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STANDARDIZED LIFE-SAVING APPLIANCE EVALUATION AND TEST REPORT FORMS

(continued)

5 RESCUE BOATS

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5.1 OUTBOARD ENGINES FOR RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Engine type	
Serial number	
Fuel type	
Design power output (kW)	
Propeller diameter and pitch	
Required battery capacity	
Starting aids	
Date	
Place	
Name and signature of surveyor	
Approving organization	

Outboard Engines for Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.1.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

	Manufacturer:_____	Date:_____ Time:_____
Outboard Engines for Rescue Boats	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

5.1.2 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

	Manufacturer:_____	Date:_____ Time:_____
Outboard Engines for Rescue Boats	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

5.1.3 Visual inspection		**Regulations: LSA Code 1.2, 4.4.6; MSC.81(70) 1 /7.7**
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the engine. Conduct measurements and verify equipment as required	The engine should be provided with either a manual starting system, or a power starting system with two independent rechargeable energy sources. Any necessary starting aids should be provided. Propeller protection should be in place during test.	Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/Observations

5.1.4 Power test		**Regulations: LSA Code 5.1.1.8; MSC.81(70) 1 /7.7.2 - 7.7.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The motor, fitted with a suitable propeller, should be placed in a test rig such that the propeller is completely submerged in a water tank, simulating service conditions. Propeller protection should be in place during the test. The motor should be run at the maximum continuous rated speed using the maximum power obtainable for 20 min	The rigid means of rescue should no show any permanent damage from such a loading The motor should not overheat or be damaged.	Protection of propeller in place Passed _____ Failed _____ Duration : _____ min Any significant damage? Passed _____ Failed _____ Overheating? Passed _____ Failed _____ Comments/Observations

	Manufacturer:_____	Date:_____ Time:_____
Outboard Engines for Rescue Boats	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

5.1.5 Water drench test		**Regulations: LSA Code 5.1.1.8; MSC.81(70) 1 /7.7.4**
Test Procedure	Acceptance Criteria	Significant Test Data
The motor protective cover should be removed and the motor thoroughly drenched with water, by hose, except for the intake to the carburettor. The motor should be started and run at speed for at least 5 min while it is still being drenched.	The motor should not falter or be damaged by this test.	Duration : _____ min Any significant damage? Passed _____ Failed _____ Comments/Observations

5.1.6 Hot start test		**Regulations: LSA Code 5.1.1.8; MSC.81(70) 1 /7.7.5**
Test Procedure	Acceptance Criteria	Significant Test Data
While still in the test rig referred to in 5.1.4, the motor should be run at idling speed in order to heat up the cylinder block. At the maximum temperature achievable, the motor should be stopped and immediately restarted. This test should be carried out at least twice.	The motor should not fail to restart.	Test carried out : _____ times Restarts Passed _____ Failed _____ Any significant damage? Passed _____ Failed _____ Comments/Observations

	Manufacturer:_____	Date:_____ Time:_____
Outboard Engines for Rescue Boats	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

5.1.7 Manual start test	**Regulations: LSA Code 5.1.1.8; MSC.81(70) 1 /7.7.6 - 7.7.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
The motor should be started at ambient temperature by manual means. The means should be either a manual automatic-rewind system or a pull cord round the top flywheel of the motor. The motor should be started twice within 2 min of commencement of the start procedure. The motor should be run until normal operating temperatures are reached, then it should be stopped and started manually twice within 2 min, by means of a manual automatic-rewind system or a pull cord round the to flywheel of the motor	The motor should not fail to start with in two minutes on any try.	Ambient temperature test carried out : _____ times Does the motor start twice within 2 min? Passed _____ Failed _____ Operating temperature Does the motor start twice within 2 min? Passed _____ Failed _____ Comments/Observations

	Manufacturer:_____ Date:_____	Time:_____
Outboard Engines for Rescue Boats	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.1.8 Cold start test	**Regulations: LSA Code 4.4.6.2; MSC.81(70) 1 /7.7.8 - 7.7.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
The motor, together with the fuel, fuel lines and battery, should be placed in a chamber at a temperature of -15^0C and allowed to remain until the temperature of all parts has reached the temperature of the chamber. The temperature of the fuel, battery and motor should be measured for this test. The motor should be started twice, within 2 min of commencement of the start procedure, and allowed to run long enough to demonstrate that it runs at operating speed. It is recommended that this period should not exceed 15 s. Where lower temperature service is intended, that lower temperature should be substituted for -15^0C in the above-mentioned test.	The engine starting systems and starting aids should start the engine at an ambient temperature of -15^0C within 2 min of commencing the start procedure unless, in the opinion of the Administration having regard to the particular voyages in which the ship carrying the rescue boat is constantly engaged, a different temperature is appropriate. The engine must start at the specified temperatures.	Starting power Source: Starting aids used: Measured temperatures Chamber: °C Fuel: °C Lubricant oil: °C Cooling fluid: °C Number of starts: Duration of first run: seconds Duration of second run: seconds Duration of last run: seconds Type of battery: Required capacity of starting battery: Passed _____ Failed _____ Comments/Observations

	Manufacturer:_____	Date:_____ Time:_____
Outboard Engines for Rescue Boats	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

5.1.9 Engine-out-of-water test		**Regulations: LSA Code 4.4.6.2; MSC.81(70) 1 /7.7.10**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage.	The engine should be capable of operating for not less than 5 min after starting from cold with the rescue boat out of the water. The engine should not be damaged as a result of this test.	Cooling water supplied during test? Yes/ No If so, by what method? Duration _____ min Any damage after this test? Passed _____ Failed _____ Comments/Observations

5.1.10 Extra test for outboard engine for fast rescue boats		**Regulations: MSC/Circ. 809, 4.1.8**
Test Procedure	Acceptance Criteria	Significant Test Data
	Engines in fast rescue boats should stop automatically or be stopped by the helmsman's emergency release switch should the rescue boat capsize. When the rescue boat has righted each engine or motor should be capable of being restarted, provided the helmsman's emergency release, if fitted, has been reset. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system should the rescue boat capsize.	Means of stopping the engine in case of capsizing: Capable of restarting after re-righting: Amount of loss: ml Passed _____ Failed _____ Comments/Observations

5.2 RIGID RESCUE BOATS

EVALUATION AND TEST REPORT

5.2.0 General information

- 5.2.0.1 General data and specifications
- 5.2.0.2 Submitted drawings, reports and documents
- 5.2.0.3 Quality assurance

5.2.1 Visual inspection

- 5.2.1.1 Occupant space
- 5.2.1.2 Fittings, provisions and ladders
- 5.2.1.3 Engine and starting system
- 5.2.1.4 Steering mechanism and fuel tank
- 5.2.1.5 Release mechanism
- 5.2.1.6 Drain valve

5.2.2 Freeboard, stability and self-righting tests

- 5.2.2.1 Flooded stability test
- 5.2.2.2 Freeboard test
- 5.2.2.3 Righting test (for non self-righting rescue boats)

5.2.3 Seating strength and space Tests

- 5.2.3.1 Seating strength test
- 5.2.3.2 Seating Space test

5.2.4 Release mechanism tests

- 5.2.4.1 Simultaneous release
- 5.2.4.2 Load test
- 5.2.4.3 Towing release test

5.2.5 Operational tests

- 5.2.5.1 Liferaft towing
- 5.2.5.2 Endurance, speed, and fuel consumption
- 5.2.5.3 Engine out of water
- 5.2.5.4 Compass test
- 5.2.5.5 Helpless person recovery
- 5.2.5.6 Manoeuvrability with paddles or oars

5.2.6 Towing and painter tests

- 5.2.6.1 Towing test
- 5.2.6.2 Painter release test

5.2.7 Strength tests

- 5.2.7.1 Impact, drop, and operation after impact & drop test
- 5.2.7.2 Overload test

5.2 RIGID RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.0.1 General Data and Specifications	**Regulations: LSA Code 4.4, 5.1, MSC.81(70) 1/7.1.9**

General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Canopy: _____ Fire retardancy documentation:_____ Rescue Boat Inherent Buoyancy (Type App.) Material: _____ Weight: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Gear ratio (inboard engine):_____ Additional rigid or inflatable buoyancy:- _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Sill: _____ Depth to Gunwale: _____ Moulded Breadth: _____ Moulded Depth: _____ Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

	Manufacturer:_____ Date:_____ Time:_____	
Rigid Rescue Boats	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 4.4.2.2, 4.4.3.5, 5.1, MSC.81(70) 1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 3.8 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher. **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Location:_____ Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 4.4.3, 4.4.7, 5.1, MSC.81(70) 1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Fittings and Provisions** Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat Weathertight stowage for small items of equipment Approved position indicating light provided at highest point Provided with effective means of bailing or be automatically self-bailing. **Ladders** Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline. **Other Provisions** Buoyant material may be installed external to the hull of the boat, provided it is adequately protected against damage and is capable of withstanding exposure when stowed on an open deck on a ship at sea and for 30 days afloat in all sea condition. **Colour** The boat is of a highly visible colour where it will assist detection.	Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ NA _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Lowest step _____ m below waterline YES NO NA Passed _____ Failed _____ Highly visible colour: Passed _____ Failed _____ Comments/Observations

	Manufacturer:_____ Date:_____ Time:_____	
Rigid Rescue Boats	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable energy sources provided for power starting systems - Required starting aids provided. - Starting system is not impeded by engine casing, thwarts, or other obstructions - Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion - Exhaust arranged to prevent water from entering engine in normal operation. - System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable arrangements providing similar protection. - Personnel are protected from hot and moving parts - Shouted order can be heard with engine running at speed necessary for 6 knot operation - Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting. - Recharging for engine batteries provided by ship's power supply does not exceed 50 v - Recharging means for engine batteries can be disconnected at the rescue boat embarkation station - Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Manual Power YES NO NA Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC.81(70)1/7.1.9**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering**	
	A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor)	Passed _____ Failed _____
	Rudder permanently attached to the rescue boat	Passed _____ Failed _____ NA ___
	Except when remote steering is provided, the tiller is permanently attached or linked to the rudder stock	Passed _____ Failed_____ NA ___
	Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller	Passed _____ Failed _____
	Fuel Tank	
	If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed_____ NA ___
		Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed _____ NA ___
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed _____ NA ___
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed _____ NA ___
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed _____ NA ___
		Comments/Observations
	For a single fall and hook system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed _____ NA ___

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.1.6 Visual Inspection—Drain Valve	**Regulations: LSA Code 4.4.7.1, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required (not applicable for self-bailing boats)	Fitted near lowest point on the hull Automatically opens when the boat is not waterborne and closes to prevent water entry when the boat is waterborne Cap or plug attached to the boat by a lanyard, chain or equivalent Readily accessible from inside the rescue boat Position clearly marked	Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.2.2.1 Flooded Stability Test		**Regulations: LSA Code 4.4.1.1, MSC.81(70)1/6.8.1-.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with its equipment. If provision lockers, water tanks and fuel tanks cannot be removed, they should be flooded or filled to the final waterline resulting from this test. Rescue boats fitted with watertight stowage compartments to accommodate individual drinking water containers should have these containers aboard and placed in the stowage compartments which should be sealed watertight during the flooding tests. Ballast of equivalent weight and density should be substituted for the engine and any other installed equipment that can be damaged by water. Weights representing persons (of 75 kg mass) who would be in the water when the rescue boat is flooded may be omitted. Weights representing persons who would not be in the water when the rescue boat is flooded should be placed in the normal seating positions of such persons. Note: Several tests may have to be conducted if holes in different areas would create different flooding conditions.	When loaded as specified, the rescue boat should have positive stability when filled with water to represent flooding which would occur when the rescue boat is holed in any one location below the waterline assuming no loss of buoyancy material and no other damage.	Comments/Observations Passed _____ Failed _____

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.2.2.2 Freeboard Test		**Regulations: LSA Code 4.4.5, MSC.81(70)1/6.8.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat with its engine should be loaded with a mass equal to that of all the equipment. One half of the number of persons for which the rescue boat is to be approved should be seated in a proper seating position on one side of the centreline. The freeboard should then be measured on the low side. The freeboard of the boat should be taken in the loading condition with all equipment, engine and fuel, or equivalent mass positioned to represent engine and fuel.	This test should be considered successful, if the measured freeboard, on the low side, is not less than 1.5% of the rescue boat's length or 100 mm, whichever is greater.	Measured Freeboard: _____ mm 1.5% of Boat's Length: _____ mm Passed _____ Failed _____ Comments/Observations

5.2.2.3 Righting Test (for non self-righting rescue boats)		**Regulations: MSC.81(70)1/7.1.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. (This test is not required if the righting test in 4.5.2.3 has been performed.)	The rescue boat is capable of being righted by not more than two persons if it is inverted on the water.	Is the boat self-righting? YES NO (If YES, refer to lifeboat report 4.5.2.3) Can the boat be righted by 2 persons? Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.3.1 Seating Strength Test		**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat. In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.2.7.1.)	The seating should be able to support this loading without any permanent deformation or damage. The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Observed damage Passed _____ Failed _____ Passed _____ Failed _____ NA Comments/Observations

5.2.3.2 Seating Space Test		**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The rigid rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suits and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rigid rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.2.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed _____ Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.4.1 Release Mechanism Tests—Simultaneous Release		**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. Single fall systems not intended for on-load operation are exempt from this test.	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed_____ NA ___ (NA – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed_____ NA ___ (NA – Single fall, off-load only) Comments/Observations

5.2.4.2 Release Mechanism Tests—Load Test		**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load. (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook;. 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard @ hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: _____ kts Passed _____ Failed _____ Non-Waterborne Test Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine / Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.5.2 Operational Tests — Endurance, Speed, & Fuel Consumption	**Regulations: LSA Code 4.4.6.8, 5.1.1.6,MSC.81(70)1/7.1.5, 1/7.1.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after the impact and drop tests in 5.2.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 6 knots for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 6 knots for a period of 4 hours in calm water.	Smallest Engine / Largest Engine Make/model: _____ _____ Engine Speed: rpm _____ _____ Boat Speed: kts _____ _____ Consumption: L/h _____ _____ Fuel Tank Capacity: _____ L Endurance: hrs _____ _____ Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.2.5.3 Operational Tests—Engine out of water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.2.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

5.2.5.5 Operational Tests—Helpless Person Recovery		**Regulations: LSA Code 4.4.3.4, 5.1.1.7, MSC.81(70)1/6.10.8, 7.1.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated by test that it is possible to bring helpless people on board the rescue boat from the sea.	Helpless people can be brought on board the rescue boat from the sea.	Method of recovery: _____ Number of Persons required and any special equipment used: _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.5.6 Operational Tests—Manoeuvrability With Paddles Or Oars		**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

5.2.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.6.2 Towing & Painter Tests—Painter Release Test	**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.2.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.2.7.1 Strength Tests - Impact, Drop, & Operation after Impact & Drop Test	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/6.4.1, 6.4.3, 6.4.5, 6.4.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The same rescue boat with its engine, loaded as described above, should then be suspended above the water so that the distance from the lowest point of the rescue boat to the water is 3 m. The rescue boat should then be released so that it falls freely into the water. .3 After the impact and drop tests, the boat should be examined to detect the position and extent of damage that may have occurred as a result of the tests, and an operational test should then be conducted in accordance with 5.2.5.2. .4 After the operational test, the rescue boat should be unloaded, cleaned, and carefully examined to detect the position and extent of damage that may have occurred as a result of the tests.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the rescue boat's efficient functioning; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.2.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Weight of heaviest engine tested:_____ Final Evaluation: Passed _____ Failed _____ Comments/Observations

Rigid Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.2.7.2 Strength Tests—Overload Test	**Regulations: MSC.81(70)1/7.1.4**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a properly distributed load of four times the weight to represent the equipment and full complement of persons for which it is to be approved and suspended for five minutes from its bridle or hooks. The weights should be distributed in proportion to the loading of the boat in its service condition, but the weights used to represent the persons need not be placed 300 mm above the seat pan. The boat and bridle or hooks and fastening device should be examined after the test has been conducted. Testing by filling the boat with water should not be accepted. This method of loading does not give the proper distribution of weight. Machinery may be removed in order to avoid damage, in which case weights should be added to the boat to compensate for the removal of such machinery. The rescue boat and it's bridle or hooks (release mechanism) and fastening device should be examined after the test for any signs of damage.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Load in boat: _____ kg Comments/Observations Passed _____ Failed _____

5.3 INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

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5.3 INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.0.1 General Data and Specifications	**Regulations: LSA Code 5.1**

General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____ Propeller:_____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Gunwale: _____ Length to transom:_____ Length of hull:_____ (insert diagram of hull for reference) Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.3.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 3.8 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher. **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Buoyancy compartments** fitted with:	
	Non-return valve for manual inflation	Passed _____ Failed _____
	Means for deflation	Passed _____ Failed _____
	Safety relief valve unless waived by Administration	Passed _____ Failed _____ NA ___
	Suitable patches for securing painters fore and aft	Passed _____ Failed _____
	Fittings and Provisions	
	Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller	Passed _____ Failed _____
	On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat	Passed _____ Failed _____ NA ___
	Weathertight stowage for small items of equipment	Passed _____ Failed _____
	Approved position indicating light provided at highest point	Passed _____ Failed _____
	Rubbing strips on bottom and vulnerable places on the outside	Passed _____ Failed _____
	Transom, if fitted, not inset by more than 20% of overall length	Passed _____ Failed _____
	Provided with effective means of bailing or be automatically self-bailing.	Passed _____ Failed _____
		Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.3.1.2 Visual Inspection — Fittings, Provisions and Ladders (cont'd)	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Ladders** Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline.	YES NO NA Lowest step _____ m below waterline Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system	Manual Power YES NO NA
	- Two independent rechargeable energy sources provided for power starting systems	Passed_____ Failed_____
	- Required starting aids provided.	Passed_____ Failed_____
	- Starting system is not impeded by engine casing, thwarts, or other obstructions	Passed_____ Failed_____
	- Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion	Passed_____ Failed_____
	- Exhaust arranged to prevent water from entering engine in normal operation.	Passed_____ Failed_____
	- System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris	Passed_____ Failed_____
	- Engine casing made of fire retardant material or other suitable arrangements providing similar protection.	Passed_____ Failed_____
	- Personnel are protected from hot and moving parts	Passed_____ Failed_____
	- Shouted order can be heard with engine running at speed necessary for 6 knot operation	Passed_____ Failed_____
	- Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting.	Passed_____ Failed_____
	- Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship’s power supply.	Passed_____ Failed_____
	- Radio batteries not used to provide power for engine starting.	Passed_____ Failed_____
	- Recharging for engine batteries provided by ship’s power supply does not exceed 50 v	Passed_____ Failed_____
	- Recharging means for engine batteries can be disconnected at the rescue boat embarkation station	Passed_____ Failed_____
	- Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Passed_____ Failed_____

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering** A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor) Rudder permanently attached to the rescue boat Except when remote steering is provided, the tiller is permanently attached or linked to the rudder stock Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller **Fuel Tank** If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed _____ Passed _____ Failed _____ NA ___ Passed _____ Failed _____ NA ___ Passed _____ Failed _____ Passed _____ Failed _____ NA ___ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7, .6, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed _____ NA ___
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed _____ NA ___
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed _____ NA ___
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed _____ NA ___
	For a single fall system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed _____ NA ___
		Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.1.6 Visual Inspection—Drain Valve		**Regulations: LSA Code 4.4.7.1, 5.1, MSC.81(70)1/7.2.16**
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required (not applicable for self-bailing boats)	Fitted near lowest point on the hull	Passed _____ Failed _____
	Automatically opens when the boat is not waterborne and closes to prevent water entry when the boat is waterborne	Passed _____ Failed _____
	Cap or plug attached to the boat by a lanyard, chain or equivalent	Passed _____ Failed _____
	Readily accessible from inside the rescue boat	Passed _____ Failed _____
	Position clearly marked	Passed _____ Failed _____
		Comments/Observations

5.3.2.1 Damage Test		**Regulations: LSA Code 5.1.3.5, MSC.81(70)1/7.2.8-.9**
Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with the inflated rescue boat loaded with the number of persons (of 75 kg mass) for which it is to be approved both with and without engine and fuel or an equivalent mass in the position of the engine and fuel tank: 1 with forward buoyancy compartment deflated; 2 with the entire buoyancy on one side of the rescue boat deflated; and 3 with the entire buoyancy on one side and the bow compartment deflated.	In each of the conditions prescribed, the full number of persons for which the rescue boat is to be approved should be supported within the rescue boat.	Comments/Observations 1 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 2 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 3 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.2.2 Stability Test	**Regulations: LSA Code 4.4.5, MSC.81(70)1/7.2.6-.7**

Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with engine and fuel or an equivalent mass in place of the engine and fuel tanks:		
.1 the number of persons for which the inflated rescue boat is to be approved should be crowded to one side with half this complement seated on the buoyancy tube, and then to one end. In each case the freeboard should be recorded; and	.1 Under these conditions the freeboard should be everywhere positive.	1 Freeboard crowded to one side _____ mm To bow: _____ mm To stern:_____mm Passed _____ Failed _____
.2 the stability of the rescue boat during boarding should be ascertained by two persons in the rescue boat demonstrating that they can readily assist from the water a third person who is required to feign unconsciousness. The third person should have his back towards the side of the rescue boat so that he cannot assist the rescuers. All persons should wear approved lifejackets.	.2 The rescue boat should be stable	2 Stability observations during recovery of unconscious person: Clothing/Suits on helpless person: _____ Method of recovery: _____
These stability tests may be carried out with the rescue boat floating in still water.		Number of persons required and any special equipment used: _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.2.3 Loading Test		**Regulations: MSC.81(70)1/7.2.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The freeboard of the inflated rescue boat should be taken in the various loading conditions as follows: .1 rescue boat with all its equipment; .2 rescue boat with all its equipment, engine and fuel, or an equivalent mass positioned to represent engine and fuel; .3 rescue boat with all its equipment and the number of persons for which it is to be approved having an average mass of 75 kg so arranged that a uniform freeboard is achieved at the side buoyancy tubes; and .4 rescue boat with the number of persons for which it is to be approved and all its equipment, engine and fuel or an equivalent mass to represent engine and fuel and the rescue boat being re-trimmed as necessary.	In each condition the minimum freeboard should be not less than 300 mm at the buoyancy tubes and not less than 250 mm from the lowest part of the transom.	.1 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .2 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .3 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .4 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm Passed _____ Failed _____ Comments/Observations

5.3.2.4 Swamp Test		**Regulations: MSC.81(70)1/7.2.11**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat, when fully swamped, is capable of supporting its full equipment, the number of persons for which it is to be approved and a mass equivalent to its engine and full fuel tank. It should also be demonstrated that the rescue boat does not seriously deform in this condition.	The rescue boat should be capable of supporting the full load and should not seriously deform.	Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.2.5 Righting Test (for non self-righting rescue boats)		**Regulations: MSC.81(70)1/7.1.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. Test without engine is only applicable for outboard engines.	The rescue boat should be capable of being righted by not more than two persons if it is inverted on the water.	Is the boat self-righting? YES NO (If YES, refer to lifeboat report 4.5.2.3) Can the boat be righted by 2 persons? With engine and fuel: Passed _____ Failed _____ Without engine and fuel: Passed _____ Failed _____ Comments/Observations

5.3.3.1 Seating Strength Test		**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat.	The seating should be able to support this loading without any permanent deformation or damage.	Observed damage Passed _____ Failed _____
In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.3.7.1)	The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Passed _____ Failed_____ NA ___ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.3.2 Seating Space Test	**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suits and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.3.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed _____ Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.4.1 Release Mechanism Tests—Simultaneous Release Test		**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. (Single fall systems not intended for on-load operation are exempt from this test.)	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed _____ NA ___ (NA – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed _____ NA ___ (NA – Single fall, off-load only) Comments/Observations

5.3.4.2 Release Mechanism Tests—Load Test		**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load. (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook; 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20º to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard @ hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne <u>Waterborne Test:</u> Towing Speed: _____ kts PASSED_____ FAILED_____ <u>Non-Waterborne Test</u> Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine / Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.5.2 Operational Tests — Endurance, Speed & Fuel Consumption	**Regulations: LSA Code5.1.1.6,MSC.81(70)1/7.1.5, 1/7.1.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after impact and drop tests in 5.3.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 6 knots for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 6 knots for a period of 4 hours in calm water.	Smallest Engine / Largest Engine Make/model: _____ _____ Engine Speed: rpm _____ _____ Boat Speed: kts _____ _____ Consumption: L/h _____ _____ Fuel Tank Capacity: _____ L Endurance: hrs _____ _____ Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.5.3 Operational Tests—Engine Out of Water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.3.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.3.5.5 Operational Tests—Manoeuvrability With Paddles Or Oars	**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.5.6 Operational Tests—Heavy Weather / Seas Test		**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.10**
Test Procedure	Acceptance Criteria	Significant Test Data
To simulate use in heavy weather the inflated rescue boat should be fitted with a larger powered engine than is intended to be fitted and driven hard in a wind of force 4 or 5 or equivalent rough water for at least 30 min. For boats with inboard engines the power does not need to be greater than that intended to be used.	The rescue boat should not show undue flexing or permanent strain nor have lost more than minimal pressure.	Tube pressure before test: _____ mbar Pressure relief valves open/closed?_____ Wave height_____m Wind Speed _____ m/s Tube pressure after test: _____ mbar Passed _____ Failed _____ Comments/Observations

5.3.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.6.2 Towing & Painter Tests—Painter Release Test	**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.3.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.7.1	**Strength Tests—Impact, Drop, & Operation after Impact & Drop Tests**	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/6.4.1, 7.2.2. & 7.2.3**

Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The rescue boat complete with all its equipment and with a mass equivalent to its engine and fuel in the position of its engine and fuel tank should be dropped three times from a height of at least 3 m on to water. The drops should be from the 45-degree bow-down, level trim, and 45-degree stern-down attitudes. .3 On completion of these tests the rescue boat and its equipment should be carefully examined.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the efficient functioning of the rescue boat and its equipment; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.3.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Heaviest engine used:_____ Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Final Evaluation: Passed:_____ Failed:_____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.3.7.2 Strength Tests—Ambient Overload Test		**Regulations: LSA Code 5.1.3.2.2, MSC.81(70)1/7.2.12**
Test Procedure	Acceptance Criteria	Significant Test Data
With all relief valves inoperative, the inflated rescue boat should be loaded with four times the mass of the full complement of persons and equipment for which it is to be approved and suspended for 5 minutes from its bridle at an ambient temperature of $+20 \pm 3^0$C. The rescue boat and its bridle should be examined after the test is conducted.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Passed _____ Failed _____ Comments/Observations

5.3.7.3 Strength Tests—Cold Overload Test		**Regulations: LSA Code 5.1.3.2.3, MSC.81(70)1/7.2.13**
Test Procedure	Acceptance Criteria	Significant Test Data
With all relief valves operative, after 6 h conditioning at a temperature of -30^0C, the inflated rescue boat should be loaded with 1.1 times the mass of the full complement of persons and equipment for which it is to be approved and suspended for five minutes from its bridle. The rescue boat and bridle should be examined after the test is conducted.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.3.7.4 Strength Tests—Mooring Out Test	**Regulations: LSA Code 5.1.3.3, MSC.81(70)1/7.2.15, 5.5, 5.17.7-.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a mass equal to the mass of the total number of persons for which it is to be approved and its equipment and moored in a location at sea or in a seawater harbour. The rescue boat should remain afloat in that location for 30 days. The pressure may be topped up once a day using the manual pump; however, during any 24 h period the rescue boat should retain its shape. Each inflatable compartment in the rescue boat should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative, compressed air should be used to inflate the inflatable rescue boat and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has been completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved.	The rescue boat should not sustain any damage that would impair its performance. The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the rescue boat.	Compartment 1 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 2 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 3 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 4 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 5 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Passed _____ Failed _____ Comments/Observations

Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.3.8.1 Inflation Chamber Characteristics Tests	**Regulations: LSA Code 1.2.2, MSC.81(70)1/7.2.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
The inflatable compartment materials used to construct the rescue boat should be tested for the following characteristics : .1 tensile strength .2 tear strength .3 heat resistance .4 cold resistance .5 heat ageing .6 weathering .7 flex cracking .8 abrasion .9 coating adhesion .10 oil resistance .11 elongation at break .12 piercing strength .13 ozone resistance .14 gas permeability .15 seam strength .16 ultraviolet light resistance	The material characteristics should be to the satisfaction of the Administration .	.1 tensile strength _____ N/50 mm width .2 tear strength _____ N .3 heat resistance – Blocking _____ .4 cold resistance – Cracking _____ .5 heat ageing _____ % retained strength N/50 mm width .6 weathering _____ % retained strength N/50 mm width .7 flex cracking – Cracking or deterioration _____ .8 abrasion _____ mg/rev.; Base fabric not visible _____ .9 coating adhesion _____ N/50 mm width .10 oil resistance – Tackiness or other deterioration _____ .11 elongation at break _____ % .12 piercing strength _____ .13 ozone resistance – Visible cracking _____ .14 gas permeability _____ bubbles/min or l/m^2/hr of _____ .15 seam strength _____ N/50 mm width .16 ultraviolet light resistance _____ % retained strength N/50 mm width Cracking _____ SATISFACTORY UNSATISFACTORY Comments/Observations

5.4 RIGID/INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

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- 5.4.0.3 Quality assurance

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5.4.2 Stability, damage and loading tests
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5.4.8 Materials tests
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5.4 RIGID/INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.0.1 General Data and Specifications	**Regulations: LSA Code 4.4, 5.1, MSC.81(70)1/7.2.16**

General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Canopy: _____ Fire retardancy documentation:_____ Inflated chambers:_____ Rescue Boat Inherent Buoyancy (Type App.) Material: _____ Weight: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Gear ratio (inboard engine):_____ Additional rigid or inflatable buoyancy:- _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Sill: _____ Depth to Gunwale: _____ Moulded Breadth: _____ Moulded Depth: _____ (Insert diagram of hull for reference) Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

	Manufacturer:_____ Date:_____ Time:_____	
Rigid/Inflated Rescue Boats	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 4.4.2.2, 4.4.3.5, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 3.8 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher. **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Buoyancy compartments** fitted with:	
	Non-return valve for manual inflation	Passed _____ Failed _____
	Means for deflation	Passed _____ Failed _____
	Safety relief valve unless waived by Administration	Passed _____ Failed_____ NA
	Suitable patches for securing painters fore and aft	Passed _____ Failed _____
	Fittings and Provisions	
	Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller	Passed _____ Failed _____
	On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat	Passed _____ Failed _____
	Weathertight stowage for small items of equipment	Passed _____ Failed_____ NA
	Approved position indicating light provided at highest point	Passed _____ Failed _____
	Provided with effective means of bailing or be automatically self-bailing.	Passed _____ Failed _____
		Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.1.2 Visual Inspection — Fittings, Provisions and Ladders (cont'd)	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Ladders** Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline. **Other Provisions** Buoyant material may be installed external to the hull of the boat, provided it is adequately protected against damage and is capable of withstanding exposure when stowed on an open deck on a ship at sea and for 30 days afloat in all sea condition. **Colour** The boat should be of a highly visible colour where it will assist detection.	Passed _____ Failed _____ Lowest step _____ m below waterline YES NO NA Passed _____ Failed _____ Highly visible colour: Passed_____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable energy sources provided for power starting systems - Required starting aids provided. - Starting system is not impeded by engine casing, thwarts, or other obstructions - Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion - Exhaust arranged to prevent water from entering engine in normal operation. - System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable arrangements providing similar protection. - Personnel are protected from hot and moving parts - Shouted order can be heard with engine running at speed necessary for 6 knot operation - Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting. - Recharging for engine batteries provided by ship's power supply does not exceed 50 v - Recharging means for engine batteries can be disconnected at the rescue boat embarkation station - Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Manual Power YES NO NA Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering** A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor) Rudder permanently attached to the rescue boat Except when remote steering is provided, the tiller is permanently attached or linked to the rudder stock Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller **Fuel Tank** If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed _____ Passed _____ Failed_____ NA ___ Passed _____ Failed_____ NA ___ Passed _____ Failed _____ Passed _____ Failed_____ NA ___ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.4.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7.6.5, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed_____ NA ___
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed_____ NA ___
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed_____ NA ___
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed_____ NA___
	For a single fall system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed_____ NA ___
		Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.1.6 Visual Inspection—Drain Valve		**Regulations: LSA Code 4.4.7.1, 5.1, MSC.81(70)1/7.2.9**
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required (not applicable for self-bailing boats)	Fitted near lowest point on the hull	Passed _____ Failed _____
	Automatically opens when the boat is not waterborne and closes to prevent water entry when the boat is waterborne	Passed _____ Failed _____
	Cap or plug attached to the boat by a lanyard, chain or equivalent	Passed _____ Failed _____
	Readily accessible from inside the rescue boat	Passed _____ Failed _____
	Position clearly marked	Passed _____ Failed _____
		Comments/Observations

5.4.2.1 Damage Test (Does not apply if waterline is below lower side of inflated tube)		**Regulations: LSA Code 5.1.3.5, MSC.81(70)1/7.2.8-.9, 7.3.2**
Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with the rigid inflated rescue boat loaded with the number of persons (of 75 kg mass) for which it is to be approved both with and without engine and fuel or an equivalent mass in the position of the engine and fuel tank: 1 with forward buoyancy compartment deflated; 2 with the entire buoyancy on one side of the rescue boat deflated; and 3 with the entire buoyancy on one side and the bow compartment deflated.	In each of the conditions prescribed, the full number of persons for which the rescue boat is to be approved should be supported within the rescue boat.	Comments/Observations 1 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 2 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 3 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.2.2 Stability Test	**Regulations: LSA Code 4.4.5, MSC.81(70)1/7.2.6-.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with engine and fuel or an equivalent mass in place of the engine and fuel tanks:		
.1 the number of persons for which the rigid/inflated rescue boat is to be approved should be crowded to one side with half this complement seated on the buoyancy tube, and then to one end. In each case the freeboard should be recorded; and	.1 Under these conditions the freeboard should be everywhere positive.	1 Freeboard crowded to one side _____ mm To bow: _____ mm To stern:_____mm Passed _____ Failed _____
.2 the stability of the rescue boat during boarding should be ascertained by two persons in the rescue boat demonstrating that they can readily assist from the water a third person who is required to feign unconsciousness. The third person should have his back towards the side of the rescue boat so that he cannot assist the rescuers. All persons should wear approved lifejackets.	.2 The rescue boat should be stable	2 Stability observations during recovery of unconscious person: Clothing/suits on helpless person: _____ Method of recovery: _____ Number of persons required and any special equipment used _____
These stability tests may be carried out with the rescue boat floating in still water.		Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.2.3 Loading Test		**Regulations: LSA Code 5.1.3.6, MSC.81(70)1/7.2.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The freeboard of the rescue boat should be taken in the various loading conditions as follows: .1 rescue boat with all its equipment; .2 rescue boat with all its equipment, engine and fuel, or an equivalent mass positioned to represent engine and fuel; .3 rescue boat with all its equipment and the number of persons for which it is to be approved having an average mass of 75 kg so arranged that a uniform freeboard is achieved at the side buoyancy tubes; and .4 rescue boat with the number of persons for which it is to be approved and all its equipment, engine and fuel or an equivalent mass to represent engine and fuel and the rescue boat being retrimmed as necessary.	In each condition the minimum freeboard should be not less than 300 mm at the buoyancy tubes and not less than 250 mm from the lowest part of the transom.	.1 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .2 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .3 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .4 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm Passed _____ Failed _____ Comments/Observations

5.4.2.4 Swamp Test		**Regulations: LSA Code 1.2.2.6, MSC.81(70)1/7.2.11**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat, when fully swamped, is capable of supporting its full equipment, the number of persons for which it is to be approved and a mass equivalent to its engine and full fuel tank. It should also be demonstrated that the rescue boat does not seriously deform in this condition.	The rescue boat should be capable of supporting the full load and should not seriously deform.	Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.2.5	**Flooded Stability Test (Required only when waterline is below lower side of inflated tube)**	**Regulations: LSA Code 4.4.1.1, MSC.81(70)1/6.8.1-.3**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with its equipment. If provision lockers, water tanks and fuel tanks cannot be removed, they should be flooded or filled to the final waterline resulting from this test. Rescue boats fitted with watertight stowage compartments to accommodate individual drinking water containers should have these containers aboard and placed in the stowage compartments which should be sealed watertight during the flooding tests. Ballast of equivalent weight and density should be substituted for the engine and any other installed equipment that can be damaged by water. Weights representing persons (of 75 kg mass) who would be in the water when the rescue boat is flooded may be omitted. Weights representing persons who would not be in the water when the rescue boat is flooded should be placed in the normal seating positions of such persons. Note: Several tests may have to be conducted if holes in different areas would create different flooding conditions.	When loaded as specified, the rescue boat should have positive stability when filled with water to represent flooding which would occur when the rescue boat is holed in any one location below the waterline assuming no loss of buoyancy material and no other damage.	Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.2.6 Righting Test (for non-self-righting rescue boats)	**Regulations: MSC.81(70)1/7.1.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. Note: Test without engine is only applicable for outboard engines.	The rescue boat should be capable of being righted by not more than two persons if it is inverted on the water.	Is the boat self-righting? YES NO (If YES, refer to lifeboat report 4.5.2.3) Can the boat be righted by 2 persons? With engine and fuel: Passed _____ Failed _____ Without engine and fuel: Passed _____ Failed _____ Comments/Observations

5.4.3.1 Seating Strength Test	**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1 & 6.4.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat. In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.4.7.1)	The seating should be able to support this loading without any permanent deformation or damage. The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Observed damage Passed _____ Failed _____ Passed _____ Failed_____ NA Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.3.2 Seating Space Test		**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suits and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.4.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed _____ Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____

Rigid/Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.4.4.1 Release Mechanism Tests—Simultaneous Release		**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. (Single fall systems not intended for on-load operation are exempt from this test.)	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed_____ NA (N/A – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed_____ NA (N/A – Single fall, off-load only) Comments/Observations

5.4.4.2 Release Mechanism Tests—Load Test		**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook;. 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard **@** hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: _____ kts Passed _____ Failed _____ Non-Waterborne Test Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine / Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.4.5.2 Operational Tests — Endurance, Speed & Fuel Consumption	**Regulations: LSA Code 5.1.1.6,MSC.81(70)1/7.1.5, 1/7.1.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after impact and drop tests in 5.4.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 6 knots for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 6 knots for a period of 4 hours in calm water.	Smallest Engine / Largest Engine Make/model: _____ _____ Engine Speed: rpm _____ _____ Boat Speed: kts _____ _____ Consumption: L/h _____ _____ Fuel Tank Capacity: _____ L Endurance: hrs _____ _____ Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.5.3 Operational Tests—Engine Out of Water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.4.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.5.5 Operational Tests—Manoeuvrability With Paddles Or Oars	**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved. For boats with inboard engines the power does not need to be greater than that intended to be used.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.5.6 Operational Tests—Heavy Weather / Seas Test		**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.10**
Test Procedure	Acceptance Criteria	Significant Test Data
To simulate use in heavy weather the rescue boat should be fitted with a larger powered engine than is intended to be fitted and driven hard in a wind of force 4 or 5 or equivalent rough water for at least 30 min.	The rescue boat should not show undue flexing or permanent strain nor have lost more than minimal pressure.	Tube pressure before test: _____ mbar Pressure relief valves open/closed?_____ Wave height_____m Wind Speed _____ m/s Tube pressure after test: _____ mbar Passed _____ Failed _____ Comments/Observations

5.4.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.4.6.2 Towing & Painter Tests—Painter Release Test	**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.4.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.7.1	**Strength Tests — Impact, Drop & Operation after Impact & Drop Test**	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/7.2.2**

Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The rescue boat complete with all its equipment and with a mass equivalent to its engine and fuel in the position of its engine and fuel tank should be dropped three times from a height of at least 3 m on to water. The drops should be from the 45-degree bow-down, level trim, and 45-degree stern-down attitudes. .3 On completion of these tests the rescue boat and its equipment should be carefully examined.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the efficient functioning of the rescue boat and its equipment; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.4.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Heaviest engine used:_____ Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Final Evaluation: Passed:_____ Failed:_____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.7.2 Strength Tests—Overload Test	**Regulations: MSC.81(70)1/7.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a properly distributed load of four times the weight to represent the equipment and full complement of persons for which it is to be approved and suspended for five minutes from its bridle or hooks. The weights should be distributed in proportion to the loading of the boat in its service condition, but the weights used to represent the persons need not be placed 300 mm above the seat pan. The boat and bridle or hooks and fastening device should be examined after the test has been conducted. Testing by filling the boat with water should not be accepted. This method of loading does not give the proper distribution of weight. Machinery may be removed in order to avoid damage, in which case weights should be added to the boat to compensate for the removal of such machinery. The rescue boat and its bridle or hooks (release mechanism) and fastening device should be examined after the test for any signs of damage.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Load in boat: _____ kg Comments/Observations Passed _____ Failed _____

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.4.7.4	**Strength Tests—Mooring Out Test (Does not apply if waterline is below lower side of inflated tube)**	**Regulations: LSA Code 5.1.3.3, MSC.81(70)1/7.2.15, 5.5, 5.17.7-.8**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a mass equal to the mass of the total number of persons for which it is to be approved and its equipment and moored in a location at sea or in a seawater harbour. The rescue boat should remain afloat in that location for 30 days. The pressure may be topped up once a day using the manual pump; however, during any 24 h period the rescue boat should retain its shape. Each inflatable compartment in the rescue boat should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative; compressed air should be used to inflate the inflatable rescue boat and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has been completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved.	The rescue boat should not sustain any damage that would impair its performance. The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the rescue boat.	<u>Compartment 1</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 2</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 3</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 4</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 5</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.4.8.1 Inflation Chamber Characteristics Tests	**Regulations: LSA Code 1.2.2, MSC.81(70)1/7.2.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
The inflatable compartment materials used to construct the rescue boat should be tested for the following characteristics : .1 tensile strength .2 tear strength .3 heat resistance .4 cold resistance .5 heat ageing .6 weathering .7 flex cracking .8 abrasion .9 coating adhesion .10 oil resistance .11 elongation at break .12 piercing strength .13 ozone resistance .14 gas permeability .15 seam strength .16 ultraviolet light resistance	The material characteristics should be to the satisfaction of the Administration	.1 tensile strength _____ N/50 mm width .2 tear strength _____ N .3 heat resistance – Blocking _____ .4 cold resistance – Cracking _____ .5 heat ageing _____ % retained strength N/50 mm width .6 weathering _____ % retained strength N/50 mm width .7 flex cracking – Cracking or deterioration _____ .8 abrasion _____ mg/rev.; Base fabric not visible _____ .9 coating adhesion _____ N/50 mm width .10 oil resistance – Tackiness or other deterioration _____ .11 elongation at break _____ % .12 piercing strength _____ .13 ozone resistance – Visible cracking _____ .14 gas permeability _____ bubbles/min or l/m^2/hr of _____ .15 seam strength _____ N/50 mm width .16 ultraviolet light resistance _____ % retained strength N/50 mm width Cracking _____ SATISFACTORY UNSATISFACTORY Comments/Observations

5.5 RIGID FAST RESCUE BOATS

EVALUATION AND TEST REPORT

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5.5 RIGID FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.0.1 General Data and Specifications	**Regulations: LSA Code 4.4, 5.1, MSC.81(70)1/7.1.9**

General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Canopy: _____ Fire retardancy documentation:_____ Rescue Boat Inherent Buoyancy (Type App.) Material: _____ Weight: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Gear ratio (inboard engine):_____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____ Propeller_____	Dimensions: LOA (including fixed fenders, if any): _____ Breadth Maximum: _____ Depth to Sill: _____ Depth to Gunwale: _____ Moulded Breadth: _____ Moulded Depth: _____ Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.5.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: -_____ Quality Assurance Procedure: - _____ Quality Assurance Manual: -_____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 4.4.2.2, 4.4.3.5, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 6.0 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.5.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 4.4.3, 4.4.7, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Fittings and Provisions** Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller	Passed _____ Failed _____
	On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat	Passed _____ Failed_____ NA
	Weathertight stowage for small items of equipment	Passed _____ Failed _____
	Approved position-indicating light provided at highest point	
	Automatically self-bailing or capable of rapidly clearing water.	Passed _____ Failed _____
	Ladders	Passed _____ Failed_____ NA
	Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline.	YES NO NA Lowest step _____ m below waterline
	Other Provisions Buoyant material may be installed external to the hull of the boat, provided it is adequately protected against damage and is capable of withstanding exposure when stowed on an open deck on a ship at sea and for 30 days afloat in all sea condition.	Passed _____ Failed _____
	Colour The boat is of a highly visible colour where it will assist detection.	Highly visible colour: Passed_____ Failed _____ Comments/observations:

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable energy sources provided for power starting systems - Required starting aids provided. - Starting system is not impeded by engine casing, thwarts, or other obstructions - Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion - Exhaust arranged to prevent water from entering engine in normal operation. - System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable arrangements providing similar protection. - Personnel are protected from hot and moving parts - Shouted order can be heard with engine running at speed necessary for 6 knot operation - Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting. - Recharging for engine batteries provided by ship's power supply does not exceed 50 v - Recharging means for engine batteries can be disconnected at the rescue boat embarkation station - Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Manual Power YES NO NA Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC/Circ.809, 4.1.7 MSC.81(70)1/7.1.9**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering**	
	A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor)	Passed _____ Failed _____
	Rudder permanently attached to the rescue boat	Passed _____ Failed_____ NA ___
	Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller	Passed _____ Failed _____
	Steered by wheel at helmsman's position	Passed _____ Failed_____ NA ___
	Has emergency steering system providing direct control of rudder, water jet or outboard motor	Passed _____ Failed _____
	Hands-free, watertight VHF radio provided	Passed _____ Failed _____
	Fuel Tank	
	If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed_____ NA ___
		Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7, 5.1, MSC/Circ.809, 4.1.9 MSC.81(70)1/7.1.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed_____ NA ___
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed_____ NA ___
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed_____ NA ___
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed_____ NA ___
	For a single fall system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed_____ NA ___
		Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.2.1 Flooded Stability Test	**Regulations: LSA Code 4.4.1.1, MSC.81(70)1/6.8.1-.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with its equipment. If provision lockers, water tanks and fuel tanks cannot be removed, they should be flooded or filled to the final waterline resulting from this test. Rescue boats fitted with watertight stowage compartments to accommodate individual drinking water containers should have these containers aboard and placed in the stowage compartments which should be sealed watertight during the flooding tests. Ballast of equivalent weight and density should be substituted for the engine and any other installed equipment that can be damaged by water. Weights representing persons (of 75 kg mass) who would be in the water when the rescue boat is flooded may be omitted. Weights representing persons who would not be in the water when the rescue boat is flooded should be placed in the normal seating positions of such persons. Note: Several tests may have to be conducted if holes in different areas would create different flooding conditions.	When loaded as specified, the rescue boat should have positive stability when filled with water to represent flooding which would occur when the rescue boat is holed in any one location below the waterline assuming no loss of buoyancy material and no other damage.	Comments/Observations Passed _____ Failed _____

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.2.2 Freeboard Test		**Regulations: LSA Code 4.4.5, MSC.81(70)1/6.8.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat with its engine should be loaded with a mass equal to that of all the equipment. One half of the number of persons for which the rescue boat is to be approved should be seated in a proper seating position on one side of the centreline. The freeboard should then be measured on the low side.	This test should be considered successful, if the measured freeboard, on the low side, is not less than 1.5% of the rescue boat's length or 100 mm, whichever is greater.	Measured Freeboard: _____ mm 1.5% of Boat's Length: _____ mm Passed _____ Failed _____ Comments/Observations

5.5.2.3 Righting Test (for non self-righting fast rescue boats)		**Regulations: MSC.81(70)1/7.1.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. Test without engine is only applicable for outboard engines. (This test is not required if the righting test in 5.5.2.4 has been performed.)	The rescue boat should be capable of being righted by not more than two persons if it is inverted on the water. When the rescue boat has righted, each engine or motor should be capable of being restarted, provided the helmsman's emergency release, if fitted, has been reset. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Can the boat be righted by 2 persons? With engine and fuel: Passed _____ Failed _____ Without engine and fuel: Passed _____ Failed _____ Method used to right boat: _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.2.4 Self-Righting Test (for self-righting fast rescue boats only)	**Regulations: MSC/Circ.809, Annex, 4.1.5, 4.1.8; MSC.81(70)1/6.14**

Test Procedure	Acceptance Criteria	Significant Test Data
A suitable means should be provided to rotate the rescue boat about a longitudinal axis to any angle of heel and then release it. The rescue boat should be incrementally rotated to angles of heel up to and including 180^0 and should be released. These tests should be conducted in the following conditions of load: .1 when the rescue boat with its engine is loaded in the normal position with properly secured weights representing the fully equipped rescue boat with a full complement of persons on board. The weight used to represent each person, assumed to have an average mass of 75 kg, should be secured at each seat location and have its centre of gravity approximately 300 mm above the seatpan so as to have the same effect on stability as when the rescue boat is loaded with the number of persons for which it is to be approved; and .2 when the rescue boat is in the light condition.	After release, the rescue boat should always return to the upright position without the assistance of the occupants. At the beginning of these tests, the engine should be running in neutral position and: .1 unless arranged to stop automatically when inverted, the engine should continue to run until stopped by the helmsman's emergency release switch; and .2 after resetting the helmsman's emergency release, if necessary, the engine should be easily restarted and run for 30 min after the rescue boat has returned to the upright position. Water should not enter the engine. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Angle of Heel / Righting Moment Loaded / Righting Moment Light 45^0 _____ _____ 90^0 _____ _____ 135^0 _____ _____ 180^0 _____ _____ Result : PASSED FAILED PASSED FAILED Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.3.1 Seating Strength Test		**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat. In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.5.7.1)	The seating should be able to support this loading without any permanent deformation or damage. The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Observed damage Passed _____ Failed _____ Passed _____ Failed_____ NA ___ Comments/Observations

5.5.3.2 Seating Space Test		**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The rigid rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suits and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rigid rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.5.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.4.1 Release Mechanism Tests—Simultaneous Release	**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. Single fall systems not intended for on-load operation are exempt from this test.	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed_____ NA (NA – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed_____ NA (NA – Single fall, off-load only) Comments/Observations

5.5.4.2 Release Mechanism Tests—Load Test	**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load. (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook;. 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard **@** hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne <u>Waterborne Test:</u> Towing Speed: _____ kts Passed _____ Failed _____ <u>Non-Waterborne Test</u> Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine / Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.5.2 Operational Tests — Endurance, Speed, & Fuel Consumption	**Regulations: LSA Code MSC/Circ.809, Annex, 4.1.4 MSC.81(70)1/7.1.6, 7.4.2.1-.2**

Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after the impact and drop tests in 5.5.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 8 knots with a full complement of persons and equipment and 20 knots with a crew of 3 persons for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 8 knots for a period of 4 hours with its full complement of persons and equipment. The fuel tank should have sufficient capacity to operate at a speed of 20 knots for a period of 4 hours with a crew of 3 persons.	Smallest Engine / Largest Engine Make/model: _____ _____ Fuel Tank Capacity: _____ L Propeller: Pitch: _____ _____ Diameter: _____ _____ @8 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ @20 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.5.5.3 Operational Tests—Engine Out of Water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.5.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.5.5 Operational Tests— Helpless Person Recovery		**Regulations: LSA Code 4.4.3.4, 5.1.1.7, MSC.81(70)1/6.10.8, 7.1.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated by test that it is possible to bring helpless people on board the rescue boat from the sea.	Helpless people can be brought on board the rescue boat from the sea.	Number of Persons required and any special equipment used: _____ Passed _____ Failed _____ Comments/Observations

5.5.5.6 Operational Tests—Manoeuvrability With Paddles Or Oars		**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.5.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.5.6.2 Towing & Painter Tests—Painter Release Test		**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.5.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.5.7.1 Strength Tests - Impact, Drop & Operation after Impact & Drop Test	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/6.4.1, 6.4.3, 6.4.5, 6.4.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The same rescue boat with its engine, loaded as described above, should then be suspended above the water so that the distance from the lowest point of the rescue boat to the water is 3 m. The rescue boat should then be released so that it falls freely into the water. .3 After the impact and drop tests, the boat should be examined to detect the position and extent of damage that may have occurred as a result of the tests, and an operational test should then be conducted in accordance with 5.5.5.2. .4 After the operational test, the rescue boat should be unloaded, cleaned, and carefully examined to detect the position and extent of damage that may have occurred as a result of the tests.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the rescue boat's efficient functioning; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.5.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Weight of heaviest engine tested:_____ Final Evaluation: Passed _____ Failed _____ Comments/Observations

Rigid Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.5.7.2 Strength Tests—Overload Test	**Regulations: MSC.81(70)1/7.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a properly distributed load of four times the weight to represent the equipment and full complement of persons for which it is to be approved and suspended for five minutes from its bridle or hooks. The weights should be distributed in proportion to the loading of the boat in its service condition, but the weights used to represent the persons need not be placed 300 mm above the seat pan. The boat and bridle or hooks and fastening device should be examined after the test has been conducted. Testing by filling the boat with water should not be accepted. This method of loading does not give the proper distribution of weight. Machinery may be removed in order to avoid damage, in which case weights should be added to the boat to compensate for the removal of such machinery. The rescue boat and it's bridle or hooks (release mechanism) and fastening device should be examined after the test for any signs of damage.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Load in boat: _____ kg Comments/Observations Passed _____ Failed _____

5.6 INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

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5.6 INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.0.1 General Data and Specifications	**Regulations: LSA Code 5.1**

General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____ Propeller:_____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Gunwale: _____ Length to transom:_____ Length of hull:_____ (insert diagram of hull) Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: -_____ Quality Assurance Procedure: - _____ Quality Assurance Manual: -_____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.6.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 6.0 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Buoyancy compartments** fitted with:	
	Non-return valve for manual inflation	Passed _____ Failed _____
	Means for deflation	Passed _____ Failed _____
	Safety relief valve unless waived by Administration	Passed _____ Failed_____ NA ____
	Suitable patches for securing painters fore and aft	Passed _____ Failed _____
	Fittings and Provisions	
	Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller	Passed _____ Failed _____
	On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat	Passed _____ Failed_____ NA _____
	Weathertight stowage for small items of equipment	Passed _____ Failed _____
	Approved position indicating light provided at highest point	Passed _____ Failed _____
	Rubbing strips on bottom and vulnerable places on the outside	Passed _____ Failed _____
	Transom, if fitted, not inset by more than 20% of overall length	Passed _____ Failed _____
	Automatically self-bailing or capable of rapidly clearing water	Passed _____ Failed _____
		Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.6.1.2 Visual Inspection — Fittings, Provisions and Ladders (cont'd)	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Ladders** Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline. **Colour** The boat should be of a highly visible colour where it will assist detection.	Passed _____ Failed _____ Lowest step _____ m below waterline Highly visible colour: Passed_____ Failed Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.1.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable energy sources provided for power starting systems - Required starting aids provided. - Starting system is not impeded by engine casing, thwarts, or other obstructions - Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion - Exhaust arranged to prevent water from entering engine in normal operation. - System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable arrangements providing similar protection. - Personnel are protected from hot and moving parts - Shouted order can be heard with engine running at speed necessary for 6 knot operation - Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting. - Recharging for engine batteries provided by ship's power supply does not exceed 50 v - Recharging means for engine batteries can be disconnected at the rescue boat embarkation station - Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Manual Power YES NO NA Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC/Circ.809, Annex, 4.1.7 MSC.81(70)1/7.2.16**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering**	
	A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor)	Passed _____ Failed _____
	Rudder permanently attached to the rescue boat	Passed _____ Failed_____ NA _____
	Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller	Passed _____ Failed _____
	Steered by wheel at helmsman's position	Passed _____ Failed_____ NA _____
	Has emergency steering system providing direct control of rudder, water jet or outboard motor	Passed _____ Failed _____
	Hands-free, watertight VHF radio provided	Passed _____ Failed _____
	Fuel Tank	
	If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed_____ NA _____
		Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7,.6.5, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed_____ NA _____
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed_____ NA _____
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed_____ NA _____
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed_____ NA _____
	For a single fall system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed_____ NA _____
		Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.6.2.1 Damage Test	**Regulations: LSA Code 5.1.3.5, MSC.81(70)1/7.2.8-.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with the inflated rescue boat loaded with the number of persons (of 75 kg mass) for which it is to be approved both with and without engine and fuel or an equivalent mass in the position of the engine and fuel tank: 1 with forward buoyancy compartment deflated; 2 with the entire buoyancy on one side of the rescue boat deflated; and 3 with the entire buoyancy on one side and the bow compartment deflated.	In each of the conditions prescribed, the full number of persons for which the rescue boat is to be approved should be supported within the rescue boat.	1 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 2 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 3 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.2.2 Stability Test	**Regulations: LSA Code 4.4.5, MSC.81(70)1/7.2.6-.7**

Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with engine and fuel or an equivalent mass in place of the engine and fuel tanks:		
.1 the number of persons for which the inflated rescue boat is to be approved should be crowded to one side with half this complement seated on the buoyancy tube, and then to one end. In each case the freeboard should be recorded; and	.1 Under these conditions the freeboard should be everywhere positive.	1 Freeboard crowded to one side _____ mm To bow: _____ mm To stern: _____ mm Passed _____ Failed _____
.2 the stability of the rescue boat during boarding should be ascertained by two persons in the rescue boat demonstrating that they can readily assist from the water a third person who is required to feign unconsciousness. The third person should have his back towards the side of the rescue boat so that he cannot assist the rescuers. All persons should wear approved lifejackets.	.2 The rescue boat should be stable	2 Stability observations during recovery of unconscious person: Clothing/Suits on helpless person: _____ Method of recovery: _____ Number of persons required and any special equipment used: _____
These stability tests may be carried out with the rescue boat floating in still water.		Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.6.2.3 Loading Test		**Regulations: MSC.81(70)1/7.2.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The freeboard of the inflated rescue boat should be taken in the various loading conditions as follows: .1 rescue boat with all its equipment; .2 rescue boat with all its equipment, engine and fuel, or an equivalent mass positioned to represent engine and fuel; .3 rescue boat with all its equipment and the number of persons for which it is to be approved having an average mass of 75 kg so arranged that a uniform freeboard is achieved at the side buoyancy tubes; and .4 rescue boat with the number of persons for which it is to be approved and all its equipment, engine and fuel or an equivalent mass to represent engine and fuel and the rescue boat being retrimmed as necessary.	In each condition the minimum freeboard should be not less than 300 mm at the buoyancy tubes and not less than 250 mm from the lowest part of the transom.	.1 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .2 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .3 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .4 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm Passed _____ Failed _____ Comments/Observations

5.6.2.4 Swamp Test		**Regulations: MSC.81(70)1/7.2.11**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat, when fully swamped, is capable of supporting its full equipment, the number of persons for which it is to be approved and a mass equivalent to its engine and full fuel tank. It should also be demonstrated that the rescue boat does not seriously deform in this condition.	The rescue boat should be capable of supporting the full load and should not seriously deform.	Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.2.5 Righting Test (for non self-righting fast rescue boats)	**Regulations: MSC.81(70)1/7.1.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. (This test is not required if the righting test in 5.6.2.6 has been performed.)	The rescue boat should be capable of being righted by not more than two persons if it is inverted on the water. When the rescue boat has righted, each engine or motor should be capable of being restarted, provided the helmsman's emergency release, if fitted, has been reset. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Can the boat be righted by 2 persons? With engine and fuel: Passed _____ Failed _____ Without engine and fuel: Passed _____ Failed _____ Method used to right boat: _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.2.6 Self-Righting Test (for self-righting fast rescue boats only)	**Regulations: MSC/Circ.809, Annex, 4.1.5, 4.1.8 MSC.81(70)1/6.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
A suitable means should be provided to rotate the rescue boat about a longitudinal axis to any angle of heel and then release it. The rescue boat should be incrementally rotated to angles of heel up to and including 180^0 and should be released. These tests should be conducted in the following conditions of load: .1 when the rescue boat with its engine is loaded in the normal position with properly secured weights representing the fully equipped rescue boat with a full complement of persons on board. The weight used to represent each person, assumed to have an average mass of 75 kg, should be secured at each seat location and have its centre of gravity approximately 300 mm above the seatpan so as to have the same effect on stability as when the rescue boat is loaded with the number of persons for which it is to be approved; and .2 when the rescue boat is in the light condition.	After release, the rescue boat should always return to the upright position without the assistance of the occupants. At the beginning of these tests, the engine should be running in neutral position and: .1 unless arranged to stop automatically when inverted, the engine should continue to run until stopped by the helmsman's emergency release switch; and .2 after resetting the helmsman's emergency release, if necessary, the engine should be easily restarted and run for 30 min after the rescue boat has returned to the upright position. Water should not enter the engine. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Angle of Heel / Righting Moment Loaded / Righting Moment Light 45^0 _____ _____ 90^0 _____ _____ 135^0 _____ _____ 180^0 _____ _____ Result : PASSED FAILED PASSED FAILED Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.3.1 Seating Strength Test	**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1**	
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat. In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.6.7.1)	The seating should be able to support this loading without any permanent deformation or damage. The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Observed damage Passed _____ Failed _____ Passed _____ Failed_____ NA Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.3.2 Seating Space Test	**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suit and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.6.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed _____ Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.4.1 Release Mechanism Tests—Simultaneous Release		**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. (Single fall systems not intended for on-load operation are exempt from this test.)	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed_____ NA (NA – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed_____ NA (NA – Single fall, off-load only) Comments/Observations

5.6.4.2 Release Mechanism Tests—Load Test		**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load. (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook. 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard @ hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne <u>Waterborne Test:</u> Towing Speed: _____ kts PASSED_____ FAILED_____ <u>Non-Waterborne Test</u> Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.5.2 Operational Tests — Endurance, Speed & Fuel Consumption	**Regulations: LSA Code MSC/Circ.809, Annex, 4.1.4 MSC.81(70)1/7.1.6, 7.4.2.1-.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after the impact and drop tests in 5.6.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 8 knots with a full complement of persons and equipment and 20 knots with a crew of 3 persons for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 8 knots for a period of 4 hours with its full complement of persons and equipment. The fuel tank should have sufficient capacity to operate at a speed of 20 knots for a period of 4 hours with a crew of 3 persons.	Smallest Engine / Largest Engine Make/model: _____ _____ Fuel Tank Capacity: _____ L Propeller: Pitch: _____ _____ Diameter: _____ _____ @8 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ @20 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.5.3 Operational Tests—Engine Out of Water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.6.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.5.5 Operational Tests—Manoeuvrability With Paddles Or Oars	**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.5.6 Operational Tests—Heavy Weather / Seas Test		**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.10**
Test Procedure	Acceptance Criteria	Significant Test Data
To simulate use in heavy weather the inflated rescue boat should be fitted with a larger powered engine than is intended to be fitted and driven hard in a wind of force 4 or 5 or equivalent rough water for at least 30 min.	The rescue boat should not show undue flexing or permanent strain nor have lost more than minimal pressure.	Tube pressure before test: _____ mbar Pressure relief valves open/closed?_____ Wave height _____ m Wind Speed _____ m/s Tube pressure after test: _____ mbar Passed _____ Failed _____ Comments/Observations

5.6.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.6.2 Towing & Painter Tests—Painter Release Test	**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.6.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.7.1	**Strength Tests — Impact, Drop & Operation after Impact & Drop Test**	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/6.4.1, 7.2.2 & 7.2.3**

Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The rescue boat complete with all its equipment and with a mass equivalent to its engine and fuel in the position of its engine and fuel tank should be dropped three times from a height of at least 3 m on to water. The drops should be from the 45-degree bow-down, level trim, and 45-degree stern-down attitudes. .3 On completion of these tests the rescue boat and its equipment should be carefully examined.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the efficient functioning of the rescue boat and its equipment; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.6.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Heaviest engine used:_____ Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Final Evaluation: Passed:_____ Failed:_____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.6.7.2 Strength Tests—Ambient Overload Test		**Regulations: LSA Code 5.1.3.2.2, MSC.81(70)1/7.2.12**
Test Procedure	Acceptance Criteria	Significant Test Data
With all relief valves inoperative, the inflated rescue boat should be loaded with four times the mass of the full complement of persons and equipment for which it is to be approved and suspended for 5 minutes from its bridle at an ambient temperature of $+20 \pm 3^0$C. The rescue boat and its bridle should be examined after the test is conducted.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Passed _____ Failed _____ Comments/Observations

5.6.7.3 Strength Tests—Cold Overload Test		**Regulations: LSA Code 5.1.3.2.3, MSC.81(70)1/7.2.13**
Test Procedure	Acceptance Criteria	Significant Test Data
With all relief valves operative, after 6 h conditioning at a temperature of -30^0C, the inflated rescue boat should be loaded with 1.1 times the mass of the full complement of persons and equipment for which it is to be approved and suspended for five minutes from its bridle. The rescue boat and bridle should be examined after the test is conducted.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.6.7.4 Strength Tests—Mooring Out Test	**Regulations: LSA Code 5.1.3.3, MSC.81(70)1/7.2.15, 5.5, 5.17.7-.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a mass equal to the mass of the total number of persons for which it is to be approved and its equipment and moored in a location at sea or in a seawater harbour. The rescue boat should remain afloat in that location for 30 days. The pressure may be topped up once a day using the manual pump; however, during any 24 h period the rescue boat should retain its shape. Each inflatable compartment in the rescue boat should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative; compressed air should be used to inflate the inflatable rescue boat and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has been completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved.	The rescue boat should not sustain any damage that would impair its performance. The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the rescue boat.	Compartment 1 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 2 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 3 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 4 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Compartment 5 Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Passed _____ Failed _____ Comments/Observations

Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.6.8.1 Inflation Chamber Characteristics Tests	**Regulations: LSA Code 1.2.2, MSC.81(70)1/7.2.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
The inflatable compartment materials used to construct the rescue boat should be tested for the following characteristics : .1 tensile strength .2 tear strength .3 heat resistance .4 cold resistance .5 heat ageing .6 weathering .7 flex cracking .8 abrasion .9 coating adhesion .10 oil resistance .11 elongation at break .12 piercing strength .13 ozone resistance .14 gas permeability .15 seam strength .16 ultraviolet light resistance	The material characteristics should be to the satisfaction of the Administration .	.1 tensile strength _____ N/50 mm width .2 tear strength _____ N .3 heat resistance – Blocking _____ .4 cold resistance – Cracking _____ .5 heat ageing _____ % retained strength N/50 mm width .6 weathering _____ % retained strength N/50 mm width .7 flex cracking – Cracking or deterioration _____ .8 abrasion _____ mg/rev.; Base fabric not visible _____ .9 coating adhesion _____ N/50 mm width .10 oil resistance – Tackiness or other deterioration _____ .11 elongation at break _____ % .12 piercing strength _____ .13 ozone resistance – Visible cracking _____ .14 gas permeability _____ bubbles/min or $l/m^2/hr$ of _____ .15 seam strength _____ N/50 mm width .16 ultraviolet light resistance _____ % retained strength N/50 mm width Cracking _____ SATISFACTORY UNSATISFACTORY Comments/Observations

5.7 RIGID/INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

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- 5.7.0.3 Quality assurance

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5.7.3 Seating strength and space tests
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5.7.4 Release mechanism tests
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5.7.5 Operational tests
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5.7.7 Strength tests
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5.7.8 Materials tests
- 5.7.8.1 Inflation chamber characteristics tests

5.7 RIGID/INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.7.0.1 General Data and Specifications	**Regulations: LSA Code 4.4, 5.1, MSC.81(70)1/7.2.16**	
General Information	Rescue boat Dimensions	Rescue boat Weight
Construction Material: Hull: _____ Canopy: _____ Fire retardancy documentation:_____ Inflated chambers:_____ Rescue Boat Inherent Buoyancy (Type App.) Material: _____ Weight: _____ Occupancy: Persons (75 kg each): _____ Engine(s) Installed: 1 2 Type App by: - _____ Manufacturer:_____ Type: _____ Power: _____ Gear ratio (inboard engine):_____ Additional rigid or inflatable buoyancy:- _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Sill: _____ Depth to Gunwale: _____ Moulded Breadth: _____ Moulded Depth: _____ (Insert diagram of hull for reference) Provision for securing hanging-off pendant (if applicable):_____	Design Weight: Unloaded Boat: _____ Loose Equipment: _____ Fuel: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.7.0.2 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.7.0.3 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.1 Visual Inspection — Occupant Space	**Regulations: LSA Code 4.4.2.2, 4.4.3.5, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**General** Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length. Length is at least 6.0 m and not over 8.5 m. **Seating Space** Width – at least 430 mm Depth – at least 100mm each side of a point 215mm from the back Knee Space (Seating on seats) at least 635 mm from the back Knee Width – at least 250 mm Leg Space (Seating on floor) – at least 1190 mm from the back Overlapping Seat Vertical Separation – at least 350 mm Seat Horizontal Overlap – 150 mm maximum Each seating position should be clearly indicated. **Stretcher(s) space:** Rescue boats should be capable of carrying at least five seated persons and a person lying on a stretcher **Walkway Surfaces** The surfaces on which persons might walk should have a non-skid finish.	Passed _____ Failed _____ Passed _____ Failed _____ Width: _____ mm Depth: _____ mm Knee Space: _____ mm Knee Width: _____ mm Leg Space: _____ mm Vert. Separation: _____ mm Overlap: _____mm Position Indication: PASSED FAILED Stretcher space: _____ x _____mm Passed _____ Failed _____ Non Skid Surface: Passed _____ Failed Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.2 Visual Inspection — Fittings, Provisions and Ladders	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Buoyancy compartments** fitted with:	
	Non-return valve for manual inflation	Passed _____ Failed _____
	Means for deflation	Passed _____ Failed _____
	Safety relief valve unless waived by Administration	Passed _____ Failed_____ NA ____
	Suitable patches for securing painters fore and aft	Passed _____ Failed _____
	Fittings and Provisions	
	Suitable handholds or buoyant lifeline becketed around the rescue boat above the waterline and within reach of a person in the water, except in the vicinity of the rudder and propeller	Passed _____ Failed _____
	On other than self-righting rescue boats, handholds on the underside arranged to break away without damaging the rescue boat	Passed _____ Failed _____
	Weathertight stowage for small items of equipment	Passed _____ Failed_____ NA _____
	Approved position indicating light provided at highest point	Passed _____ Failed _____
	Automatically self-bailing or capable of rapidly clearing water.	Passed _____ Failed _____
		Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.2 Visual Inspection — Fittings, Provisions and Ladders (cont'd)	**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.16**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Ladders** Ladders that can be used at any entrance should be on board and the lowest step when in place should not be less than 0.4 m below the light waterline. **Other Provisions** Buoyant material may be installed external to the hull of the boat, provided it is adequately protected against damage and is capable of withstanding exposure when stowed on an open deck on a ship at sea and for 30 days afloat in all sea condition. **Colour** The boat should be of a highly visible colour where it will assist detection.	Passed _____ Failed _____ Lowest step _____ m below waterline YES NO NA Passed _____ Failed _____ Highly visible colour: Passed_____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.3 Visual Inspection—Engine and Starting System	**Regulations: LSA Code 4.4.6, 5.1, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable energy sources provided for power starting systems - Required starting aids provided. - Starting system is not impeded by engine casing, thwarts, or other obstructions - Propeller arranged to be disengaged from the engine and provision for ahead and astern propulsion - Exhaust arranged to prevent water from entering engine in normal operation. - System designed with due regard to the safety persons in the water and to the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable arrangements providing similar protection. - Personnel are protected from hot and moving parts - Shouted order can be heard with engine running at speed necessary for 6 knot operation - Watertight casing around bottom and sides of starter batteries with a tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting. - Recharging for engine batteries provided by ship's power supply does not exceed 50 v - Recharging means for engine batteries can be disconnected at the rescue boat embarkation station - Instructions for starting and operating engine are water resistant and mounted in a conspicuous place near the engine starting controls	Manual Power YES NO NA Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____ Passed_____ Failed_____

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.4 Visual Inspection — Steering Mechanism and Fuel Tank	**Regulations: LSA Code 4.4.7.2, 5.1.1.8, MSC/Circ.809, 4.1.7, MSC.81(70)1/7.2.16**

Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	**Steering**	
	A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor)	Passed _____ Failed _____
	Rudder permanently attached to the rescue boat	Passed _____ Failed_____ NA _____
	Rudder and tiller arranged so as not to be damaged by operation of the release mechanism or propeller	Passed _____ Failed _____
	Steered by wheel at helmsman's position	Passed _____ Failed _____ NA _____
	Has emergency steering system providing direct control of rudder, water jet or outboard motor	Passed _____ Failed _____
	Hands-free, watertight VHF radio provided	Passed _____ Failed _____
	Fuel Tank	
	If fitted with petrol-driven outboard motor, the fuel tank(s) should be specially protected against fire and explosion.	Passed _____ Failed _____ NA _____
		Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.1.5 Visual Inspection — Release Mechanism	**Regulations: LSA Code 4.4.7.6.5, MSC.81(70)1/7.2.16**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions	Passed _____ Failed _____
	Release control marked in a colour that contrasts with the surroundings	Passed _____ Failed _____
	For on-load release mechanisms:	
	Suitably worded danger sign for on load release	Passed _____ Failed_____ NA ____
	Mechanical protection (interlock) engages only when mechanism is completely and properly reset, to prevent accidental release during recovery	Passed _____ Failed_____ NA ____
	On-load release mechanism needs deliberate and continued action by the operator	Passed _____ Failed_____ NA ____
	Mechanical protection provided beyond that normally required for off load release	Passed _____ Failed_____ NA ____
	For a single fall system with suitable painter, on-load release capability is not required; in such an arrangement a single capability to release the boat only when it is fully waterborne will be adequate.	Passed _____ Failed_____ NA ____
		Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.7.2.1 Damage Test (Does not apply if waterline is below lower side of inflated tube)	**Regulations: LSA Code 5.1.3.5, MSC.81(70)1/7.2.8-.9, 7.3.2**

Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with the rigid inflated rescue boat loaded with the number of persons (of 75 kg mass) for which it is to be approved both with and without engine and fuel or an equivalent mass in the position of the engine and fuel tank: 1 with forward buoyancy compartment deflated; 2 with the entire buoyancy on one side of the rescue boat deflated; and 3 with the entire buoyancy on one side and the bow compartment deflated.	In each of the conditions prescribed, the full number of persons for which the rescue boat is to be approved should be supported within the rescue boat.	1 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 2 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ 3 With engine and fuel: Passed _____ Failed _____ Without engine and fuel Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.2.2 Stability Test	**Regulations: LSA Code 4.4.5, MSC.81(70)1/7.2.6-.7**

Test Procedure	Acceptance Criteria	Significant Test Data
The following tests should be carried out with engine and fuel or an equivalent mass in place of the engine and fuel tanks:		
.1 the number of persons for which the inflated rescue boat is to be approved should be crowded to one side with half this complement seated on the buoyancy tube, and then to one end. In each case the freeboard should be recorded; and	.1 Under these conditions the freeboard should be everywhere positive.	1 Freeboard crowded to one side _____ mm To bow: _____ mm To stern:_____mm Passed _____ Failed _____
.2 the stability of the rescue boat during boarding should be ascertained by two persons in the rescue boat demonstrating that they can readily assist from the water a third person who is required to feign unconsciousness. The third person should have his back towards the side of the rescue boat so that he cannot assist the rescuers. All persons should wear approved lifejackets.	.2 The rescue boat should be stable	2 Stability observations during recovery of unconscious person: Clothing/Suits on helpless person: _____ Method of recovery: _____ Number of persons required and any special equipment used: _____
These stability tests may be carried out with the rescue boat floating in still water.		Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.2.3 Loading Test		**Regulations: MSC.81(70)1/7.2.4-.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The freeboard of the inflated rescue boat should be taken in the various loading conditions as follows: .1 rescue boat with all its equipment; .2 rescue boat with all its equipment, engine and fuel, or an equivalent mass positioned to represent engine and fuel; .3 rescue boat with all its equipment and the number of persons for which it is to be approved having an average mass of 75 kg so arranged that a uniform freeboard is achieved at the side buoyancy tubes; and .4 rescue boat with the number of persons for which it is to be approved and all its equipment, engine and fuel or an equivalent mass to represent engine and fuel and the rescue boat being retrimmed as necessary.	In each condition the minimum freeboard should be not less than 300 mm at the buoyancy tubes and not less than 250 mm from the lowest part of the transom.	.1 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .2 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .3 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm .4 Freeboard at Buoyancy Tubes: _____ mm Freeboard at Transom: _____ mm Passed _____ Failed _____ Comments/Observations

5.7.2.4 Swamp Test		**Regulations: MSC.81(70)1/7.2.11**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat, when fully swamped, is capable of supporting its full equipment, the number of persons for which it is to be approved and a mass equivalent to its engine and full fuel tank. It should also be demonstrated that the rescue boat does not seriously deform in this condition.	The rescue boat should be capable of supporting the full load and should not seriously deform.	Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.2.5	**Flooded Stability Test (Required only when waterline is below lower side of inflated tube)**	**Regulations: LSA Code 4.4.1.1, MSC.81(70)1/6.8.1-.3**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with its equipment. If provision lockers, water tanks and fuel tanks cannot be removed, they should be flooded or filled to the final waterline resulting from this test. Rescue boats fitted with watertight stowage compartments to accommodate individual drinking water containers should have these containers aboard and placed in the stowage compartments which should be sealed watertight during the flooding tests. Ballast of equivalent weight and density should be substituted for the engine and any other installed equipment that can be damaged by water. Weights representing persons (of 75 kg mass) who would be in the water when the rescue boat is flooded may be omitted. Weights representing persons who would not be in the water when the rescue boat is flooded should be placed in the normal seating positions of such persons. Note: Several tests may have to be conducted if holes in different areas would create different flooding conditions.	When loaded as specified, the rescue boat should have positive stability when filled with water to represent flooding which would occur when the rescue boat is holed in any one location below the waterline assuming no loss of buoyancy material and no other damage.	Comments/Observations Passed _____ Failed _____

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.7.2.6 Righting Test (for non-self-righting fast rescue boats)	**Regulations: MSC.81(70)1/7.1.7**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that both with and without engine and fuel or an equivalent mass in place of the engine and fuel tank, the rescue boat is capable of being righted by not more than two persons if it is inverted on the water. (This test is not required if the righting test in 5.7.2.7 has been performed.)	The rescue boat should be capable of being righted by not more than two persons if it is inverted on the water. When the rescue boat has righted, each engine or motor should be capable of being restarted, provided the helmsman's emergency release, if fitted, has been reset. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Can the boat be righted by 2 persons? With engine and fuel: Passed _____ Failed _____ Without engine and fuel: Passed _____ Failed _____ Method used to right boat: _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.2.7 Self-Righting Test (for self-righting fast rescue boats only)	**Regulations: MSC/Circ.809, Annex, 4.1.5, 4.1.8 MSC.81(70)1/6.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
A suitable means should be provided to rotate the rescue boat about a longitudinal axis to any angle of heel and then release it. The rescue boat should be incrementally rotated to angles of heel up to and including 180^0 and should be released. These tests should be conducted in the following conditions of load: .1 when the rescue boat with its engine is loaded in the normal position with properly secured weights representing the fully equipped rescue boat with a full complement of persons on board. The weight used to represent each person, assumed to have an average mass of 75 kg, should be secured at each seat location and have its centre of gravity approximately 300 mm above the seatpan so as to have the same effect on stability as when the rescue boat is loaded with the number of persons for which it is to be approved; and .2 when the rescue boat is in the light condition.	After release, the rescue boat should always return to the upright position without the assistance of the occupants. At the beginning of these tests, the engine should be running in neutral position and: .1 unless arranged to stop automatically when inverted, the engine should continue to run until stopped by the helmsman's emergency release switch; and .2 after resetting the helmsman's emergency release, if necessary, the engine should be easily restarted and run for 30 min after the rescue boat has returned to the upright position. Water should not enter the engine. The design of the fuel and lubricating systems should prevent the loss of more than 250 ml of fuel or lubricating oil from the propulsion system.	Angle of Heel / Righting Moment Loaded / Righting Moment Light 45^0 _____ _____ 90^0 _____ _____ 135^0 _____ _____ 180^0 _____ _____ Result : PASSED FAILED PASSED FAILED Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.7.3.1 Seating Strength Test		**Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1 & 6.4.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The seating should be loaded with a mass of 100 kg in each position allocated for a person to sit in the rescue boat. In the case of a rescue boat launched by falls, each type of seat should be loaded with a mass of 100 kg in any single seat location when dropped into the water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in 5.7.7.1.)	The seating should be able to support this loading without any permanent deformation or damage. The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.	Observed damage Passed _____ Failed _____ Passed _____ Failed_____ NA Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.3.2 Seating Space Test	**Regulations: LSA Code 5.1.1.3.2, MSC.81(70)1/7.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be fitted with its engine and all its equipment. The number of persons for which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing lifejackets and immersion suit and any other essential equipment required, should then board; one person should lie down and the others should be properly seated in the rescue boat. The rescue boat should then be manoeuvred and all equipment on board tested to demonstrate that it can be operated without difficulty or interference with the occupants.	Equipment can be operated without interference with the occupants. The rescue boat must be capable of carrying at least 5 persons and a person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form 5.7.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	Equipment operated: YES NO Number of persons carried: Seated on seats _____ Seated on floor _____ Lying on a stretcher _____ Total _____ Passed _____ Failed _____ Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.4.1 Release Mechanism Tests—Simultaneous Release		**Regulations: LSA Code 4.4.7.6, MSC.81(70)1/6.9.1-.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For rescue boats launched by fall or falls, the rescue boat with its engine fitted should be suspended from the release mechanism just clear of the ground or the water. The rescue boat should be loaded so that the total mass equals 1.1 times the mass of the rescue boat, all its equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each fall to which it is connected without binding or damage to any part of the rescue boat or the release mechanism. (Single fall systems not intended for on-load operation are exempt from this test.)	It should be confirmed that the rescue boat will simultaneously release from each fall which it is connected without binding or damage to any part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release from each fall to which it is connected when fully waterborne in the light condition and in a 10% overload condition.	Light condition Passed _____ Failed_____ NA (NA – Single fall, off-load only) 1.1 x Loaded Mass: _____ kg Passed _____ Failed_____ NA (NA – Single fall, off-load only) Comments/Observations

5.7.4.2 Release Mechanism Tests—Load Test		**Regulations: LSA Code 4.4.7.6.4, MSC.81(70)1/6.9.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism. (Testing to failure is suggested, but not required.)	The release mechanism should not fail at load less than or equal to six times the working load. (If tested to failure, working load may be taken as 1/6 the failure load.)	Working Load: _____ N Force Applied: _____ N Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.4.3 Release Mechanism Tests—Towing Release Test	**Regulations: LSA Code 4.4.1.3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the release mechanism can release the fully equipped rescue boat when loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved, when the rescue boat is being towed at speeds up to 5 knots. In lieu of a waterborne test, this test may be conducted as follows: .1 A force equal to the force necessary to tow the rescue boat at a speed of 5 knots should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction, depending upon the design of the release hook. 2 A force equal to the safe working load of the hook should be applied to the hood in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides. 3 A force equal to the safe working load of the hook should be applied to the hook in a direction half-way between the positions of tests 1 and 2 and within the ellipse segment formed by 1 and 2. This test should be conducted in four positions. (This test is not applicable to single fall systems not intended for on-load operation.)	The rescue boat should be released satisfactorily by the release mechanism: @ towing load in hook @ 45° forward @ towing load in hook @ 45° aft @ hook SWL @ 20° athwartships to port @ hook SWL @ 20° athwartships to starboard **@** hook SWL in halfway positions: - i) Port ahead ii) Starboard ahead iii) Starboard aft iv) Port aft	Type of Test: Waterborne / Non-Waterborne <u>Waterborne Test:</u> Towing Speed: _____ kts Passed _____ Failed _____ <u>Non-Waterborne Test</u> Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Load _____ kN Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.5.1 Operational Tests—Liferaft Towing	**Regulations: LSA Code 4.4.6.8, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. It should be demonstrated that the rescue boat can tow a 25 person liferaft, as a minimum, loaded with the number of persons for which it is to be approved and its equipment at speed of 2 knots in calm water. The largest size of fully loaded liferaft which the rescue boat can tow at a speed of at least 2 knots should be determined. Alternatively, determine the maximum towing force of the rescue boat by securing the fitting designated for towing other craft to a stationary object by a tow rope fitted with a means to measure bollard pull. The engine should be operated ahead at full speed for a period of at least 2 min. and the maximum force recorded. (For rescue boats equipped with outboard motor, raft towing or bollard pull trials may be carried out with engines of various powers to assess the rescue boat's performance.)	The fully loaded rescue boat should be able to successfully tow, as a minimum, a 25 person liferaft, fully loaded with persons and equipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting or its supporting structure.	Smallest Engine / Largest Engine Make/model: _____ _____ Largest liferaft used: _____ _____ Speed maintained kts:-_____ _____ Observed damage: OR Bollard pull: N _____ _____ (Record on type approval certificate) Observed damage: Propeller: Pitch: _____ Diameter: _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.5.2 Operational Tests — Endurance, Speed, & Fuel Consumption	**Regulations: LSA Code 5.1.1.6,MSC.81(70)1/7.1.5, 1/7.1.6**

Test Procedure	Acceptance Criteria	Significant Test Data
(Note: Run this test after the impact and drop tests in 5.7.7.1.) The rescue boat should be loaded with weights equal to the mass of its equipment and the number of persons for which the rescue boat is to be approved. The engine should be started and the boat manoeuvred for a period of at least 4 h to demonstrate satisfactory operation. The rescue boat should be run at a speed of not less than 8 knots with a full complement of persons and equipment and 20 knots with a crew of 3 persons for a period which is sufficient to ascertain the fuel consumption and to establish that the fuel tank has the required capacity. (This determination may be made during the 4-h period of operation.) For rescue boats equipped with outboard motor, speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.	The boat should operate satisfactorily throughout the 4-h operation. The fuel tank should have sufficient capacity to operate at a speed of 8 knots for a period of 4 hours with its full complement of persons and equipment. The fuel tank should have sufficient capacity to operate at a speed of 20 knots for a period of 4 hours with a crew of 3 persons.	Smallest Engine / Largest Engine Make/model: _____ _____ Fuel Tank Capacity: _____ L Propeller: Pitch: _____ _____ Diameter: _____ _____ @8 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ @20 knots: Engine speed (RPM):_____ _____ Boat speed (kts) _____ _____ Consumption (L/h) _____ _____ Endurance (hrs.) _____ _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.5.3 Operational Tests—Engine Out of Water		**Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5**
Test Procedure	Acceptance Criteria	Significant Test Data
The engine should be operated for at least 5 min at idling speed under conditions simulating normal storage. Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.	The engine should not be damaged as a result of this test.	Passed _____ Failed _____ Comments/Observations

5.7.5.4 Operational Tests—Compass Test		**Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be determined that the compass performance is satisfactory and that it is not unduly affected by magnetic fittings and equipment in the rescue boat.	The compass operates satisfactorily.	Compass Make: _____ Compass Model: _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.7.5.5 Operational Tests—Manoeuvrability With Paddles Or Oars	**Regulations: LSA Code 5.1.2.2.1, MSC.81(70)1/7.1.8**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the rescue boat can be propelled and manoeuvred by its oars or paddles in calm water conditions at a speed of at least 0.5 knots over a distance of at least 25 m. when laden with the number of persons, all wearing lifejackets and immersion suits, for which it is to be approved.	The rescue boat should be capable of being satisfactorily paddled and manoeuvred.	Distance travelled: _____ m Time Required: _____ s Calculated speed: _____ m/s = _____ knots Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant _____ Immersion suit – Un-insulated/Buoyant Insulated _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.5.6 Operational Tests—Heavy Weather / Seas Test		**Regulations: LSA Code 5.1.3, MSC.81(70)1/7.2.10**
Test Procedure	Acceptance Criteria	Significant Test Data
To simulate use in heavy weather the inflated rescue boat should be fitted with a larger powered engine than is intended to be fitted and driven hard in a wind of force 4 or 5 or equivalent rough water for at least 30 min.	The rescue boat should not show undue flexing or permanent strain nor have lost more than minimal pressure.	Tube pressure before test: _____ mbar Pressure relief valves open/closed?_____ Wave height_____m Wind Speed _____ m/s Tube pressure after test: _____ mbar Passed _____ Failed _____ Comments/Observations

5.7.6.1 Towing & Painter Tests - Towing Test		**Regulations: LSA Code 4.4.1.3.2, 4.4.7.7, MSC.81(70)1/6.11.1**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the fully equipped rescue boat, loaded with a properly distributed mass equal to the mass of the number of persons for which it is to be approved, can be towed at a speed of not less than 5 knots in calm water and on an even keel using the rescue boat's painter securing device.	The rescue boat should not exhibit unsafe or unstable characteristics. There should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.6.2 Towing & Painter Tests—Painter Release Test	**Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.2-.3**

Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the painter release mechanism can release the painter on a fully equipped and loaded rescue boat that is being towed at a speed of not less than 5 knots in calm water. The painter release mechanism should be tested in several distinct directions of the upper hemisphere not obstructed by the canopy or other constructions in the rescue boat. The directions specified in test 5.7.4.3 should be used if possible.	The painter should release and there should be no damage to the rescue boat or its equipment as a result of this test.	Passed _____ Failed _____ Test Direction _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ _____ Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.7.7.1 Strength Tests—Impact, Drop & Operation after Impact & Drop Test	**Regulations: LSA Code 4.4.1.7, MSC.81(70)1/6.4.1, 7.2.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
.1 For boats launched by fall or falls, the fully equipped rescue boat, including its engine, should be loaded with weights equal to the mass of the number of persons for which the rescue boat is to be approved. The weights should be distributed to represent the normal loading in the rescue boat. (These weights need not be placed 300 mm above the seatpan.) Skates or fenders, if required, should be in position. The rescue boat, in a free hanging position, should be pulled laterally to a position so that when released it will strike a fixed rigid vertical surface at a velocity of 3.5 m/s (keel is raised 0.624 m above the free hanging position). The boat should be released to impact against the rigid vertical surface. .2 The rescue boat complete with all its equipment and with a mass equivalent to its engine and fuel in the position of its engine and fuel tank should be dropped three times from a height of at least 3 m on to water. The drops should be from the 45-degree bow-down, level trim, and 45-degree stern-down attitudes. .3 On completion of these tests the rescue boat and its equipment should be carefully examined.	The impact and drop tests should be considered successful if: .1 no damage has been sustained that would affect the efficient functioning of the rescue boat and its equipment; .2 the damage caused by the impact and drop tests has not increased significantly as a result of the operational test in 5.7.5.2; .3 machinery and other equipment has operated to full satisfaction; and .4 no significant ingress of seawater has occurred.	Load in boat: _____ kg Heaviest engine used:_____ Observed Damage: Increased Damage: YES NO Satisfactory Operation: YES NO Ingress of Water: YES NO Final Evaluation: Passed:_____ Failed:_____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

5.7.7.2 Strength Tests—Overload Test	**Regulations: MSC.81(70)1/7.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a properly distributed load of four times the weight to represent the equipment and full complement of persons for which it is to be approved and suspended for five minutes from its bridle or hooks. The weights should be distributed in proportion to the loading of the boat in its service condition, but the weights used to represent the persons need not be placed 300 mm above the seat pan. The boat and bridle or hooks and fastening device should be examined after the test has been conducted. Testing by filling the boat with water should not be accepted. This method of loading does not give the proper distribution of weight. Machinery may be removed in order to avoid damage, in which case weights should be added to the boat to compensate for the removal of such machinery. The rescue boat and it's bridle or hooks (release mechanism) and fastening device should be examined after the test for any signs of damage.	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Load in boat: _____ kg Comments/Observations Passed _____ Failed _____

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

5.7.7.3	**Strength Tests—Mooring Out Test (Does not apply if waterline is below lower side of inflated tube)**	**Regulations: LSA Code 5.1.3.3, MSC.81(70)1/7.2.15, 5.5, 5.17.7-.8**

Test Procedure	Acceptance Criteria	Significant Test Data
The rescue boat should be loaded with a mass equal to the mass of the total number of persons for which it is to be approved and its equipment and moored in a location at sea or in a seawater harbour. The rescue boat should remain afloat in that location for 30 days. The pressure may be topped up once a day using the manual pump; however, during any 24 h period the rescue boat should retain its shape. Each inflatable compartment in the rescue boat should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative; compressed air should be used to inflate the inflatable rescue boat and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has been completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved.	The rescue boat should not sustain any damage that would impair its performance. The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the rescue boat.	<u>Compartment 1</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 2</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 3</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 4</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent <u>Compartment 5</u> Initial Pressure: _____ mbar Final Pressure: _____ mbar Calculated Decrease: _____ Percent Passed _____ Failed _____ Comments/Observations

Rigid/Inflated Fast Rescue Boats	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

5.7.8.1 Inflation Chamber Characteristics Tests	**Regulations: LSA Code 1.2.2, MSC.81(70)1/7.2.14**	
Test Procedure	Acceptance Criteria	Significant Test Data
The inflatable compartment materials used to construct the rescue boat should be tested for the following characteristics : .1 tensile strength .2 tear strength .3 heat resistance .4 cold resistance .5 heat ageing .6 weathering .7 flex cracking .8 abrasion .9 coating adhesion .10 oil resistance .11 elongation at break .12 piercing strength .13 ozone resistance .14 gas permeability .15 seam strength .16 ultraviolet light resistance	The material characteristics should be to the satisfaction of the Administration .	.1 tensile strength _____ N/50 mm width .2 tear strength _____ N .3 heat resistance – Blocking _____ .4 cold resistance – Cracking _____ .5 heat ageing _____ % retained strength N/50 mm width .6 weathering _____ % retained strength N/50 mm width .7 flex cracking – Cracking or deterioration _____ .8 abrasion _____ mg/rev.; Base fabric not visible _____ .9 coating adhesion _____ N/50 mm width .10 oil resistance – Tackiness or other deterioration _____ .11 elongation at break _____ % .12 piercing strength _____ .13 ozone resistance – Visible cracking _____ .14 gas permeability _____ bubbles/min or $l/m^2/hr$ of _____ .15 seam strength _____ N/50 mm width .16 ultraviolet light resistance _____ % retained strength N/50 mm width Cracking _____ SATISFACTORY UNSATISFACTORY Comments/Observations

6 LAUNCHING AND EMBARKATION APPLIANCES

6.1 LAUNCHING AND EMBARKATION APPLIANCES

6.1.1 LAUNCHING AND RECOVERY APPLIANCES

EVALUATION AND TEST REPORT

6.1.1.1 Submitted drawings, reports and documents

6.1.1.2 Quality assurance

6.1.1.3 Visual inspection

6.1.1.4 Static proof load test

6.1.1.5 Operational load test

6.1.1.6 Turning in test

6.1.1.7 Winch brake test

6.1.1.8 Rescue boat launching appliance recovery speed test

6.1.1.9 Hand operation test

6.1.1 LAUNCHING AND RECOVERY APPLIANCES

EVALUATION AND TEST REPORT

Manufacturer	
System type **Serial number** **Maximum Working Load** **Maximum Turning Moment**	
Winch type	
Serial number	
Date	
Place	
Name and signature of surveyor	
Approval Organization	

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.1.2 Quality Assurance	**Regulations: MSC.81(70) 2/1.1 and 1.2**
Except where all appliances of a particular type are required by chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, or the International Life-Saving Appliance (LSA) Code, to be inspected, representatives of the Administration should make random inspection of manufacturers to ensure that the quality of life-saving appliances and the materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are produced to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.3 Visual inspection	**Regulations: LSA Code 6.1; III, 16.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
Confirm that installation has been manufactured to approved drawings. Visually inspect the appliance. Conduct measurements and verify clearances as required.	Amount of maintenance should be restricted to a minimum. Parts which require maintenance should be easily accessible and easily maintained. Effectiveness under icing conditions The launching mechanism should be so arranged that it may be actuated by one person from a position within the survival craft or rescue boat	Passed/ Failed Passed/ Failed Passed/ Failed Passed/ Failed
Remote control	Manual brakes should be so arranged that the brake is always applied, unless the operator or a mechanism activated by the operator holds the brake control in the 'off' position.	Type:
Limit switches	Where davit arms are recovered by power, safety devices should be fitted which will automatically cut off the power before the davit arms reach the stops in order to prevent over-stressing the falls or davits, unless the motor is designed to prevent such over-stressing.	Type:
Provisions for hanging off pendants	There should be provisions for hanging-off the lifeboat to free the release gear for maintenance Structural members and all blocks, falls, padeyes, links, fastenings and all other fittings used in connection with launching equipment should be designed with not less than a minimum factor of safety on the basis of the maximum working load assigned and the ultimate strength of the material used for construction. A minimum factor of safety of 4.5 should be applied to all davit and winch structural members, and a minimum factor of safety of 6 should be applied to falls, suspension chains, links and blocks.	Passed/ Failed Passed/ Failed Comments/Observations

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.4 Static proof load test	**Regulations: LSA Code 6.1.1.5 - 6.1.1.6; MSC.81(70) 1 /8.1.1**

Test Procedure	Acceptance Criteria	Significant Test Data
For lifeboats other than free-fall lifeboats, davits and launching appliances, except the winch brakes, should be subjected to a static proof load of 2.2 times their maximum working load. With the load at the full outboard position, the load should be swung through an arc of approximately 10^0 to each side of vertical in the intended fore and aft plane. The test should be done first in the upright position, followed by tests simulating a shipboard condition of list of 20^0 both inboard and outboard.	The launching appliance and its attachments other than winch brakes should be of sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load. There should be no evidence of significant deformation or other damage as a result of this test.	MWL : ..... kN Test load (2.2 x MWL): ..... kN There should be no evidence of significant deformation or other damage Passed/Failed upright Passed/ Failed 20^0 inboard list Passed/ Failed 20^0 outboard list Passed/ Failed

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.5 Operational load test	**Regulations: LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1 /8.1.2**

Test Procedure	Acceptance Criteria	Significant Test Data
For lifeboats other than free-fall lifeboats, a mass equal to 1.1 times the maximum working load should be suspended from the lifting points with the launching appliance in the upright position. The load should be moved from the full inboard to the full outboard position using the means of operation that is used on the ship. The test should be repeated with the launching appliance positioned to simulate a combined 20^0 inboard list and 10^0 trim. All the tests should be repeated with a mass equal to that of a fully equipped lifeboat, without persons, or the lightest survival craft intended for the use with the davit to ensure the satisfactory functioning of the davit under very light load conditions. Note: Notwithstanding the 10°trim and 20° list requirements, lifeboat launching appliances for oil tankers, chemical tankers and gas carriers with a final angle of heel greater than 20^0 should be capable of operating at the final angle of heel on the lower side of the ship, taking into consideration the final damaged waterline of the ship.	The appliance should successfully lower the load under all of the conditions, and there should be no evidence of significant deformation or other damage as a result of the tests. Each launching appliance together with all its lowering and recovery gear should be so arranged that the fully equipped survival craft or rescue boat it serves can be safely lowered against a trim of up to 10^0 and a list of up to 20^0 either way: When boarded, as required by regulation III/23 or III/33, by its full complement of persons; Without persons in the survival craft or rescue boat. A launching appliance should not depend on any means other than gravity or stored mechanical power which is independent of the ship's power supplies to launch the survival craft or rescue boat it serves in the fully loaded and equipped condition and also in the light condition.	weight of the lightest the lifeboat / rescue boat ** intended for use: LWL. ..... kN MWL : ..... kN Test load (1.1 x MWL) : ..... kN clear of davit horn ?** Passed/ Failed Does the appliance successfully lower the load under these conditions without evidence of significant deformation or damage? Passed/Failed upright (1,1x MWL) Passed/Failed 20^0 inboard list +10°trim (1.1xMWL) Passed/Failed 20^0 inboard list +10°trim (LWL) Passed/Failed Stored power Passed/Failed Start pressure: k Pa Min. pressure: k Pa Pressure drop after one movement: k Pa Time from inboard to outboard: sec ** *if applicable*

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.6 Turning in test	**Regulations: LSA Code 6.1.1.3; MSC.81(70) 1 /8.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
With the appliance in the full upright position the maximum design hoisting load should be moved from the full outboard to the full inboard position using the means of operation that is used on the ship.	The appliance should successfully move the maximum designed hoisting load from the outboard to the inboard position without causing permanent deformation or other damage.	maximum designed hoisting load : ..... kN Does the launching appliance successfully move the load from outboard to inboard? Passed/ Failed Does the launching appliance show any evidence of significant deformation or other damage as a result of this test? Passed/ Failed

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.7 Winch brake test	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of 1.5 times the maximum working load should be applied and held by the brake. This load should then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1 times the maximum working load should then be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand brake sharply. This test should be repeated a number of times. If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted. The various tests should achieve a cumulative lowering distance of at least 150 m. Operation of the winch with a load of a mass equal to that of a fully equipped lifeboat, without persons, or the lightest survival craft intended for use with the winch should also be demonstrated. Following completion of these test (and 6.1.1.8, 6.1.1.9), the winch should be stripped for inspection.	The test load should drop no more than 1 m when the brake is applied (except that the stopping distance may be exceeded if an exposed brake is wetted). The launching appliance should successfully lower a mass equal to that of a fully equipped lifeboat, without persons, or the lightest craft (or rescue boat) intended for use with the winch. Inspection of the stripped winch should reveal no significant damage or undue wear.	weight of the lightest the lifeboat / rescue boat ***** : ..... kN MWL : ..... kN Test 1: Static test load (1.5 x MWL): ..... kN Does the brake test hold the test load (1.5x MWL)? pass/fail MWM: kNm Drum diam. mm Wire diam. Mm Number of turns Max. lowering speed m/s Test 2 Dynamic Test load (1,1 x MWL): Kn brake test carried out after > 3m with max lowering speed Stop within 1 meter? Passed/Failed * *delete as appropriate* *continued*

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.7 Winch brake test (continued)	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
		1st stop > 3m 2nd stop: m 3rd stop: m 4th stop: m 5th stop: m Total lowering distance > 150 m Passed/ Failed Test 3 (if applicable) Winch design incorporates an exposed brake? Yes / No Wet stopping distance m Passed/ Failed Test 4 Test load (LWL) kN Lowering test with LWL satisfactory? Passed/ Failed Does the inspection of the stripped winch reveal any significant damage or undue wear? Passed/ Failed **Remarks*:***

Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.1.8 Rescue boat launching appliance recovery speed test		**Regulations: LSA Code 6.1.1.9; MSC.81(70) 1 /8.1.5**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that a winch intended for use with a rescue boat is capable of recovering the rescue boat with the number of persons for which it is to be approved and its equipment or an equivalent mass at a rate of not less than 0.3 m/s.	Each rescue boat launching appliance should be fitted with a powered winch motor capable of raising the rescue boat from the water with its full rescue boat complement of persons and equipment at a rate of not less than 0.3 m/s.	Hoisting load: measured recovering speed of the boat : m/s

6.1.1.9 Hand operation test		**Regulations: LSA Code 6.1.2.6; MSC.81(70) 1 /8.1.6**
Test Procedure	Acceptance Criteria	Significant Test Data
The hand operation of the winch should be demonstrated. If the winch is designed for quick recovery by hand with no load, this should be demonstrated with a load of 1.5 times the mass of the empty lifting arrangements.	An efficient hand gear should be provided for recovery of each survival craft and rescue boat. Hand gear handles or wheels should not be rotated by moving parts of the winch when the survival craft or rescue boat is being lowered or when it is being hoisted by power.	Hoisting load: Test 1: Test load (1 x hoisting load): winch can be operated satisfactorily by hand? Passed/ Failed Arrangement provided for protection against moving parts and rotating handles? Passed/ Failed Type: Test 2: Only for quick recovery Test load (1.5 x weight of empty lifting arrangement): kN Is quick recovery satisfactory? Passed/ Failed

6.1.2 FREE-FALL LAUNCHING AND RECOVERY APPLIANCES

EVALUATION AND TEST REPORT

6.1.2.1 Submitted drawings, reports and documents

6.1.2.2 Quality assurance

6.1.2.3 Visual inspection

6.1.2.4 Static proof load test

6.1.2.5 Operational load test

6.1.2.6 Turning in test

6.1.2.7 Winch brake test

6.1.2 FREE-FALL LAUNCHING AND RECOVERY APPLIANCES

EVALUATION AND TEST REPORT

Manufacturer	
System type **Serial number** **Maximum Working Load** **Maximum Turning Moment**	
Winch type	
Serial number	
Date	
Place	
Name and signature of surveyor	
Approval Organization	

Free-fall Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.2.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Free-fall Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.2.2 Quality Assurance	**Regulations: MSC.81(70) 2/1.1 and 1.2**
Except where all appliances of a particular type are required by chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, or the International Life-Saving Appliance (LSA) Code, to be inspected, representatives of the Administration should make random inspection of manufacturers to ensure that the quality of life-saving appliances and the materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are produced to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: -_____ Quality Assurance Procedure: -_____ Quality Assurance Manual: _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Free-fall Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.2.3 Visual inspection	**Regulations: LSA Code 6.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Confirm that installation has been manufactured to approved drawings	Amount of maintenance to be restricted to minimum.	Passed/ Failed
Visually inspect the launching appliance. Conduct measurements and verify clearance as required.	Parts which require maintenance should be easily accessible and easily maintained.	Passed/ Failed
	Effectiveness under icing conditions	Passed / Failed
	Where davit arms are recovered by power, safety devices should be fitted which will automatically cut off the power before the davit arms reach the stops in order to prevent over-stressing the falls or davits, unless the motor is designed to prevent such over-stressing.	Type
Limit switches	Arrangements for simulated launching should be off sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load.	Passed/ Failed
Arrangements for simulated launching	Structural members and all blocks, falls, padeyes, links, fastenings and all other fittings used in connection with launching equipment should be designed with not less than a minimum factor of safety on the basis of the maximum working load assigned and the ultimate strength of the material used for construction. A minimum factor of safety of 4.5 should be applied to all davit and winch structural members, and a minimum factor of safety of 6 should be applied to falls, suspension, chains, links and blocks.	Type Comments/Observations

Free-fall Launching & Recovery Appliances	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.2.4 Static proof load test	**Regulations: LSA Code 6.1.1.5 - 6.1.1.6; MSC.81(70) 1 /8.1.1**	
Test Procedure	Acceptance Criteria	Significant Test Data
The launching appliances for lowering a free-fall lifeboat by falls, except the winch brakes, should be subjected to a static proof load of 2.2 times the maximum working load at the full outboard position.	The launching appliance and its attachments other than winch brakes should be of sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load. There should be no evidence of significant deformation or other damage as a result of this test.	MWL : ..... kN test load (2.2 x MWL) .....……..... kN There should be no evidence of significant deformation or other damage Passed/Failed Comments/Observations

Free-fall Launching & Recovery Appliances	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.2.5 Operational load test (secondary means of launching)	**Regulations: LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1 /8.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
A mass equal to 1.1 times the maximum working load should be suspended from the lifting points. The load should be moved from the full inboard to the full outboard position using the means of operation that is to be used on the ship. The test should be repeated with the launching appliance positioned to simulate a combined 5 degree list either way and 2 degrees bow down trim. (see 6.1.2.10) The test should be repeated with a mass equal to that of the fully equipped lifeboat, without persons, to ensure the satisfactory functioning of the appliance under light load conditions.	The appliance should successfully lower the load under all of the specified conditions and there should be no evidence of significant deformation or other damage as a result of the tests.	MWL: ..... kN LWL (MWL - number of persons): kN Test 1 Test load (1.1 x MWL) : ..... kN Upright full inboard full outboard..... Passed/Failed Test 2 Test load (1.1 x MWL) kN 5° list, 2° bow down trim Passed/Failed Test 3 LWL: kN Passed/ Failed Does the appliance successfully lower the load under these conditions without evidence of significant deformation or damage? Passed/Failed Comments/Observations

Free-fall Launching & Recovery Appliances	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.2.6 Turning in test	**Regulations: LSA Code 6.1.1.3; MSC.81(70) 1 /8.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
With the appliance in the full upright position, the maximum design hoisting load should be moved from the full outboard to the full inboard position using the means of operation that is used on the ship.	The appliance should successfully move the maximum designed hoisting load from the outboard to the inboard position without causing permanent deformation or other damage.	Hoisting load : ..... kN Does the launching appliance successfully move the load from outboard to inboard? Passed/failed Does the launching appliance show any evidence of significant deformation or other damage as a result of the test? Passed/Failed Comments/Observations

Free-fall Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.2.7 Winch brake test		**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of 1.5 times the maximum working load should be applied and held by the brake. This load should then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1 times the maximum working load should then be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand brake sharply. This test should be repeated a number of times. If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted. The various tests should achieve a cumulative lowering distance of at least 150 m. Operation of the winch with a load of a mass equal to that of a fully equipped lifeboat, without persons, or the lightest survival craft intended for use with the winch should also be demonstrated. Following completion of these test (and 6.1.1.8, as applicable), the winch should be stripped for inspection.	The test load should drop no more than 1 m when the brake is applied (except that the stopping distance may be exceeded if an exposed brake is wetted). The launching appliance should successfully lower a mass equal to that of a fully equipped lifeboat, without persons, or the lightest craft (or rescue boat) intended for use with the winch. Inspection of the stripped winch should reveal no significant damage or undue wear.	Weight of the lightest the lifeboat / rescue boat ***** kN MWL : ..... kN Test 1: Static test load (1.5 x MWL): ..... kN Does the brake test hold the test load (1.5x MWL)? Passed/ Failed MWM: kNm Drum diam. mm Wire diam. Mm Number of turns Max. lowering speed m/s Test 2 Dynamic Test load (1.1 x MWL): Kn Brake test carried out after > 3m with max lowering speed Stop within 1 meter? Passed/Failed Comments/Observations * *delete as appropriate* *continued*

Free-fall Launching & Recovery Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.2.7 Winch brake test (continued)	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
		1st stop > 3m 2nd stop: m 3rd stop: m 4th stop: m 5th stop: m Total lowering distance > 150 m Passed/ Failed Test 3 (if applicable) Winch design incorporates an exposed brake? Yes / No Wet stopping distance m Passed/ Failed Test 4 Test load (LWL) kN Lowering test with LWL satisfactory? Passed/ Failed Does the inspection of the stripped winch reveal any significant damage or undue wear? Passed/ Failed Comments/Observations

6.1.3 DAVIT-LAUNCHED LIFERAFT AUTOMATIC RELEASE HOOKS

EVALUATION AND TEST REPORT

6.1.3.1 Submitted drawings, reports and documents

6.1.3.2 Quality assurance

6.1.3.3 Visual inspection

6.1.3.4 Corrosion resistance test

6.1.3.5 Maximum load for automatic release test

6.1.3.6 Dynamic forces release tests

6.1.3.7 Actuating force test

6.1.3.8 Securing force test

6.1.3.9 Manual release force test

6.1.3.10 Holding test, loaded

6.1.3.11 Holding test, light

6.1.3.12 Inertia test

6.1.3.13 Automatic Release test

6.1.3.14 Automatic release test – overloaded

6.1.3.15 Endurance test

6.1.3.16 Compatibility of liferaft and release hook test

6.1.3.17 Proof load test

6.1.3.18 Inadvertent release tests

6.1.3.19 Icing test

6.1.3.20 Impact test

6.1.3 DAVIT-LAUNCHED LIFERAFT AUTOMATIC RELEASE HOOKS

EVALUATION AND TEST REPORT

Manufacturer	
System Type	
Serial Number	
Maximum Working Load	
Maximum Turning Moment	
Winch type	
Serial Number	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.2 Quality Assurance	**Regulations: MSC.81(70) 2/1.2**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: -_____ Quality Assurance Procedure: -_____ Quality Assurance Manual: -_____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.3 Visual inspection		**Regulations: MSC.81(70) 1/8.2.2**
Test Procedure	Acceptance Criteria	Significant Test Data
The hooks complete in every respect should be given a visual and dimensional examination to verify that they conform to the approved drawings and specifications.	The hooks must conform with the manufacturer's drawings and specifications.	Hook 1 Passed _____ Failed _____ Hook 2 Passed _____ Failed _____ Comments/Observations

6.1.3.4 Corrosion resistance test		**Regulations: MSC.81(70) 1/8.2.3**
Test Procedure	Acceptance Criteria	Significant Test Data
Two hooks should be submitted to a corrosion resistance test which should be made in a salt mist chamber in accordance with the International Standard ISO 3768-1976 for 1,000 hours or equivalent national standard. Both hooks should be subjected five times to the tests required by 6.1.3.5 to 6.1.3.20, except 6.1.3.16.	The hook should pass the test without failure.	Any corrosion effects and other damage to the hooks should be recorded: Hook 1: Hook 2:

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.5 Maximum load for automatic release test	**Regulations: MSC.81(70) 1/8.2.5**

Test Procedure	Acceptance Criteria	Significant Test Data
The maximum load on the hook to allow for automatic release should be determined as follows: 1. the hook should be loaded with a mass of 200 kg and the actuating mechanism set for automatic release; 2. the load should be reduced gradually in stages until the hook releases automatically, but at not more than 30 kg, to establish load "F"; and 3. the load "F" should be measured and recorded. The test should be repeated 5 times with each hook.	The minimum allowable "F" is the minimum obtained at release which should not be less than 5 kg or not more than 30 kg. Record the maximum load "F" (5 tests).	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____	Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.3.6 Dynamic forces release tests		**Regulations: MSC.81(70) 1/8.2.6 –7**
Test Procedure	Acceptance Criteria	Significant Test Data
The load limit for automatic release, using dynamic loads, should be determined using both the following methods: 1. The hook should be loaded with a mass of 200 kg and the actuating mechanism set for automatic release. The hook should then be subjected to cyclic loading between 30 kg and 200 kg using a frequency of 1 ± 0.2 Hz. The hook should not release before 300 cycles. The number of cycles at which the hook opened or whether the test was discontinued at 300 cycles should be recorded. 2. The hook should then be reloaded to 200 kg and the actuating mechanism set for automatic release. The hook should be subjected to a cyclic loading, the upper limit of which is +200 kg, and the lower limit being "F1" using a frequency of 1 ± 0.2 Hz. The automatic release should operate within 3 cycles. The number of cycles at which the hook opened or whether the test was discontinued after 3 cycles should be recorded. "F1" is to be taken as the minimum load on the hook to allow for automatic release, as established in paragraph 6.1.3.5 reduced by 2 kg.	1. The hook should not release before 300 cyclic loads. 2. The automatic release should operate within 3 cycles.	Record the number of cycles before hook released or test was discontinued (5 tests) Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.7 Actuating force test		**Regulations: LSA Code 4.1.1.2; MSC.81(70) 1/8.2.11**
Test Procedure	Acceptance Criteria	Significant Test Data
The actuating force for automatic release should be determined in the following way: 1. The hook should be loaded to 0%, 25%, 50%, 75% and 100% of the SWL of the hook; 2. At each load level the actuating force required at the actuation mechanism should be measured and recorded.	The actuating force should in all tests be between 150 N and 250 N if lanyard operated, or the action required to set the actuating mechanism should be readily performed by a single person without difficulty.	Record actuating force (5 tests) when loaded to: - Hook 1 Hook 2 0% _____ _____ 25% _____ _____ 50% _____ _____ 75% _____ _____ 100% _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

6.1.3.8 Securing force test		**Regulations: MSC.81(70) 1/8.2.12**
Test Procedure	Acceptance Criteria	Significant Test Data
The securing force should be determined with an unloaded hook. The securing force should be recorded.	The securing force should be less than 120N. Record measured securing force (5 tests)	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.9 Manual release force test	**Regulations: MSC,81(70) 1/8.2.13**

Test Procedure	Acceptance Criteria	Significant Test Data
The manual release force should be determined as follows: 1 the hook should be loaded with a mass of 150 kg; 2 the actuating mechanism should be set for automatic release; 3 the force required to release the hook manually should be established and recorded; and 4 the manual release force for a load of 150 kg on the hook should be at least 600 N but not more than 700 N for lanyard-operated designs. Alternative designs should be demonstrated to the satisfaction of the Participating Authority to provide adequate protection from inadvertent release under load.	For a load of 150 kg, the manual release force should be 600N for lanyard operated designs. Other designs should provide adequate protection from inadvertent release under load. Record measured release force (5 tests)	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.10 Holding test, loaded		**Regulations: MSC.81(70) 1/8.2.10**
Test Procedure	Acceptance Criteria	Significant Test Data
The automatic release hook should be attached to a test load of 1.1 times its maximum working load using an approved launching appliance. The load should be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand break sharply. This test should be conducted twice, once with the release mechanism set for automatic release, and again with the mechanism set to closed.	The release mechanism should not open in either test.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

6.1.3.11 Holding test, light		**Regulations: MSC.81(70) 1/8.2.14**
Test Procedure	Acceptance Criteria	Significant Test Data
The automatic release hook should he attached to a test load equal to the mass of the lightest liferaft for which the automatic release hook is to he approved, with the actuating mechanism in the locked position (i.e. not set for automatic release). The load should then be raised so that it is clear of the ground. The actuating mechanism should then be set to automatic release.	This should be easily accomplished by a single person and should not release the load.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____	Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.3.12 Inertia test		**Regulations: MSC.81(70) 1/8.2.8**
Test Procedure	Acceptance Criteria	Significant Test Data
The hook should be attached to a short wire rope fall, approximately 1.5 m, and loaded with a mass of 10 kg. It should be secured and then lifted 1 m. From this position it should be released to perform a free fall before it is abruptly stopped by the wire rope fall.	The hook should not release as a result of this test.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

6.1.3.13 Automatic Release test		**Regulations: MSC.81(70) 1/8.2.9**
Test Procedure	Acceptance Criteria	Significant Test Data
The automatic release hook should be attached to a test load equal to 1.1 times the SWL, with the actuating mechanism in the locked position. The load should be raised to a height of at least 6 m and then be lowered at a speed of 0.6 m/sec. When the load is 1.5 m above the ground or water surface, the actuating mechanism should be set for automatic release, and the lowering completed.	The automatic release hook should release the load when it strikes the ground or water surface.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Passed _____ Failed Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____	Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.3.14 Automatic release test - overloaded		**Regulations: MSC.81(70) 1/8.2.9**
Test Procedure	Acceptance Criteria	Significant Test Data
The automatic release hook should be attached to a test load equal to 2.2 times the SWL, with the actuating mechanism in the locked position. The load should be raised to a height of at least 6 m and then be lowered at a speed of 0.6 m/sec. When the load is 1.5 m above the ground or water surface, the actuating mechanism should be set for automatic release, and the lowering completed.	There should be no evidence of permanent deformation and the hook should function after the test.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

6.1.3.15 Endurance test		**Regulations: MSC.81(70) 1/8.2.15**
Test Procedure	Acceptance Criteria	Significant Test Data
The hook should be released 100 times without failure by each of its modes of release using the maximum load permitting release for that mode. It should then be disassembled and the parts examined.	There should be no evidence of excessive wear on any part.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____	Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.3.16 Compatibility of liferaft and release hook test		**Regulations: MSC.81(70) 1/8.2.18**
Test Procedure	Acceptance Criteria	Significant Test Data
Where automatic release hooks are supplied for use with liferafts made by different manufacturers, operational tests with each type and size of lifting or attachment fitting used by the different manufacturers of the liferafts should be carried out before the particular combination of liferaft and release hook is accepted by the Administration.	The hook must be found to be compatible with each of the different lifting or attachment fittings used by the manufacturers for whom the hook is approve.	The hook can be used for rings with the following minimum and maximum diameter: Min. hole: _____mm Max. material ϕ: _____ mm (optionally fill in attached list) Comments/Observations

6.1.3.17 Proof load test		**Regulations: Res. A.689 1/8.2.11 (missing in MSC.81(70) by mistake)**
Test Procedure	Acceptance Criteria	Significant Test Data
The automatic release hook should be proof loaded to 6 times the SWL and this load held for at least 5 min. After the removal of the load, the hook should be dismantled and examined for damage.	The hook should not sustain any damage as a result of this test.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.18 Inadvertent release tests		**Regulations: MSC.81(70) 1/8.2.13.4**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated to the satisfaction of the Administration, that the automatic release hook cannot be inadvertently released while under load.	It must not be possible to inadvertently release the hook.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

6.1.3.19 Icing test		**Regulations: MSC.81(70) 1/8.2.16**
Test Procedure	Acceptance Criteria	Significant Test Data
The hook should be arranged in a cold store at -30°C to simulate operational readiness and loaded with 25 kg. A 3.5 cm thick uniform layer of icing should be built onto it by spraying cold water from angles above 45° from horizontal, with intermittent pauses to let icing form. The hook should then be actuated and as a result release the load without failure.	As a result of this test the hook should release the load without failure.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook 1: Passed_____ Failed_____ Hook 2: Passed_____ Failed_____ Comments/Observations

Davit-launched Liferaft	Manufacturer:_____	Date:_____ Time:_____
Automatic Release Hooks	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.1.3.20 Impact test		**Regulations: MSC.81(70) 1/8.2.17**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that the hook is not damaged as a result of 10 impacts at a horizontal speed of 3.5 m/s on to a structure resembling a vertical ship's side. As far as practical all sides of the hook, especially areas with exposed controls, should impact the structure.	The hook must not sustain any damage which will interfere with the normal function of the hook.	Hook 1 Hook 2 Test 1 _____ _____ Test 2 _____ _____ Test 3 _____ _____ Test 4 _____ _____ Test 5 _____ _____ Hook1: Passed_____ Failed_____ Hook2: Passed_____ Failed_____ Comments/Observations

List of davit-launched liferafts for which the hook is approved:

Manufacturer:	Type:

6.1.4. LAUNCHING AND RECOVERY APPLIANCES FOR FAST RESCUE BOATS

EVALUATION AND TEST REPORT

6.1.4.1 Submitted drawings, reports and documents

6.1.4.2 Quality assurance

6.1.4.3 Visual inspection

6.1.4.4 Static proof load test

6.1.4.5 Operational load test

6.1.4.6 Turning in test

6.1.4.7 Winch brake test

6.1.4.8 Rescue boat launching appliance recovery speed test

6.1.4.9 Hand operation test

6.1.4.10 Sea state test

6.1.4. LAUNCHING AND RECOVERY APPLIANCES FOR FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
System type	
Serial number	
Maximum Working Load	
Maximum Turning Moment	
Winch type	
Serial number	
Date	
Place	
Name and signature of surveyor	
Approval Organization	

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.1.4.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.2 Quality Assurance	**Regulations: MSC.81(70) 2/1.1 and 1.2**
Except where all appliances of a particular type are required by chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, or the International Life-Saving Appliance (LSA) Code, to be inspected, representatives of the Administration should make random inspection of manufacturers to ensure that the quality of life-saving appliances and the materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are produced to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: -_____ Quality Assurance Procedure: _____ Quality Assurance Manual: _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.3 Visual inspection		**Regulations: LSA Code 6.1, III, 16.2**
Test Procedure	Acceptance Criteria	Significant Test Data
Confirm that installation has been manufactured to approved drawings	Amount of maintenance should be restricted to a minimum.	
Visually inspect the appliance. Conduct measurements and verify clearances as required.	Parts which require maintenance should be easily accessible and easily maintained.	Passed/ Failed
	Effectiveness under icing conditions	Passed/ Failed
Provisions for hanging off pendants	There should be provisions for hanging-off the lifeboat to free the release gear for maintenance	Passed/ Failed
	The launching mechanism should be so arranged that it may be actuated by one person from a position within the survival craft or rescue boat	Passed/ Failed
Remote control	Manual brakes should be so arranged that the brake is always applied, unless the operator or a mechanism activated by the operator holds the brake control in the 'off' position.	Passed/ Failed
Limit switches	Where davit arms are recovered by power, safety devices should be fitted which will automatically cut off the power before the davit arms reach the stops in order to prevent over-stressing the falls or davits, unless the motor is designed to prevent such over-stressing.	Type : Passed/ Failed
	Structural members and all blocks, falls, padeyes, links, fastenings and all other fittings used in connection with launching equipment should be designed with not less than a minimum factor of safety on the basis of the maximum working load assigned and the ultimate strength of the material used for construction. A minimum factor of safety of 4.5 should be applied to all davit and winch structural members, and a minimum factor of safety of 6 should be applied to falls, suspension chains, links and blocks.	Type : Comments/Observations

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.4 Static proof load test		**Regulations: LSA Code 6.1.1.5 - 6.1.1.6; MSC.81(70) 1/ 6.1.1.5 - 6.1.1.6**
Test Procedure	Acceptance Criteria	Significant Test Data
For lifeboats other than free-fall lifeboats, davits and launching appliances, except the winch brakes, should be subjected to a static proof load of 2.2 times their maximum working load. With the load at the full outboard position, the load should be swung through an arc of approximately 10^0 to each side of vertical in the intended fore and aft plane. The test should be done first in the upright position, followed by tests simulating a shipboard condition of list of 20^0 both inboard and outboard.	The launching appliance and its attachments other than winch brakes should be of sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load. There should be no evidence of significant deformation or other damage as a result of this test.	MWL : ..... kN Test load (2.2 x MWL): . ..... kN There should be no evidence of significant deformation or other damage Passed/Failed Upright Passed/ Failed 20^0 inboard list Passed/ Failed 20^0 outboard list Passed/ Failed Comments/Observations

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.5 Operational load test	**Regulations: LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1 /8.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
For lifeboats other than free-fall lifeboats, a mass equal to 1.1 times the maximum working load should be suspended from the lifting points with the launching appliance in the upright position. The load should be moved from the full inboard to the full outboard position using the means of operation that is used on the ship. The test should be repeated with the launching appliance positioned to simulate a combined 20^0 inboard list and 10^0 trim. All the tests should be repeated with a mass equal to that of a fully equipped lifeboat, without persons, or the lightest survival craft intended for the use with the davit to ensure the satisfactory functioning of the davit under very light load conditions.	The appliance should successfully lower the load under all of the conditions, and there should be no evidence of significant deformation or other damage as a result of the tests. Each launching appliance together with all its lowering and recovery gear should be so arranged that the fully equipped survival craft or rescue boat it serves can be safely lowered against a trim of up to 10^0 and a list of up to 20^0 either way: When boarded, as required by regulation III/23 or III/33, by its full complement of persons; - without persons in the survival craft or rescue boat. A launching appliance should not depend on any means other than gravity or stored mechanical power which is independent of the ship's power supplies to launch the survival craft or rescue boat it serves in the fully loaded and equipped condition and also in the light condition.	Weight of the lightest the fast rescue boat intended for use: LWL : ..... kN MWL : . ..... kN Test load (1.1 x MWL) : ..... kN Clear of davit horn ?* Passed/ Failed Does the appliance successfully lower the load under these conditions without evidence of significant deformation or damage? Passed/Failed Upright (1.1x MWL) Passed/Failed 20^0 inboard list +10 °trim (1.1xMWL) Passed/Failed 20^0 inboard list +10 °trim (LWL) Passed/Failed Stored power Passed/Failed Start pressure: k Pa Min. pressure: k Pa Pressure drop after one movement: k Pa Time from inboard to outboard: sec Comments/Observations ** if applicable*

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.6 Turning in test	**Regulations: LSA Code 6.1.1.3; MSC.81(70) 1 /8.1.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
With the appliance in the full upright position, the maximum design hoisting load should be moved from the full outboard to the full inboard position using the means of operation that is used on the ship.	The appliance should successfully move the maximum designed hoisting load from the outboard to the inboard position without causing permanent deformation or other damage.	Maximum designed hoisting load : …… kN Does the launching appliance successfully move the load from outboard to inboard? Passed/ Failed Does the launching appliance show any evidence of significant deformation or other damage as a result of this test? Passed/ Failed Comments/Observations

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.7 Winch brake test	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of 1.5 times the maximum working load should be applied and held by the brake. This load should then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1 times the maximum working load should then be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand brake sharply.. This test should be repeated a number of times. If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted. The various tests should achieve a cumulative lowering distance of at least 150 m. Operation of the winch with a load of a mass equal to that of a fully equipped fast rescue boat without persons, or the lightest fast rescue boat intended for use with the winch should also be demonstrated. Following completion of these test (and 6.1.4.8, 6.1.4.9, 6.1.4.10), the winch should be stripped for inspection.	The test load should drop no more than 1 m when the brake is applied (except that the stopping distance may be exceeded if an exposed brake is wetted). The launching appliance should successfully lower a mass equal to that of a fully equipped fast rescue boat, without persons, or the lightest fast rescue boat intended for use with the winch. Inspection of the stripped winch should reveal no significant damage or undue wear.	Weight of the lightest the fast rescue boat * : ..... kN MWL : ..... kN Test 1: Static test load (1.5 x MWL): ..... kN Does the brake test hold the test load (1.5x MWL)? Passed/Failed MWM: kNm Drum diam. mm Wire diam. Mm Number of turns Max. lowering speed m/s Test 2 Dynamic Test load (1.1 x MWL): Kn Brake test carried out after > 3m with max lowering speed Stop within 1 meter? Passed/Failed Comments/Observations * *delete as appropriate* *continued*

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Model:_____ Lot/Serial Number:_____	Date:_____ Time:_____ Surveyor:_____ Organization:_____

6.1.4.7 Winch brake test (continued)	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1 /8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
		1st stop > 3m 2nd stop: m 3rd stop: m 4th stop: m 5th stop: m Total lowering distance > 150 m Passed/ Failed Test 3 (if applicable) Winch design incorporates an exposed brake? Yes / No Wet stopping distance m Passed/ Failed Test 4 Test load (LWL) kN Lowering test with LWL satisfactory? Passed/ Failed Does the inspection of the stripped winch reveal any significant damage or undue wear? Passed/ Failed Comments/Observations

Launching & Recovery Appliances for F.R.B	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.1.4.8 Rescue boat launching appliance recovery speed test		**Regulations: MSC/Circ.809 4.2.5; MSC.81(70) 1 /8.1.5**
Test Procedure	Acceptance Criteria	Significant Test Data
Fast rescue boat loaded with 6 persons to be hoisted. Demonstrate also the recovery of the fast rescue boat with the maximum number of persons that can be accommodated in the boat as calculated under par. 4.4.2 of the LSA code.	Notwithstanding 6.1.4.9 launching appliances should be capable of hoisting the fully equipped fast rescue boat loaded with 6 persons with a speed not less than 0.8 m/s. The appliance should be capable of hoisting the fast rescue boat with the maximum number of persons that can be accommodated in the boat as calculated under par. 4.4.2 of the LSA code.	Maximum load to be hoisted with a speed of at least 0.8 m/s : kN Appliance is able to hoist the fast rescue boat with maximum number of persons? Passed/ Failed Comments/Observations

6.1.4.9 Hand operation test		**Regulations: LSA Code 6.1.2.6; MSC.81(70) 1 /8.1.6**
Test Procedure	Acceptance Criteria	Significant Test Data
The hand operation of the winch should be demonstrated. If the winch is designed for quick recovery by hand with no load, this should be demonstrated with a load of 1.5 times the mass of the empty lifting arrangements.	An efficient hand gear should be provided for recovery of each survival craft and rescue boat. Hand gear handles or wheels should not be rotated by moving parts of the winch when the survival craft or rescue boat is being lowered or when it is being hoisted by power.	Hoisting load: Test 1: Test load (1 x hoisting load): winch can be operated satisfactorily by hand? Passed/ Failed Arrangement provided for protection against moving parts and rotating handles? Passed/ Failed Type: Test 2: Only for quick recovery Test load (1.5 x weight of empty lifting arrangement): kN Is quick recovery satisfactory? Passed/ Failed

	Manufacturer:_____	Date:_____	Time:_____
Launching & Recovery Appliances for F.R.B	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.1.4.10 Sea state test	**Regulations: LSA Code 6.1; MSC.81(70) 1 /8.1.8**

Test Procedure	Acceptance Criteria	Significant Test Data
The fast rescue boat launching appliance should be demonstrated in a sea state associated with a force 6 wind on the Beaufort scale, in association with a significant wave height of at least 3 m. The test should include launching and recovery of a fast rescue boat and demonstrate:		Wind speed: Significant wave height: Method of determination: MWL (= test load) kN
1. satisfactory operation of the device to dampen forces and oscillations due to interaction with the waves;	1 The launching appliance should be fitted with a device to dampen the forces due to interaction with the waves when the fast rescue boat is launched or recovered. The device should include a flexible element to soften shock forces and a damping element to minimize oscillations.	Working of dampening device satisfactory? Passed/ Failed Working of winch brake satisfactory? Passed/ Failed
2. satisfactory operation of the winch brake. The additional dynamic force induced in the wire due to retardation should be measured, and	2 the winch should be fitted with an automatic high-speed tensioning device which prevents the wire from going slack in all sea state conditions in which the fast rescue boat is intended to operate.	Gradual action? Passed/ Failed Additional dynamic force in wire kN < 0.5 x MWL? Passed/ Failed
3. satisfactory operation of the tensioning device.	3 The winch brake should have a gradual action. When the fast rescue boat is lowered at full speed and the brakes are applied sharply, the additional dynamical force induced in the wire due to retardation should not exceed 0.5 times the working load of the launching appliance.	Tensioning device operation satisfactory? Passed/ Failed Wire prevented from going slack? Passed/ Failed Comments/Observations

6.2 MARINE EVACUATION SYSTEMS

EVALUATION AND TEST REPORTS

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6.2 MARINE EVACUATION SYSTEMS

EVALUATION AND TEST REPORTS

Manufacturer	
Type/Model	
Date of Approval	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.0.1 Submitted drawings, reports and documents

Submitted drawings and documents			**Status**
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			**Status**
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.0.2 Quality Assurance	**Regulations: - SOLAS III/4**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.0.3 General Data and Specifications	**Regulations: LSA Code I/1.2 & VI/6.2**

General Information	Dimensions	Weight
The MES, complete in all respects in its fully inflated condition should be subject to a detailed inspection in the manufacturers' works to ensure that all requirements are complied with. Strength and construction of the passage and platform should be to the satisfaction of the administration The platform if fitted should be:- 1. **S**uch that sufficient buoyancy will be provided for the working load. In the case of an inflatable platform, the main buoyancy chambers, which for this purpose should include thwarts or floor inflatable structure members, are to meet the requirements of section 4.4.3 based upon the platform capacity, except that the capacity should be obtained by dividing by 0.25 the usable area given in 6.2.0.4. 2. The angle of the slide to the horizontal should be within the range of 30^o to 35^o when the ship is upright and in the lightest sea going condition. In the case of a passenger ship, a maximum of 55^o inn the final stage of flooding set by the requirements in regulation II-I/8	Length of passage:- Vertical System _____ m Inclined System _____ m Installation Height of System _____ Diameter of Platform _____ m (if applicable) Carrying Capacity of Platform _____ Number of passages _____ Angle of Slide Path _____	Weight of complete system _____ kg Weight of associated liferaft's _____kg

	Manufacturer:_____	Date:_____	Time:_____
Marine Evacuation Systems	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.0.3 General Data and Specifications (continued)	**Regulations: LSA Code I/1.2 & VI/ 6.2**

General Information	Dimensions	Weight
3. The term "operational pressure" has the same meaning as the term "working pressure"; i.e the pressure determined by the designed reseat pressure of the relief valves, if fitted, except that, if the actual reseat pressure of the relief valve, determined by testing, exceeds the designed reseat pressure by more than 15%, the higher figure should be used.	Inclined Slide:- PRV lifting pressure _____kPa PRV re-seat pressure _____kPa	

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.0.4 Platform carrying capacity	**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/12.4.1**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, (if fitted); should be such that sufficient buoyancy will be provided for the working load. The number of persons which the platform should be permitted to accommodate should be equal to the lesser of:- The greatest whole number obtained by dividing by 0.096 the volume, measured in cubic metres of the main buoyancy tubes, including any thwarts or floor inflatable structures when inflated; or The greatest whole number obtained by dividing by 0.25 the inner usable cross-sectional area of the platform measured in square metres (which for this purpose may include the thwart or thwarts, if fitted) measured to the innermost edge of the buoyancy tubes. However, Administrations may approve alternative arrangements which are demonstrated to comply with all of the prescribed performance requirements.	This usable platform area should be at least equal to: (20% of total number of persons that the System is certified for)/4 m^2 or 10 m^2 whichever is the greater.	No. of persons platform is designed for _____ 1. Capacity of platform using buoyancy _____ 2. Capacity of platform using area _____ Lesser of 1 and 2 above _____ 3. Usable area requirement for platform. 4. Number of persons platform can actual carry. Comment/Observation Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.0.5 Markings on Container		**Regulations:- LSA Code I/1.2 & VI/6.2.4.2 & 6.2.4.3**
Test Procedure	Acceptance Criteria	Significant Test Data
The container should be marked with; Maker's name or trade mark; Serial number; Name of approval authority and the capacity of the system; (6.2.0.2) SOLAS; Date of manufacture (month and year); Date and place of last service; Maximum permitted height of stowage above water-line; and Stowage position on board. Launching and operating instructions should be marked on or in the vicinity of the container.	All instructions and markings to be indelible.	Indicate markings on container below:- Passed _____ Failed _____

6.2.0.6 Markings on Passage		**Regulations:- LSA Code I/1.2 & VI/ 6.2**
Test Procedure	Acceptance Criteria	Significant Test Data
The marine evacuation system should be marked with: Maker's name or trade mark; Serial number; Date of manufacture (month and year); Name of approving authority; Name and place of servicing station where it was last serviced, along with the date of servicing; and The capacity of the system.	All instructions & markings to be indelible.	Indicate markings on container below:- Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.0.7 Visual Inspection		**Regulations:- Chapter III/13.4; LSA Code I/1.2 & 6.22; MSC81(70) 1/12.5.5**
Test Procedure	Acceptance Criteria	Significant Test Data
Liferaft Release From Passage **Inflatable liferafts associated with marine evacuation systems** Any inflatable liferaft used in conjunction with the marine evacuation system should be provided with pre-connected or easily connected retrieving lines to the platform.	If the passage is to give direct access to the liferaft(s), it should be demonstrated that it can be easily and quickly detached.	1. Are liferafts launched with passage Yes/No 2. Method of connection of liferafts to passage 3. Method of release from passage 4. Method of release acceptable Yes/No Comments/observations Passed _____ Failed _____

6.2.1 Material Test		**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 5.17.3 & 12.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Inflated materials used in the construction of marine evacuation systems are to be tested to the standards laid down in test report 4.3.4.	Fabric must be type approved in accordance with Test Report 4.3.4, Material Tests for Liferafts.	Fabric Complies Yes _____ No _____ Comments/Observation Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.2 Deployment Instructions		**Regulations:- LSA Code I/1.2 & VI/6.2.2.1; MSC81(70) 1/12.2.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation System Container; It should be demonstrated that the passage and platform if fitted, or liferaft's in any other case, can be deployed from the container by one person in a sequence prescribed in the manufacturer's instruction. If more than one action is necessary to operate the system means should be provided to prevent incorrect operation.	The deployment of the system and instructions to be acceptable to the administration.	1. Number of sequences required to deploy system ____ 2. Instruction adequate Yes _____ No _____ 3. Can system be deployed by one person Yes /No. 4. If more than one operation Number of operations to deploy system _____ Comments/Observations Passed _____ Failed _____

6.2.3 Container Static Load Test		**Regulations LSA Code I/ 1.2 & VI/6.2; MSC81(70) 1/ 12.2.2**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation System Container. A static load of 2.2 times the maximum load on the system applied to its structural attachment to the ship for a period of 30 minutes. This static load is to be equivalent to the calculated load imposed by the maximum number and size of fully loaded liferaft's for which the system is designed, attached to the loaded platform with the ship moving through the water at 3 knots against a head wind of force 10 on the Beaufort scale.	There should be no evidence of significant deformation or other damage as a result of this factory test.	1. Calculated static load _____ tonnes 2. 2.2 x calculated load _____ tonnes 3. Period of test load _____ min Method used to calculate static load test Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.3.1 Container Door Hose Test		**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 5.12 & 12.2.3**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation System Container; To ensure the effectiveness of the closures in preventing water entering the container, the efficiency of the sealing arrangements should be demonstrated by means of a hose test or by any other equally effective method. The requirement for the hose test is that about 2,300 l of water per minute be directed at and around the sealing arrangements through a 63.5 mm hose from a point 3.5 m away for a period of 5 min. Alternatively, when hose testing is required to verify the tightness of the structures the minimum pressure in the hose, at least equal to 2 bar, is to be applied at a maximum distance of 1.5 m. (Note:- If the system is installed internally in the ship and the door is not part of the ships structure then this test is not required to be carried out).	The container to remain reasonably weathertight to prevent the ingress of water and there should be no significant accumulation of water inside the container.	1. Capacity of water hose _____l/min Diameter of hose _____mm 2. Ingress of water in container _____litres 3. Drainage adequate Yes/No 4. Diameter of drain holes _____ mm 5. Number of drain holes _____ Comment/Observations Passed _____ Failed _____

6.2.3.2 Container Door Dry Release Test.		**Regulations: LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 12.2.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation System Container; After completing the test in the release and securing arrangements for any internal or external doors are to be satisfactorily tested by 5 dry release operations carried out consecutively.	The door should operate satisfactory and not be damaged as a result of this test.	Door operation: 1. Pass/Fail 2. Pass/Fail 3. Pass/Fail 4. Pass/Fail 5. Pass/Fail Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.3.3 Container Door Trim Release Test		**Regulations: LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 12.2.5**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation System Container; It should be demonstrated by 2 dry deployments of the system, with the container angled back to simulate an unfavourable trim of up to 10° and list of up to 20° either way, that outer door, the passage and platform (if fitted), will not suffer damage which will render it unusable for its intended purpose.	There should be no damage to the outer door, passage and platform if fitted which will render the system unusable. The door of the container should open fully and the system deploy without interference.	1. Height of deployment _____ m 2. Adverse trim and list 10° trim 20°list (low side) Operation of system Passed ____ Failed ____ 3. Adverse trim and list 10° trim 20°list (high side) Operation of system Passed ____ Failed ___ Comments/Observation. Passed _____ Failed _____

6.2.4 Passage Load Test		**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 12.3.1.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage A fully inflated passage should be arranged on solid base at the height at which it is to be stowed on board. Each single path should be loaded with 150 kg weight at mid length.	Slide path must be usable and not become unduly distorted.	1. Height of slide above ground _____ m 2. Length of slide _____m 3. Number of slide paths 4. Angle of slide path _____ ^{o} Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.1 Dry Sliding Test		**Regulations: LSA Code I/1.2 & VI/6.2; MSC81(70) 1/12.3.1.2**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; A fully inflated passage should be subjected to individual sliding operations twice the number for which it is to be certificated. For this test actual persons of varied physique and weight should be used.	On completion the passage path should remain in a serviceable condition.	1. Number of slide paths 2. Number of persons passage is certified for 3. Number of sliding operations Comments/Observations. Passed _____ Failed _____

6.2.4.2 Loss of Pressure Test		**Regulations LSA Code I/1.2 & VI/6.2; MSC81(70) 1/12.3.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; It should be demonstrated using actual persons that the loss of pressure in any one section of the passage will not limit its use as a means of evacuation.	Passage should remain usable throughout with the relevant section of the slide de-pressurised.	1. Height of slide above ground _____m. 2. No. of persons using system _____ 3. Sequence of deflation of slide tubes; Section deflated 1. 2. 3. 4. 4. Angle of passage___° Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.3 Load Test of Passage to Container	**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/ 12.2.2 & 12.3.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; A static load of 2.2 times the maximum load to which the system is to be designed should be applied for a period of 30 minutes to the connection between the passage and the container. This static load is to be equivalent to the calculated load imposed by the maximum number and size of fully loaded liferaft's for which the system is designed, attached to the loaded platform with the ship moving through the water at 3 knots against a head wind of force 10 on the Beaufort scale.	On completion there must be no signs of any fracture or stranding of its connections, or other damage as a result of this factory test.	1. Calculated static load _____tonnes 2. 2.2 x calc. load _____tonnes 3. Period of test load _____ min 4. Calculated breaking load of connection _____ T. 5. Method used to calculate static load test Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.4 Cold Inflation Test	**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/12.3.1.5**

Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; The uninflated passage with its gas cylinders should be placed in a cold chamber at a temperature of -30^{0}C. After a period of not less than 24 hours at this temperature the passage should reach its working pressure within 5 minutes.	The passage and components must show no sign of cracking, seam slippage or other defects. The gas inflation system should show no sign of cracking or other defects.	1. Cold Chamber temperature _____ ^{0}C Time in _____ Time out _____ Hours in chamber _____ @ -30^{0}C 2. Design WP _____ kPa 3. System usable in _____ secs 4. Time to reach working pressure _____ secs 5. Relief valves blowing at:- 6 Passage reached working pressure in 5 Min Yes/No Gas Inflation System Acceptable Yes/No 7. Details of gas inflation system .1 Slide - No. of cylinders Weight of cylinders _____ Kg. Gas charge_____ kgCO_2, _____ kg N_2 Bottle details .2 Platform – No. of cylinders Weight of cylinders _____ Kg. Gas charge_____ kg CO_2, _____ kg N_2 Bottle details

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.4 Cold Inflation Test (continued)	**Regulations:- LSA Code I/1.2 & VI/6.2; MSC.81(70) 1/12.3.1.5**	
Test Procedure	Acceptance Criteria	Significant Test Data
	Continued:-	8. Details of high pressure hose .1 Material of Hose .2 Pressure rating of hose 9. Details of Cylinder valve 10. Details of Operating Head 11. Details of Inflation Valve 12. Details of Pressure Relief Valve .1 Lifting pressure .2 Reseat pressure 13. Additional Inflatable Structures associated with passage and platform:- Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.5 Hot Inflation Test	**Regulations:- LSA Code I/1.2 & VI/6.2; MSC81(70) 1/12.3.1.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; The uninflated passage with its gas cylinders should be placed in a hot chamber at a temperature of $+65^0$C for not less than 7 hours.	On inflation the pressure relief valves on the passage should be of sufficient capacity to prevent pressure in excess of twice the designed working pressure. The passage and components should show no sign of cracking, seam slippage or other defects. (The inflation system should be identical to the system described in 6.2.4.4 above)	1. Hot chamber temperature _____ ^{0}C Time in _____ Time out _____ Hours in chamber _____ @ $+65^0$C 2. Design WP _____ kPa 3. System usable in _____ secs 4. Time to reach working pressure _____ secs 5. Maximum pressure reached during inflation _____ kPa 10. Relief valves blowing at:- Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.4.6 Wet Sliding Test		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.1.7**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; It should be demonstrated with at least 10 sliding operations on a slide path thoroughly wetted with water to simulate wet weather conditions.	The speed of descent should not be considered excessive or dangerous.	1. Height of slide above ground _____ m 2. Angle of slide path to horizontal _____° 3. No. of persons sliding Comments/Observation Passed _____ Failed _____

6.2.4.7 3 Times Pressure Test		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/ 12.3.1.8, 5.17.7 & 5.17.8**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Inclined Inflated Passage; Each inflatable compartment in the passage should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative, compressed air should be used to inflate the passage and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved.	The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the passage.	1. Passage .1 Design Working Pressure _____ kpa .2 3 x working pressure _____ kPa .3 Pressure at start _____ kPa .4 Calculated 5% pressure drop maximum ____ kPa .5 Pressure drop after 30 minutes _____ kPa .6 Percentage drop _____ % Comment/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.5 2 x Times Sliding test		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.2.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Vertical Passage The vertical passage should be subjected to individual descent operations twice the number for which it is to be certificated. For this test actual persons of varied physique and weight should be used.	On completion the passage path should remain in a serviceable condition.	1. Number of vertical passages _____. 2. Number of sliding operations per passage ____. 3. Passage remains in serviceable condition Yes/No ___. Comments/observations. Passed _____ Failed _____

6.2.5.1 Load Test of Passage to Container		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.2.2**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Vertical Passage; A static load of 2.2 times the maximum to which the system is to be designed should be applied for a period of 30 minutes to the connection between the passage and the container. This static load is to be equivalent to the calculated load imposed by the maximum number and size of fully loaded liferaft's for which the system is designed, attached to the loaded platform with the ship moving through the water at 3 knots against a head wind of force 10 on the Beaufort scale.	On completion there must be no signs of any fracture or stranding of its connections, or other damage as a result of this factory test.	1. Calculated static load _____ tonnes 2. 2.2 x calc. load _____ tonnes 3. Period of test load _____ min 4. Calculated breaking load of connection _____ T. Method used to calculate static load test Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.5.2 Cold Passage Test		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.2.3**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Vertical Passage. The stowed passage should be placed in a cold chamber at a temperature of -30^{0}C for a period of 24 hours.	At this temperature the passage should show no signs of cracking or other defects.	Cold chamber temperature _____ °C Time in _____ Time out _____ Total time in chamber _____ hr Total time to deploy _____secs Does passage show signs of cracking or other defects Yes/No _____ Comments/observations. Passed _____ Failed _____

6.2.5.3 Wet Descent Test		**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.2.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Vertical Passage. It should be demonstrated with at least 10 descent operations, in the case of open vertical passages with the path thoroughly wetted with water to simulate wet weather conditions.	The speed of descent should not be considered excessive or dangerous.	1. Height of vertical passage above ground _____ m. 2. No of persons sliding _____. Comments/Observation Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.6.1 Loaded Freebaord and 50% Buoyancy Loss Loaded Test	**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.4.2**

Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, if fitted The platform should be inflated and loaded with the number of persons carried in accordance with 6.2.0.4. Freeboards should be measured all round all wearing an approved lifejacket. It should then be demonstrated that in the event of the loss of 50% of the buoyancy in the tubes, the platform should be capable of supporting the number of persons specified, all wearing approved lifejacket.	Freeboard should be measured all round, and should not be less than 300 mm. and should have a positive freeboard.	No. of persons on platform Freeboard in undamaged condition Freeboard recorded Positive Negative 12 o'clock_____mm _____ _____ 3 o'clock_____mm _____ _____ 6 o'clock_____mm _____ _____ 9 o'clock_____mm _____ _____ Buoyancy tube deflated Upper/Lower Freeboard recorded Positive Negative 12 o'clock_____mm _____ _____ 3 o'clock_____mm _____ _____ 6 o'clock_____mm _____ _____ 9 o'clock_____mm _____ _____ Comments/observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.6.2 Self Draining Test	**Regulations: LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.4.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, if fitted Water should be pumped into the interior of the platform, while it is afloat, at a rate of 2300 l per minute for 1 minute, the water should then be shut off. If the platform is divided into separate areas, by thwarts or other means, each such area should be subjected to the test.	There should be no appreciable accumulation of water on the platform. The platform should remain stable and usable during this test.	1. Hose delivery rate_____ l/min 2. Period of delivery of water _____ min 3. Area of platform _____ m² 4. Area of drainage point _____ m² 5. Drainage area sufficient to remove water Yes/No Comments/observations. Passed _____ Failed_____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.6.3 Cold Inflation Test	**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.4.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, if fitted; The uninflated platform with its inflation system should be placed in a cold chamber at a temperature of -30^{0}C. After a period of not less than 24 hours at this temperature the platform should reach its working pressure within 5 minutes.	The passage and components must show no sign of cracking, seam slippage or other defects. The gas inflation system should show no sign of cracking or other defects. The Pressure Relief Valves should be monitored to ensure that they operate satisfactorily after inflation and during the warming up of the liferaft.	1. Cold temperature _____^{0}C Time in _____ Time out _____ Hours in chamber _____ @ -30^{0}C 2. Design WP _____ kPa 3. System usable in _____ min 4. Time to reach working pressure _____ min 5. Relief valves blowing at:- Gas Inflation System Acceptable to Administration Yes/No 6. Details of gas inflation system .1 Platform - No. of cylinders Weight of cylinders _____ Kg. Gas charge_____ kg CO_2, _____ kg N_2 Bottle details 7. Details of high pressure hose _____ .1 Material of Hose _____ .2 Pressure rating of hose _____ *continued…*

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.6.3 Cold Inflation Test (continued)	**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.4.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Continued: -	Continued:-	8. Details of Cylinder valve 9. Details of Operating Head 10. Details of Inflation Valve _____ 11. Details of Pressure Relief Valve _____ _____ .1 Lifting pressure _____ .2 Reseat pressure _____ 12. Additional Inflatable Structures associated with platform Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.6.4 Hot Inflation Test	**Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.4.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, if fitted:- The platform with its inflation system should be placed in a hot chamber at a temperature of $+65^0$C for not less than 7 hours.	On being inflated the pressure relief valves on the platform should be of sufficient capacity to prevent pressure in excess of twice the designed working pressure. The passage and components should show no sign of cracking, seam slippage or other defects. The maximum pressure achieved during the hot should align with the Pressure Relief Valves Lifting and Re-seat pressures. (The inflation system should be identical to the system described in 6.2.6.3 above)	1. Hot temperature _____ ^{0}C Time in _____ Time out _____ Hours in chamber _____ @ $+65^0$C 2. Design WP _____ 2 x Design WP _____ 3. System usable _____ min 4. Time to reach working pressure 6. Pressure relief valves blowing at:-. 7. Max Pressures reached in buoyancy tubes and time. Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.6.5 3 Times Overpressure Test	**Regulations: LSA Code I/1.2 & VI/6.22; MSC81(70) 1/ 5.17, 5.17.8 & 12.4.6**	
Test Procedure	Acceptance Criteria	Significant Test Data
Marine Evacuation Platform, if fitted; Each inflatable compartment in the platform should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative, compressed air should be used to inflate the platform and the inflation source removed. The test should continue for at least 30 minutes. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment material has completed stretching due to the inflation pressure and stabilised. This test should be conducted after equilibrium condition has been achieved.	The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defect in the platform.	1. Passage .1 Design Working Pressure _____ kPa .2 PRV lifting pressure _____ kPa .3 PRV reseat pressure _____ kPa .4 3 x working pressure _____ kPa .5 Pressure at start _____kpa .6 Calculated 5% pressure drop maximum ____kpA .7 Pressure drop after 30 minutes _____ kPa .8 Percentage drop _____ % Comment/Observations Passed _____ Failed

Marine Evacuation Systems	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.7 Liferaft Construction		**Regulations:- LSA Code I/1.2 IV/4.22 & VI/6.2; MSC81(70) 1/12.5.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Inflatable liferafts associated with marine evacuation systems Any inflatable liferaft used in conjunction with the marine evacuation system should conform with the requirements of the LSA Code section 4.2.	Liferafts used in conjunction with the marine evacuation system should conform and be prototype tested to the requirements of section 4.2.	Type approval certifications confirms compliance with LSA Code section 4.2 and 4.2 0f these test reports para 4.4.3 Conforms to LSA Code section 4.2. Yes/No ____ Tested to Test Report 4.4.3 Inflatable liferaft's. Yes/No Comments/observations. Passed _____ Failed _____

6.2.7.1 Liferaft Release From Stowage Position.		**Regulations:- Chapter III/ 13.4; LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.5.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Inflatable liferafts associated with marine evacuation systems Any inflatable liferaft used in conjunction with the marine evacuation system should, where applicable; 1. be sited close to the system container but be capable of dropping clear of the deployed system and boarding platform. 2. be capable of release one at a time from its stowage rack with arrangements which will enable it to be moored alongside the platform. 3. be provided with pre-connected or easily connected retrieving lines to the platform.	It should be demonstrated that the liferafts can be deployed from their stowage position, and moored alongside the platform, if fitted, before being inflated, and bowsed in ready for boarding. It should be demonstrated that the liferafts can be deployed from their stowed positions independently of the marine evacuation system.	1 Height of stowage position in lightest seagoing condition m. 2 Certified drop height of liferaft_____m. 3 Operation carried out successfully Yes/No 4 Method of release automatic _____ manual _____ 5 Description of release method _____ 6 Liferafts launched independently of the MES Yes/No ____ Comments/observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.7.2 Liferaft Release From Passage	**Regulations:- Chapter III/13.4; LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.5.5**	
Test Procedure	Acceptance Criteria	Significant Test Data
Inflatable liferafts associated with marine evacuation systems Any inflatable liferaft used in conjunction with the marine evacuation system should be provided with pre-connected or easily connected retrieving lines to the platform.	If the passage is to give direct access to the liferaft(s), it should be demonstrated that it can be easily and quickly detached.	1. Are liferafts launched with passage Yes/No ____ 2. Method of connection of liferafts to passage _____ 3. Method of release from passage _____ 4. Method of release acceptable Yes/No ____ Comments/observations Passed_____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.8 Timed Evacuation Test	**Regulations: LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.6.1**

Test Procedure	Acceptance Criteria	Significant Test Data
Performance of the marine evacuation system A marine evacuation system should be evaluated for capacity by mean of timed evacuation deployments conducted in harbour. It should be demonstrated in harbour by a full deployment of a system, including the launching and inflation of all the associated liferafts, that the system will provide a satisfactory means of evacuation. For this trial the number of persons to be used should be that for which the system is to be certificated. The various stages of this trial should be timed so as to permit the calculation of the number of persons that can be evacuated in any specified period, a representative composition of persons with normal health, height and weight should be used in the demonstration, and should consist of different sexes and ages so far as it is practicable and reasonable. Time Trial Sheets Attached to be completed	The passage of the marine evacuation system should be provide for safe decent of persons of various ages, sizes and physical capabilities, wearing approved lifejackets, from the embarkation station to the floating platform or survival craft.	No. of persons system is certificated for_____ No. of platform crew _____ Number evacuated after 17.40 _____ Number evacuated after 30 minutes _____ Number actually evacuated _____ Time taken _____ No. of associated liferafts _____ Carrying capacity of liferafts _____ Height of embarkation deck above water_____ m Weather conditions: _____ Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.9 Heavy Weather sea trial (Phase 1)		**Regulations: LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.6.2.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Conditions during the heavy weather sea trial should not fall below a sea state associated with a wind of force 6 on the Beaufort scale. It should be demonstrated at sea by a full deployment of a system, including the launching and inflation of the associated liferafts, that the system will provide a satisfactory means of evacuation in a sea state associated with a wind of force 6 on the Beaufort scale, and in association with a significant wave height of at least 3 m. The signal should be high-pass filtered at 0.08 Hz to exclude any contributions from swell. The significant wave height should be calculated based on filtered spectrum and should not be less than 3.0 m. The demonstration should be carried out in accordance with the following procedures: **Phase 1 - Initial deployment of system.** .1 with the vessel in a simulated "dead ship" condition, and the bow into the wind the system (passage and platform or any other configuration) should be deployed in its normal design manner; and .2 The platform and passage are to be observed from the ship to verify in this condition that it forms a stable evacuation system for the platform crew to descend and carry out their initial duties in preparation for evacuation;	System to remain usable throughout the trials and should not suffer damage to the platform, passage, or liferafts, or other defects. System capable of providing a 3 metres significant wave height satisfactory means of evacuation in a sea state associated with a wind of force 6 on the Beaufort scale.	1. Position of vessel during trials _____ Weather conditions at start _____ BF; Weather conditions at end of trials _____ BF. Wind speed at start _____ m/s Wind speed at end _____ m/s Significant wave height _____ m Maximum wave height _____ m Method of measuring wave height _____ Average drift of ship during trial _____ m/s Time taken for system to become usable ___ min Weather conditions remained with test limits Yes/No Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____ Time:_____
	Model:_____	Surveyor:_____
	Lot/Serial Number:_____	Organization:_____

6.2.9.1 Heavy weather sea trial (Phase 2)	**Regulations: LSA Code I/1.2 & VI/6.22 ; MSC81(70) 1/12.6.2.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
Conditions during the heavy weather sea trial should not fall below a sea state associated with a wind of force 6 on the Beaufort scale. **Phase 2 : Lee Side Trial** .1 the ship to be manoeuvred to place the system on the lee side and then allowed to freely drift. .2 where the system employs a platform, the nominated number of the platform crew are to descend via the passage and retrieve at least two liferafts which have been launched separately; .3 where the system employs a passage giving direct access to the liferaft, the nominated number of liferaft boarding crew are to descend via the passage. If additional liferafts are employed with the system, then they should be launched separately and be retrieved by the liferaft crew; and .4 after the liferafts have been satisfactorily deployed, dependant upon safety considerations 20 persons in suitable protective clothing are to evacuate to the liferafts through the passage;	System to remain usable throughout the trials and should not suffer damage to the platform, passage, or liferafts, or other defects. System capable of providing a satisfactory means of evacuation in a sea state associated with a wind of force 6 on the Beaufort scale. (The design of Marine Evacuation Systems may vary, such that the configuration of the arrangement of the liferafts as described in the test procedure may not be applicable. The Heavy weather sea trial should be based upon the manufacturers design concept, for the system, for evacuating the number of persons in the required time.)	2 Number of platform crew _____ Number of liferafts deployed _____ Safe to evacuate 20 persons to liferafts Yes/No ____ 3 Evacuation satisfactory Yes/No _____ Comments/Observations. Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.2.9.2 Heavy weather sea trial (Phase 3)	**Regulations LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.6.2.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
Conditions during the heavy weather sea trial should not fall below a sea state associated with a wind of force 6 on the Beaufort scale. **Phase 3 - Loaded trial lee side** The platform, if fitted, and the required number of liferafts are to be loaded to their certified capacity with weights representing 75 kg/person. When loaded with the required weights the system is to be observed for a period of 30 minutes, with the vessel free to drift, Vessel allowed to drift for a minimum period of 30 minutes.	System to remain usable throughout the trials and should not suffer damage to the platform, passage, liferafts, or other defects. System capable of providing a satisfactory means of evacuation in a sea state associated with a wind of force 6 on the Beaufort scale. The system should continue to provide a safe and stable evacuation system.	Number of persons platform can carry Platform weight loaded = _____ persons X 75 kg = _____ kg Number of liferafts inflated _____ Carrying capacity of liferaft _____ Liferaft weight loaded = _____ persons X 75 kg = _____kg Method of loading liferafts _____ Average drift speed during trial _____m/s Length of loaded trial lee side _____min Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.9.3 Heavy weather sea trial (Phase 4)	**Regulations: LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.6.2.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
Conditions during the heavy weather sea trial should not fall below a sea state associated with a wind of force 6 on the Beaufort scale. **Phase 4 - Loaded trial weather side** The platform, if fitted, and the required number of liferafts are to be loaded to their certified capacity with weights representing 75 kg/person. The trials of phase 2 and 3 should be repeated with the system deployed on the weather side of the ship. The lee side trials and the weather side trials may be conducted in any convenient order. Where ship manoeuvres are required to place the system on any one side, any damage or failure sustained during this manoeuvre should not constitute a failure of the system. Vessel allowed to drift for a minimum period of 30 minutes.	System to remain usable throughout the trials and should not suffer damage to the platform, passage, liferafts, or other defects. System capable of providing a satisfactory means of evacuation in a sea state associated with a wind of force 6 on the Beaufort scale. The system should be tested, as far as practicable, on a vessel having similar characteristics to the types of ships the equipment is to be fitted to.	Number of persons platform can carry Platform weight loaded = _____ persons X 75 kg = _____ kg Number of liferafts inflated Carrying capacity of liferaft Liferaft weight loaded = _____ persons X 75 kg = _____ kg Method of loading liferafts _____ Average drift speed during trial _____ m/s Length of loaded trial weather side _____ min Comments/Observations Passed _____ Failed _____

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.10	**Evacuation Trial Timings (MES with platform and liferafts)**	**Regulations: Chapter III/15; LSA Code I/1.2 & VI/6.22; MSC81(70) 1/6.1.5**
		TIMINGS
1	MES door open	
2	MES in water	
3	MES slide/platform inflated	
4	4 platform crew on platform	
5	Signal to release liferafts given	
6	**1ST LIFERAFT LAUNCHED**	
6.1	ILR container bowsed in	
6.2	ILR boardable	
6.3	1st person descends system	
6.4	Last person in liferaft No 1	
6.5	Liferaft marshalled clear	
7	**2ND LIFERAFT LAUNCHED**	
7.1	ILR container bowsed in	
7.2	ILR boardable	
7.3	1st person descends system	
7.4	Last person in liferaft No 2	
7.5	Liferaft marshalled clear	

Continued…..

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

(Continued)	**TIMINGS**
8 **3RD LIFERAFT LAUNCHED**	
8.1 ILR container bowsed in	
8.2 ILR boardable	
8.3 1st person descends system	
8.4 last person in liferaft No 3	
8.5 Liferaft marshalled clear	
9 **4TH LIFERAFT LAUNCHED**	
9.1 ILR container bowsed in	
9.2 ILR boardable	
9.3 1st person descends system	
9.4 Last person in liferaft No 4	
9.5 Liferaft marshalled clear	
10 **5TH LIFERAFT LAUNCHED**	
10.1 ILR container bowsed in	
10.2 ILR boardable	
10.3 1st person descends system	
10.4 Last person in liferaft No 5	
10.5 Liferaft marshalled clear	

Continued…..

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

(Continued)	**TIMINGS**
11 **6TH LIFERAFT LAUNCHED**	
11.1 ILR container bowsed in	
11.2 ILR boardable	
11.3 1st person descends system	
11.4 Last person in liferaft No 6	
11.5 Liferaft marshalled clear	
12 **7TH LIFERAFT LAUNCHED**	
12.1 ILR container bowsed in	
12.2 ILR boardable	
12.3 1st person descends system	
12.4 Last person in liferaft No 7	
12.5 Liferaft marshalled clear	
13 **8TH LIFERAFT LAUNCHED**	
13.1 ILR container bowsed in	
13.2 ILR boardable	
13.3 1st person descends system	
13.4 Last person in liferaft No 8	
13.5 Liferaft marshalled clear	
Evacuation trial completed at hr . . . . . min . . . . . sec	
Total Time for Evacuation……hr . . . . . min	

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.2.11	**Evacuation Trial Timings (MES straight into liferafts)**	**Regulations: Chapter III/15; LSA Code I/1.2 & VI/6.22; MSC81(70) 1/6.1.5**
		TIMINGS
1	MES door open	
2	MES in water	
3	MES passage, liferafts inflated and boardable	
4	MES crew descend	
4.1	Additional liferaft launched (if required)	
4.2	ILR container bowsed in	
4.3	ILR boardable	
5	Signal to receive passengers given	
6	**1ST PERSON DESCENDS** (liferaft No 1)	
6.1	Last person in liferaft No 1	
6.2	Liferaft marshalled clear	
7	**1ST PERSON DESCENDS** (liferaft No 2)	
7.1	Last person in liferaft No 2	
7.2	Liferaft marshalled clear	
8	**1ST PERSON DESCENDS** (liferaft No 3)	
8.1	Last person in liferaft No 3	
8.2	Liferaft marshalled clear	

Continued…..

Marine Evacuation Systems	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

Continued			**TIMINGS**
9	**1ST PERSON DESCENDS** (liferaft No 4)		
	9.1	Last person in liferaft No 4	
	9.2	Liferaft marshalled clear	
10		**1ST PERSON DESCENDS** (liferaft No 5)	
	10.1	Last person in liferaft No 5	
	10.2	Liferaft marshalled clear	
11		**1ST PERSON DESCENDS** (liferaft No 6)	
	11.1	Last person in liferaft No 6	
	11.2	Liferaft marshalled clear	
12		**1ST PERSON DESCENDS** (liferaft No 7)	
	12.1	Last person in liferaft No 7	
	12.2	Liferaft marshalled clear	
13		**1ST PERSON DESCENDS** (liferaft No 8)	
	13.1	Last person in liferaft No 8	
	13.2	Liferaft marshalled clear	

Evacuation trial completed at hr . . . . . min . . . . . sec

Total Time for Evacuation hr . . . . . min

6.3 MEANS OF RESCUE

EVALUATION AND TEST REPORT

6.3.1 Submitted drawings, reports and documents
- 6.3.1.1 General data and specifications
- 6.3.1.2 Quality assurance
- 6.3.1.3 Visual inspection

6.3.2 Means of rescue – Marine evacuation systems
- 6.3.2.1 Visual inspection of means of rescue types
- 6.3.2.2 Means to ascend to the deck
  - 6.3.2.2.1 Visual inspection of means to ascend to the deck
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- 6.3.2.3 Mechanical hoist
  - 6.3.2.3.1 Static proof load test of safety hoist
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  - 6.3.2.3.3 Turning in test
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6.3.3 Means of Rescue – Davit launching system
- 6.3.3.1 Visual Inspection of davit launched means of rescue
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- 6.3.3.3 Impact test
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  - 6.3.3.4.1 Damage test of inflatable means of rescue
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  - 6.3.3.4.4 Strength test
- 6.3.3.5 Rigid means of rescue
  - 6.3.3.5.1 Construction of rigid means of rescue
  - 6.3.3.5.2 Strength of rigid means of rescue
- 6.3.3.6 Means of rescue launching appliance
  - 6.3.3.6.1 Static proof load test
  - 6.3.3.6.2 Operational load test
  - 6.3.3.6.3 Turning in test
  - 6.3.3.6.4 Winch brake test
  - 6.3.3.6.5 Means of rescue recovery speed test
  - 6.3.3.6.6 Hand operation test

6.3 MEANS OF RESCUE

EVALUATION AND TEST REPORT

Manufacturer	
System Type	
Serial Number	
Maximum Working Load	
Maximum Turning Moment	
Winch type	
Serial Number	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

Means of Rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.1 Submitted drawings, reports and documents

Submitted drawings and documents			Status
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			Status
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Means of Rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.1.1 General Data and Specifications	**Regulations: LSA Code 4.4, 5.1, MSC.81(70)1/7.2.16**

General Information	MOR Dimensions	MOR Weight
Construction Material: Hull: _____ Canopy: _____ Fire retardancy documentation:_____ Inflated chambers:_____ MOR Inherent Buoyancy (Type App.) Material: _____ Weight: _____ Occupancy: Persons (75 kg each): _____ Additional rigid or inflatable buoyancy:- _____ Release mechanism(s) (if applicable) 1 2 Manufacturer:_____ Type: _____ SWL: _____	Dimensions: LOA: _____ Breadth Maximum: _____ Depth to Sill: _____ Depth to Gunwale: _____ Moulded Breadth: _____ Moulded Depth: _____ (Insert diagram of hull for reference)	Design Weight: Unloaded: _____ Loose Equipment: _____ Persons: _____ Calculated Loaded Weight: Fully Equipped: _____ With Persons: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Means of Rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.1.2 Quality Assurance	**Regulations: -**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: - _____ Quality Assurance Procedure: - _____ Quality Assurance Manual: - _____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.1.3 Visual Inspection	**Regulations: Ch.III/26.4; LSA Code 1.2.2.9; MSC/Circ.810-2.2, 2.4.2.1, 2.4.2.4, 2.4.2.9**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visual examination. 1. Approval markings	The means of rescue should:- Be clearly marked with approval information including the Administration which approved it, date of manufacture and expiry and operational restrictions,	Passed _____ Failed _____
	Markings are to be indelible;	Passed _____ Failed _____
	Be conspicuously marked with the maximum number of persons the means of rescue is permitted to take;	Passed _____ Failed _____
	Be conspicuously marked to prevent confusion with liferafts and, if applicable to a marine evacuation system, unless these also form part of the means of rescue:	Passed _____ Failed _____
2. Operating instructions.	Be provided with brief instructions or diagrams clearly illustrating the use of the means of rescue:	Passed _____ Failed _____ Comments/Observations

Means of Rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.2.1 Visual Inspection of Means of Rescue Types		**Regulations: Ch.III/26.4; LSA Code 1.2.2.9; MSC/Circ.810-2.4**
Test Procedure	Acceptance Criteria	Significant Test Data
The means of rescue should be one of the following:		
.1 A marine evacuation system complying with the requirements of section 6.2 of the LSA Code providing a suitable floating platform, with a ladder or other means to ascend to the deck for able-bodied persons, and a mechanically powered means to safely hoist persons lying down.	Is the MES Type Approved in accordance with Section 6.2. above?	Yes / No
	Is a suitable floating platform provided?	Yes / No
	Is a ladder or other means of ascending to the deck provided?	Yes / No
	Is a mechanical hoist provided?	Yes / No
.2 A device complying with the requirements for davit-launched liferafts in paragraphs 4.1.3.1, 4.1.4.1, 4.1.5.1.1, and in the case of an inflatable device, 4.2.2, 4.2.2.1, 4.2.2.3, 4.2.2.4, 4.2.7, 4.2.8.1, 4.2.8.2 (if fitted) and 4.2.9.1, or in the case of a rigid device, 4.3.1, 4.3.2, 4.3.6.2, 4.3.6.3, 4.3.6.4, 4.3.6.6, 4.3.6.9, 4.3.6.10 and 4.3.7 of the LSA Code, to provide a suitable floating platform. The device should be used with a launching appliance, meeting the requirements of 6.1 or equivalent. A safety device should be fitted to prevent over stressing the launching appliance.	Is the device designed to comply with the requirements of a davit-launched liferaft?	Yes / No
	Is the Means of Rescue an inflatable device or rigid device?	Inflatable / Rigid
		Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.2.1 Visual Inspection of means to ascend to the deck		**Regulations: MSC/Circ.810 –2.4.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The MES is to be provided with means for able-bodied persons to ascend to the deck.	A means of ascending to the deck is to be provided and corresponds to the approved drawings.	Passed _____ Failed _____
In the case of a vertical MES, this can either be a ladder or by other means.		Passed _____ Failed _____
For inclined MESs, this can be either by providing suitable handholds or by portable ladders with steps having an efficient non-slip surface	The amount of maintenance should be restricted to a minimum	Passed _____ Failed _____
Visually inspect the appliance. Conduct measurements and verify clearance as required	Parts which require maintenance should be easily accessible and easily maintained	Comments/Observations Means provided to ascend to the deck: -

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.2.2 Handholds on inclined MESs		**Regulations: MSC/Circ. 810 –2.4.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Materials used for handholds are to be suitable for the intended purpose.	Are handholds fitted? The material and its means of attachment used for the handholds is to be of sufficient strength to accommodate the expected use.	Yes / No Passed _____ Failed _____ Comments/Observation

6.3.2.2.3 Visual inspection of ladders (or equivalents)		**Regulations: MSC/Circ. 810 –2.4.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The steps of the ladder (or its equivalent) should be suitable for the intended purpose.	The construction of the ladder and its means of attachment are to be of sufficient strength to accommodate the expected use.	Passed _____ Failed _____ Comments/Observation

	Manufacturer:_____ Date:_____ Time:_____	
Means of rescue	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.1 Static proof load test of safety hoist	**Regulations: LSA Code 6.1.1.5 - 6.1.1.6; MSC.81(70) 1/8.1.1**	
Test Procedure	Acceptance Criteria	Significant Test Data
For safety hoist and launching appliances, except the winch brakes, should be subjected to a static proof load of 2.2 times their maximum working load. With the load at the full outboard position, the load should be swung through an arc of approximately 10^0 to each side of vertical in the intended fore and aft plane. The test should be done first in the upright position, followed by tests simulating a shipboard condition of list of 20^0 both inboard and outboard.	The launching appliance and its attachments other than winch brakes should be of sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load. There should be no evidence of significant deformation or other damage as a result of this test.	MWL : ..... kN Test load (2.2 x MWL): ..... kN There should be no evidence of significant deformation or other damage Passed/Failed Upright Passed/ Failed 20^0 inboard list Passed/ Failed 20^0 outboard list Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.2 Operational load test		**Regulations: LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1/8.1.2**
Test Procedure	Acceptance Criteria	Significant Test Data
For safety hoists a mass equal to 1.1 times the maximum working load should be suspended from the lifting points with the launching appliance in the upright position. The load should be moved from the full inboard to the full outboard position using the means of operation that is used on the ship. The test should be repeated with the launching appliance positioned to simulate a combined 20^0 inboard list and 10^0 trim. All the tests should be repeated with a mass equal to that of a fully equipped safety hoist, without persons, or the safety hoist intended for the use with the davit to ensure the satisfactory functioning of the davit under very light load conditions.	The appliance should successfully lower the load under all of the conditions, and there should be no evidence of significant deformation or other damage as a result of the tests. Each launching appliance together with all its lowering and recovery gear should be so arranged that the fully equipped safety hoist it serves can be safely lowered against a trim of up to 10^0 and a list of up to 20^0 either way: When boarded by its full complement of persons; Without persons in the safety hoist.	Weight of the lightest the safety hoist intended for use: LWL: ..... kN MWL: ..... kN Test load (1.1 x MWL): ..... kN Clear of davit horn ?* Passed/ Failed Does the appliance successfully lower the load under these conditions without evidence of significant deformation or damage? Passed/Failed Upright (1.1x MWL) Passed/Failed 20^0 inboard list +10° trim (1.1xMWL) Passed/Failed 20^0 inboard list +10° trim (LWL) Passed/Failed Stored power Passed/Failed Start pressure: k Pa Min. pressure: k Pa Pressure drop after one movement: k Pa Time from inboard to outboard: sec Comments/Observations **if applicable*

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.3 Turning in test		**Regulations: LSA Code 6.1.1.3; MSC.81(70) 1/8.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
With the appliance in the full upright position the maximum design hoisting load should be moved from the full outboard to the full inboard position using the means of operation that is used on the ship.	The appliance should successfully move the maximum designed hoisting load from the outboard to the inboard position without causing permanent deformation or other damage.	Maximum designed hoisting load : ……..... kN Does the launching appliance successfully move the load from outboard to inboard ? Passed/ Failed Does the launching appliance show any evidence of significant deformation or other damage as a result of this test? Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.4 Winch brake test		**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1/8.1.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of 1.5 times the maximum working load should be applied and held by the brake. This load should then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1 times the maximum working load should then be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand brake sharply. This test should be repeated a number of times. If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted. The various tests should achieve a cumulative lowering distance of at least 150 m. Operation of the winch with a load of a mass equal to that of a fully equipped safety hoist, without persons, or the lightest safety hoist intended for use with the winch should also be demonstrated. Following completion of these test (and 6.3.2.3.5 and 6.3.2.3.6), the winch should be stripped for inspection.	The test load should drop no more than 1 m when the brake is applied (except that the stopping distance may be exceeded if an exposed brake is wetted). The launching appliance should successfully lower a mass equal to that of a fully equipped safety hoist, without persons, or the lightest safety hoist intended for use with the winch. Inspection of the stripped winch should reveal no significant damage or undue wear.	Weight of the lightest the safety hoist : ..... kN MWL : ..... kN Test 1: Static test load (1.5 x MWL): ..... kN Does the brake test hold the test load (1.5x MWL)? pass/fail MWM: kNm Drum diam. mm Wire diam. Mm Number of turns Max. lowering speed m/s Test 2 Dynamic Test load (1.1 x MWL): kN Brake test carried out after > 3m with max lowering speed. Stop within 1 meter? Passed/Failed * *delete as appropriate* *continued*

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.4 Winch brake test (continued)	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1/8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
		1st stop > 3m 2nd stop: m 3rd stop: m 4th stop: m 5th stop: m Total lowering distance > 150 m Passed/ Failed Test 3 (if applicable) Winch design incorporates an exposed brake? Yes / No Wet stopping distance m Passed/ Failed Test 4 Test load (LWL) kN Lowering test with LWL satisfactory? Passed/ Failed Does the inspection of the stripped winch reveal any significant damage or undue wear? Passed/ Failed **Remarks*:***

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.2.3.5 Safety hoist recovery speed test		**Regulations: LSA Code 6.1.1.9; MSC.81(70) 1/8.1.5**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that a winch intended for use with a safety hoist is capable of recovering the safety hoist with the number of persons for which it is to be approved and its equipment or an equivalent mass at a rate of not less than 0.3 m/s.	Each safety hoist launching appliance should be fitted with a powered winch motor capable of raising the safety hoist from the water with its full safety hoist complement of persons and equipment at a rate of not less than 0.3 m/s .	Hoisting load: Measured recovering speed of the safety hoist : - _____m/s Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.2.3.6 Hand operation test		**Regulations: LSA Code 6.1.2.6; MSC.81(70) 1/8.1.6**
Test Procedure	Acceptance Criteria	Significant Test Data
The hand operation of the winch should be demonstrated. If the winch is designed for quick recovery by hand with no load, this should be demonstrated with a load of 1.5 times the mass of the empty lifting arrangements.	An efficient hand gear should be provided for recovery of each safety hoist. Hand gear handles or wheels should not be rotated by moving parts of the winch when the safety hoist is being lowered or when it is being hoisted by power.	Hoisting load: Test 1: Test load (1 x hoisting load): winch can be operated satisfactorily by hand? Passed/ Failed Arrangement provided for protection against moving parts and rotating handles? Passed/ Failed Type: Test 2: Only for quick recovery Test load (1.5 x weight of empty lifting arrangement): - kN Is quick recovery satisfactory? Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.1 Visual Inspection of davit launched Means of rescue	**Regulations: LSA Code - 1.2.2.9 MSC/Circular.810 -2.2, 2.4.2.1, 2.4.2.4, 2.4.2.9**

Test Procedure	Acceptance Criteria	Significant Test Data
Visual examination.	The means of rescue should:-	
1. Approval markings	Be clearly marked with approval information including the Administration which approved it, date of manufacture and expiry and operational restrictions,	Passed _____ Failed _____
	Markings are to be indelible;	Passed _____ Failed _____
	Be conspicuously marked with the maximum number of persons the means of rescue is permitted to take;	Passed _____ Failed _____
	Be conspicuously marked to prevent confusion with liferafts and, if applicable marine evacuation system, unless these form part of the means of rescue:	Passed _____ Failed _____
2. Operating instructions.	Be provided with brief instructions or diagrams clearly illustrating the use of the means of rescue:	Passed _____ Failed _____
3. Landing Area at water level.	The means of rescue is to have at least $9m^2$ for receiving rescued persons:	Passed _____ Failed _____
4. Colour.	Be of a highly visible colour:	Passed _____ Failed _____
5. Protection	Be protected against damage when moving against the ship's side;	Passed _____ Failed _____ N/A _____
	Offer protection to the rescued person from injury by the launching appliance;	Passed _____ Failed _____

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.1 Visual Inspection of davit launched Means of rescue (continued)	**Regulations: MSC/Circular.810 -2.4.2.1, 2.4.2.2, 2.4.2.5 to 2.4.2.8 & 2.4.2.11**	
Test Procedure	Acceptance Criteria	Significant Test Data
Visual examination (cont.).	The means of rescue should (cont.):-	
5. Protection (cont.)	Prevent occupants from falling from the means of rescue should it come into contact with an object like the ship's side;	Passed _____ Failed _____
	Be arranged such that the rescued persons do not need to traverse any gaps between the means of rescue and the platform and/or the ship's deck:	Passed _____ Failed _____
6. Self draining floor	The floor is to be self draining:	Passed _____ Failed _____
7. Means provided for bowsing	Be provided with means of bowsing the means of rescue against the ship's side:	Passed _____ Failed _____
9. Equipment	Be provided with one knife, in accordance with 4.1.5.1.2 of the LSA Code, at each bowsing point:	Passed _____ Failed _____ N/A _____
9. Controls	The inflation system controls; if of an inflatable type, are to be manual controlled:	Passed _____ Failed _____ N/A _____
10. Retro-reflective material	Be fitted with retro-reflective tape in accordance IMO Resolution A.658(16), Annex 1, Section 4.	Passed _____ Failed _____ N/A _____
11. Boarding ramps	Be fitted with at least two boarding ramps	Passed _____ Failed _____ N/A _____

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.1 Visual Inspection of davit launched Means of rescue (continued)		**Regulations: LSA Code – 4.1.3.1 and 4.1.5.1.1**
Test Procedure	Acceptance Criteria	Significant Test Data
Visual examination (cont.). 12. Lifelines should be securely becketed around the inside and outside of the means of rescue. 13. A buoyant rescue quoit, attached to not less than 30m of buoyant line. 14. Means are to be provided such that the container of the means of rescue or parts of it are prevented from falling into the sea during inflation and/or launching of the means of rescue. 15. Every inflatable means of rescue is to be provided with at least one repair outfit for repairing punctures in buoyancy compartments. 16. Every inflatable means of rescue is to be provided with at least one topping-up pump or a pair of bellows.	The means of rescue should (cont.):- Lifelines provided and securely fitted A buoyant rescue quoit, attached to not less than 30m of buoyant line is provided Fixing arrangements are provided which are of adequate strength A puncture repair kit is provided One topping-up pump or pair of bellows is provided	Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Passed _____ Failed _____ Comments/Observations

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.2 Markings on davit launched means of rescue		**Regulations: LSA Code I/1.2 and 4.2.1**
Test Procedure	Acceptance Criteria	Significant Test Data
The means of rescue should be marked with: Maker's name or trade mark; Serial number; Name of approval authority and the capacity of the system; SOLAS; Date of manufacture (month and year); Date and place of last service; Maximum permitted height of stowage above water-line; and The maximum number of persons the means of rescue is permitted to accommodate. Launching and operating instructions should be marked on or in the vicinity of the container.	The means of rescue should be either packed in a container or stowed such that it is so constructed as to withstand hard wear under conditions encountered at sea and as far as practicable weather tight, except for drain holes in the container bottom. All instructions and markings to be indelible.	Makers name: -_____ Serial No.: - _____ Approval authority: - _____ _____ Date of manufacture: - _____ Date and place last serviced: - _____ Maximum permitted height: - _____ Maximum number of persons: - _____ Launching & operating instructions acceptable? YES/NO _____ Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.3 Impact test		**Regulations: LSA Code IV/4.1.4.1.1; MSC.81(70) 5.16.2**
Test Procedure	Acceptance Criteria	Significant Test Data
The liferaft should be loaded with a mass equal to the mass of the number of persons for which it is to be approved and its equipment. With the liferaft in a free hanging position it should be pulled laterally to a position so that when released it will strike a rigid vertical surface at a velocity of 3.5 m/s. The Means of Rescue should then be released to impact against the rigid vertical surface. Note: The Means of Rescue should be lifted up 650 mm.	After this test the liferaft should show no signs of damage which would affect its efficient functioning.	Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.4.1 Damage test of inflatable means of rescue	**Regulations: LSA Code IV/4.2.2.1; MSC.81(70) 5.16.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that, in the event of any one of the buoyancy compartments being damaged or failing to inflate, the intact compartment or compartments should support, with positive freeboard over the means of rescue's periphery, the number of persons for which the means of rescue is to be approved. This can be demonstrated with persons each having a mass of 75 kg and seated in their normal positions or by an equally distributed mass.	The intact compartments should support, with positive freeboard over the means of rescue's periphery, the number of persons for which the means of rescue is to be approved, with any one of the buoyancy compartments deflated. _____=> Compartment deflated: _____ Freeboards: 12 o'clock _____ mm 3 o'clock _____ mm 6 o'clock _____ mm 9 o'clock _____ mm	Compartment deflated: _____ Freeboards: 12 o'clock _____ mm 3 o'clock _____ mm 6 o'clock _____ mm 9 o'clock _____ mm Compartment deflated: _____ Freeboards: 12 o'clock _____ mm 3 o'clock _____ mm 6 o'clock _____ mm 9 o'clock _____ mm Compartment deflated: _____ Freeboards: 12 o'clock _____ mm 3 o'clock _____ mm 6 o'clock _____ mm 9 o'clock _____ mm Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.4.2 Inflation test	**Regulations: LSA Code IV/4.2.2.3; MSC.81(70) 5.17.3 to 5.17.6**

Test Procedure	Acceptance Criteria	Significant Test Data
An inflatable means of rescue, packed in each type of container, should be inflated by pulling the painter and the time recorded:- 1) for it to become boardable, i.e. when buoyancy tubes are inflated to full shape and diameter. 2) for the cover to be erect; and 3) for the means of rescue to reach its full operational pressure when tested: .1 at an ambient temperature of between 18^0C and 20^0C; .2 at a temperature of -30^0C; and .3 at a temperature of $+65^0$C. For the inflation test at -30^0C the packed means of rescue should be kept at room temperature for at least 24 h, then placed in a refrigerated chamber at a temperature of -30^0C for 24 h prior to inflation by pulling the painter. Two means of rescue should be subject to an inflation test at this temperature. For the inflation test at $+65^0$C the packed means of rescue should be kept at room temperature for at least 24 h, then placed in a heating chamber at a temperature of $+65^0$C for not less than 7 h prior to inflation by pulling the painter. Force to pull out painter should be measured at ambient temperature.	When inflated in an ambient temperature of between 18^0C and 20^0C it should achieve total inflation in not more than 1 min. When inflated at -30^0C the means of rescue should reach working pressure in 3 min. There should be no seam slippage, cracking, or other defect in the means of rescue and it should be ready for use after the tests. When inflated at $+65^0$C the gas pressure relief valves must be of sufficient capacity to prevent damage to the means of rescue by excess pressure and to prevent the maximum pressure during the inflation from reaching twice the re-seat pressure of the release valve. There must be no seam slippage, cracking or other defect in the means of rescue. The force to pull out the painter should not be more than 150 N.	1) Force to pull the painter _____ N Inflation times: - Container open _____sec Boardable _____sec Relief valves: Upper open _____sec Lower open _____sec Lights int./ext. _____/_____sec Working Pressure _____ MPa 2) Cold temperature _____ ^{0}C Hours: _____ h Inflation times: - Raft 1 Raft 2 Container open _____sec Boardable _____sec Relief valves: Upper open _____sec Lower open _____sec Lights int./ext. _____/_____sec Working Pressure _____ MPa 3) Hot temperature _____ ^{0}C Hours: _____ h Inflation times: - Container open _____ sec Boardable _____ sec Relief valves: Upper open _____ sec Lower open _____ sec Lights int./ext. _____/_____sec Working Pressure _____ MPa Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.4.3 Pressure test		**Regulations: LSA Code IV/4.2.2.4; MSC.81(70) 5.17.7 to 5.17.8**
Test Procedure	Acceptance Criteria	Significant Test Data
Each inflatable compartment in the means of rescue should be tested to a pressure equal to three times the working pressure. Each pressure relief valve should be made inoperative, compressed air should be used to inflate the inflatable means of rescue and the inflation source removed. The test should continue for at least 30 min. The measurement of pressure drop due to leakage can be started when it has been assumed that compartment rubber material has been completed stretching due to the inflation pressure and stabilized. This test should be conducted after equilibrium condition has been achieved. The term "operational pressure" has the same meaning as the term "working pressure"; i.e. the pressure determined by the designed re-seat pressure of the relief valves, if fitted, except that, if the actual re-seat pressure of the relief valves, determined by testing, exceeds the designed re-seat pressure by more than 15%, the higher figure should be used.	The pressure should not decrease by more than 5% as determined without compensating for temperature and atmospheric pressure changes, and there should be no seam slippage, cracking or other defects in the means of rescue.	Design WP _____ Design temp _____ ^{0}C Design atmos. _____bar 3 times WP _____ Pressure drop after 30 min _____ The above should cover each compartments 1, 2 3, etc. Damage recorded: _____ _____ Floor: Design pressure _____ Pressure drop after 1 hour _____ Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.4.4 Strength test		**Regulations: LSA Code IV/4.2.8.1.1; MSC.81(70) 5.17.10**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated by an overload test on the means of rescue hanging from its centre support that the bridle system has an adequate factor of safety as follows: .1 the liferaft should be placed in a temperature of 20±3^{0}C for a period of at least 6 h; .2 following this period of conditioning, the liferaft should be suspended from its lifting hook or bridle and the buoyancy chambers (not including an inflatable floor) inflated; .3 when fully inflated and when the relief valves have re-seated themselves, all relief valves should be made inoperative; .4 the liferaft should then be lowered and loaded with a distributed mass equivalent to four times the mass of the number of persons for which it is to be approved and its equipment, the mass of each person being taken as 75 kg. .5 the liferaft should then be raised and remain suspended for at least 5 min; .6 the pressure before and after the test after the weight is removed and while it remains suspended, should be recorded; and .7 any dimensional deflections or distortions of the liferaft should be recorded.	During the test and after its completion, the inflatable means of rescue should remain suitable for its intended use.	Conditioning: Temperature:_____ ^{0}C Time in temperature _____h Number of persons _____ Load _____kg Time suspended _____min Pressure before loading Pressure suspended/loaded Pressure after test after unloading Dimensional deflections or distortions: Comments/Observations Passed _____ Failed _____

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.5.1 Construction of rigid means of rescue		**Regulations: LSA Code IV/4.3.2**
Test Procedure	Acceptance Criteria	Significant Test Data
The buoyancy of the means of rescue should be provided by approved inherently buoyant material placed as near as possible to the periphery of the liferaft. The buoyant material should be fire-retardant or be protected by a fire-retardant covering.	Material to be certified as being fire retardant.	Passed _____ Failed _____
The floor of the means of rescue should prevent the ingress of water and should effectively support the occupants out of the water and insulate them from cold.	The rigid means of rescue is to prevent the ingress of water.	Passed _____ Failed _____
	The rigid means of rescue is to support the occupant out of the water.	Passed _____ Failed _____
		Comments/Observations
		Passed _____ Failed _____

Means of rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.3.5.2 Strength of rigid means of rescue		**Regulations: LSA Code IV/4.3.7**
Test Procedure	Acceptance Criteria	Significant Test Data
In addition to the above requirements, a rigid liferaft for use with an approved launching appliance should, when suspended from its lifting hook or bridle, withstand a load of 4 times the mass of its full complement of persons and equipment.	The rigid means of rescue should no show any permanent damage from such a loading	Passed _____ Failed _____ Comments/Observations

Means of rescue	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

6.3.3.6.1 Static proof load test		**Regulations: LSA Code 6.1.1.5 - 6.1.1.6; MSC.81(70) 1/8.1.1**
Test Procedure	Acceptance Criteria	Significant Test Data
For rigid means of rescue davits and launching appliances, except the winch brakes, should be subjected to a static proof load of 2.2 times their maximum working load. With the load at the full outboard position, the load should be swung through an arc of approximately 10^0 to each side of vertical in the intended fore and aft plane. The test should be done first in the upright position, followed by tests simulating a shipboard condition of list of 20^0 both inboard and outboard.	The launching appliance and its attachments other than winch brakes should be of sufficient strength to withstand a static proof load on test of not less than 2.2 times the maximum working load. There should be no evidence of significant deformation or other damage as a result of this test.	MWL : ..... kN Test load (2.2 x MWL): ..... kN There should be no evidence of significant deformation or other damage Passed/Failed upright Passed/ Failed 20^0 inboard list Passed/ Failed 20^0 outboard list Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.6.2 Operational load test	**Regulations: LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1/8.1.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
For rigid means of rescue a mass equal to 1.1 times the maximum working load should be suspended from the lifting points with the launching appliance in the upright position. The load should be moved from the full inboard to the full outboard position using the means of operation that is used on the ship. The test should be repeated with the launching appliance positioned to simulate a combined 20^0 inboard list and 10^0 trim. All the tests should be repeated with a mass equal to that of a fully equipped lifeboat, without persons, or the lightest survival craft intended for the use with the davit to ensure the satisfactory functioning of the davit under very light load conditions. Note: Notwithstanding the 10°trim and 20° list requirements, lifeboat launching appliances for oil tankers, chemical tankers and gas carriers with a final angle of heel greater than 20^0 should be capable of operating at the final angle of heel on the lower side of the ship, taking into consideration the final damaged waterline of the ship.	The appliance should successfully lower the load under all of the conditions, and there should be no evidence of significant deformation or other damage as a result of the tests. Each launching appliance together with all its lowering and recovery gear should be so arranged that the fully equipped survival craft or rescue boat it serves can be safely lowered against a trim of up to 10^0 and a list of up to 20^0 either way: when boarded, as required by regulation III/23 or III/33, by its full complement of persons; without persons in the survival craft or rescue boat. A launching appliance should not depend on any means other than gravity or stored mechanical power which is independent of the ship's power supplies to launch the survival craft or rescue boat it serves in the fully loaded and equipped condition and also in the light condition.	Weight of the means of rescue intended for use: LWL ..... kN MWL: ..... kN Test load (1.1 x MWL) : ..... kN Clear of davit horn ?** Passed/ Failed Does the appliance successfully lower the load under these conditions without evidence of significant deformation or damage? Passed/Failed Upright (1.1x MWL) Passed/Failed 20^0 inboard list +10° trim (1.1xMWL) Passed/Failed 20^0 inboard list +10° trim (LWL) Passed/Failed Stored power Passed/Failed Start pressure: k Pa Min. pressure: k Pa Pressure drop after one movement: k Pa Time from inboard to outboard: sec Comments/Observations ** *if applicable*

Means of rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.3.6.3 Turning in test		**Regulations: LSA Code 6.1.1.3; MSC.81(70) 1/8.1.3**
Test Procedure	Acceptance Criteria	Significant Test Data
With the appliance in the full upright position the maximum design hoisting load should be moved from the full outboard to the full inboard position using the means of operation that is used on the ship.	The appliance should successfully move the maximum designed hoisting load from the outboard to the inboard position without causing permanent deformation or other damage.	maximum designed hoisting load : ..... kN Does the launching appliance successfully move the load from outboard to inboard ? Passed/ Failed Does the launching appliance show any evidence of significant deformation or other damage as a result of this test? Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.6.4 Winch brake test		**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1/8.1.4**
Test Procedure	Acceptance Criteria	Significant Test Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of 1.5 times the maximum working load should be applied and held by the brake. This load should then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1 times the maximum working load should then be lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying the hand brake sharply.	The test load should drop no more than 1 m when the brake is applied (except that the stopping distance may be exceeded if an exposed brake is wetted).	Weight of the lightest means of rescue : ..... kN MWL : ..... kN Test 1: Static test load (1.5 x MWL): ..... kN
This test should be repeated a number of times. If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted.		Does the brake test hold the test load (1.5x MWL)? pass/fail MWM: kNm Drum diam. mm Wire diam. Mm Number of turns Max. lowering speed m/s
The various tests should achieve a cumulative lowering distance of at least 150 m. Operation of the winch with a load of a mass equal to that of a fully equipped means of rescue, without persons, or the lightest means of rescue intended for use with the winch should also be demonstrated.	The launching appliance should successfully lower a mass equal to that of a fully equipped means of rescue, without persons, or the lightest means of rescue intended for use with the winch.	Test 2 Dynamic Test load (1.1 x MWL): kN Brake test carried out after > 3m with max lowering speed
Following completion of these test (and 6.3.3.6.5 and 6.3.3.6.6), the winch should be stripped for inspection.	Inspection of the stripped winch should reveal no significant damage or undue wear.	Stop within 1 meter? Passed/Failed

continued

Means of rescue	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

6.3.3.6.4 Winch brake test (continued)	**Regulations: LSA Code 6.1.2.5; MSC.81(70) 1/8.1.4**	
Test Procedure	Acceptance Criteria	Significant Test Data
		1st stop > 3m 2nd stop: m 3rd stop: m 4th stop: m 5th stop: m Total lowering distance > 150 m Passed/ Failed Test 3 (if applicable) Winch design incorporates an exposed brake? Yes / No Wet stopping distance m Passed/ Failed Test 4 Test load (LWL) kN Lowering test with LWL satisfactory? Passed/ Failed Does the inspection of the stripped winch reveal any significant damage or undue wear? Passed/ Failed Comments/Observations

Means of rescue	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

6.3.3.6.5 Means of rescue recovery speed test		**Regulations: LSA Code 6.1.1.9; MSC.81(70) 1/8.1.5**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be demonstrated that a winch intended for use with a means of rescue is capable of recovering the means of rescue with the number of persons for which it is to be approved and its equipment or an equivalent mass at a rate of not less than 0.3 m/s.	Each means of rescue launching appliance should be fitted with a powered winch motor capable of raising the means of rescue from the water with its full complement of persons and equipment at a rate of not less than 0.3 m/s .	Hoisting load: Measured recovering speed of the boat : m/s Comments/Observations

6.3.3.6.6 Hand operation test		**Regulations: LSA Code 6.1.2.6; MSC.81(70) 1/8.1.6**
Test Procedure	Acceptance Criteria	Significant Test Data
The hand operation of the winch should be demonstrated. If the winch is designed for quick recovery by hand with no load, this should be demonstrated with a load of 1.5 times the mass of the empty lifting arrangements.	An efficient hand gear should be provided for recovery of each means of rescue. Hand gear handles or wheels should not be rotated by moving parts of the winch when the means of rescue is being lowered or when it is being hoisted by power.	Hoisting load: Test 1: Test load (1 x hoisting load): winch can be operated satisfactorily by hand? Passed/ Failed Arrangement provided for protection against moving parts and rotating handles? Passed/ Failed. Type: Test 2: Only for quick recovery Test load (1.5 x weight of empty lifting arrangement): kN Is quick recovery satisfactory? Passed/ Failed Comments/Observations

7 OTHER LIFE-SAVING APPLIANCES

7.1 LINE THROWING APPLIANCES

EVALUATION AND TEST REPORTS

7.1.1 Submitted drawings, reports and documents
- 7.1.1.1 Quality assurance
- 7.1.1.2 Visual Inspection
- 7.1.1.3 General data and specifications

7.1.2 Temperature cycling test

7.1.3 Low temperature conditioning test

7.1.4 High temperature conditioning test

7.1.5 Humidity conditioning

7.1.6 Water and corrosion resistance test
- 7.1.6.1 1 m Immersion for 24 hours test
- 7.1.6.2 Salt spray test

7.1.7 Handling safety test
- 7.1.7.1 2 m drop test
- 7.1.7.2 Immersion suit glove test

7.1.8 Double charge test

7.1.9 Line tensile test

7.1.10 Safety inspection

7.1 LINE THROWING APPLIANCES

EVALUATION AND TEST REPORT

Manufacturer	
Type	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

7.1.1 Submitted drawings, reports and documents

Submitted drawings and documents			Status
Drawing No.	**Revision No. & date**	**Title of drawing**	

Submitted reports and documents			Status
Report/Document No.	**Revision No. & Date**	**Title of report / document**	
		Maintenance Manual -	
		Operations Manual -	

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

7.1.1.1 Quality Assurance	**Regulations: - SOLAS III/5, MSC.81(70) 2/4**
Except where all appliances of a particular type are required by Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended, to be inspected, representatives of the Administration should make random inspections of manufacturers to ensure that the quality of life-saving appliances and materials used comply with the specification of the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that life-saving appliances are provided to the same standard as the prototype life-saving appliance approved by the Administration and to keep records of any production tests carried out in accordance with the Administration's instructions.	Quality Assurance Standard Used: _____ Quality Assurance Procedure: _____ Quality Assurance Manual: -_____ Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

Line Throwing Appliances	Manufacturer:_____	Date:_____	Time:_____
	Model:_____	Surveyor:_____	
	Lot/Serial Number:_____	Organization:_____	

7.1.1.2 Visual inspection	**Regulations: LSA Code Chapter I/1.2 and MSC81(70) 1/ 9.4**

Test Procedure	Acceptance Criteria	Significant Test Data
Visual examination:-	Line Throwing Appliance should:-	
Approval markings	Be clearly marked with approval information including the Administration which approved it, date of manufacture and expiry and operational restrictions, markings are to be indelible;	Passed _____ Failed _____
Operating instructions.	Be provided with clear and precise instructions or diagrams printed on the casing clearly illustrating the use of the line throwing appliance;	Passed _____ Failed _____
Outer casing.	Be so designed as not to cause discomfort to the person holding the casing when used in accordance with the manufacturers instructions; does not depend on adhesive tapes or plastic envelopes for its water-resistant properties	Passed _____ Failed _____
Comfort.	Be so constructed that the end from which the rocket is ejected can be positively identified by day or night and be capable of throwing a line with reasonable accuracy;	Passed _____ Failed _____
Ignition System.	be in the case of a pistol-fired rocket, or the assembly, in the case of an integral rocket and line, contained in a water-resistant casing. In addition, in the case of a pistol-fired rocket, the line and rockets together with the means of ignition should be stowed in a container, which provides protection from the weather.	Passed _____ Failed _____ Comments/Observations

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.1.3 General Data and Specifications	**Regulations: LSA Code 1.2; MSC.81(70) 1 /9.1**

General Information	Line Thrower Dimensions	Line Thrower Weight
Construction Material: Rocket Casing:_____ Outer Casing (If applicable): _____ Line Material: _____	Dimensions: Length of Rocket: _____ Diameter of Rocket: _____ Length of Line: _____ Number of Strands:_____ Diameter of Line: _____	Design Weight: Rocket: _____ Weight As Tested: Fully Equipped: _____ Comments/Observations

Line Throwing Appliances

Manufacturer:_____ Date:_____ Time:_____

Model:_____ Surveyor:_____

Lot/Serial Number:_____ Organization:_____

TEST ITEMS CONDITIONING SEQUENCE	**SPECIMEN NUMBER**								**REFERENCES**	**REMARKS**
	1-3	4	5	6	7 - 9	10-12	13-15	16	**MSC 81(70)**	
Measuring dimensions and mass	A	A	A	A	A	A	A	A	LSA Code 1.2	
Temperature cycling test (7.1.2)	B								1.2.1, 4.2.1	
Low temperature conditioning (7.1.3)		B							9.5, 4.2.2	
High temperature conditioning (7.1.4)			B						9.5, 4.2.3	
Humidity conditioning (7.1.5)				B					9.5, 4.2.4	
1 metre for 24 hours (7.1.6.1)					B				9.1, 4.3.1	
Salt water spray (7.6.1.2)						B			9.1, 4.3.3	
Drop test (7.1.7.1)							B		9.5, 4.4.1	
Safety inspection (7.1.10)	C	C	C	C	C	C	C	C	9.1, 4.5.1, 4.5.5, 4.5.6	
Visual inspection(7.1.1.2)	C	C	C	C	C	C	C	C	9.4	
Operation at ambient temperature	D				D	D	D		9.5, 1.2.1, 4.2, 1.9.1,4.3.1, 4.3.3, 4.4.1	
Operate at conditioning Temperature		D	D	D					9.5, 4.2.2, 4.2.3,.4.2.4	

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____

TEST ITEMS CONDITIONING SEQUENCE	**SPECIMEN NUMBER**								**REFERENCES**	**REMARKS**
	1-3	4	5	6	7 - 9	10-12	13-15	16	**MSC 81(70)**	
Operational test using immersion suit (7.1.7.2)							E		9.1, 4.4.2	May be carried out with any specimen and the number recorded on the test sheet.
Function test Line firing	E	E	E	E	E	E	E	E	9.2	
Double charge firing test (7.1.8)								F	9.2	
Line tensile test (7.1.9)		G	G	G					9.3	May be carried out by an independent laboratory acceptable to the Administration and report submitted.

Note: The letters in the above `boxes' refer to the sequence of testing of each specimen Line Throwing Appliance Projectile.

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.2 Temperature cycling test	**Regulations: LSA Code 1.2 and 7.1; MSC81(70) 1/ 9.5 & 4.2.1**

Test Procedure	Acceptance Criteria	Significant Test Data		
The three specimens of parachute rocket flares should be alternately subjected to surrounding temperatures of -30°C and +65°C. These alternating cycles need not follow immediately after each other and the following procedure, repeated for a total of 10 cycles, is acceptable: 1. an 8 h cycle at +65°C to be completed in one day; and 2. the specimens removed from the warm chamber that same day and left exposed under ordinary room conditions until the next day; 3. an 8 h cycle at -30°C to be completed the next day; and 4. the specimen removed from the cold chamber that same day and left exposed under ordinary room conditions until the next day; The 3 projectiles should be fired connected to a line and should then function effectively.	Each specimen should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical properties. The projectiles should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile	1	2	3
		Condition after conditioning (Pass/Fail)		
		Distance travelled by line (metres)		
		Lateral deflection (%)		
		Comments/Observations Passed _____ Failed_____		

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

7.1.3 Low temperature conditioning test		**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.5 & 4.2.2**
Test Procedure	Acceptance Criteria	Significant Test Data
A line throwing appliance unit, consisting of projectiles, firing system and line should be subject to a temperature of -30^0C for at least 48 h. and should then function effectively at that temperature.	The specimen should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical qualities The specimen should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile	Specimen 4 Condition after conditioning (Pass/Fail) Distance travelled by line (metres)_____ Lateral deflection (%)_____ Comments/Observations Passed _____ Failed _____

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.4 High temperature conditioning test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.5 & 4.2.3**	
Test Procedure	Acceptance Criteria	Significant Test Data
A line throwing appliance unit consisting of projectiles, firing system and line should be subject to a temperature of $+65^0$C for at least 48 h. The specimens should function effectively at that temperature.	The specimen should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical qualities. The specimen should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile	Specimen 5 Condition after conditioning (Pass/Fail) Distance travelled by line (metres)_____ Lateral deflection (%)_____ Comments/Observations Passed _____ Failed _____

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.5 Humidity conditioning	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.5 & 4.2.4**

Test Procedure	Acceptance Criteria	Significant Test Data
One individual line throwing appliance unit consisting of projectiles, firing system and line should subjected to a temperature of +65°C and 90% relative humidity for at least 96 h, followed by ten days at 20°C to 25°C at 65% relative humidity and should then function effectively at that temperature. The specimen should be fired connected to a line.	The specimen of line thrower should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical qualities The specimen should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile	Specimen 6 Condition after conditioning (Pass/Fail) Distance travelled by line (metres)_____ Lateral deflection (%)_____ Comments/Observations Passed _____ Failed _____

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.6.1 1 m immersion for 24 hours test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.1 & 4.3.1**

Test Procedure	Acceptance Criteria	Significant Test Data		
Three rockets used in the line-throwing appliance units, should be immersed horizontally for 24 h under 1 m of water. The specimens should be fired connected to a line and should function efficiently at that temperature	The three specimens should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical qualities. The 3 specimens should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.	7	8	9
		Condition after conditioning (Pass/Fail)		
		Distance travelled by line (metres)		
		Lateral deflection (%)		
		Comments/Observations Passed _____ Failed _____		

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.6.2 Salt Spray Test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.1 & 4.3.3**

Test Procedure	Acceptance Criteria	Significant Test Data		
Three rockets used in line-throwing appliance units, should be subjected to a salt spray (5% natrium chloride solution) at a temperature of +35±3°C for at least 100 h. The specimens should be fired connected to a line and should function correctly at ambient temperature	The three specimens should be inspected after the test, each specimen should show no sign of damage such as shrinking, cracking, swelling, dissolution or change of mechanical qualities. The 3 specimens should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.	10	11	12
		Condition after conditioning (Pass/Fail)		
		Distance travelled by line (metres)		
		Lateral deflection (%)		
		Comments/Observations		
Note: Natrium and Sodium are the same compound		Passed _____	Failed _____	

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.7.1 2 m Drop Test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.1 & 4.4.1**

Test Procedure	Acceptance Criteria	Significant Test Data		
Three line-throwing appliances rockets should be dropped in turn end-on and horizontally from a height of 2 m on to a steel plate about 6 mm thick cemented on to a concrete floor. The specimens should be fired connected to a line.	The three specimens should remain in a safe condition after the drop test and should show no sign of damage such as cracking, swelling, dissolution or change of mechanical qualities The 3 specimens should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile	13	14	15
		Condition after conditioning (Pass/Fail)		
		Distance travelled by line (metres)		
		Lateral deflection (%)		
		Comments/Observations Passed _____ Failed _____		

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.7.2 Immersion Suit Glove Test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.1 & 4.4.2**

Test Procedure	Acceptance Criteria	Significant Test Data		
Three specimens of line throwing appliances should be activated in accordance with the manufacturer's operating instructions by an operator wearing an insulated buoyant immersion suit or the gloves taken from an insulated buoyant immersion suit. The specimens should be fired connected to a line.	The three specimens should be capable of being operated effectively without injury to the operator, or any person in close proximity during firing. The 3 specimens should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.	13	14	15
		Condition after conditioning (Pass/Fail)		
		Distance travelled by line (metres)		
		Lateral deflection (%)		
		Operation using immersion suit glove (Pass/fail)		
		Comments/Observations Passed _____ Failed _____		

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____	
	Model:_____ Surveyor:_____	
	Lot/Serial Number:_____ Organization:_____	

7.1.8 Double charge test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.2**	
Test Procedure	Acceptance Criteria	Significant Test Data
If the line throwing appliance projectile is fired using an explosive charge, then one of the projectiles should be fired using double the normal charge. The specimen should be fired connected to a line.	The launcher should remain in a safe condition after the double charge test. This test should establish that it can be operated with a double charge effectively without injury to the operator, or any person in close proximity during firing or burning. The specimen should carry the line at least 230 m in calm conditions. The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.	Specimen 16 Normal weight of charge (grams)_____ Double weight of charge (grams) _____ Double charge test (Pass/Fail) Launcher remaining in safe condition after double charge test (Pass/Fail) Distance travelled by line (metres)_____ Lateral deflection (%) _____ Comments/Observations Passed _____ Failed _____

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

7.1.9 Line tensile test	**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 9.3**

Test Procedure	Acceptance Criteria	Significant Test Data
The fired lines from specimen 4, 5 and 6 with a knot in the middle of the test length should be subjected to a tensile test.	The line should have a breaking strain of not less than 2 kN.	Line manufacturer Diameter of line _____ mm Number of strands _____ Breaking strain _____ kN. Line acceptable (Pass/Fail) Comments/Observations. Passed _____ Failed _____

Line Throwing Appliances	Manufacturer:_____ Date:_____ Time:_____ Model:_____ Surveyor:_____ Lot/Serial Number:_____ Organization:_____	

7.1.10 Safety inspection		**Regulations: LSA Code 1.2 & 7.1; MSC81(70) 1/ 4.5.1, 4.5.5 & 4.5.6**
Test Procedure	Acceptance Criteria	Significant Test Data
It should be established by visual inspection that the line throwing appliance:		
1. is indelibly marked with clear and precise instructions on how it should be operated and that the danger end can be identified by day or night;	Clear and precise operating instructions are marked on the line throwing appliance clearly identifies the danger end.	Markings and identification of ends acceptable (Pass/Fail) _____
2. has a simple and integral means of ignition which requires the minimum of preparation and can be readily operated in adverse conditions without external aid and with wet, cold or gloved hands;	It has a simple means of ignition and can be operated by cold, wet and gloved hands.	Operation of specimen when wet, cold and gloved hands. (Pass/Fail) _____
3. does not depend on adhesive tapes or plastic envelopes for its water resistant properties; and	Adhesive tapes or plastic envelopes are not used to maintain water-resistant properties.	Water resistant without the use of envelopes or adhesive tape. (Pass/Fail) _____
4. can be indelibly marked with means of determining its age.	Date of manufacturing and date of expiry indelible printed on the outside.	Line throwing appliance rocket and striker unit indelible date stamped. (Pass/Fail) _____
		Comments/Observation. Passed _____ Failed _____

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