INTERNATIONAL MARITIME ORGANIZATION

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STANDARDIZED LIFE-SAVING APPLIANCE EVALUATION AND TEST REPORT FORMS

(continued)

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5.1 OUTBOARD ENGINES FOR RESCUE BOATS

5.1.1	Submitted drawings, reports and documents
5.1.2	Quality assurance
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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	

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Manufacturer:			Date:	Time:	
Outboard Engines for Rescue Boats Model: Surveyor:					
	Lot/Serial N	umber:	Organization:		
5.1.1 Submitted					
	I	Submitted drawings a			Status
Drawing No.	Revision No. & date		Title of drawing		
					'
		Submitted reports a	nd documents		C4 - 4
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			

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	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.	Quality Assurance Standard Used: Quality Assurance Procedure:
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 Manual: -
	Description of System.
	Ovality Assurance System assertable Ves /No
	Quality Assurance System acceptable Yes/No Comments/Observations

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Manufact	urer:	Date:	Tim	ne:
Outboard Engines for Rescue Boats Model:		Surveyor:		
Lot/Seria	l Number:	Organization:		
5.1.3 Visual inspection		Regulations: LSA Code 1.2, 4.4	.6; MSC.81(70) 1 /7.7	
Test Procedure	Acceptance	ee Criteria	Signi	ficant Test Data
Visually inspect the engine.	The engine should be provided with		Passed	Failed
Conduct measurements and verify equipment as	a power starting system with two sources.	independent rechargeable energy		
required		(1	December	F. 1. 1
	Any necessary starting aids should	be provided.	Passed	Failed
	Propeller protection should be in p	place during test.	Passed	Failed
			Comments/Observation	s
5.1.4 Power test		Regulations: LSA Code 5.1.1.8;	MSC.81(70) 1 /7.7.2 - 7	7.7.3
Test Procedure	Acceptanc	ce Criteria	Signi	ficant Test Data
The motor, fitted with a suitable propeller, should		no show any permanent damage	Protection of propeller	
be placed in a test rig such that the propeller is completely submerged in a water tank, simulating			Passed	Failed
service conditions.	The motor should not overheat or	be damaged.	Duration : mir	1
Propeller protection should be in place during the			Any significant damage	?
test.			Passed	Failed
The motor should be run at the maximum			Overheating?	
continuous rated speed using the maximum power obtainable for 20 min			Passed	Failed

Comments/Observations

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Manufacti	urer:	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	Acceptanc	ce 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	ce 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 restar	t.	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:	

Lot/Serial Number Organization				
5.1.7 Manual start test	Regulations: LSA Code 5.1.1.8	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 motor should not fail to start with in two minutes on any try.	Ambient temperature test carried out : times		
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		Does the motor start twice within 2 min? Passed Failed Operating temperature Does the motor start twice within 2 min? Passed Failed Comments/Observations		

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	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° C and allowed to remain until the temperature of all parts has reached the temperature of the chamber.	The engine starting systems and starting aids should start the engine at an ambient temperature of -15° C 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.	Starting power Source: Starting aids used: Measured temperatures
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°C in the above-mentioned test.	The engine must start at the specified 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

Manufactu	ırer:	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			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? If so, by what method? Duration min Any damage after this test?		Cooling water supplied during test? Yes/ No If so, by what method? Duration min Any damage after this test? Passed Failed
5.1.10 Extra test for outboard engine for fast rescue boats Regulations: MSC/Circ. 809, 4.1.8		1.8	
Test Procedure	Acceptano	ce 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 is	nformation
	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 ins	spection
	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	l, 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 st	trength and space Tests
	5.2.3.1	Seating strength test
	5.2.3.2	Seating Space test
5.2.4	Release n	nechanism tests
	5.2.4.1	Simultaneous release
	5.2.4.2	Load test
	5.2.4.3	Towing release test
5.2.5	Operation	nal 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 a	nd painter tests
	5.2.6.1	Towing test
	5.2.6.2	Painter release test
5.2.7	Strength t	tests
	5.2.7.1	Impact, drop, and operation after impact & drop tes
	5.2.7.2	Overload test

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5.2 RIGID RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

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	Manufacturer:	Date:	Time:
Rigid Rescue Boats	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:	Dimensions:		Design Weight:	
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:	LOA: Breadth Maximum: Depth to Sill: Depth to Gunwale: Moulded Breadth: Moulded Depth: Provision for securing applicable):	hanging-off pendant (Unloaded Boat: Loose Equipment: Fuel: Persons: Calculated Loaded Weight: Fully Equipped:	
Type: Power: Gear ratio (inboard engine): Additional rigid or inflatable buoyancy:- Release mechanism(s) (if applicable) 1 2 Manufacturer: Type: SWL:			Fully Equipped: Comments/Observations	

	Manufacturer		Date:	Time:	
Rigid Rescue Boats	Model:		Surveyor:		
			Organization:		
5.2.0.2 Submitted	l drawings, reports and d	ocuments			
		Submitted drawings and docu	ıments		-
Drawing No.	Revision No. & date		Title of drawing		Status
	T	Submitted reports and docur			Status
Report/Document No.	Revision No. & Date		Title of report / document		
		Maintenance Manual -			
		Operations Manual -			

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	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.	Quality Assurance Standard Used: -
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 Procedure: -
	Quality Assurance Manual: -
	Description of System.
	Quality Assurance System acceptable Yes/No
	Comments/Observations

	Manufacturer:	Date:	Time:	
Rigid Rescue Boats	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 Acce		e 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.		Passed	Failed
	Length is at least 3.8 m and not over	· 8.5 m.	Passed	Failed
	Knee Space (Seating on seats) a Knee Width – at least 250 mm Leg Space (Seating on floor) – a Overlapping Seat Vertical Sepan Seat Horizontal Overlap – 150 r	at least 1190 mm from the back ration – at least 350 mm	Width:	mm mm mm mm mm
	persons and a person lying on a s Walkway Surfaces	e of carrying at least five seated tretcher. night walk should have a non-skid	Stretcher space: Location: Passed Non Skid Surface: Passec Comments/Observations	Failed

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

5.2.1.2 Visual Inspection — Fittings, Provi	isions and Ladders	Regulations: LSA Code 4.4.3, 4.4	4.7, 5.1, MSC.81(70) 1/7.1.9
Test Procedure	Acceptano	ce Criteria	Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.		lifeline becketed around the rescue thin reach of a person in the water, ler and propeller	Passed Failed
	On other than self-righting rescu arranged to break away without	e boats, handholds on the underside damaging the rescue boat	Passed Failed
	Weathertight stowage for small in Approved position indicating light	• •	Passed Failed NA
	Provided with effective mean self-bailing.	s of bailing or be automatically	Passed Failed Passed Failed
	lowest step when in place shoul light waterline. Other Provisions	entrance should be on board and the ld not be less than 0.4 m below the led external to the hull of the boat,	Passed Failed Lowest step m below waterline
	provided it is adequately protected withstanding exposure when stow and for 30 days afloat in all sea co	ed against damage and is capable of wed on an open deck on a ship at sea	YES NO NA Passed Failed
	Colour The boat is of a highly visible co	lour where it will assist detection.	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		
Test Procedure		
Test Procedure Visually inspect the rescue boat. Conduct measurements and verify clearances as required.		

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

5.2.1.4 Visual Inspection — Steering Me	5.1.1.8, MSC.81(70)1/7.	1.9			
Test Procedure Acceptance Crite		ce Criteria	Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	A tiller should be capable of controlling the rudder (rudder and tiller may form part of outboard motor)		Passed	FailedFailed	- _ NA
	Except when remote steering is attached or linked to the rudder	provided, the tiller is permanently 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 outb be specially protected against f	oard motor, the fuel tank(s) should ire and explosion.	Passed Comments/Observation	Faileds	NA

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

5.2.1.5 Visual Inspection — Release Med	5.2.1.5 Visual Inspection — Release Mechanism Regulations: LSA Code 4.4.7, 5.1		
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		
	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	

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

5.2.1.6 Visual Inspection—Drain Valve	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 Passed Passed Passed Comments/Observation	Failed Failed Failed Failed Failed

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	Manufacture	er:	Date:	Time	e:	
Rigid Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	Tumber:	Organization:			
5.2.2.1 Flooded Stability T	<u>'est</u>		Regulations: LSA Code 4.4.1.1	, MSC.81(70)1/6.8.13		
Test Procedure		Acceptano	ce Criteria	Signit	ficant Test Data	
The rescue boat should be load equipment. If provision lockers, wa fuel tanks cannot be removed, the flooded or filled to the final water from this test. Rescue boats fitted w stowage compartments to a individual drinking water container these containers aboard and placed it compartments which should be seal during the flooding tests. Ballast weight and density should be substituted and any other installed equip be damaged by water. Weights representing persons (of who would be in the water when the flooded may be omitted. Weights persons who would not be in the water boat is flooded should be normal seating positions of such persons who would created the seat of the water when the flooded may be omitted. Weights persons who would not be in the water boat is flooded should be normal seating positions of such persons in different areas would created the seat of the seat	ater tanks and ey should be cline resulting with watertight accommodate as should have in the stowage led watertight of equivalent tituted for the oment that can are some some rescue boat is a representing rater when the placed in the ersons.	stability when filled with water to occur when the rescue boat is ho	rescue boat should have positive or represent flooding which would led in any one location below the rancy material and no other damage.	Comments/Observations Passed	Failed	

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1 agc 22	Manufacturer:	Date:	Time:
Rigid Rescue Boats	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	

5.2.2.2 Freeboard Test		Regulations: LSA Code 4.4.5, M	ISC.81(70)1/6.8.45	
Test Procedure	Acceptanc	ee 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.		1.5% of Boat's Length: Failed Comments/Observations	
5.2.2.3 Righting Test (for non self-rightin	ng rescue boats)	Regulations: MSC.81(70)1/7.1.7		
Test Procedure	Acceptanc	e 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 persons if it is inverted on the water		Is the boat self-righting? YES (If YES, refer to lifeboat report 4.5.2.3) Can the boat be righted by 2 persons? Passed Failed Comments/Observations	NO

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	Manufactur	er:	Date:	Time:
Rigid Rescue Boats Model:			Surveyor:	
	Lot/Serial N	Number:	Organization:	
5.2.3.1 Seating Strength Te	st		Regulations: LSA Code 4.4.1.5, N	MSC.81(70)1/6.6.1
Test Procedure		Acceptance	ce 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 seating should be able to suppor deformation or damage.	t this loading without any permanent	Observed damage
the rescue boat.				Passed Failed
In the case of a rescue boat launched type of seat should be loaded with a r		The seating should be canable of su	innorting this loading. No damage	Passed Failed NA
in any single seat location when dro	opped into the	The seating should be capable of supporting this loading. No damage should be sustained that would affect the seat's efficient functioning.		
water from height of at least 3 m. (This test may be performed in conjunction with the Drop Test in				Comments/Observations
5.2.7.1.)	•			
5.2.3.2 Seating Space Test			Regulations: LSA Code 5.1.1.3.2,	, MSC.81(70)1/7.1.3
Test Procedure		Acceptano	ce Criteria	Significant Test Data
The rigid rescue boat should be fitted		Equipment can be operated without	interference with the occupants.	Equipment operated: YES NO
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.		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.		Number of persons carried: Seated on seats Seated on floor Lying on a stretcher Total
		No seating is on the gunwale, transom, or buoyancy chambers on the		Passed Failed
		sides of the boat.		Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant Lifejacket – Unique lated (Recognition of the latest decomposition)
				Immersion suit – Un-insulated/Buoyant Insulated

er:	Date:	Time:	
	Surveyor:		
umber:	Organization:		
ltaneous Release	Regulations: LSA Code 4.4.7.6,	MSC.81(70)1/6.9.12	
Acceptano	nce Criteria Significant Test Data		
from each fall which it is connected without binding or damage to a part of the rescue boat or the release mechanism. It should be confirmed that the rescue boat will simultaneously release		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	
Test	Regulations: LSA Code 4.4.7.6.	4, MSC.81(70)1/6.9.3	
		Significant Test Data	
Test Procedure Acceptance Criteria		-	
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	
	It should be confirmed that the reso from each fall which it is connected part of the rescue boat or the release. It should be confirmed that the reso from each fall to which it is connected condition and in a 10% overload condition and in a 10% overload condition and in a 10% overload conditions are the working load. The release mechanism should not times the working load. (If tested to failure, working load.)	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. Test Regulations: LSA Code 4.4.7.6. Acceptance Criteria 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	

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Manufactu	rer:	Date:	Time:
Rigid Rescue Boats Model:		Surveyor:	
Lot/Serial	Number:	Organization:	
5.2.4.3 Release Mechanism Tests—Towin	ng Dolongo Togt	T	3.2 & 4.4.7.6.5, MSC.81(70)1/6.9.4
	T		
Test Procedure	Acceptan	ce 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;	mechanism: @ towing load in hook @ @ towing load in hook @	45° forward	Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: kts Passed Failed Non-Waterborne Test Load kN Passed Failed Load kN Passed Failed Failed Failed
 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. 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.) 	@ hook SWL @ 20° athw @ hook SWL in halfway i) Port ah ii) Starboa iii) Starboa iv) Port af	vartships to starboard positions: - lead lead lead ahead lead aft	LoadkN PassedkN PassedkN PassedkN LoadkN PassedkN PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed

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	Manufacturer:	Date:	Time:	
Rigid Rescue Boats	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 suc minimum, a 25 person liferaft, fully loaded vequipment, at a speed of 2 knots in calm water. There should be no damage to the towing fitting structure.	Make/model:		

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						Page 2
	Manufacture	er:	Date:	Τ	Гіте:	
Rigid Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	lumber:	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		Acceptan	ce Criteria	Si	gnificant Test Data	
(Note: Run this test after the impactests in 5.2.7.1.)	ct and drop	The boat should operate satisfactor	orily throughout the 4-h operation.		Smallest Engine	Largest Engine
The rescue boat should be loaded v	with woights			Make/model:		
equal to the mass of its equipment	and the			Engine Speed: rpm		
number of persons for which the rescue boat is to be approved.		The fuel tank should have sufficient capacity to operate at a speed of 6 knots for a period of 4 hours in calm water.		Boat Speed: kts		
The engine should be started manoeuvred for a period of at				Consumption: L/h		
demonstrate satisfactory operation				Fuel Tank Capacity:	:L	
The rescue boat should be run at a speed of not				Endurance: hrs		
less than 6 knots for a period which ascertain the fuel consumption an	nd to establish			Propeller:		
that the fuel tank has the required condetermination may be made during				Pitch:		
of operation.)	r			Diameter:		
For rescue boats equipped with ou				Passed	_ Failed	
speed and manoeuvring trials should be carried out with engines of various powers to assess the rescue boat's performance.				Comments/Observat	tions	
rescue boat's performance.						

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	Manufacture	rer: Date:		Time:
			Surveyor:	
		umber:	Organization:	
5.2.5.3 Operational Tests	—Engine out o	f water	Regulations: LSA Code 4.4.6.3,	MSC.81(70)1/6.10.5
Test Procedure		Acceptance	e Criteria	Significant Test Data
The engine should be operated for at idling speed under condition normal storage.		The engine should not be damaged	l as a result of this test.	Passed Failed Comments/Observations
Note: If a water flushing device is used for this purpose, it should b the test.				
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 performance is satisfactory and unduly affected by magnetic equipment in the rescue boat.	that it is not	The compass operates satisfactorily.		Compass Make: Compass Model: Passed Failed Comments/Observations
5.2.5.5 Operational Tests	—Helpless Per	son 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 possible to bring helpless people rescue boat from the sea.				Method of recovery: Number of Persons required and any special equipment used: Comments/Observations

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Manu	acturer:	Date:	Time:
Rigid Rescue Boats Mode		Surveyor:	
Lot/Se	rial Number:	Organization:	
5.2.5.6 Operational Tests—Manoe	vrability With Paddles Or Oars	Regulations: LSA Code 5.1.2.2.	1. MSC.81(70)1/7.1.8
Test Procedure	1	nce Criteria	Significant Test Data
•		e of being satisfactorily paddled and	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 - T	owing Test	Regulations: LSA Code 4.4.1.3.	2, 4.4.7.7, MSC.81(70)1/6.11.1
Test Procedure	Acceptan	nce Criteria	Significant Test Data
It should be demonstrated that the fully equirescue boat, loaded with a properly distril mass equal to the mass of the number of perfor which it is to be approved, can be tower speed of not less than 5 knots in calm water on an even keel using the rescue boat's passecuring device.	tited cons at a result of this test.	it unsafe or unstable characteristics. ne rescue boat or its equipment as a	Passed Failed Comments/Observations

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	Manufacturer:	Date:	Time:
Rigid Rescue Boats	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)1/6.11.23			
Test Procedure	Test Procedure Acceptance		ce Criteria Significant Test Data		est 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 should release and to rescue boat or its equipment as a rescue	here should be no damage to the result of this test.	Passed Test Direct	ion	Failed
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.			Comments/C	Passed Passed Passed Passed Passed Passed Passed	Failed Failed Failed Failed Failed Failed Failed

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	Manufacturer:		Date:	Time:
Rigid Rescue Boats	Model:		Surveyor:	
	Lot/Serial Number	er:	Organization:	
5.2.7.1 Strength Tests - Impa	act, 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 Procedu	ure	Acceptan	ce Criteria	Significant Test Data
.1 For boats launched by fall or frescue boat, including its engine, weights equal to the mass of the which the rescue boat is to be appropriate the rescue boat. (These weights nor may have occurred as a result operational test should be distributed to represent the rescue boat. (These weights nor may have occurred as a result operational test should be appropriated as a result operational test should be appropriated as a result operational test should then be considered.	falls, the fully equipped should be loaded with number of persons for proved. The weights the normal loading in need not be placed 300 refenders, if required, boat, in a free hanging ly to a position so that drigid vertical surface hised 0.624 m above load should be released all surface. Lengine, loaded as suspended above the ne lowest point of the The rescue boat should be released with the first point of the water.	The impact and drop tests should a no damage has been sustained efficient functioning; 2 the damage caused by the increased significantly as a 5.2.5.2;	that would affect the rescue boat's impact and drop tests has not result of the operational test in that operated to full satisfaction;	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
with 5.2.5.2. .4 After the operational test, the unloaded, cleaned, and carefully position and extent of damage tha result of the tests.	examined to detect the			Comments/Observations

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	Manufacturer:	Date:	Time:
Rigid Rescue Boats	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	The rescue boat and its bridle or release mechanism should not show any signs of damage.	Load in boat: kg Comments/Observations

5.3 INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

5.3.0	General I	General Information					
	5.3.0.1	General data and specifications					
	5.3.0.2	Submitted drawings, reports and documents					
	5.3.0.3	Quality assurance					
5.3.1	Visual inspection						
	5.3.1.1	Occupant space					
	5.3.1.2	Fittings, provisions and ladders					
	5.3.1.3	Engine and starting system					
	5.3.1.4	Steering mechanism and fuel tank					
	5.3.1.5						
	5.3.1.6	Drain valve					
5.3.2	Stability	damage, and loading tests					
0.0.2	5.3.2.1	Damage test					
	5.3.2.2	Stability test					
	5.3.2.3	Loading test					
	5.3.2.4	Swamp test					
	5.3.2.5	Righting test (for non self-righting rescue boats)					
5.3.3	Seating st	trength and space tests					
0.0.0	5.3.3.1						
	5.3.3.2	Seating space test					
5.3.4	Release mechanism tests						
	5.3.4.1						
	5.3.4.2						
	5.3.4.3	Towing release test					
5.3.5	Operation	nal tests					
	5.3.5.1	Liferaft towing					
	5.3.5.2						
	5.3.5.3	Engine Out of Water					
	5.3.5.4	Compass test					
	5.3.5.5	Manoeuvrability with paddles or oars					
	5.3.5.6	Heavy seas test					
5.3.6	Towing a	nd painter tests					
	5.3.6.1	Towing test					
	5.3.6.2	Painter release test					
5.3.7	Strength t	tests					
	5.3.7.1	Impact, drop, and operation after impact & drop tests					
	5.3.7.2	Ambient overload test					
	5.3.7.3	Cold overload test					
	5.3.7.4	Mooring out test					
5.3.8	Materials	tests					
	5.3.8.1	Inflation chamber characteristics tests					

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5.3 INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

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	Manufactur	er:	Date:	Time:
Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Number:	Organization:	
5.3.0.1 General Data and S	nacifications		Regulations: LSA Code 5.1	
General Information	pecifications	Rescue boat		Rescue boat Weight
Construction Material:		Dimensions:	Difficusions	Design Weight:
Hull:Occupancy:		LOA:Breadth Maximum:		Unloaded Boat: Loose Equipment:
Persons (75 kg each):		Depth to Gunwale:		Fuel:Persons:
Engine(s) Installed: 1 Type App by:		Length to transom: Length of hull:		Calculated Loaded Weight:
Manufacturer: Type:		(insert diagram of hull for reference	ce)	Fully Equipped: With Persons:
Power: Release mechanism(s) (if applicable 1 Manufacturer:	2	Provision for securing hanging-off applicable):		Weight As Tested: Fully Equipped:
Type: SWL:				Comments/Observations
Propeller:				

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rage 50	Manufacturer	:	Date:	Time:	
		mber:			
5.3.0.2 Submitted	l drawings, reports and d	locuments			
		Submitted drawings	and documents		C4 o Anno
Drawing No.	Revision No. & date		Title of drawing		- Status
		Submitted reports a	and documents		Status
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			
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Inflated Rescue Boats Model:	
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 Regulations: - Quality Assurance Standard Used: -	
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	
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	
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	
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 Manual: -	
Description of System.	
Quality Assurance System acceptable Yes/No Comments/Observations	

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

5.3.1.1 Visual Inspection — Occupant Space Re		Regulations: LSA Code 5.1, MS	C.81(70)1/7.2.16
Test Procedure	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.		Passed Failed
	Length is at least 3.8 m and not over	er 8.5 m.	Passed Failed
	Knee Space (Seating on seats) Knee Width – at least 250 mm Leg Space (Seating on floor) – Overlapping Seat Vertical Sepa Seat Horizontal Overlap – 150 Each seating position sl Stretcher(s) space: Rescue boats should be capab persons and a person lying on a Walkway Surfaces	at least 1190 mm from the back aration – at least 350 mm mm maximum hould be clearly indicated.	Width:mm Depth:mm Knee Space:mm Knee Width:mm Leg Space:mm Vert. Separation:mm Overlap:mm Position Indication: PASSED FAILED Stretcher space:xmm Passed xmm Passed Failed Non Skid Surface: Passed Failed Comments/Observations

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	Mai	nufacturer:		Date:	Time:
		odel:		Surveyor:	
		t/Serial Number:		Organization:	
5.3.1.2 Visual Inspection — Fittings, Provisions and Ladders				Regulations: LSA Code 5.1.3, MS	C.81(70)1/7.2.16
Test Procedure Accepta		ceptan	ce Criteria	Significant Test Data	

5.3.1.2 Visual Inspection — Fittings, Provisions and Ladders Re		Regulations: LSA Code 5.1.3, MS	C.81(70)1/7.2.16		
Test Procedure	Acceptance Criteria		Significant Test D		
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	l by Administration	Passed	Failed	_ NA
	Suitable patches for securing pai	inters fore and aft	Passed	Failed	
		lifeline becketed around the rescue thin reach of a person in the water, ler 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 vu	alnerable 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 Comments/Observation		

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	Manufacturer:	Date:	Time:
Inflated Rescue Boats	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	Test Procedure Acceptance Criteria		Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.		entrance should be on board and hould not be less than 0.4 m below	YES NO NA Lowest step m below waterline Comments/Observations		

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

5.3.1.3 Visual Inspection—Engine and Starting System Regulations: LSA Code 4.4.6, 5.1, M		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.	starting systems Required starting aids provided. Starting system is not impeded obstructions Propeller arranged to be disengage ahead and astern propulsion Exhaust arranged to prevent was operation. System designed with due regards the possibility of damage to the perent of the possibility of damage to the perent of the personnel are protected from hote. Shouted order can be heard with each operation. Watertight casing around bottom tightly fitting top which provides. Means for recharging engine start provided by solar charger or shipe. Radio batteries not used to provide. Recharging for engine batteries provides and sold the provides of the personnel are provided by solar charger or shipe. Radio batteries not used to provide. Recharging for engine batteries provides and provides of the personnel provides	and moving parts ngine running at speed necessary for 6 n and sides of starter batteries with a for gas venting. rting, radio, and searchlight batteries 's power supply. de power for engine starting. provided by ship's power supply does reries can be disconnected at the rescue rating engine are water resistant and	Manual Pov YES NO Passed Passe	

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

5.3.1.4 Visual Inspection — Steering Me	chanism 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		Signi	ficant Test Data	
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.			Passed	Failed	
	Rudder permanently attached to		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/Observation	ns	

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

5.3.1.5 Visual Inspection — Release Med	hanism	Regulations: LSA Code 4.4.7, .6	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.			Passed		
	For on-load release mechanisms:				
	Suitably worded danger si	gn for on load release	Passed	Failed	NA
	mechanism is completely and properly reset, to prevent accidental release during recovery On-load release mechanism needs deliberate and continued action by the operator Mechanical protection provided beyond that normally required for off load release		Passed	Failed	NA
			Passed	Failed	NA
			Passed	Failed	NA
			Passed	Failed	NA
	to release the boat only when it is	tuny waterborne will be adequate.	Comments/Observati	ions	

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rage 11						
	Manufacture	er:	Date:		Time:	
Inflated Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	umber:	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		Acceptano	ce Criteria		Significant Test Data	
Visually inspect the rescue boat. Co		Fitted near lowest point on the hull		Passed	Failed	
measurements and verify clearance (not applicable for self-bailing boat		Automatically opens when the boat is prevent water entry when the boat is		Passed	Failed	
		Cap or plug attached to the boat by	a lanyard, chain or equivalent	Passed	Failed	
		Readily accessible from inside the r	escue boat	Passed	Failed	
		Position clearly marked		Passed	Failed	
				Comments/Observa	ntions	
5.3.2.1 Damage Test			Regulations: LSA Code 5.1.3.5, M	ISC.81(70)1/7.2.89		
Test Procedure		Acceptance Criteria			Significant Test Data	
The following tests should be carriinflated rescue boat loaded with persons (of 75 kg mass) for whapproved both with and without enan equivalent mass in the position of the tank: 1 with forward buoyancy deflated;	the number of ich it is to be gine and fuel or f the engine and	In each of the conditions prescribed, the rescue boat is to be approved sh boat.		Passed Without e	ne and fuel: Failed ngine and fuel Failed ne and fuel:	
2 with the entire buoyancy on rescue boat deflated; and	one side of the			Without e	ngine and fuel Failed ne and fuel:	
3 with the entire buoyancy on	one side and the			Passed Without e	Failed	

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Passed

Failed

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	Manufactur	er:	Date:	Time:
Inflated Rescue Boats	Model:		Surveyor:	
Lot/Serial N		Tumber:	Organization:	
5.3.2.2 Stability Test			Regulations: LSA Code 4.4.5, N	
Test Procedure		Acceptance	,	Significant Test Data
The following tests should be ca engine and fuel or an equivalent me the engine and fuel tanks: .1 the number of persons	nass in place of for which the		freeboard should be everywhere	Freeboard crowded to one side mm
inflated rescue boat is to should be crowded to one this complement seated or tube, and then to one end the freeboard should be re	e side with half in the buoyancy d. In each case	positive.		To bow: mm
.2 the stability of the rescu boarding should be ascer persons in the rescue boat that they can readily as water a third person who feign unconsciousness. The should have his back towather rescue boat so that he the rescuers. All persons approved lifejackets. These stability tests may be carried rescue boat floating in still water.	rtained by two demonstrating ssist from the is required to the third person ards the side of e cannot assist is should wear	.2 The rescue boat should be stab	le	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: Passed Failed Comments/Observations

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condition.

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	Manufacture	er:	Date:	Time:
Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Jumber:	Organization:	
<u> </u>				
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 taken in the various loading condit 1 rescue boat with all its equipmed. 2 rescue boat with all its equipmed fuel, or an equivalent mass represent engine and fuel; 3 rescue boat with all its equipmed number of persons for which approved having an average marranged that a uniform freeboat the side buoyancy tubes; and 4 rescue boat with the number of which it is to be approved and a engine and fuel or an equivalent represent engine and fuel and the being re-trimmed as necessary.	ent; ent, engine and s positioned to ipment and the ich it is to be hass of 75 kg so and is achieved at if persons for all its equipment, at mass to he rescue boat	In each condition the minimum freebo at the buoyancy tubes and not less that 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)1/7.2.1	1
Test Procedure		Acceptance	Criteria	Significant Test Data
It should be demonstrated that the refully swamped, is capable of sup equipment, the number of persons f be approved and a mass equivalent full fuel tank. It should also be dethe rescue boat does not seriously	oporting its full for which it is to to its engine and emonstrated that	The rescue boat should be capable of s not seriously deform.	supporting the full load and should	Passed Failed Comments/Observations

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Manufactu	rer:	Date:	Time:
Inflated Rescue Boats Model:		Surveyor:	
Lot/Serial	Number:	Organization:	
5.3.2.5 Righting Test (for non self-righ	ting rescue boats)	Regulations: MSC.81(70)1/7.1.7	7
Test Procedure	Acceptano	ce 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 boar 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	Acceptano	ce 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.	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)	should be sustained that would aff	upporting this loading. No damage ect the seat's efficient functioning.	Passed Failed NA Comments/Observations

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	Manufacturer:	Date:	Time:
Inflated Rescue Boats	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 person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provide the space used conforms with the leg space requirements of test fort 5.3.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	A Number of persons carried: Seated on seats Seated on floor Lying on a stretcher

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	Manufacture	er:	Date:	Time:
Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	umber:	Organization:	
5.3.4.1 Release Mechanism Tests—Simultaneous Release Test Regul			Regulations: LSA Code 4.4.7.6,	MSC.81(70)1/6.9.12
Test Procedure		Acceptano	ce Criteria	Significant Test Data
For rescue boats launched by frescue boat with its engine fit suspended from the release mech of the ground or the water. The should be loaded so that the total times the mass of the rescue equipment and the number of petthe rescue boat is to be approved. Should be released simultaneously to which it is connected with damage to any part of the rescue release mechanism. (Single fall systems not intend operation are exempt from this terms.)	itted should be nanism just clear The rescue boat mass equals 1.1 e boat, all its ersons for which The rescue boat by from each fall out binding or cue boat or the ded for on-load	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 Mechanis	sm Tests—Load	Test	Regulations: LSA Code 4.4.7.6.	4, MSC.81(70)1/6.9.3
Test Procedure		Acceptance	ce Criteria	Significant Test Data
The release mechanism should be tensile strength testing device. The increased to at least six times the of the release mechanism. (Testing to failure is suggested, but the strength of the release mechanism.)	The load should he working load	times the working load.	fail at load less than or equal to six d may be taken as 1/6 the failure	Working Load: N Force Applied: N Passed Failed Comments/Observations

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

5.3.4.3 Release Mechanism Tests—Towing Release Test Regulations: Le		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:	The rescue boat should be released mechanism:	satisfactorily by the release	Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: kts PASSED FAILED
.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;	@ towing load in hook @ @ towing load in hook @ @ hook SWL @ 20° athw	45° aft	Non-Waterborne Test Load kN Passed Failed Load kN Passed Failed
 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. 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. 	@ hook SWL @ 20° athw @ hook SWL in halfway j i) Port ah ii) Starboa iii) Starboa iv) Port afi	positions: - ead ard ahead ard aft	Load
(This test is not applicable to single fall systems not intended for on-load operation.)			Comments/observations

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			Page 3
Manu	acturer:	Date:	Time:
Inflated Rescue Boats Mode	<u>. </u>	Surveyor:	
Lot/So	rial Number:	Organization:	
5.3.5.1 Operational Tests—Liferat	Towing		s, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2
Test Procedure	T	nce Criteria	Significant Test Data
The rescue boat should be loaded with we equal to the mass of its equipment and the nu of persons for which the rescue boat is approved. It should be demonstrated that rescue boat can tow a 25 person liferaft, minimum, loaded with the number of person which it is to be approved and its equipment speed of 2 knots in calm water. The largest size of fully loaded liferaft which rescue boat can tow at a speed of at least 2 is should be determined. Alternatively, determine the maximum to force of the rescue boat by securing the findesignated for towing other craft to a static object by a tow rope fitted with a mean measure bollard pull. The engine should operated ahead at full speed for a period least 2 min. and the maximum force recorder (For rescue boats equipped with outboard marft towing or bollard pull trials may be caution of the period of the rescue boats of various powers to assess the rescue boat's performance.)	ghts nber minimum, a 25 person liferaft equipment, at a speed of 2 knots is for at at the nots The fully loaded rescue boat shou minimum, a 25 person liferaft equipment, at a speed of 2 knots is the as a s for at at the nots wing ting mary is to libe of at d.	ald be able to successfully tow, as a fully loaded with persons and	Smallest Engine Largest Engine Make/model:

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

5.3.5.2 Operational Tests — Endurance	Speed & Fuel Consumption	Regulations: LSA Code5.1.1.6,N	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 boat should operate satisfactor	orily throughout the 4-h operation.	Smallest Engine Largest Engine Make/model:
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 fuel tank should have sufficient knots for a period of 4 hours in ca	nt capacity to operate at a speed of 6 alm water.	Engine Speed: rpm Boat Speed: kts Consumption: L/h Fuel Tank Capacity: L Endurance: hrs Propeller: Pitch: Diameter: Passed Failed Comments/Observations

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	Manufacture	er:	Date:	Time:	
Inflated Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Tumber:	Organization:		
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5.3.5.3 Operational Tests	—Engine Out o	of Water	Regulations: LSA Code 4.4	.6.3, MSC.81(70)1/6.10.5	
Test Procedure		Acceptance	ce Criteria	Significant Test Data	
The engine should be operated for at idling speed under condition normal storage.		The engine should not be damaged	d as a result of this test.	Passed Failed	
Note: If a water flushing device is used for this purpose, it should b the test.				Comments/Observations	
5.3.5.4 Operational Tests—Compass Test Regu		Regulations: LSA Code 5.1	ulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7		
Test Procedure		Acceptano	ce Criteria	Significant Test Data	
It should be determined that performance is satisfactory and unduly affected by magnetic equipment in the rescue boat.	that it is not	The compass operates satisfactoril	ly.	Compass Make:	
				Passed Failed	
				Comments/Observations	

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	Manufacturer:	Date:	_ Time:
Inflated Rescue Boats	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 manoeuvred.	e of being satisfactorily paddled and	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

Manufactur	er:	Date:	Time:
Inflated Rescue Boats Model:		Surveyor:	
Lot/Serial N	Number:	Organization:	
5.3.5.6 Operational Tests—Heavy Weat	her / Seas Test	Regulations: LSA Code 5.1.3, M	
Test Procedure	Acceptano	ce 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	g Test	Regulations: LSA Code 4.4.1.3.	2, 4.4.7.7, MSC.81(70)1/6.11.1
Test Procedure	Acceptano	ce 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.		it unsafe or unstable characteristics. e rescue boat or its equipment as a	Passed Failed Comments/Observations

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	Manufacturer:	Date:	Time:
Inflated Rescue Boats	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)1/6.11.23			
Test Procedure	Acceptance Criteria		Significant Test Data		est 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 should release and the rescue boat or its equipment as a r	here should be no damage to the result of this test.	Passed Test Direction		Failed
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.			Comments/Obse	Passed Passed Passed Passed Passed rvations	Failed Failed Failed Failed Failed Failed Failed Failed

						Page 3
	Manufacture	er:	Date:	Time:	•	
Inflated Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	Tumber:	Organization:			
5.3.7.1 Strength Tests—I Tests	mpact, Drop, &	& Operation after Impact & Drop	Regulations: LSA Code 4.4.1	.7, MSC.81(70)1/6.4.1, 7.2	2.2. & 7.2	2.3
Test Procedure		Acceptance	Criteria	Signifi	cant Test	t Data
.1 For boats launched by fall or equipped rescue boat, including its be loaded with weights equal to a number of persons for which the represent the normal loading in the (These weights need not be placed the seatpan.) Skates or fenders, if reposition, should be pulled laterall so that when released it will strik vertical surface at a velocity of 3 raised 0.624 m above the free har. The boat should be released to imposition and the seatpan.	s engine, should the mass of the escue boat is to be distributed to he rescue boat. I 300 mm above required, should a a free hanging ly to a position a fixed rigid 3.5 m/s (keel is nging position).	The impact and drop tests should be .1 no damage has been sustained functioning of the rescue boat and its .2 the damage caused by the impact significantly as a result of the operation. .3 machinery and other equipment hand .4 no significant ingress of seawater	that would affect the efficient sequipment; and drop tests has not increased ional test in 5.3.5.2; has operated to full satisfaction;	Load in boat: Heaviest engine used: Observed Damage: Increased Damage: Satisfactory Operation:		NO NO
rigid vertical surface. 2 The rescue boat complete equipment and with a mass equipment and fuel in the position of fuel tank should be dropped thresheight of at least 3 m on to wat should be from the 45-degree boat trim, and 45-degree stern-down at 3.3 On completion of these tests and its equipment should be caref	e with all its uivalent to its fits engine and et imes from a ter. The drops ow-down, level ttitudes.			Ingress of Water: Final Evaluation: Passe Comments/Observations		NO Failed:

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	Manufactur	er:	Date:	Time:			
Inflated Rescue Boats	Model:		Surveyor:				
	Lot/Serial N	Number:	Organization:				
5.3.7.2 Strength Tests—Am	bient Overl	oad Test	Regulations: LSA Code 5.1.3.2.2	2, MSC.81(70)1/7.2.12			
Test Procedure		Acceptance	e Criteria	Significant Test Data			
1 /		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—Col	ld Overload	Test	Regulations: LSA Code 5.1.3.2.	3, MSC.81(70)1/7.2.13			
Test Procedure		Acceptance	e Criteria	Significant Test Data			
With all relief valves operative, conditioning at a temperature of inflated rescue boat should be load times the mass of the full complement and equipment for which it is to be a suspended for five minutes from its. The rescue boat and bridle should lafter the test is conducted.	2 -30°C, the ded with 1.1 nt of persons approved and bridle.	The rescue boat and its bridle or reany signs of damage.	lease mechanism should not show	Passed Failed Comments/Observations			

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1	Manufacture	r:	Date:	Time:
Inflated Rescue Boats	Model:		Surveyor:	
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5.3.7.4 Strength Tests—Moor	ring Out Te	st	Regulations: LSA Code 5.1.3.3,	MSC.81(70)1/7.2.15, 5.5, 5.17.78
Test Procedure		Acceptance	e Criteria	Significant Test Data
The rescue boat should be loaded we equal to the mass of the total number for which it is to be approved and its and moored in a location at sea or in a harbour. The rescue boat should remain that location for 30 days. The pressur topped up once a day using the man however, during any 24 h period the reshould retain its shape. Each inflatable compartment in the reshould be tested to a pressure equal to the the working pressure. Each pressure reshould be made inoperative, composhould be used to inflate the inflatable rand the inflation source removed. The continue for at least 30 min. The measurement of pressure drop due can be started when it has been ass compartment rubber material has been stretching due to the inflation prestabilized. This test should be conducted as a second to the inflation of the conduction has been achieved.	of persons equipment a seawater in afloat in are may be mual pump; rescue boat three times relief valve pressed air rescue boat test should to leakage sumed that completed essure and acted after	The rescue boat should not sustain performance. The pressure should not decrease without compensating for tempe changes, and there should be no defect in the rescue boat.	by more than 5% as determined rature and atmospheric pressure	Compartment 1 Initial Pressure: mbar Final Pressure: mbar Percent Calculated Decrease: Percent Compartment 2 Initial Pressure: mbar Final Pressure: mbar Percent Compartment 3 Initial Pressure: mbar Final Pressure: mbar Percent Calculated Decrease: Percent Compartment 4 Initial Pressure: mbar Final Pressure: mbar Percent Calculated Decrease: Percent Compartment 5 Initial Pressure: mbar Final Pressure: mbar Final Pressure: mbar Calculated Decrease: Percent Passed Failed Comments/Observations

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

5.3.8.1 Inflation Chamber Characteristic		ics Tests Regulations: LSA Code 1.2.2, M		ISC.81	(70)1/7.2.14
Test Procedure		Acceptano	ce Criteria		Significant Test Data
The inflatable compartment construct the rescue boat of 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 bre 12 piercing strength 13 ozone resistance 14 gas permeability 15 seam strength 16 ultraviolet light resistance	ent materials used to should be tested for the	-	uld be to the satisfaction of the	.2 .3 .4 .5 .6 .7 .8 .9 .10 .11 .12 .13 .14 .15	tensile strength
				Com	ments/Observations

5.4 RIGID/INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

5.4.0	General Ir 5.4.0.1 5.4.0.2 5.4.0.3	nformation General data and specifications Submitted drawings, reports and documents Quality assurance
5.4.1	Visual ins 5.4.1.1 5.4.1.2 5.4.1.3 5.4.1.4 5.4.1.5 5.4.1.6	pection Occupant space Fittings, provisions and ladders Engine and starting system Steering mechanism and fuel tank Release mechanism Drain valve
5.4.2	Stability, 6 5.4.2.1 5.4.2.2 5.4.2.3 5.4.2.4 5.4.2.5 5.4.2.6	damage and loading tests Damage test Stability test Loading test Swamp test Flooded stability test Righting test (for non self-righting rescue boats)
5.4.3	Seating str 5.4.3.1 5.4.3.2	rength and space tests Seating strength test Seating space test
5.4.4	Release m 5.4.4.1 5.4.4.2 5.4.4.3	
5.4.5	Operation 5.4.5.1 5.4.5.2 5.4.5.3 5.4.5.4 5.4.5.5 5.4.5.6	al tests Liferaft towing Endurance, speed and fuel consumption Engine out of water Compass test Manoeuvrability with paddles or oars Heavy weather/seas test
5.4.6	Towing ar 5.4.6.1 5.4.6.2	nd painter tests Towing tests Painter release test
5.4.7	Strength to 5.4.7.1 5.4.7.2 5.4.7.3	ests Impact, drop and operation after impact & drop test Overload test Mooring out test
5.4.8	Materials 5.4.8.1	

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5.4 RIGID/INFLATED RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

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1	Manufacturer:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
]	Lot/Serial Number:	Organization:	
5.4.0.1 General Data and Spec	ifications	Regulations: LSA Code 4.	.4, 5.1, MSC.81(70)1/7.2.16
General Information	Rescue boa	t Dimensions	Rescue boat Weight
Construction Material: Hull:			Design Weight:
Canopy:			Unloaded Boat:
Fire retardancy documentation:			Loose Equipment:
Inflated chambers:			Fuel:
Rescue Boat Inherent Buoyancy (Type A			Persons:
Weight:			Calculated Loaded Weight:
Occupancy:			Fully Equipped:
Persons (75 kg each):	(Insert diagram of hull for reference	ce)	With Persons:
Engine(s) Installed: 1 Type App by:	Provision for securing hanging-off applicable):		— Weight As Tested:
Manufacturer:			Fully Equipped:
Туре:			7 1 11
Power:			Comments/Observations
Gear ratio (inboard engine):			
Additional rigid or inflatable buoyancy:	-		
Release mechanism(s) (if applicable) 1 Manufacturer: Type:			

SWL:

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	Manufacturer	:	Date:	Time:	
Rigid/Inflated Rescue Boats Model:			Surveyor:		
	Lot/Serial Nu	mber:	Organization:		
5.4.0.2 Submitted	l drawings, reports and o	locuments			
		Submitted drawings	and documents		Status
Drawing No.	Revision No. & date		Title of drawing		Status
	•				
		Submitted reports a	and documents		C4 - 4
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			
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	Manufacturer:	Date: Time:	
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	
		T	
5.4.0.3 Quality Assurance	e	Regulations: -	
International Convention for the inspected, representatives of the manufacturers to ensure that the o	particular type are required by Chapter III of the Safety of Life at Sea, 1974, as amended, to be Administration should make random inspections of quality of life-saving appliances and materials used the approved prototype life-saving appliance.	Quality Assurance Standard Used: -	
Manufacturers should be required to institute a quality control procedure to ensure the 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 test		Quality Assurance Procedure: -	
carried out in accordance with the	e Administration's instructions.	Quality Assurance Manual: -	
		Description of System.	
		Quality Assurance System acceptable Yes/No Comments/Observations	

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

5.4.1.1 Visual Inspection — Occupant Space Regulation		Regulations: LSA Code 4.4.2.2,	Code 4.4.2.2, 4.4.3.5, 5.1, MSC.81(70)1/7.2.16	
Test Procedure	Acceptano	ce Criteria	Significant Test Data	
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Unless the rescue boat has adequate sheer, it should be provided with a bow cover extending for not less than 15% of its length.		Passed Failed	
	Knee Space (Seating on seats) Knee Width – at least 250 mm Leg Space (Seating on floor) – Overlapping Seat Vertical Sep Seat Horizontal Overlap – 150 Each seating position s Stretcher(s) space: Rescue boats Should be capa persons and a person lying on s Walkway Surfaces	ide of a point 215mm from the back at least 635 mm from the back at least 1190 mm from the back aration – at least 350 mm mm maximum should be clearly indicated.	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	

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

5.4.1.2 Visual Inspection — Fittings, Pro	visions and Ladders	Regulations: LSA Code 5.1.3, M	ASC.81(70)1/7.2.16		
Test Procedure	Acceptano	ce Criteria	Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.			Passed	_ Failed	_
	Means for deflation		Passed	Failed	_
	Safety relief valve unless waiv	ed by Administration	Passed	Failed	NA
	Suitable patches for securing p	painters fore and aft	Passed	Failed	_
	Fittings and Provisions				
		lifeline becketed around the rescue ithin reach of a person in the water, dder and propeller	Passed	_ Failed	_
		rescue boats, handholds on the way without damaging the rescue	Passed	_ Failed	_
	Weathertight stowage for small	items of equipment	Passed	Failed	NA
	Approved position indicating l	ight provided at highest point	Passed	Failed	_
	Provided with effective mear self-bailing.	as of bailing or be automatically	Passed	Failed	_
			Comments/Observat	ions	

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	Manufacturer:	Date:	Time:
Rigid/Inflated Rescue Boats	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 m below waterline YES NO NA Passed Failed Highly visible colour: Passed Failed Comments/Observations			

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

5.4.1.3 Visual Inspection—Engine and Sta	rting System	Regulations: LSA Code 4.4.6, 5.1,	, MSC.81(70)1/7.2.16	
Test Procedure	Acceptan	ce Criteria	Significant Test Data	
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system Two independent rechargeable of starting systems Required starting aids provided. Starting system is not impeded obstructions Propeller arranged to be disengage ahead and astern propulsion Exhaust arranged to prevent was operation. System designed with due regard to the possibility of damage to the debris Engine casing made of fire resurrangements providing similar personnel are protected from hot Shouted order can be heard with the	by engine casing, thwarts, or other red from the engine and provision for ter from entering engine in normal to the safety persons in the water and he propulsion system from floating etardant material or other suitable protection.	Manual Power YES NO NA Passed Passed Passed Passed Passed Passed Passed Passed	
	 tightly fitting top which provides Means for recharging engine star provided by solar charger or ship Radio batteries not used to provided Recharging for engine batteries penot exceed 50 v Recharging means for engine benescue boat embarkation station 	ting, radio, and searchlight batteries 's power supply. de power for engine starting. rovided by ship's power supply does atteries can be disconnected at the rating engine are water resistant and	Passed	Failed Failed Failed Failed Failed Failed

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	Manufacturer:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
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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	2.16	
Test Procedure	Acceptance Criteria		Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.			Passed	Failed	
	Rudder permanently attached to		Passed	Failed	NA
	Except when remote steering is attached or linked to the rudder	provided, the tiller is permanently stock	Passed	Failed	NA
	Rudder and tiller arranged so as the release mechanism or prope	not to be damaged by operation of eller	Passed	Failed	
	Fuel Tank				
	If fitted with petrol-driven outbo	oard motor, the fuel tank(s) should ire and explosion.	Passed	Failed	NA
			Comments/Observations	S	

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

5.4.1.5 Visual Inspection — Release Mechanism		Regulations: LSA Code 4.4.7.6.	ions: 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	
measurements and verify clearances as required.	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 action by the operator	m needs deliberate and continued	Passed	Failed	_ NA
	Mechanical protection prov for off load release	rided beyond that normally required	Passed	Failed	_ NA
	For a single fall system with scapability is not required; in such to release the boat only when it is		Passed Comments/Observations		_ NA

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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	Fitted near lowest point on the hull		Passed Failed	
(not applicable for self-bailing boats)	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 re	escue boat	Passed Failed	
	Position clearly marked		Passed Failed	
			Comments/Observations	
5.4.2.1 Damage Test (Does not apply if inflated tube)	waterline is below lower side of	Regulations: LSA Code 5.1.3.5, M	ISC.81(70)1/7.2.89, 7.3.2	
Test Procedure	Acceptano	ce 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:	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 Passed Failed	
1 with forward buoyancy compartment deflated;			2 With engine and fuel: Passed Failed Without engine and fuel Passed Failed	
with the entire buoyancy on one side of the rescue boat deflated; and			3 With engine and fuel: Passed Failed	
3 with the entire buoyancy on one side and the bow compartment deflated.			Without engine and fuel Passed Failed	

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		Manufactur	er:	Date:	Time:
Rigid/Inflated Rescue Boats Model:			Surveyor:		
Lot/Serial N			Number:	Organization:	
5.4.2.2	Stability Test			Regulations: LSA Code 4.4.5,	MSC.81(70)1/7.2.67
	Test Procedure		Acceptance	ee Criteria	Significant Test Data
engine a	lowing tests should be cand fuel or an equivalent me and fuel tanks: the number of persons rigid/inflated rescue be approved should be crowd with half this complement buoyancy tube, and then	for which the pat is to be ded to one side t seated on the to one end. In	.1 Under these conditions the positive.	freeboard should be everywhere	To bow: mm Passed Failed
	each case the freeboar recorded; and the stability of the rescue boarding should be ascer persons in the rescue boat that they can readily as water a third person who feign unconsciousness. The should have his back towarthe rescue boat so that he the rescuers. All persons approved lifejackets. tability tests may be carried to at floating in still water.	ne boat during retained by two demonstrating ssist from the is required to the third person ands the side of e cannot assist s should wear	.2 The rescue boat should be stable	le	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 Passed Failed
103040	out nothing in our witter.				Comments/Observations

seriously deform in this condition.

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	Manufacture	er:	Date:	Time:	
Rigid/Inflated Rescue Boats Model:			Surveyor:		
	Lot/Serial N	Jumber:	Organization:		
5.4.2.3 Loading Test			Regulations: LSA Code 5.1.3.6,	, MSC.81(70)1/7.2.45	
Test Procedure		Acceptano	ce 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		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		, MSC.81(70)1/7.2.11	
Test Procedure		Acceptano	ce 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		The rescue boat should be capab should not seriously deform.	le of supporting the full load and	Passed Failed Comments/Observations	

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	Manufacture	er:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Jumber:	Organization:	
5.4.2.5 Flooded Stability lower side of inflat		d only when waterline is below	Regulations: LSA Code 4.4.1.1,	MSC.81(70)1/6.8.13
Test Procedure		Acceptano	ce Criteria	Significant Test Data
The rescue boat should be locequipment. If provision lockers, we fuel tanks cannot be removed, the flooded or filled to the final water from this test. Rescue boats fitted stowage compartments to individual drinking water contained	vater tanks and hey should be crline resulting with watertight accommodate ers should have	When loaded as specified, the restability when filled with water to occur when the rescue boat is how waterline assuming no loss of buoy	o represent flooding which would led in any one location below the	Passed Failed Comments/Observations
these containers aboard and placed compartments which should be see during the flooding tests. Ballast weight and density should be sub- engine and any other installed equi- be damaged by water.	in the stowage aled watertight of equivalent stituted for the			
Weights representing persons (or who would be in the water when the flooded may be omitted. Weight persons who would not be in the verscue boat is flooded should be normal seating positions of such p	e rescue boat is its representing water when the placed in the			
Note: Several tests may have to be holes in different areas would creat flooding conditions.				

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	Manufacture	er:	Date:	Time:_		
Rigid/Inflated Rescue Boats Mode			Surveyor:			
	Lot/Serial N	umber:	Organization:			
5.4.2.6 Righting Test (for n	on-self-righti	ng rescue boats)	Regulations: MSC.81(70)1/7	.1.7		
Test Procedure		Acceptance	ce Criteria	Significa	ant 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? (If YES, refer to lifeboat reference to	report 4.5.2.3)	
5.4.3.1 Seating Strength Te	st		Regulations: LSA Code 4.4.1.5, MSC.81(70)1/6.6.1 & 6.4.3			
Test Procedure		Acceptano	ce Criteria	Significa	ant 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.		Observed damage		
		The seating should be capable of sushould be sustained that would affe		ge Passed I	Failed	

N	Manufacturer:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
L	ot/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	Ассер	otance Criteria	Significant Test Data
The rescue boat should be fitted with and all its equipment. The number of pe		ithout interference with the occupants.	Equipment operated: YES NO
which the rescue boat is to be approve an average mass of at least 75 kg, and al	ed, having The rescue boat must be capal	ble of carrying at least 5 persons and a her.	Number of persons carried:
lifejackets and immersion suits and a essential equipment required, should th	1 1		Seated on seats
one person should lie down and the other be properly seated in the rescue boat. T	the space used conforms with	s may be seated on the floor, provided the leg space requirements of test form	Seated on floor
boat should then be manoeuvred	and all		Lying on a stretcher
equipment on board tested to demonstr can be operated without difficulty or int with the occupants.	1 3 7	transom, or buoyancy chambers on the	Total
with the occupants.			Passed Failed
			Lifejacket and immersion suit used during the test:
			Lifejacket – Inflatable/Inherently Buoyant
			Immersion suit - Un-insulated/Buoyant Insulated

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	Manufacture	er:	Date:	Time:
Rigid/Inflated Rescue Boats Model:_			Surveyor:	
	Lot/Serial N	umber:	Organization:	
5.4.4.1 Release Mechanism	Tests—Simul	Itaneous Release	Regulations: LSA Code 4.4.7.6	, MSC.81(70)1/6.9.12
Test Procedure		Acceptano	ce 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		Acceptano	ce 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. (If tested to failure, working load may be taken as 1/6 the failure). (If tested to failure, working load may be taken as 1/6 the failure).		Working Load:N Force Applied:N Passed Failed Comments/Observations		

Failed ____

Failed ____

Failed

Failed

Failed _____

Passed

Load

Passed

Passed

Passed

Passed

Comments/observations

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	Manufacture	er:	Date:	Time:	
Rigid/Inflated Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Tumber:	Organization:		
5.4.4.3 Release Mechanism	Tests—Towing	g Release Test	Regulations: LSA Code 4.4.1.3.2		
Test Procedure		Acceptan	ce Criteria	Significa	nt Test Data
It should be demonstrated that mechanism can release the fully exposed when loaded with weights equate the number of persons for which the to be approved, when the rescue boat at speeds up to 5 knots. In lieu of a within test may be conducted as follows. 1 A force equal to the force not the rescue boat at a speed of be applied to the hook in direction of the boat at an at the vertical. This test should in the aftward as well at direction, depending upon the release hook;	quipped rescue I to the mass of e rescue boat is e is being towed waterborne test, es: ecessary to tow 5 knots should the lengthwise angle of 45° to I be conducted s the forward	The rescue boat should be released sa @ towing load in hook @ @ towing load in hook @ @ hook SWL @ 20° athw @ hook SWL @ 20° athw	45° aft vartships to port	Type of Test: Waterborne / Waterborne Test: Towing Speed: kts Passed knon-Waterborne Test Load kN Passed knoad kN Passed knoad	Failed
2 A force equal to the safe w the hook should be applied to athwartships direction at an the vertical. This test should on both sides.	the hood in an angle of 20° to	@ hook SWL in halfway i) Port ah ii) Starbo	ead ard ahead	Load kN Passed kN Load kN	Failed

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Starboard aft Port aft

iii)

iv)

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.

intended for on-load operation.)

(This test is not applicable to single fall systems not

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	Manufacturer:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
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5.4.5.1 Operational Tests—Liferaft Town	Regulations: LSA Code 4.4.6.8,	5.1.1.7, 5.1.1.9, MSC	.81(70)1/7.1.2		
Test Procedure	Acceptanc	ce Criteria	Sig	gnificant 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 shoul minimum, a 25 person liferaft, equipment, at a speed of 2 knots in There should be no damage to th structure.	fully loaded with persons and a calm water.	Make/model: Largest liferaft used: Speed maintained kts Observed damage: OR Bollard pull: N (Record on type appropers) Observed damage: Propeller: Pitch: Diameter: Passed Comments/Observation	roval certificate)	

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	Manufactur	er:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Jumber:	Organization:	
5.4.5.2 Operational Tests -	_ Endurance	, Speed & Fuel Consumption	Regulations: LSA Code 5.1.1.6	
Test Procedure	- Endurance	1	ce Criteria	Significant Test Data
(Note: Run this test after impact and	drop tests in	-	orily throughout the 4-h operation.	
5.4.7.1.) The rescue boat should be loaded we equal to the mass of its equipment an number of persons for which the result be approved. The engine should be started a manoeuvred for a period of at demonstrate satisfactory operation.	nd the cue boat is to and the boat least 4 h to	The fuel tank should have sufficient knots for a period of 4 hours in ca	nt capacity to operate at a speed of 6 .lm water.	Make/model: Engine Speed: rpm Boat Speed: kts Consumption: L/h Fuel Tank Capacity:L
The rescue boat should be run at a less than 6 knots for a period which ascertain the fuel consumption and that the fuel tank has the required ca determination may be made during of operation.) For rescue boats equipped with our speed and manoeuvring trials should out with engines of various powers rescue boat's performance.	is sufficient to d to establish apacity. (This the 4-h period tboard motor, ald be carried			Endurance: hrs Propeller: Pitch: Diameter: Passed Failed Comments/Observations

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Rigid/Inflated Rescue Boats M	Model:		Surveyor:			
L	ot/Serial N	umber:	Organization:			
5.4.5.3 Operational Tests—En	gine Out o	f Water	Regulations: LSA Code 4.4.6.3,	MSC.81(70)1/6.10.5		
Test Procedure		Acceptance	ce Criteria	Significant Test Data		
The engine should be operated for at le at idling speed under conditions so normal storage. Note: If a water flushing device is intenused for this purpose, it should be fitted the test.	simulating anded to be	The engine should not be damaged	d as a result of this test.	Passed Failed Comments/Observations		
5.4.5.4 Operational Tests—Co	ompass Tes	t	Regulations: LSA Code 5.1.2.2.3, MSC.81(70)1/6.10.7			
Test Procedure		Acceptanc	ee Criteria	Significant Test Data		
It should be determined that the performance is satisfactory and that unduly affected by magnetic fitti equipment in the rescue boat.	it is not	The compass operates satisfactoril	y.	Compass Make: Compass Model: Passed Failed Comments/Observations		

	Manufacture	er:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Jumber:	Organization:	
5.4.5.5 Operational Tests—	Manoeuvrab	oility With Paddles Or Oars	Regulations: LSA Code 5.1.2.2	2.1, MSC.81(70)1/7.1.8
Test Procedure		Acceptano	ce Criteria	Significant Test Data
It should be demonstrated that the respective propelled and manoeuvred by paddles in calm water conditions at a least 0.5 knots over a distance of at when laden with the number of wearing lifejackets and immersion suit is to be approved. For boats with inboard engines the not need to be greater than that intused.	its oars or a speed of at t least 25 m. persons, all its, for which power does	The rescue boat should be capable manoeuvred.	of being satisfactorily paddled and	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

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	Manufacture	er:	Date:	Time:
Rigid/Inflated Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	umber:	Organization:	
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5.4.5.6 Operational Tests—	-Heavy Weatl	her / Seas Test	Regulations: LSA Code 5.1.3, N	ISC.81(70)1/7.2.10
Test Procedure		Acceptance	ce Criteria	Significant Test Data
To simulate use in heavy weather the rescue boat The rescue boat should		The rescue boat should not show nor have lost more than minimal p		Tube pressure before test: mbar Pressure relief valves open/closed? m Wave height m Wind Speed m/s Tube pressure after test: mbar Passed Failed Comments/Observations
5.4.6.1 Towing & Painter T	Cests - Towing	g 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 furescue boat, loaded with a properly mass equal to the mass of the number for which it is to be approved, can be speed of not less than 5 knots in call on an even keel using the rescue be securing device.	y distributed er of persons be towed at a Im water and	The rescue boat should not exhibit There should be no damage to the result of this test.		Passed Failed Comments/Observations

	rer:				
	Number:				
5.4.6.2 Towing & Painter Tests—Painter Release Test Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.23					
Test Procedure	Acceptano	ce Criteria		Significant Tes	st 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 the rescue boat or its equipment as a rescu	here should be no damage to the	Passed Test Direction Comments/Obser	Passed Passed Passed Passed Passed Passed	Failed Failed Failed Failed Failed Failed Failed Failed

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Rigid/Inflated Rescue Boats Model:			Surveyor:			
	Lot/Serial N	fumber:	Organization:			
<u> </u>						
5.4.7.1 Strength Tests — I Test	mpact, Drop	& Operation after Impact & Drop	Regulations: LSA Code 4.4.1.	7, MSC.81(70)1/7.2.2		
Test Procedure		Acceptance	Criteria	Signific	cant Test	Data
.1 For boats launched by fall or fequipped rescue boat, including its obe loaded with weights equal to the number of persons for which the respective the normal loading in the (These weights need not be placed of the seatpan.) Skates or fenders, if respective in position. The rescue boat, in a position, should be pulled laterally so that when released it will strike vertical surface at a velocity of 3.3 raised 0.624 m above the free hang The boat should be released to imparigid vertical surface.	engine, should be mass of the scue boat is to be distributed to be rescue boat. Soo mm above quired, should a free hanging to a position a fixed rigid 5 m/s (keel is ging position).	The impact and drop tests should be 1 no damage has been sustained functioning of the rescue boat and 2 the damage caused by the impact significantly as a result of the open and 3 machinery and other equipment hand 4 no significant ingress of seawater	that would affect the efficient d its equipment; and drop tests has not increased erational test in 5.4.5.2; has operated to full satisfaction;	Load in boat: Heaviest engine used: Observed Damage: Increased Damage: Satisfactory Operation:	YES YES	NO NO
.2 The rescue boat complete equipment and with a mass equengine and fuel in the position of i fuel tank should be dropped three height of at least 3 m on to water should be from the 45-degree boy trim, and 45-degree stern-down attiants. 3 On completion of these tests the and its equipment should be careful.	ivalent to its its engine and times from a r. The drops v-down, level itudes.			Ingress of Water: Final Evaluation: Passed Comments/Observations	YES	NO Failed:

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	Manufacture	er:	Date:	Time:	
Rigid/Inflated Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Jumber:	Organization:		
5.4.7.2 Strength Tests—Ov	verload Test		Regulations: MSC.81(70)1/7.1.	1	
Test Procedure		Acceptance	ee Criteria	Significa	nt Test Data
The rescue boat should be loaded we distributed load of four times the represent the equipment and full compersons for which it is to be a suspended for five minutes from hooks. The weights should be proportion to the loading of the boat condition, but the weights used to persons need not be placed 300 m seat pan. The boat and bridle of fastening device should be examine has been conducted.	he weight to omplement of approved and its bridle or distributed in it in its service represent the nm above the or hooks and	The rescue boat and its bridle or reany signs of damage.	elease mechanism should not show	Load in boat: Comments/Observations	kg
Testing by filling the boat with wa be accepted. This method of load give the proper distribution of weight may be removed in order to avoin which case weights should be added compensate for the removal of such the rescue boat and its bridle or hand mechanism) and fastening device examined after the test for any significant.	ding does not ht. Machinery d damage, in d to the boat to h machinery.			Passed Fa	ailed

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Rigid/Inflated Rescue Boats		Manufacturer:	Date:	Time:	
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		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, M	SC.81(70)1/7.2.15, 5.5, 5.17.78	

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

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	Manufacturer:	Date:	_ Time:
Rigid/Inflated Rescue Boats	Model:	Surveyor:	
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5.4.8.1 Inflation Chamber Characteristics Tests		Regulations: LSA Code 1.2.2, N	ISC.81(70)1/7.2.14
Test Procedure	Acceptano	ce 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 show Administration	uld be to the satisfaction of the	.1 tensile strengthN/50 mm width .2 tear strengthN .3 heat resistance - Blocking4 cold resistance - Cracking5 heat ageing% retained strength N/50 mm width .6 weathering% retained strength N/50 mm width .7 flex cracking - Cracking or deterioration .8 abrasionmg/rev.; Base fabric not visible9 coating adhesionN/50 mm width .10 oil resistance - Tackiness or other deterioration .11 elongation at break% .12 piercing strength13 ozone resistance - Visible cracking14 gas permeability bubbles/min or l/m²/hr of15 seam strength N/50 mm width .16 ultraviolet light resistance % retained strength N/50 mm width Cracking SATISFACTORY UNSATISFACTORY

5.5 RIGID FAST RESCUE BOATS

EVALUATION AND TEST REPORT

5.5.0		nformation
	5.5.0.1	General data and specifications
	5.5.0.2	Submitted drawings, reports and documents
	5.5.0.3	Quality assurance
5.5.1	Visual in	spection
	5.5.1.1	Occupant space
	5.5.1.2	Fittings, provisions and ladders
	5.5.1.3	Engine and starting system
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5.5.2	Freeboard	d, stability and self-righting tests
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	5.5.2.2	Freeboard test
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	5.5.3.1	Seating strength test
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5.5.4	Release n	nechanism tests
	5.5.4.1	Simultaneous release
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	5.5.4.3	Towing release test
5.5.5	Operation	nal tests
	5.5.5.1	Liferaft towing
	5.5.5.2	Endurance, speed, and fuel consumption
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	5.5.5.4	Compass test
	5.5.5.5	Helpless person recovery
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5.5.6	Towing a	nd painter tests
	5.5.6.1	Towing test
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5.5.7	Strength t	tests
	5.5.7.1	Impact, drop and operation after impact & drop test
	5.5.7.2	Overload test

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5.5 RIGID FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

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

5.5.0.1 General Data and Specifications	General Data and Specifications Regula		rulations: LSA Code 4.4, 5.1, MSC.81(70)1/7.1.9		
General Information	Rescue boat	Dimensions	Rescue boat Weight		
General Information 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: -	Rescue boat Dimensions: LOA (including fixed fenders, and a Breadth Maximum:	if any): hanging-off pendant (if	Rescue boat Weight Design Weight: Unloaded Boat: Loose Equipment: Fuel: Persons: Calculated Loaded Weight: Fully Equipped: With Persons:		
Manufacturer: Type: Power: Gear ratio (inboard engine): Release mechanism(s) (if applicable) 1 2 Manufacturer: Type: SWL: Propeller			Weight As Tested: Fully Equipped: Comments/Observations		

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Manufacturer		:	Date:	Time:	
Rigid Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial Nu	mber:	Organization:		
5.5.0.2 Submitted	l drawings, reports and o				
		Submitted drawings a	and documents		Status
Drawing No.	Revision No. & date		Title of drawing		Status
		Submitted reports ar	nd documents		
Report/Document No.	Revision No. & Date		Title of report / document		Status
_		Maintenance Manual -	-		
		Operations Manual -			

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		Manufacturer:	Date:		Time:	
Rigid Fast R	escue Boats	Model:	Surveyor:			
		Lot/Serial Number:	Organization:_			
5.5.0.3	Quality Assurance		Regulations: -			
Except wher International inspected, re manufacturer comply with Manufacture life-saving all appliance appliance approximations.	e all appliances of a pa Convention for the Sa presentatives of the Adr es to ensure that the qua the specification of the rs should be required to opliances are provided to proved by the Administr	articular type are required by Chapter III of the afety of Life at Sea, 1974, as amended, to be ministration should make random inspections of lity of life-saving appliances and materials used approved prototype life-saving appliance. institute a quality control procedure to ensure that to the same standard as the prototype life-saving ration and to keep records of any production tests administration's instructions.	Quality Assurance Standard Used: Quality Assurance Proceed	lure:	es/No	

<i>E E 1 1</i>	Visual Insusation	Occurrent Space	Decodetions, ICA Code 4422 4425 51 MC	C 01/70\1/7 1 0
		Lot/Serial Number:	Organization:	
Rigid Fast I	Rescue Boats	Model:	Surveyor:	
		Manufacturer:	Date:	Time:
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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	Acceptano	ce Criteria	Significant Test Data	
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Unless the rescue boat has adequat a bow cover extending for not less	Ç	Passed Failed Passed Failed	
	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.		Width:mm Depth:mm Knee Space:mm Knee Width:mm Leg Space:mm Vert. Separation:mm Overlap:mm Position Indication: PASSED FAILED Stretcher space:xmm Passed Failed Non Skid Surface: Passed Failed Comments/Observations	

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	Manufacturer:	Date:	Time:
Rigid Fast Rescue Boats	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	Acceptan	ce Criteria	Sign	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 rescu underside arranged to break awa	ne boats, handholds on the my without damaging the rescue boat	Passed	FailedNA	
	Approved position-indicating light provided at highest point		Passed	Failed	
			Passed	Failed	
	Ladders		Passed	FailedNA	
	Ladders that can be used at any the lowest step when in place sh the light waterline.	entrance should be on board and could not be less than 0.4 m below	YES NO NA		
	provided it is adequately protect	ed external to the hull of the boat, ed against damage and is capable stowed on an open deck on a ship all sea condition.	Lowest step	m below waterline Failed	
	Colour The boat is of a highly visible c	olour where it will assist detection.	Highly visible colour: Comments/observations	Passed Faileds:	

	Manufacturer:	_ Date:	Time:
Rigid Fast Rescue Boats	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	Acceptanc	e Criteria	Sig	gnificant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	- Two independent rechargeable energy sources provided for power		Manual Power YES NO NA	
	starting systems - Required starting aids provided.		Passed	Failed
		y engine casing, thwarts, or other	Passed	Failed
	- Propeller arranged to be disengage ahead and astern propulsion	d from the engine and provision for	Passed	Failed
	- Exhaust arranged to prevent water operation.	er from entering engine in normal	Passed	Failed
	*		Passed	Failed
	arrangements providing similar pro - Personnel are protected from hot are	tection.	Passed	Failed
		gine running at speed necessary for 6	Passed	Failed
	knot operation - Watertight casing around bottom		Passed	Failed
	tightly fitting top which provides for Means for recharging engine start		Passed	Failed
	provided by solar charger or ship's - Radio batteries not used to provide	power supply.	Passed	Failed
	- Recharging for engine batteries pro		Passed	Failed
	not exceed 50 v	J 1 1 11 J	Passed	Failed
	Recharging means for engine batter boat embarkation stationInstructions for starting and opera		Passed	Failed
	mounted in a conspicuous place ne	5 5	Passed	Failed

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Rigid Fast Rescue Boats	Model:	Surveyor:	
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5.5.1.4 Visual Inspection — Steering Me	chanism 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.		ntrolling the rudder (rudder and	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 Has emergency steering system		Passed	Failed	NA
	rudder, water jet or outboard m Hands-free, watertight VHF rad	otor	Passed		_
	Fuel Tank	no provided	rasseu	raneu	_
	If fitted with petrol-driven outb should be specially protected as		Passed	Failed	NA
			Comments/Observation	ons	

	Manufacturer:	Date:	Time:
Rigid Fast Rescue Boats	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			9
Test Procedure	Acceptano	ce Criteria	Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Clear operating instructions		Passed	Failed	
measurements and verify clearances as required.	Release control marked in a surroundings	colour that contrasts with the	Passed	Failed	
	For on-load release mechanisms:				
	Suitably worded danger si	gn 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
	capability is not required; in such	suitable painter, on-load release an arrangement a single capability fully waterborne will be adequate.	Passed Comments/Observations		NA

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

Test Procedure
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

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	Manufacture	er:	Date:	Time:
Rigid Fast Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Tumber:	Organization:	
		1		
5.5.2.2 Freeboard Test			Regulations: LSA Code 4.4.5, N	ASC.81(70)1/6.8.45
Test Procedure		Acceptanc	ce Criteria	Significant Test Data
The rescue boat with its engine sho		This test should be considered succ	· · · · · · · · · · · · · · · · · · ·	Measured Freeboard: mm
with a mass equal to that of all t One half of the number of persons		on the low side, is not less than 1 100 mm, whichever is greater.	.5% of the rescue boat's length or	1.5% of Boat's Length: mm
rescue boat is to be approved shou		100 mm, whichever is greater.		1.5% of Boat's Length.
a proper seating position on or centreline. The freeboard sho				Passed Failed
measured on the low side.	ouid then be			Comments/Observations
5.5.2.3 Righting Test (for non self-righting		ng fast rescue boats)	Regulations: MSC.81(70)1/7.1.	7
Test Procedure		Acceptano	ee Criteria	Significant Test Data
It should be demonstrated that		The rescue boat should be capable	of being righted by not more than	Can the boat be righted by 2 persons?
without engine and fuel or an equiplace of the engine and fuel tank, t		two persons if it is inverted on the	water.	With engine and fuel:
is capable of being righted by not		When the rescue boat has righted	, each engine or motor should be	Passed Failed
persons if it is inverted on the wat	er.	capable of being restarted, prov	ided the helmsman's emergency	Wish and an aire and final
Test without engine is only a	applicable for	release, if fitted, has been reset.		Without engine and fuel: Passed Failed
outboard engines.		The design of the fuel and lubricati		
(This test is not required if the r	righting test in	of more than 250 ml of fuel or lu system.	ibricating oil from the propulsion	Method used to right boat:
5.5.2.4 has been performed.)	5 . 6			
				Comments/Observations

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

5.5.2.4 Self-Righting Test (for self-right	ting fast rescue boats only) Regulations: MSC/Circ.809, Ann		nex, 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° 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.	position without the assistance of At the beginning of these tests, neutral position and: .1 unless arranged to stop engine should continue helmsman's emergency of .2 after resetting the helmsecssary, the engine should after the rescue position. Water should not enter the engine The design of the fuel and lubricate	the engine should be running in automatically when inverted, the e to run until stopped by the release switch; and lmsman's emergency release, if ould be easily restarted and run for e boat has returned to the upright	Angle of Righting Moment Heel Loaded Light 45°	

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	Manufacture	er:	Date:	Time:
Rigid Fast Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	Tumber:	Organization:	
5.5.3.1 Seating Strength Test		1	Regulations: LSA Code 4.4.1.5, N	ISC.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		The seating should be able to support this loading without any permanent deformation or damage.		Observed damage
rescue boat.				Passed Failed
In the case of a rescue boat launche type of seat should be loaded with a		The seating should be capable of sup should be sustained that would affect		Passed Failed NA
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)		should be sustained that would affect the seat's efficient functioning.		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 fitte and all its equipment. The number		Equipment can be operated without in	nterference with the occupants.	Equipment operated: YES NO
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.		The rescue boat must be capable of person lying down on a stretcher.	carrying at least 5 persons and a	Number of persons carried: Seated on seats Seated on floor
		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.		Lying on a stretcher Total
				Passed Failed
		No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.		Lifejacket and immersion suit used during the test: Lifejacket – Inflatable/Inherently Buoyant
				Immersion suit – Un-insulated/Buoyant Insulated
				Comments/Observations

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Manufact	ırer:	Date:	Time:	
Rigid Fast Rescue Boats Model:		Surveyor:		
Lot/Seria	Number:	Organization:		
5.5.4.1 Release Mechanism Tests—Sin	nultaneous Release	Regulations: LSA Code 4.4.7.6,	MSC.81(70)1/6.9.12	
Test Procedure	Acceptano	ce 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 times the mass of the rescue boat, all it equipment and the number of persons for which the rescue boat is to be approved. The rescue boat should be released simultaneously from each factor which it is connected without binding of 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—Lo	ad Test	Regulations: LSA Code 4.4.7.6.	4, MSC.81(70)1/6.9.3	
Test Procedure	Acceptano	ce Criteria	Significant Test Data	
tensile strength testing device. The load should be increased to at least six times the working load.		fail at load less than or equal to six d may be taken as 1/6 the failure	Working Load: N Force Applied: N Passed Failed Comments/Observations	

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	Manufacture	r:	Date:	Time:
	Rigid Fast Rescue Boats Model:		Surveyor:	
		umber:		
I	5.5.4.3 Release Mechanism Tests—Towing	D.L T.A		
	5.5.4.3 Release Mechanism Tests—Towing	Release Test	Regulations: LSA Code 4.4.1.3.2	& 4.4.7.0.5, MSC.81(70)1/0.9.4
	Test Procedure	Acceptance	ce 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	mechanism: @ towing load in hook @ @ towing load in hook @ @ hook SWL @ 20° athw	45° aft artships to port	Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: kts Passed Failed Non-Waterborne Test Load kN Passed Failed Load kN Passed kN Passed Failed
	release hook;. 2 A force equal to the safe working load of	@ hook SWL @ 20° athw	artships to starboard	
	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.	@ hook SWL in halfway p i) Port ah	ead	Load kN Passed Failed Load kN
	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.	ii) Starboa iii) Starboa iv) Port aft		Passed Failed Load kN Passed Failed Passed Failed Passed Failed Passed Failed Passed Failed

Comments/observations

(This test is not applicable to single fall systems not intended for on-load operation.)

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	Manufacturer:	Date:	Time:
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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 Criter		ce 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.)	minimum, a 25 person liferaft, equipment, at a speed of 2 knots in	Id be able to successfully tow, as a fully loaded with persons and n calm water. The towing fitting or its supporting	Smallest Engine Largest Engine Make/model:	

Time:
19, Annex, 4.1.4 MSC.81(70)1/7.1.6, 7.4.2.12
Significant Test Data
Smallest Engine Largest Engine
ke/model: I Tank Capacity: peller: Pitch: Diameter: knots: ine speed (RPM): tt speed (kts)
durance (hrs.) O knots: durance (RPM): ut speed (kts)
pee P L kiii t t u

Endurance (hrs.)

Comments/Observations

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	Manufacture	er:	Date:	Time:	
Rigid Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	(umber:	Organization:		
5.5.5.3 Operational Tests—	-Engine Out o	of Water	Water Regulations: LSA Code 4.4.6.3, MSC.81(70)1/6.10.5		
Test Procedure		Acceptance	ance 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 Tes		st	Regulations: LSA Code 5.1.2.2	3, MSC.81(70)1/6.10.7	
Test Procedure	-	Acceptano	re Criteria	Significant Test Data	
It should be determined that to performance is satisfactory and to unduly affected by magnetic equipment in the rescue boat.	hat it is not	The compass operates satisfactorily.		Compass Make: Compass Model: Passed Failed Comments/Observations	

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	Manufactur	er:	Date:	Time:
Rigid Fast Rescue Boats	Model:		Surveyor:	
	Lot/Serial N	lumber:	Organization:	
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5.5.5.5 Operational Tests—	Helpless Per	rson Recovery	Regulations: LSA Code 4.4.3.4,	5.1.1.7, MSC.81(70)1/6.10.8, 7.1.1
Test Procedure		Acceptano	ce Criteria	Significant Test Data
It should be demonstrated by test possible to bring helpless people of 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—	Manoeuvrab	oility With Paddles Or Oars	Regulations: LSA Code 5.1.2.2.	1, MSC.81(70)1/7.1.8
Test Procedure		Acceptano	ce Criteria	Significant Test Data
It should be demonstrated that the reside propelled and manoeuvred by paddles in calm water conditions at a least 0.5 knots over a distance of at when laden with the number of wearing lifejackets and immersion suit is to be approved.	its oars or a speed of at t least 25 m. persons, all	The rescue boat should be capable manoeuvred.	of being satisfactorily paddled and	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

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	Manufacture	er:	Date:		
Rigid Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Tumber:	Organization:		
5.5.6.1 Towing & Painter	Tests - Towing	g Test	Regulations: LSA Code 4.4.1.3.	2, 4.4.7.7, MSC.81	(70)1/6.11.1
Test Procedure		Acceptance	ce Criteria		Significant Test Data
It should be demonstrated that the rescue boat, loaded with a proper mass equal to the mass of the num for which it is to be approved, can speed of not less than 5 knots in con an even keel using the rescue securing device.	rly distributed ber of persons be towed at a alm water and	The rescue boat should not exhibit There should be no damage to the result of this test.		PassedComments/Obser	
5.5.6.2 Towing & Painter Tests—Painter Release Test Regulations: LSA Code 4.4.7.7,			MSC.81(70)1/6.11.23		
Test Procedure		Acceptano	ee Criteria		Significant Test Data
It should be demonstrated that the mechanism can release the paint equipped and loaded rescue boat towed at a speed of not less than 5 water. The painter release mechanism sho several distinct directions of the up not obstructed by the canop constructions in the rescue boat. specified in test 5.5.4.3 should be up	ter on a fully that is being knots in calm uld be tested in per hemisphere by or other The directions	The painter should release and the rescue boat or its equipment as a r		Passed Test Direction Comments/Obser	Passed Failed Passed Failed Passed Failed Passed Failed Passed Failed Passed Failed

	Manufacturer:		Date:	Time	e:	
Rigid Fast Rescue Boats	Model:		Surveyor:			
	Lot/Serial Number	er:	Organization:			
5.5.7.1 Strength Tests - Im	pact, Drop & Operat	tion after Impact & Drop Test	Regulations: LSA Code 4.4.1.7	, MSC.81(70)1/6.4.1, 6.4.3	3, 6.4.5, 6.4	4.7
Test Procedure		Acceptane	ce Criteria	Signit	ficant Test	Data
.1 For boats launched by fall or fall rescue boat, including its engine, sh weights equal to the mass of the nu which the rescue boat is to be app	hould be loaded with umber of persons for	The impact and drop tests should .1 no damage has been sustained efficient functioning;	that would affect the rescue boat's	Load in boat:Observed Damage:	kg	
should be distributed to represent the rescue boat. (These weights neemm above the seatpan.) Skates or should be in position. The rescue boat is to be approximately should be approximately to be approximately should be app	he normal loading in ed not be placed 300 fenders, if required,	.2 the damage caused by the	impact and drop tests has not tof the operational test in 5.5.5.2;	Increased Damage:	YES	NO
position, should be pulled laterally when released it will strike a fixed rig a velocity of 3.5 m/s (keel is raised 0. hanging position). The boat should	to a position so that gid vertical surface at .624 m above the free	.3 machinery and other equipmer and.4 no significant ingress of seaw	nt has operated to full satisfaction;	Satisfactory Operation:	YES	NO
against the rigid vertical surface.	be released to impact	.4 no significant nigress of seaw	ater has occurred.	Ingress of Water:	YES	NO
.2 The same rescue boat with it described above, should then be s water so that the distance from the rescue boat to the water is 3 m. Th then be released so that it falls freely .3 After the impact and drop tests examined to detect the position and 6 may have occurred as a result of operational test should then be conceivith 5.5.5.2.	suspended above the e lowest point of the he rescue boat should by into the water. s, the boat should be extent of damage that of the tests, and an			Weight of heaviest engin Final Evaluation: Passed	e tested: Failed	
.4 After the operational test, the re unloaded, cleaned, and carefully ex position and extent of damage that m result of the tests.	camined to detect the			Comments/Observations		

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	Manufacturer:	Date:	Time:
Rigid Fast Rescue Boats	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

5.6.0	General in 5.6.0.1 5.6.0.2 5.6.0.3	nformation General data and specifications Submitted drawings, reports and documents Quality assurance
5.6.1	Visual ins 5.6.1.1 5.6.1.2 5.6.1.3 5.6.1.4 5.6.1.5	Occupant space Fittings, provisions and ladders Engine and starting system Steering mechanism and fuel tank Release mechanism
5.6.2	Stability, 5.6.2.1 5.6.2.2 5.6.2.3 5.6.2.4 5.6.2.5 5.6.2.6	damage and loading tests Damage test Stability test Loading test Swamp test Righting test (for non self-righting fast rescue boats) Self-righting test (for self-righting fast rescue boats only)
5.6.3	Seating st 5.6.3.1 5.6.3.2	rength and space tests Seating strength test Seating space test
5.6.4	Release m 5.6.4.1 5.6.4.2 5.6.4.3	
5.6.5	Operation 5.6.5.1 5.6.5.2 5.6.5.3 5.6.5.4 5.6.5.5 5.6.5.6	Liferaft towing Endurance, speed and fuel compensation Engine out of water Compass test Manoeuvrability with paddles or oars Heavy weather/seas test
5.6.6	Towing a 5.6.6.1 5.6.6.2	nd painter tests Towing test Painter release test
5.6.7	Strength t 5.6.7.1 5.6.7.2 5.6.7.3 5.6.7.4	Impact, drop & operation after impact & drop test Ambient overload test Cold overload test Mooring out test
5.6.8	Materials 5.6.8.1	tests Inflation chamber characteristics tests

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5.6 INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

	Manufactur	ror	Data	Time:
Inflated Fast Rescue Boats				Time
Inflated Past Resear Doats			•	
	Low Serial 1	(uniber	Organization	
5.6.0.1 General Data an	d Specifications	Re	egulations: LSA Code 5.1	
General Informati	on	Rescue boat Din	nensions	Rescue boat Weight
Construction Material:		Dimensions:		Design Weight:
Hull:		LOA:		Unloaded Boat:
Occupancy:		Breadth Maximum:		Loose Equipment:
Persons (75 kg each):		Depth to Gunwale:		Fuel:
Engine(s) Installed: 1	2	Length to transom:		Persons:
Type App by:		Length of hull:		
Manufacturer:		zengar er nam		Calculated Loaded Weight:
Type:				Fully Equipped:
Power:		(insert diagram of hull)		With Persons:
Release mechanism(s) (if applic	able)	Provision for securing ha applicable):	inging-off pendant	(if
1	2	application).		Weight As Tested:
Manufacturer:				Fully Equipped:
Type:				
SWL:				Comments/Observations
Propeller:				

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	Manufacturer		Date:	Time:		
Inflated Fast Rescue Boats Model:			Surveyor:			
	Lot/Serial Nu	mber:	Organization:			
5.6.0.2 Submitted	5.6.0.2 Submitted drawings, reports and documents					
	Т	Submitted drawings and			Status	
Drawing No.	Revision No. & date		Title of drawing			
					I	
		Submitted reports and d	ocuments		C4 - 4	
Report/Document No.	Revision No. & Date		Title of report / document		Status	
		Maintenance Manual -				
		Operations Manual -				
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	Manufacturer:	Date:	Time:
Inflated Fast Rescue Boats	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	
5.6.0.3 Quality Assurance	e	Regulations: -	
Except where all appliances of a International Convention for the inspected, representatives of the manufacturers to ensure that the comply with the specification of the Manufacturers should be required life-saving appliances are provided.	a particular type are required by Chapter III of the e Safety of Life at Sea, 1974, as amended, to be Administration should make random inspections of quality of life-saving appliances and materials used the approved prototype life-saving appliance. Ito institute a quality control procedure to ensure that ed to the same standard as the prototype life-saving istration and to keep records of any production tests	Quality Assurance Standard Used: Quality Assurance Procedure: Quality Assurance Manual: Description of System. Quality Assurance System acceptable Yes/No Comments/Observations	
		Comments/Observations	

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

5.6.1.1 Visual Inspection — Occupant Sp	pace	Regulations: LSA Code 5.1, MS	SC.81(70)1/7.2.16
Test Procedure	Acceptance Criteria		Significant Test Data
Test Procedure Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	General Unless the rescue boat has adequate a bow cover extending for not less. Length is at least 6.0 m and not over the second of the seco	te sheer, it should be provided with a than 15% of its length. Ver 8.5 m. de of a point 215mm from the back at least 635 mm from the back at least 1190 mm from the back aration – at least 350 mm mm maximum hould be clearly indicated. le of carrying at least five seated	
	Walkway Surfaces The surfaces on which persons finish.	might walk should have a non-skid	Non Skid Surface: Passed Failed Comments/Observations

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

5.6.1.2 Visual Inspection — Fittings, Provi	isions and Ladders	Regulations: LSA Code 5.1.3, MS	SC.81(70)1/7.2.16			
Test Procedure	Acceptance Criteria		Test Procedure Acceptance Criteria Significant Test		nificant 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	d by Administration	Passed	Failed	_ NA	
	Suitable patches for securing pa	inters 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 lig	ght 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/Observation	ns		

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

5.6.1.2 Visual Inspection — Fittings, Pro	visions and Ladders (cont'd)	Regulations: LSA Code 5.1.3, M	ISC.81(70)1/7.2.16		
Test Procedure	Acceptance Criteria		Test Procedure Acceptance Criteria		Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	the lowest step when in place should not be less than 0.4 m below		Passed Failed Lowest step m below waterline		
	Colour The boat should be of a highly detection.	y visible colour where it will assist	Highly visible colour: Passed Failed Comments/Observations		

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

5.6.1.3 Visual Inspection—Engine and S	5.6.1.3 Visual Inspection—Engine and Starting System Regulations: LSA Code 4.4.6, 5.1, N		MSC.81(70)1/7	7.1.16
Test Procedure	Acceptan	ce Criteria		Significant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	systems - Required starting aids provided Starting system is not impeded obstructions - Propeller arranged to be disengage ahead and astern propulsion - Exhaust arranged to prevent was	rgy sources provided for power starting by engine casing, thwarts, or other ed from the engine and provision for ter from entering engine in normal	Manual Pov YES NO Passed_Passe	
	the possibility of damage to the propulsion system from floating debris - Engine casing made of fire retardant material or other suitable		Passed	Failed
	knot operation	nd moving parts agine running at speed necessary for 6	PassedPassed	Failed Failed Failed
	fitting top which provides for gas v - Means for recharging engine star	ting, radio, and searchlight batteries	Passed	Failed
	provided by solar charger or ship's - Radio batteries not used to provide - Recharging for engine batteries pro	power for engine starting.	Passed	Failed Failed
	 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 		Passed	Failed
	boat embarkation station - Instructions for starting and oper	ating engine are water resistant and	Passed	Failed
	mounted in a conspicuous place ne	ar the engine starting controls	Passed	Failed

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

5.6.1.4 Visual Inspection — Steering Me	chanism and Fuel Tank	Regulations: LSA Code 4.4.7.2,	5.1.1.8, MSC/Circ.809,	Annex, 4.1.7 MSC	C.81(70)1/7.2.16
Test Procedure	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
	of the release mechanism or propeller		Passed	Failed	_
			Passed	Failed	NA
	Has emergency steering system rudder, water jet or outboard m		Passed	Failed	_
	Hands-free, watertight VHF rad	dio provided	Passed	Failed	_
	Fuel Tank				
	If fitted with petrol-driven outb should be specially protected as		Passed	Failed	NA
			Comments/Observation	ons	

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

5.6.1.5 Visual Inspection — Release Med	hanism	Regulations: LSA Code 4.4.7,.6.	5, MSC.81(70)1/7.2.16	
Test Procedure	Acceptan	ce Criteria	Significant Test Data	
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	1 6		Passed	Failed
, ,	Release control marked in a surroundings	colour that contrasts with the	Passed	Failed
	For on-load release mechanisms:			
	Suitably worded danger si	gn for on load release	Passed	FailedNA
	mechanism is completely and properly reset, to prevent accidental release during recovery On-load release mechanism needs deliberate and continued action by the operator Mechanical protection provided beyond that normally required for off load release 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	FailedNA
			Passed	Failed NA
			Passed	Failed NA
			Passed	Failed NA
			Comments/Observation	ıs

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

5.6.2.1 Damage Test	Regulations: LSA Code 5.1.3.5,	MSC.81(70)1/7.2.89	
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:	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	
 with forward buoyancy compartment deflated; with the entire buoyancy on one side of the rescue boat deflated; and with the entire buoyancy on one side and the bow compartment deflated. 		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	

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	Manufactur	er: Date:		Time:
Inflated Fast Rescue Boats	Model:	Surveyor	r:	
	Lot/Serial N	umber: Organiz	vation:	
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5.6.2.2 Stability Test			1 Code 4.4.5, MS	SC.81(70)1/7.2.67
Test Procedure		Acceptance Criteria		Significant Test Data
The following tests should be caengine and fuel or an equivalent me the engine and fuel tanks:				
.1 the number of persons for inflated rescue boat is to should be crowded to on half this complement sea buoyancy tube, and then each case the freeboard seach case the fre	be approved e side with ated on the to one end. In	.1 Under these conditions the freeboard should b positive.	e everywhere	1 Freeboard crowded to one side mm To bow: mm To stern: mm Passed Failed
.2 the stability of the rescuboarding should be ascerpersons in the rescue boat that they can readily awater a third person who feign unconsciousness. To should have his back town the rescue boat so that he the rescuers. All person approved lifejackets. These stability tests may be carrier rescue boat floating in still water.	rtained by two t demonstrating ssist from the o is required to he third person ards the side of e cannot assist as should wear	.2 The rescue boat should be stable	1	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: Passed Failed Comments/Observations

1 age 120					
	Manufacture	er:	Date:	Time:	
Inflated Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	fumber:	Organization:		
5.6.2.3 Loading Test			Regulations: MSC.81(70)1/7.2.4		
Test Procedure		Acceptance	e Criteria	Significant Test Data	
The freeboard of the inflated rescue be taken in the various loading condition. 1 rescue boat with all its equipment fuel, or an equivalent mass prepresent engine and fuel; 3 rescue boat with all its equipment number of persons for which approved having an average mass arranged that a uniform freeboard the side buoyancy tubes; and 4 rescue boat with the number of which it is to be approved and all it engine and fuel or an equival represent engine and fuel and the being retrimmed as necessary.	t, engine and positioned to to the it is to be sof 75 kg so is achieved at a persons for the equipment, ent mass to		reeboard should be not less than 300 mm ss than 250 mm from the lowest part of 1. Freeboard at Buoyancy Tubes:		m m m m
5.6.2.4 Swamp Test			Regulations: MSC.81(70)1/7.2.11		
Test Procedure		Acceptanc	e Criteria	Significant Test Data	
It should be demonstrated that the resc fully swamped, is capable of suppo equipment, the number of persons for be approved and a mass equivalent to full fuel tank. It should also be demo- the rescue boat does not seriously do condition.	orting its full which it is to its engine and onstrated that	The rescue boat should be capable of not seriously deform.	supporting the full load and should	Passed Failed Comments/Observations	

Manufactur	er:	Date:	Time:
Inflated Fast Rescue Boats Model:		Surveyor:	
Lot/Serial N	Jumber:	Organization:	
5.6.2.5 Righting Test (for non self-righti	ng fast rescue boats)	Regulations: MSC.81(70)1/7.1.7	7
Test Procedure	Acceptano	ce 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.)	two persons if it is inverted on the When the rescue boat has righted capable of being restarted, prov release, if fitted, has been reset. The design of the fuel and lubricati	e of being righted by not more than water. I, each engine or motor should be rided the helmsman's emergency ing systems should prevent the loss abricating oil from the propulsion	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

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

5.6.2.6 Self-Righting Test (for self-right	nnex, 4.1.5, 4.1.8 MSC.81(70)1/6.14			
Test Procedure	Acceptan	ce 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° 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	After release, the rescue boat sh position without the assistance of At the beginning of these tests, neutral position and: 1 unless arranged to stop engine should continue helmsman's emergency in the engine should continue helmsman's emergency in the engine should make the engine of the fuel and lubricate.	ould always return to the upright the occupants. the engine should be running in automatically when inverted, the e to run until stopped by the release switch; and msman's emergency release, if ould be easily restarted and run for boat has returned to the upright	Angle of Righting Moment Heel Loaded Light 45° 90° 135° 180° Result: PASSED FAILED PASSED FAILED Comments/Observations	
.2 when the rescue boat is in the light condition.				

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	Manufacture	er:	Date:	Time:_	
Inflated Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Number:	Organization:		
5.6.3.1 Seating Strength 7	Гest		Regulations: LSA Code 4.4.1.5	5, MSC.81(70)1/6.6.1	
Test Procedure		Acceptano	ce Criteria	Significa	ant Test Data
The seating should be loaded with kg in each position allocated for a		The seating should be able to permanent deformation or damage	support this loading without any	Observed damage	
the rescue boat. In the case of a rescue boat laur each type of seat should be loaded 100 kg in any single seat location into the water from height of at le test may be performed in conjunt Drop Test in 5.6.7.1)	nched by falls, with a mass of when dropped east 3 m. (This	The seating should be capable of s	upporting this loading. No damage ect the seat's efficient functioning.	Passed I	FailedNA

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

5.6.3.2 Seating Space Test Regulations: LSA Code 5.1.1.3.		.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 occupant. The rescue boat must be capable of carrying at least 5 persons and person lying down on a stretcher. Except the helmsmen, persons may be seated on the floor, provide the space used conforms with the leg space requirements of test for 5.6.1.1. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	a Number of persons carried: Seated on seats Seated on floor Lying on a stretcher

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	Manufacture	er:	Date:	Time:	
Inflated Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Tumber:	Organization:		
5.6.4.1 Release Mechanism	n Tests—Simu	Itaneous Release	Regulations: LSA Code 4.4.7.6,	, MSC.81(70)1/6.9.12	
Test Procedure		Acceptano	ce Criteria	Significant Test Data	
For rescue boats launched by fall rescue boat with its engine fitted suspended from the release mechan of the ground or the water. The should be loaded so that the total must times the mass of the rescue equipment and the number of personal the rescue boat is to be approved. The should be released simultaneously to which it is connected without damage to any part of the rescue release mechanism. (Single fall systems not intended operation are exempt from this test	ed should be nism just clear e rescue boat hass equals 1.1 boat, all its sons for which the rescue boat from each fall at binding or e boat or the	he be 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	n Tests—Load	Test	Regulations: LSA Code 4.4.7.6.	4, MSC.81(70)1/6.9.3	
Test Procedure		Acceptano	ce Criteria	Significant Test Data	
The release mechanism should be mounted on a tensile strength testing device. The load should		The release mechanism should not fail at load less than or equal to six times the working load.		Working Load: N	
be increased to at least six times the		difference working four.		Force Applied: N	
of the release mechanism. (Testing to failure is suggested, but	not required.)	(If tested to failure, working load load.)	d may be taken as 1/6 the failure	Passed Failed	
				Comments/Observations	

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

5.6.4.3 Release Mechanism Tests—Towing	5.6.4.3 Release Mechanism Tests—Towing Release Test Regulations: LSA Code 4.4.1.3.		
Test Procedure	Acceptano	ce 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	The rescue boat should be relementanism: @ towing load in hook @ @ towing load in hook @		Type of Test: Waterborne / Non-Waterborne Waterborne Test: Towing Speed: kts PASSED FAILED Non-Waterborne Test Load kN Passed kN Passed kN Passed Failed Failed
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.)	@ hook SWL @ 20° athw @ hook SWL in halfway p i) Port ah ii) Starboa iii) Starboa iv) Port aft	positions: - ead ard ahead ard aft	Load

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	Manufacture	er:	Date:	Time:
Inflated Fast Rescue Boats	Model:		Surveyor:	
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5.6.5.1 Operational Tests-	—Liferaft Tow	ring	Regulations: LSA Code 4.4.6.8	5, 5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2
Test Procedure		Acceptance	ee Criteria	Significant Test Data
The rescue boat should be loaded equal to the mass of its equipment a of persons for which the rescue approved. It should be demonst rescue boat can tow a 25 person minimum, loaded with the number which it is to be approved and its speed of 2 knots in calm water. The largest size of fully loaded life rescue boat can tow at a speed of a should be determined. Alternatively, determine the mast force of the rescue boat by secur designated for towing other craft object by a tow rope fitted wit measure bollard pull. The engoperated ahead at full speed for least 2 min. and the maximum force (For rescue boats equipped with or raft towing or bollard pull trials rout with engines of various power rescue boat's performance.)	and the number boat is to be trated that the in liferaft, as a r of persons for s equipment at the eraft which the at least 2 knots eximum towing ring the fitting to a stationary that a means to ine should be a period of at the eraft who at the eraft which the at least 2 knots eximum towing ring the fitting to a stationary that a means to ine should be a period of at the erecorded.	The fully loaded rescue boat shoul minimum, a 25 person liferaft, equipment, at a speed of 2 knots in There should be no damage to the structure.	d be able to successfully tow, as a fully loaded with persons and a calm water.	Make/model:

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

5.6.5.2 Operational Tests — Endurance, S	peed & Fuel Consumption	Regulations: LSA Code MSC/Cir	cc.809, Annex, 4.1.4 N	MSC.81(70)1/7.1.6, 7	7.4.2.12
Test Procedure	Acceptan	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	The boat should operate satisfactor. The fuel tank should have sufficient	ily throughout the 4-h operation. In capacity to operate at a speed of 8 its full complement of persons and	Make/model: Fuel Tank Capacity: Propeller: Pitch: Diameter: @8 knots: Engine speed (RPM) Boat speed (kts) Consumption (L/h)	Smallest Engine L	Largest Engine
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 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.		Endurance (hrs.) @ 20 knots: Engine speed (RPM) Boat speed (kts) Consumption (L/h) Endurance (hrs.) Comments/Observat):	

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	Manufactur	er:	Date:	Time:	
Inflated Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Jumber:	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	ptance Criteria Significant Test Data		
The engine should be operated for at at idling speed under conditions normal storage. Note: If a water flushing device is in	simulating tended to be	The engine should not be damaged	d as a result of this test.	Passed Failed Comments/Observations	
used for this purpose, it should be the test.	fitted during				
5.6.5.4 Operational Tests—	Compass Te	st	Regulations: LSA Code 5.1.	2.2.3, MSC.81(70)1/6.10.7	
Test Procedure		Acceptance	ce Criteria	Significant Test Data	
It should be determined that the performance is satisfactory and the unduly affected by magnetic frequipment in the rescue boat.	at it is not	The compass operates satisfactoril	y.	Compass Make:	
				Passed Failed Comments/Observations	

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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	Acceptano	ce 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 manoeuvred.	of being satisfactorily paddled and	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		

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	Manufacture	er:	Date:	Time:		
Inflated Fast Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	Tumber:	Organization:			
5.6.5.6 Operational Tests—	-Heavy Weat	her / Seas Test	Regulations: LSA Code 5.1.3, N	ASC.81(70)1/7.2.10		
Test Procedure		Acceptano	ce Criteria	Significant Test Data		
To simulate use in heavy weather rescue boat should be fitted with a la engine than is intended to be fitte hard in a wind of force 4 or 5 or equ water for at least 30 min.	rger powered d and driven	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	g Test	Regulations: LSA Code 4.4.1.3.	2, 4.4.7.7, MSC.81(70)1/6.11.1		
Test Procedure		Acceptano	ce Criteria	Significant Test Data		
It should be demonstrated that the for rescue boat, loaded with a properly mass equal to the mass of the number for which it is to be approved, can speed of not less than 5 knots in car on an even keel using the rescue is securing device.	ly distributed per of persons be towed at a lm water and		unsafe or unstable characteristics. e rescue boat or its equipment as a	Passed Failed Comments/Observations		

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	Lot/Serial Number:	Organization:	

5.6.6.2 Towing & Painter Tests—Painter Release Test Re		Regulations: LSA Code 4.4.7.7, MSC.81(70)1/6.11.23			
Test Procedure	Acceptance Criteria		Significant Test Data		est 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 should release and t rescue boat or its equipment as a r	here should be no damage to the result of this test.	Passed Test Direction		Failed
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.			Comments/Obse	Passed Passed Passed Passed Passed Passed rvations	FailedFailedFailedFailedFailedFailedFailed

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	Manufacture	er:	Date:	Time	:	
			Surveyor:			
		Jumber:	Organization:			
5.6.7.1 Strength Tests — I Test	mpact, Drop	& Operation after Impact & Drop	Regulations: LSA Code 4.4.1	1.7, MSC.81(70)1/6.4.1, 7.	2.2 & 7.	2.3
Test Procedure		Acceptance	Criteria	Signifi	cant Tes	t Data
.1 For boats launched by fall or f equipped rescue boat, including its obe loaded with weights equal to the number of persons for which the rese be approved. The weights should be represent the normal loading in the (These weights need not be placed 3 the seatpan.) Skates or fenders, if red be in position. The rescue boat, in a position, should be pulled laterally so that when released it will strike vertical surface at a velocity of 3.5 raised 0.624 m above the free hang The boat should be released to imparigid vertical surface.	engine, should e mass of the scue boat is to distributed to e rescue boat. 600 mm above quired, should a free hanging to a position a fixed rigid 5 m/s (keel is ing position).	The impact and drop tests should be .1 no damage has been sustained functioning of the rescue boat and its .2 the damage caused by the impact significantly as a result of the operat .3 machinery and other equipment I and .4 no significant ingress of seawater	that would affect the efficient s equipment; and drop tests has not increased ional test in 5.6.5.2; has operated to full satisfaction;	Load in boat: Heaviest engine used: Observed Damage: Increased Damage: Satisfactory Operation:		NO NO
.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.				Ingress of Water: Final Evaluation: Passe Comments/Observations		NO Failed:

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Manufacture	er:	Date:	Time:	
Inflated Fast Rescue Boats Model:		Surveyor:		
Lot/Serial N	umber:	Organization:		
5.6.7.2 Strength Tests—Ambient Overlo	ad 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°C, 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	

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	Manufacture	er:	Date:	Time:	_
Inflated Fast Rescue Boats	Model:		Surveyor:		
	Lot/Serial N	Number: Organization:			
5.6.7.4 Strength Tests—Mo	oring Out Te	Regulations: LSA Code 5.1.3.3,		MSC.81(70)1/7.2.15, 5.5, 5.17.78	
Test Procedure		Acceptance Criteria		Significant Test Data	
The rescue boat should be loaded equal to the mass of the total number for which it is to be approved and it and moored in a location at sea or it harbour. The rescue boat should rest that location for 30 days. The prest topped up once a day using the mind however, during any 24 hiperiod the should retain its shape. Each inflatable compartment in the should be tested to a pressure equal to the working pressure. Each pressure should be made inoperative; conshould be used to inflate the inflatable and the inflation source removed. The continue for at least 30 min. The measurement of pressure drop do can be started when it has been a compartment rubber material has been stretching due to the inflation probabilized. This test should be confident in the stabilized of the inflation has been achieved.	er of persons ts equipment in a seawater main afloat in ssure may be anual pump; e rescue boat to three times e relief valve mpressed air le rescue boat he test should use to leakage assumed that en completed pressure and inducted after	The rescue boat should not sustain performance. The pressure should not decrease without compensating for tempe changes, and there should be no defect in the rescue boat.	by more than 5% as determined rature and atmospheric pressure	Compartment 1 Initial Pressure: mbar Final Pressure: mbar Percent Compartment 2 Initial Pressure: mbar Final Pressure: mbar Percent Calculated Decrease: Percent Compartment 3 Initial Pressure: mbar Final Pressure: mbar Percent Compartment 4 Initial Pressure: mbar Final Pressure: mbar Percent Calculated Decrease: Percent Compartment 5 Initial Pressure: mbar Calculated Decrease: mbar Final Pressure: mbar Calculated Decrease: percent Passed Failed Comments/Observations	

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	Manufacturer:	Date:	Time:
Inflated Fast Rescue Boats	Model:	Surveyor:	
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5.6.8.1 Inflation Chamber Characteristic	es 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 show Administration .	ald be to the satisfaction of the	.1 tensile strength N/50 mm width .2 tear strength N .3 heat resistance - Blocking4 cold resistance - Cracking5 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.;	

5.7 RIGID/INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

5.7.0	General in 5.7.0.1 5.7.0.2 5.7.0.3	nformation General data and specifications Submitted drawings, reports and documents Quality assurance	
5.7.1	Visual ins 5.7.1.1 5.7.1.2 5.7.1.3 5.7.1.4 5.7.1.5	Occupant space Fittings, provisions and ladders Engine and starting system Steering mechanism and fuel tank Release mechanism	
5.7.2	Stability, 5.7.2.1 5.7.2.2 5.7.2.3 5.7.2.4 5.7.2.5 5.7.2.6 5.7.2.7	damage and loading tests Damage test Stability test Loading test Swamp test Flooded stability test Righting test (for non self-righting fast rescue boats) Self-righting test (for self-righting fast rescue boats only)	
5.7.3	Seating st 5.7.3.1 5.7.3.2	rength and space tests Seating strength test Seating space test	
5.7.4	Release m 5.7.4.1 5.7.4.2 5.7.4.3		
5.7.5	Operation 5.7.5.1 5.7.5.2 5.7.5.3 5.7.5.4 5.7.5.5 5.7.5.6	Liferaft towing	
5.7.6	Towing at 5.7.6.1 5.7.6.2	nd painter tests Towing tests Painter release test	
5.7.7	Strength tests 5.7.7.1 Impact, drop and operation after impact & drop test 5.7.7.2 Overload test 5.7.7.3 Mooring out test		
5.7.8	Materials 5.7.8.1	tests Inflation chamber characteristics tests	

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5.7 RIGID/INFLATED FAST RESCUE BOATS

EVALUATION AND TEST REPORT

Manufacturer	
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Place	
Name Surveyor printed	
Signature	
Approving Organization	

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	Manufacturer:	Date:	Time:	
Rigid/Inflated Fast Rescue Boats	Model:	Surveyor:		
	Lot/Serial Number:	Organization:	·	
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5.7.0.1 General Data and Sp	pecifications	Regulations: LSA Code	e 4.4, 5.1, MSC.81(70)1/7.2.16	
General Information		Rescue boat Dimensions	Rescue boat Weight	
Construction Material: Hull:	Dimensions:		Design Weight:	
Canopy:	$I \cup V$		Unloaded Boat:	
Fire retardancy documentation:	Proodth Movimus	m:	Loose Equipment:	
Inflated chambers:	Donth to Sill:		Fuel:	
Rescue Boat Inherent Buoyancy (Typ	Denth to Gunwal	e:	Persons:	_
Material:		:		
Weight:	Moulded Depth:		Calculated Loaded Weight:	
Occupancy:			Fully Equipped:	
Persons (75 kg each):	(moore diagram of nor	l for reference)	With Persons:	_
Engine(s) Installed: 1 Type App by: -	Provision for securing	hanging-off pendant (if		
Manufacturer:	applicable):		Weight As Tested:	
Type:			Fully Equipped:	
Power:				
Gear ratio (inboard engine):			Comments/Observations	
Additional rigid or inflatable buoyand	cy:-			
Release mechanism(s) (if applicable)	2			
Manufacturer:				
Type:				
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		Manufacturer	·	Date:	Time:	
Rigid/Inflated Fast Resc	ue Boats	Model:		Surveyor:		
		Lot/Serial Nu	mber:	Organization:		
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5.7.0.2 Submitted	l drawings	s, reports and o				
	T		Submitted drawings a			Status
Drawing No.	Revision	n No. & date		Title of drawing		
			Submitted reports an	nd documents		Status
Report/Document No.	Revision	n No. & Date		Title of report / document		Status
			Maintenance Manual -			
			Operations Manual -			

	Manufacturer:	Date:	Time:
Rigid/Inflated Fast Rescue Boats	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	
5.7.0.3 Quality Assurance		Regulations: -	
Except where all appliances of a p International Convention for the S inspected, representatives of the Ac manufacturers to ensure that the que comply with the specification of the Manufacturers should be required to life-saving appliances are provided	particular type are required by Chapter III of the Safety of Life at Sea, 1974, as amended, to be dministration should make random inspections of ality of life-saving appliances and materials used approved prototype life-saving appliance. In institute a quality control procedure to ensure that to the same standard as the prototype life-saving tration and to keep records of any production tests Administration's instructions.	Quality Assurance Standard Used: Quality Assurance Procedure: Quality Assurance Manual: Description of System.	
		Quality Assurance System acceptable Comments/Observations	Yes/No

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	Manufacturer:	Date:	Time:
Rigid/Inflated Fast Rescue Boats	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 Accepta		nce 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.		Passed Failed
	Length is at least 6.0 m and not ov	ver 8.5 m.	Passed Failed
	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.		Width: mm Depth: mm Knee Space: mm Knee Width: mm Leg Space: mm Vert. Separation: mm Overlap: mm Position Indication: PASSED FAILED
	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.		Stretcher space: xmm Passed Failed Non Skid Surface: Passed Failed Comments/Observations

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

5.7.1.2 Visual Inspection — Fittings, Pro	visions and Ladders	Regulations: LSA Code 5.1.3, M	ISC.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 waiv	ed by Administration	Passed	Failed	NA
	Suitable patches for securing p	painters fore and aft	Passed	Failed	_
	Fittings and Provisions			- ·	
		lifeline becketed around the rescue ithin reach of a person in the water, dder and propeller	Passed	Failed	_
		rescue boats, handholds on the way without damaging the rescue	Passed	_ Failed	_
	Weathertight stowage for smal	l items of equipment	Passed	_ Failed	NA
	Approved position indicating l	light provided at highest point	Passed	Failed	_
	Automatically self-bailing or c	apable of rapidly clearing water.	Passed	Failed	
			Comments/Observat	ions	

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

5.7.1.2 Visual Inspection — Fittings, Pro	ovisions and Ladders (cont'd) Regulations: LSA Code 5.1.3, N	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		

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

5.7.1.3 Visual Inspection—Engine and Starting System Regulations: I		Regulations: LSA Code 4.4.6, 5.1	, MSC.81(70)1/7.2.16	
Test Procedure	Acceptance	e Criteria	Si	gnificant Test Data
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Type of starting system - Two independent rechargeable en starting systems	nergy sources provided for power	Manual Power YES NO NA	
	 Required starting aids provided. 		Passed	Failed
	1 0 1		Passed	Failed
	- Propeller arranged to be disengage ahead and astern propulsion	Propeller arranged to be disengaged from the engine and provision for F		Failed
	 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 		Passed	Failed
			Passed	Failed
			Passed	Failed
		gine running at speed necessary for 6	Passed	Failed
			Passed	Failed
	tightly fitting top which provides for	tightly fitting top which provides for gas venting. - Means for recharging engine starting, radio, and searchlight batteries		Failed
	provided by solar charger or ship's power supply. - Radio batteries not used to provide power for engine starting.		Passed	Failed
	- Recharging for engine batteries pro		Passed	Failed
	not exceed 50 v		Passed	Failed
	Recharging means for engine batter boat embarkation stationInstructions for starting and opera		Passed	Failed
	mounted in a conspicuous place ne	č č	Passed	Failed

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Rigid/Inflated Fast Rescue Boats	Model:	Surveyor:	
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5.7.1.4 Visual Inspection — Steering Me	5.1.1.8, MSC/Circ.809,	4.1.7, MSC.81(70))1/7.2.16		
Test Procedure	Acceptan	ce Criteria	Significant Test Data		
Visually inspect the rescue boat. Conduct measurements and verify clearances as required.	Steering A tiller should be capable of cotiller may form part of outboard	A tiller should be capable of controlling the rudder (rudder and		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/Observation	ns	

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

5.7.1.5 Visual Inspection — Release Med	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	e 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 c surroundings	colour that contrasts with the	Passed	Failed	
	For on-load release mechanisms:				
	Suitably worded danger sign	n for on load release	Passed	Failed	_ NA
	Mechanical protection (interlock) engages only mechanism is completely and properly reset, to accidental release during recovery		Passed	Failed_	NA
	On-load release mechanism needs de action by the operator	n needs deliberate and continued	Passed	Failed	NA
	Mechanical protection provi for off load release	ded beyond that normally required	Passed	Failed	_ NA
	For a single fall system with so capability is not required; in such a to release the boat only when it is for	n arrangement a single capability	Passed	Failed	_ NA

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Manufactur	er:	Date:	Time:
Rigid/Inflated Fast Rescue Boats Model:		Surveyor:	
Lot/Serial I	Number:	Organization:	
5.7.2.1 Damage Test (Does not apply if inflated tube)	waterline is below lower side of	Regulations: LSA Code 5.1.3.5,	MSC.81(70)1/7.2.89, 7.3.2
Test Procedure	Acceptano	ce 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.	which the rescue boat is to be app the rescue boat.	ped, the full number of persons for proved should be supported within	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 Without engine and fuel Passed Failed Comments/Observations

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Rigid/Inflated Fast Rescue Boats	Model:		Surveyor:	
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5522 G(121/ F) (B 14 46 A 46 A	AFGC 04/80/4/8 A < 8
5.7.2.2 Stability Test			Regulations: LSA Code 4.4.5, N	MSC.81(70)1/7.2.67
Test Procedure		Acceptance	ce Criteria	Significant Test Data
The following tests should be carriengine and fuel or an equivalent mas the engine and fuel tanks: .1 the number of persons for vinflated rescue boat is to be should be crowded to one shalf this complement seated buoyancy tube, and then to each case the freeboard should recorded; and	which the e approved side with d on the one end. In	.1 Under these conditions the positive.	freeboard should be everywhere	1 Freeboard crowded to one side mm To bow: mm To stern: mm Passed Failed
.2 the stability of the rescue boarding should be ascerta persons in the rescue boat de that they can readily assi water a third person who is feign unconsciousness. The should have his back toward the rescue boat so that he of the rescuers. All persons approved lifejackets. These stability tests may be carried rescue boat floating in still water.	ined by two emonstrating st from the s required to third person ds the side of cannot assist should wear	.2 The rescue boat should be state	ole	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: Passed Failed Comments/Observations

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Rigid/Inflated Fast Rescue Boats	Model:		Surveyor:	
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			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
5.7.2.3 Loading Test		Re	egulations: MSC.81(70)1/7.2.4	5
Test Procedure		Acceptance C	riteria	Significant Test Data
The freeboard of the inflated rescue boat should be taken in the various loading conditions as follows: In each condition the minimum freeb mm at the buoyancy tubes and not le part of the transom.			.1 Freeboard at Buoyancy Tubes: mm Freeboard at Transom: mm	
.1 rescue boat with all its equipmen	t;			.2 Freeboard at Buoyancy Tubes: mm Freeboard at Transom: mm
.2 rescue boat with all its equipment.	, engine and			recooard at Transom min
fuel, or an equivalent mass po	ositioned to			.3 Freeboard at Buoyancy Tubes: mm
represent engine and fuel;				Freeboard at Transom: mm
.3 rescue boat with all its equipme number of persons for which approved having an average mass arranged that a uniform freeboard at the side buoyancy tubes; and	it is to be s of 75 kg so			.4 Freeboard at Buoyancy Tubes: mm Freeboard at Transom: mm Passed Failed
.4 rescue boat with the number of which it is to be approved a equipment, engine and fuel or ar mass to represent engine and furescue boat being retrimmed as n	and all its and equivalent uel and the			Comments/Observations
5.7.2.4 Swamp Test		Re	egulations: MSC.81(70)1/7.2.1	1
Test Procedure		Acceptance C	riteria	Significant Test Data
It should be demonstrated that the rewhen fully swamped, is capable of sufull equipment, the number of persons is to be approved and a mass equivengine and full fuel tank. It should demonstrated that the rescue boars are involved to form in this capability.	ipporting its for which it valent to its ald also be	The rescue boat should be capable of should not seriously deform.	f supporting the full load and	Passed Failed Comments/Observations

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	Manufacture	er:	Date:	Time	2:	
Rigid/Inflated Fast Rescue Boats	Model:		Surveyor:			
	Lot/Serial N	Tumber:	Organization:			
5.7.2.5 Flooded Stability T lower side of inflate		d only when waterline is below	Regulations: LSA Code 4.4.1.1	, MSC.81(70)1/6.8.13		
Test Procedure		Acceptano	ce Criteria	Signit	icant Test Data	
The rescue boat should be load equipment. If provision lockers, wa fuel tanks cannot be removed, the flooded or filled to the final waterl from this test. Rescue boats fitted wistowage compartments to a individual drinking water containers these containers aboard and placed in compartments which should be seald during the flooding tests. Ballast of weight and density should be substituting and any other installed equipment be damaged by water. Weights representing persons (of who would be in the water when the flooded may be omitted. Weights persons who would not be in the waterscue boat is flooded should be prormal seating positions of such persons in different areas would creflooding conditions.	ter tanks and by should be ine resulting ith watertight ccommodate is should have in the stowage ed watertight of equivalent ituted for the ment that can representing iter when the blaced in the resons.	When loaded as specified, the restability when filled with water to occur when the rescue boat is howaterline assuming no loss of buoy	o represent flooding which would		Failed	

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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	Acceptanc	e 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 two persons if it is inverted on the When the rescue boat has righted capable of being restarted, provrelease, if fitted, has been reset. The design of the fuel and lubrication of more than 250 ml of fuel or lusystem.	water. , each engine or motor should be ided the helmsman's emergency and systems should prevent the loss	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		

Manufactu	rer:	Date:	Time:
Rigid/Inflated Fast Rescue Boats Model:		Surveyor:	
Lot/Serial	Number:	Organization:	
5.7.2.7 Self-Righting Test (for self-rig	nting fast rescue hoats only)	Regulations: MSC/Circ.809. An	nnex, 4.1.5, 4.1.8 MSC.81(70)1/6.14
Test Procedure	1	ce 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° and should be released. These tests should be conducted in the following conditions of load: 1.1 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 2.2 when the rescue boat is in the light condition.	After release, the rescue boat sh position without the assistance of At the beginning of these tests, neutral position and: .1 unless arranged to stop engine should continue helmsman's emergency to the stop engine should continue helmsman's emergency to the stop engine should continue helmsman's emergency to the stop engine should not enter the engine should make the stop engine should not enter the engine to the design of the fuel and lubricat of more than 250 ml of fuel or lessystem.	ould always return to the upright the occupants. the engine should be running in automatically when inverted, the e to run until stopped by the release switch; and amsman's emergency release, if ould be easily restarted and run for boat has returned to the upright	Angle of Righting Moment Heel Loaded Light 45° 90° 135° 180° Result: PASSED FAILED PASSED FAILED Comments/Observations

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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	Acceptano	ce 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 a permanent deformation or damage	support this loading without any	Observed damage
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	The seating should be capable of s should be sustained that would aff	upporting this loading. No damage ect the seat's efficient functioning.	Passed Failed
test may be performed in conjunction with the Drop Test in 5.7.7.1.)			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	
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 Equipment can be operated without interference with the occupants. Equipment operated: YES NO	
which the rescue boat is to be approved, having an average mass of at least 75 kg, and all wearing The rescue boat must be capable of carrying at least 5 persons and a Number of persons carried:	
lifejackets and immersion suit and any other essential equipment required, should then board; person lying down on a stretcher. Seated on seats	
one person should lie down and the others should be properly seated in the rescue boat. The rescue Except the helmsmen, persons may be seated on the floor, provided the space used conforms with the leg space requirements of test form Seated on floor	
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. No seating is on the gunwale, transom, or buoyancy chambers on the sides of the boat.	
Passed Failed	
Lifejacket and immersion suit used during	ne test:
Lifejacket – Inflatable/Inherently Buoy	nt
Immersion suit – Un-insulated/Buoyant In	sulated
——————————————————————————————————————	
Comments/Observations	

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Rigid/Inflated Fast Rescue Boats Model:			Surveyor:		
	Lot/Serial N	umber:	Organization:		
5.7.4.1 Release Mechanism	Tests—Simu	Itaneous Release	Regulations: LSA Code 4.4.7.6,	MSC.81(70)1/6.9.12	
Test Procedure		Acceptano	ce 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	ce 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 times the working load. (If tested to failure, working load mounted on a tensile strength testing device. The load should times the working load.		-	Working Load: N Force Applied: N Passed Failed Comments/Observations		

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Rigid/Inflated Fast Rescue Boats		Model:		Surveyor:		
		Lot/Serial Nu	ımber:	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			
Total December 1		Cuit-ui-	C:: T4 D-4-			

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	Acceptano	ce 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.	The rescue boat should be relementation: @ towing load in hook @ @ towing load in hook @ @ hook SWL @ 20° athw	45° 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 Failed
 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. 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.) 	@ hook SWL in halfway p i) Port ah ii) Starboa iii) Starboa iv) Port aft	positions: - ead urd ahead urd aft	LoadkN PassedkN PassedkN PassedkN PassedkN PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed PassedFailed

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5.7.5.1 Operational Tests—Liferaft Towing Regulation		Regulations: LSA Code 4.4.6.8,	5.1.1.7, 5.1.1.9, MSC.81(70)1/7.1.2	
Test Procedure	Acceptano	ce 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.)	minimum, a 25 person liferaft, equipment, at a speed of 2 knots is	ald be able to successfully tow, as a fully loaded with persons and n calm water. The towing fitting or its supporting	Smallest Engine Largest Engine Make/model:	

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	Lot/Serial Number:	Organization:	
Rigid/Inflated Fast Rescue	Boats Model:	Surveyor:	
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5.7.5.2 Operational Tests — Endurance, S	peed, & Fuel Consumption	Regulations: LSA Code 5.1.1.6,M	ISC.81(70)1/7.1.5, 1/7.1.6	
Test Procedure		,	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 fuel tank should have sufficient capacity to operate at a speed of 8			rgest Engine
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.)		its full complement of persons and	Engine speed (RPM): Boat speed (kts) Consumption (L/h) Endurance (hrs.)	
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 fuel tank should have sufficien knots for a period of 4 hours with a	t capacity to operate at a speed of 20 crew of 3 persons.	@20 knots: Engine speed (RPM): Boat speed (kts) Consumption (L/h) Endurance (hrs.) Comments/Observations	

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Lot/Serial l	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	Acceptano	ce 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 not be damaged	d as a result of this test.	Passed Failed
Note: If a water flushing device is intended to be used for this purpose, it should be fitted during the test.			Comments/Observations
5.7.5.4 Operational Tests—Compass Te	st	Regulations: LSA Code 5.1.2.2.	3, MSC.81(70)1/6.10.7
Test Procedure	Acceptano	ce 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.		ly.	Compass Make:
			Passed Failed Comments/Observations

Manufacture	er:	Date:	Time:
Rigid/Inflated Fast Rescue Boats Model:		Surveyor:	
Lot/Serial N	umber:	Organization:	
5.7.5.5 Operational Tests—Manoeuvrab	ility With Paddles Or Oars	Regulations: LSA Code 5.1.2.2.	1, MSC.81(70)1/7.1.8
Test Procedure	Acceptan	ce 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 manoeuvred.	e of being satisfactorily paddled and	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

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Lot/Serial N	umber:	Organization:		
5.7.5.6 Operational Tests—Heavy Weather / Seas Test Regulations: LSA Code 5.1.3			ISC.81(70)1/7.2.10	
Test Procedure	Acceptano	ce 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.	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	2, 4.4.7.7, MSC.81(70)1/6.11.1	
Test Procedure	Acceptance	ce 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 There should be no damage to the result of this test.		Passed Failed Comments/Observations	

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Manufactur	er:	Date:		Time:
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5.7.6.2 Towing & Painter Tests—Painte	r Release Test	Regulations: LSA Code 4.4.7.7,	MSC.81(70)1/6.11.2	23
Test Procedure	Acceptano	ce Criteria	S	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	The painter should release and the rescue boat or its equipment as a rescue boat or its equipment and the rescue boat or its equipment as a re	here should be no damage to the result of this test.		Passed Failed
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.				Passed Failed Passed Failed Passed Failed Passed Failed Passed Failed Passed Failed

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

5.7.7.1 Strength Tests—Impact, Drop & Ope	ration after Impact & Drop Test Regulations: LSA Code	1.4.1.7, 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 increasignificantly as a result of the operational test in 5.7.5.2; 3 machinery and other equipment has operated to full satisfact and 4 no significant ingress of seawater has occurred.	Observed Damage:

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Lot/Serial N	Jumber:	Organization:		
5.7.7.2 Strength Tests—Overload Test		Regulations: MSC.81(70)1/7.1.4	ļ	
Test Procedure	Acceptance	Criteria	Significa	ant 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	The rescue boat and its bridle or releasing signs of damage.	ease mechanism should not show	Load in boat: Comments/Observations	kg
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.			Passed F	³ ailed

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		Manufacture	r:	Date:	Time:
Rigid/Inflate	ed Fast Rescue Boats	Model:		Surveyor:	
		Lot/Serial N	umber:	Organization:	
5.7.7.3	Strength Tests—Mo below lower side of		st (Does not apply if waterline is	Regulations: LSA Code 5.1.3.3,	MSC.81(70)1/7.2.15, 5.5, 5.17.78
	Test Procedure		Accentance	ce Criteria	Significant Test Data

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

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Comments/Observations

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

5.7.8.1 Inflation Chamber Characteristics	Tests	Regulations: LSA Code 1.2.2, MS	SC.81(70)1/7.2.14
Test Procedure	Acceptance	ce 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 Administration	lld be to the satisfaction of the	.1 tensile strength

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	
Wiaximum Working Load	
Maximum Turning Moment	
Winch type	
Serial number	
Date	
Place	
-	
Name and signature of surveyor	
Traine and signature of surveyor	
10	
Approval Organization	

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1 450 170					
		Manufacturer:	Date:	Time:	
Launching & Recovery	Appliances	Model:	Surveyor:		
		Lot/Serial Number:			
6.1.1.1 Submitted	l drawings, reports and	documents			
Submittee	i urawings, reports anu	Submitted drawings and d	ocuments		
Drawing No.	Revision No. & date	9	Title of drawing		Status
		Submitted reports and d	ocuments		64-4
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			

	Manufacturer:	Date:	Time:
Launching & Recovery Appliances	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 International Convention for the Safety of International Life-Saving Appliance (LSA) Consideration and Life-Saving appliances and the materithe approved prototype life-saving appliance. Manufacturers should be required to institute a life-saving appliances are produced to the sar appliance approved by the Administration and carried out in accordance with the Administration.	Life at Sea, 1974, as amended, or the ode, to be inspected, representatives of the ion of manufacturers to ensure that the ials used comply with the specification of a quality control procedure to ensure that me standard as the prototype life-saving I to keep records of any production tests	Standard Used:Quality Assurance Procedure:	

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	Manufacturer:	Date:	Time:
Launching & Recovery Appliances	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.	Amount of maintenance should be restricted to a minimum.	Passed/ Failed
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
	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.	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	Passed/ Failed
	Structural members and all blocks, falls, padeyes, links, fastenings and all other fittings used in connection with launching equipment should be	Passed/ Failed
	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.	Comments/Observations

l L	Manufacturer:	Date:	Time:
Launching & Recovery Appliances	Model:	Surveyor:_	
I	Lot/Serial Number:	Organizatio	on:
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	Acceptanc	e 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° 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° both inboard and outboard.	The launching appliance and its att should be of sufficient strength to w of not less than 2.2 times the maximum. There should be no evidence of damage as a result of this test.	achments other than winch brakes vithstand a static proof load on test num working load.	MWL:

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Launching & Recovery Appliances	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	

6.1.1.5 Operational load test	6.1.1.3; MSC.81(70) 1 /8.1.2			
Test Procedure	Acceptance Criteria		Significant Test D	ata
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 appliance should successfully lower the load conditions, and there should be no evidence of significant other damage as a result of the tests.		weight of the lightest the lifeboat / rescue boat ** intended LWL	for use: kN
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.	Each launching appliance together with all its lowers should be so arranged that the fully equipped survival it serves can be safely lowered against a trim of up to 20° either way: When boarded, as required by regulation III/23 of complement of persons; Without persons in the survival craft or rescue boat	1 craft or rescue boat to 10 ⁰ and a list of up or III/33, by its full		
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° 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.	A launching appliance should not depend on any meror stored mechanical power which is independent supplies to launch the survival craft or rescue boat loaded and equipped condition and also in the light	of the ship's power it serves in the fully	20 ⁰ inboard list +10°trim (LWL) Stored power Pa Start pressure: Min. pressure: Pressure drop after one movement: Time from inboard to outboard:	Passed/Failed ssed/Failed k Pa k Pa k Pa sec

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	Manufacturer:	Date:	Time:	
Launching & Recovery Appliances	Model:	Surveyor:_		
	Lot/Serial Number:	Organizati	on:	
6.1.1.6 Turning in test		Regulations: LSA Code 6.1.1.3;	MSC.81(70) 1 /8.1.3	
Test Procedure	Acceptano	ce 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 successful hoisting load from the outboard causing permanent deformation or	to the inboard position without	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	

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

	Manufacturer:	Date:	Time:
Launching & Recovery Appliances	Model:	Surveyor:_	
	Lot/Serial Number:	Organization	on:
6.1.1.7 Winch brake test (continued)		Regulations: LSA Code 6.1.2.5;	MSC.81(70) 1 /8.1.4
Test Procedure	Acceptan	ce 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:

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	Manufacturer:	Date:	Time:
Launching & Recovery Appliances	Model:	Surveyor:_	
	Lot/Serial Number:	Organization	on:
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	Acceptano	ce 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.	winch motor capable of raising the rescue boat from the water with its		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	Acceptano	ce 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 survival craft and rescue boat. Han be rotated by moving parts of the rescue boat is being lowered or where the survival and the survival craft and rescue boat is being lowered or where the survival craft and rescue boat is being lowered or where the survival craft and rescue boat.	d gear handles or wheels should not winch when the survival craft or	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	

		Manufacturer:	Date:	Time:	
Free-fall Launching & F	Recovery Appliances	Model:	Surveyor:		
		Lot/Serial Number:			
6.1.2.1 Submitted	l drawings, reports and	documents			
		Submitted drawings an	d documents		Status
Drawing No.	Revision No. & date		Title of drawing		Status
		Submitted reports and	documents		Status
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			

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	Manufacturer:		Date:	Time:
Free-fall Launching & Recovery Appliances	Model:		Surveyor:	
	Lot/Serial Number:		Organization:	
6.1.2.2 Quality Assurance		Regulations: MSC.8	1(70) 2/1.1 and 1.2	
Except where all appliances of a particular type	e are required by chapter III of the	Quality Assurance		

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 Standard Used: -_____ 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 Quality Assurance Procedure: -_____ the approved prototype life-saving appliance. Manufacturers should be required to institute a quality control procedure to ensure that Quality Assurance Manual: 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. Description of System. Quality Assurance System acceptable Yes/No Comments/Observations

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

Lov Seriai Number: Organization:			
6.1.2.3 Visual inspection	Regulations: LSA Code 6.1.4		
Test Procedure	Acceptance Criteri	ia	Significant Test Data
Confirm that installation has been manufactured to approved drawings			Passed/ Failed
Visually inspect the launching appliance. Conduct measurements and verify clearance as	Parts which require maintenance should be emaintained.	easily accessible and easily	Passed/ Failed
required.	Effectiveness under icing conditions		Passed / Failed
	Where davit arms are recovered by power, fitted which will automatically cut off the poreach the stops in order to prevent over-strunless the motor is designed to prevent suc	ower before the davit arms ressing the falls or davits,	Туре
Limit switches	Arrangements for simulated launching shou to withstand a static proof load on test of maximum working load.		Passed/ Failed
Arrangements for simulated launching	all other fittings used in connection with launching equipment should be designed with not less than a minimum factor of safety on the basis		Туре
	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.		Comments/Observations

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

6.1.2.4 Static proof load test Regulations: LSA Code 6.1.1		- 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. These should be appliance and its attachments other than winch brak should be of sufficient strength to withstand a static proof load on to of not less than 2.2 times the maximum working load.		test load (2.2 x MWL) kN
	There should be no evidence of significant deformation or other damage as a result of this test.	There should be no evidence of significant deformation or other damage Passed/Failed
		Comments/Observations

	Manufacturer:	Date:	Time:
Free-fall Launching & Recovery Appliances	Model:	Surveyor:_	
	Lot/Serial Number:	Organization Organization	on:
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	Acceptano	ce Criteria	Significant Test Data
A mass equal to 1.1 times the maximum working load should be suspended from the lifting points.		y lower the load under all of the buld be no evidence of significant result of the tests.	MWL: kN LWL (MWL - number of persons): kN
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.			Test 1 Test load (1.1 x MWL) :
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)			Upright full inboard full outboard Passed/Failed Test 2 Test load (1.1 x MWL) _ kN 5° list, 2° bow down trim Passed/Failed
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.			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

1 4ge 1/2			
	Manufacturer:	Date:	Time:
Free-fall Launching & Recovery Appliances	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 hoisting load from the outboard causing permanent deformation or of the causing permanent deformation deformatio	to the inboard position without	Hoisting load :	

continued

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	Manufacturer:	Date:	Time:	
Free-fall Launching & Recovery Appliances	Model:	Surveyor:_		
	Lot/Serial Number:	Organizatio	on:	
6.1.2.7 Winch brake test	Re	gulations: LSA Code 6.1.2.5;	MSC.81(70) 1 /8.1.4	
Test Procedure	Acceptance Cr	iteria	Significant Te	est Data
Winch drums should be wound to the maximum			Weight of the lightest the lifebo	at / rescue boat *
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	The test load should drop no more than		MWL :	kN kN
then be lowered for at least one complete revolution of the barrel shaft. A test load of 1.1	brake is wetted).	,	Test 1: Static test load (1.5 x MWL):	kN
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	ı		Does the brake test hold the Passed/ Failed	test load (1.5x MWL)?
the hand brake sharply.			MWM:	kNm
This test should be repeated a number of times.			Drum diam. Wire diam.	mm Mm
If the winch design incorporates an exposed brake, one of these tests should be carried out with the brake wetted.			Number of turns Max. lowering speed	m/s
The various tests should achieve a cumulative	The launching appliance should succeed that of a fully equipped lifeboat, without	•	Test 2	
lowering distance of at least 150 m. Operation of the winch with a load of a mass	(or rescue boat) intended for use with t		Dynamic Test load (1.1 x MWI Brake test carried out after > 3n	
equal to that of a fully equipped lifeboat, withou persons, or the lightest survival craft intended for	Inspection of the stripped winch should	reveal no significant damage	Stop within 1 meter?	Passed/Failed

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Comments/Observations

* delete as appropriate

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.

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	Manufacturer:	Date:	Time:
Free-fall Launching & Recovery Appliances	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

5.1.3.1	Submitted drawings, reports and documents
5.1.3.2	Quality assurance
5.1.3.3	Visual inspection
5.1.3.4	Corrosion resistance test
5.1.3.5	Maximum load for automatic release test
5.1.3.6	Dynamic forces release tests
5.1.3.7	Actuating force test
5.1.3.8	Securing force test
5.1.3.9	Manual release force test
5.1.3.10	Holding test, loaded
5.1.3.11	Holding test, light
5.1.3.12	Inertia test
5.1.3.13	Automatic Release test
5.1.3.14	Automatic release test – overloaded
5.1.3.15	Endurance test
5.1.3.16	Compatibility of liferaft and release hook test
5.1.3.17	Proof load test
5.1.3.18	Inadvertent release tests
5.1.3.19	Icing test
5.1.3.20	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	

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Davit-launched Liferaft	. N	Ianufacturer:	Date:	Time:	
Automatic Release Hool	ks N	Model:	Surveyor:		
	I	ot/Serial Number:	Organization:		
6.1.3.1 Submitted	d drawings, reports and o	locuments			
		Submitted drawings a	and documents		Status
Drawing No.	Revision No. & date		Title of drawing		Status
				<u>, </u>	
		Submitted reports ar	nd documents		G
Report/Document No.	Revision No. & Date		Title of report / document		Status
		Maintenance Manual -			
		Operations Manual -			

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

6.1.3.2 Ouality 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.	Regulations: MSC.81(70) 2/1.2 Quality Assurance Standard Used:
	Quality Assurance System acceptable Yes/No Comments/Observations

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Davit-launched Liferaft	Manufacturer:	Date:	Time:	
Automatic Release Hooks	Model:	Surveyor:_		
	Lot/Serial Number:	Organizati	on:	
6.1.3.3 Visual inspection		Regulations: MSC.81(70) 1/8.2.	2	
Test Procedure	Acceptano	ce 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 specifications.	manufacturer's drawings and	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		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.		nout failure.	Any corrosion effects and other damage to the hooks should be recorded: Hook 1: Hook 2:	

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

6.1.3.5 Maximum load for automatic rel	ease test	Regulations: MSC.81(70) 1/8.2.	5	
Test Procedure	Acceptan	ce 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 should not be less than 5 kg or no Record the maximum load "F" (5	-	Hook 1 Hook 2	

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		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:			Record the number of cycles before hook released or test was discontinued (5 tests)	
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.	1. The hook should not release be	efore 300 cyclic loads.	Hook 1 Hook 2 Test 1 Test 2 Test 3 Test 4 Test 5 Hook 1: Passed Failed Hook 2: Passed Failed	
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.	2. The automatic release should or	perate within 3 cycles.	Comments/Observations	

Davit-launched Liferaft M	Manufacturer:	Date:	Time:
Automatic Release Hooks	Model:	Surveyor:	
L	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 2 lanyard operated, or the action required to set the act mechanism should be readily performed by a single person v difficulty.	ctuating Hook 1 Hook 2
6.1.3.8 Securing force test	Regulations: MSC.81(70	0) 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 me securing force (5 tests)	Hook 1 Hook 2 Test 1

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	

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

6.1.3.10 Holding test, loaded	R	Regulations: MSC.81(70) 1/8.2.1	10	
Test Procedure	Acceptance C	Criteria	Sig	nificant 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 op	oen in either test.	Hook 1 Test 1 Test 2 Test 3 Test 4 Test 5 Hook 1: Passed Hook 2: Passed Comments/Observation	Hook 2Failed Failed ons
6.1.3.11 Holding test, light	R	Regulations: MSC.81(70) 1/8.2.1	14	
Test Procedure	Acceptance C	Criteria	Sig	nificant 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 release the load.	y a single person and should not	Hook 1 Test 1 Test 2 Test 3 Test 4 Test 5 Hook 1: Passed Hook 2: Passed Comments/Observation	Hook 2Failed Failed ons

			Page 20:
Davit-launched Liferaft	Manufacturer:	Date:	Time:
Automatic Release Hooks	Model:	Surveyor:_	
	Lot/Serial Number:	Organization	on:
6.1.3.12 Inertia test		Regulations: MSC.81(70) 1/8.2.	8
Test Procedure	Acceptano	e 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 r	esult of this test.	Hook 1
6.1.3.13 Automatic Release test		Regulations: MSC.81(70) 1/8.2.	9
Test Procedure	Acceptano	ee 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 ground or water surface.	release the load when it strikes the	Hook 1 Hook 2 Test 1 Test 2 Test 3 Test 4 Test 5 Passed Failed Comments/Observations

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

6.1.3.14 Automatic release test - overloade	d Reg	egulations: MSC.81(70) 1/8.2.9)	
Test Procedure	Acceptance Cri	riteria	Sig	gnificant 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 permand should function after the test.	nent deformation and the hook	Hook 1 Test 1 Test 2 Test 3 Test 4 Test 5 Hook 1: Passed Hook 2: Passed Comments/Observation	Hook 2 Failed Failed
6.1.3.15 Endurance test	Reg	egulations: MSC.81(70) 1/8.2.1	15	
Test Procedure	Acceptance Cri	riteria	Sig	gnificant 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 excessi	sive wear on any part.	Hook 1 Test 1 Test 2 Test 3 Test 4 Test 5 Hook 1: Passed Hook 2: Passed Comments/Observation	Hook 2 Failed Failed ions

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Davit-launched Liferaft	Manufacturer:	Date:	Time:
Automatic Release Hooks	Model:	Surveyor:	
	Lot/Serial Number:	Organizati	on:
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6.1.3.16 Compatibility of liferaft and rel		Regulations: MSC.81(70) 1/8.2.	
Test Procedure	Acceptan	ce 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.	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 \(\phi : mm \) (optionally fill in attached list) Comments/Observations
6.1.3.17 Proof load test		Regulations: Res. A.689 1/8.2.1	1 (missing in MSC.81(70) by mistake)
Test Procedure	Acceptan	ce 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.		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

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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

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.		
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	

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	

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		Manufacturer:	Date:	Time:	
Launching & Recovery	Appliances for F.R.B	Model:	Surveyor:		
		Lot/Serial Number:	Organization:		
6.1.4.1 Submitted	l drawings, reports and	d documents			
		Submitted drawings a	nd documents	Sta	atus
Drawing No.	Revision No. & date		Title of drawing	544	ieus
		Submitted reports an	nd documents	G4-	4
Report/Document No.	Revision No. & Date	2	Title of report / document	Sta	atus
		Maintenance Manual -			
		Operations Manual -			

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	Manufacturer:	Date:	Time:
Launching & Recovery Appliances for F.R.B	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	Standard Used:
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	Quality Assurance Manual:
production tests carried out in accordance with the Administration's instructions.	Description of System.
	Quality Assurance System acceptable Yes/No
	Comments/Observations

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

6.1.4.3 Visual inspection	Regulations: LSA Code 6.1, III, 1	6.2
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
measurements and verify clearances as required.	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:
	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 Type: Comments/Observations

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

6.1.4.4 Static proof load test	Regulations: LSA Code 6.1.1.5	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.	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.	MWL : kN Test load (2.2 x MWL): kN		
With the load at the full outboard position, the load should be swung through an arc of approximately 10° 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° both inboard and outboard.	There should be no evidence of significant deformation or other damage as a result of this test.	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		

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

6.1.4.5 Operational load test	Regulations: LSA Code 6.1.1.1 - 6		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		Test Procedure Acceptance Criteria Significant Test Data		a
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.	conditions, and there should be no evidence of significant deformation or other damage as a result of the tests.		Weight of the lightest the fast rescue box LWL:kN MWL:kN	at intended for use:	
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.			Test load (1.1 x MWL): Clear of davit horn ?* Passed/ Fail		
The test should be repeated with the launching appliance positioned to simulate a combined $20^{\rm 0}$ inboard list and $10^{\rm 0}$ trim.	Each launching appliance together with all it should be so arranged that the fully equipped it serves can be safely lowered against a trin to 20 ⁰ either way:	survival craft or rescue boat	Does the appliance successfully lower to conditions without evidence of signific damage? Passed/Failed	the load under these	
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.	When boarded, as required by regulation complement of persons; - without persons in the survival cra		Upright (1.1x MWL) $20^{0} \text{ inboard list } +10^{\circ} \text{trim } (1.1\text{xMWL})$	Passed/Failed Passed/Failed	
duvit under very light foud conditions.	A launching appliance should not depend on		20 ⁰ inboard list +10° trim (LWL)	Passed/Failed	
	or stored mechanical power which is indep supplies to launch the survival craft or resc loaded and equipped condition and also in t	pendent of the ship's power ue boat it serves in the fully	Stored power Start pressure: Min. pressure: Pressure drop after one movement: Time from inboard to outboard:	Passed/Failed k Pa k Pa k Pa	
			Comments/Observations * if applicable		

	Manufacturer:	Date:	Time:
Launching & Recovery Appliances for F.R.B	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	Test Procedure Acceptance Criteria Significan	
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:

			1 480 211
	Manufacturer:	Date:	Time:
Launching & Recovery Appliances for F.R.B	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 T	est Data
Winch drums should be wound to the maximum number of turns permitted and a static test load of	The test load should drop no more (except that the stopping distance		Weight of the lightest the fast re	escue boat *
1.5 times the maximum working load should be	brake is wetted).	thay be exceeded if all exposed	:	kN
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			MWL :	kN
times the maximum working load should then be			Test 1:	LNI
lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying			Static test load (1.5 x MWL):	kN
the hand brake sharply			Does the brake test hold the tes Passed/Failed	t load (1.5x MWL)?
This test should be repeated a number of times.			MWM:	kNm
If the winch design incorporates an exposed	The launching appliance should s		Drum diam.	mm
brake, one of these tests should be carried out with the brake wetted.	that of a fully equipped fast resolightest fast rescue boat intended f	cue boat, without persons, or the or use with the winch.	Wire diam. Number of turns	Mm
The various tests should achieve a cumulative	Inspection of the stripped winch sh		Max. lowering speed	m/s
lowering distance of at least 150 m.	or undue wear.	iouid reveal no significant damage	Test 2	
Operation of the winch with a load of a mass equal to that of a fully equipped fast rescue boat			Dynamic Test load (1.1 x MWI Brake test carried out after > 3n	
without persons, or the lightest fast rescue boat intended for use with the winch should also be			Stop within 1 meter?	Passed/Failed
demonstrated.				i assed/i aned
Following completion of these test (and 6.1.4.8,			Comments/Observations	
6.1.4.9, 6.1.4.10), the winch should be stripped for inspection.			* delete as appropriate	continued

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

6.1.4.7 Winch brake test (continued)	Regulations: LSA Cod	e 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

	Manufacturer:	Date:	Time:
Launching & Recovery Appliances for F.R.B	Model:	Surveyor:	
	Lot/Serial Number:	Organization	on:
6.1.4.8 Rescue boat launching appliance	e recovery speed test	Regulations: MSC/Circ.809 4.2	.5; MSC.81(70) 1 /8.1.5
Test Procedure	Acceptano	ce Criteria	Significant Test Data
Fast rescue boat loaded with 6 persons to be hoisted.		g appliances should be capable of cue boat loaded with 6 persons with	Maximum load to be hoisted with a speed of at least 0.8 m/s: kN
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.		of hoisting the fast rescue boat with that can be accommodated in the cof the LSA code.	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	Acceptano	ce 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.	survival craft and rescue boat. Han be rotated by moving parts of the	be provided for recovery of each ad gear handles or wheels should not be winch when the survival craft or then 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; M	SC.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
satisfactory operation of the device to dampen forces and oscillations due to interaction with the waves;	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	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.	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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- 6.2.0.1 Submitted drawings, reports and documents
- 6.2.0.2 Quality assurance
- 6.2.0.3 General data and specifications
- 6.2.0.4 Platform carrying capacity
- 6.2.0.5 Markings on container
- 6.2.0.6 Markings on passage
- 6.2.0.7 Visual inspection

Test procedures

- 6.2.1 Material test
- 6.2.2 Deployment instructions
- 6.2.3 Container static load test
 - 6.2.3.1 Container door hose test
 - 6.2.3.2 Container door dry release test
 - 6.2.3.3 Container door trim release test

Inclined inflated passages

6.2.4 Passage load test

- 6.2.4.1 Dry sliding test
- 6.2.4.2 Loss of pressure test
- 6.2.4.3 Load test of passage to container
- 6.2.4.4 Cold inflation test
- 6.2.4.5 Hot inflation test
- 6.2.4.6 Wet sliding test
- 6.2.4.7 3 times pressure test

Vertical descent passages

6.2.5 2 times sliding test

- 6.2.5.1 Load test of passage to container
- 6.2.5.2 Cold passage test
- 6.2.5.3 Wet descent test

Platform (if fitted)

6.2.6 Platform carrying capacity

- 6.2.6.1 Loaded freeboard and 50% buoyancy loss loaded test
- 6.2.6.2 Self draining test
- 6.2.6.3 Cold inflation test
- 6.2.6.4 Hot inflation test
- 6.2.6.5 3 times overpressure test

Associated liferafts

- 6.2.7 Liferaft construction
 - 6.2.7.1 Liferaft release from stowage position
 - 6.2.7.2 Liferaft release from passage
 - 6.2.7.3 Liferaft float free arrangements

Evacuation Trials

6.2.8 Timed evacuation test

Sea trails

- 6.2.9 Heavy weather sea trial (Phase 1)
 - 6.2.9.1 Heavy weather sea trial (Phase 2)
 - 6.2.9.2 Heavy weather sea trial (Phase 3)
 - 6.2.9.3 Heavy weather sea trial (Phase 4)

Data recording sheets

- 6.2.10 Evacuation trial timings (MES with platform and liferafts)
- 6.2.11 Evacuation trial timings (MES straight into liferafts)

6.2 MARINE EVACUATION SYSTEMS EVALUATION AND TEST REPORTS

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

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	Manufacturer:	Date:	Time:		
Marine Evacuation Systems	Model:	Surveyor:			
	Lot/Serial Number:	Organization:			
6.2.0.1 Submitted draw	vings, reports and documents				
Submitted drawings and documents					

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		
Report/Document No.	Revision No. & Date	Title of report / document	Status
		Maintenance Manual -	
		Operations Manual -	

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	Manufacturer:	Date: Time:	
Marine Evacuation Systems	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	
6.2.0.2 Quality Assurance		T	
International Convention for the Safinspected, representatives of the Admanufacturers to ensure that the quacomply with the specification of the Manufacturers should be required to life-saving appliances are provided	ticular type are required by Chapter III of the lety of Life at Sea, 1974, as amended, to be ministration should make random inspections of lity of life-saving appliances and materials used approved prototype life-saving appliance. It is a quality control procedure to ensure that to the same standard as the prototype life-saving tration and to keep records of any production tests Administration's instructions.	Regulations: - SOLAS III/4 Quality Assurance Standard Used:	

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

6.2.0.3 General Data and Specifications		Regulations: LSA Code I/1.2 & VI/6.2		
General Information	Dime	nsions	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	Length of passage:- Vertical System m Inclined System m Installation Height of System		Weight of complete system Weight of associated liferaft's	
administration				
1. Such 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.	Diameter of Platform (if applicable) Carrying Capacity of Platform Number of passages Angle of Slide Path			
2. The angle of the slide to the horizontal should be within the range of 30° to 35° when the ship is upright and in the lightest sea going condition. In the case of a passenger ship, a maximum of 55° inn the final stage of flooding set by the requirements in regulation II-I/8				

						Page 229
	Manufacture	er:		Date:	Time:	
Marine Evacuation Systems Model:				Surveyor:		
	Lot/Serial N	Jumber:		Organization:		
6.2.0.3 General Data and	Specifications (continued)	Regulations: I	LSA Code I/1.2 & VI/ 6.2		
General Information	n	Dir	mensions		Weight	
3. The term "operational presame meaning as the pressure"; i.e the pressure the designed reseat pressure valves, if fitted, except the reseat pressure of the determined by testing, excereseat pressure by more higher figure should be use	term "working determined by are of the relief tat, if the actual relief valve, teds the designed than 15%, the	Inclined Slide:- PRV lifting pressure PRV re-seat pressure				

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	Manufacturer:	Date:	Time:
Marine Evacuation Systems	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	Acceptar	nce Criteria	Significant Test Data	
Marine Evacuation Platform, (if fitted);	This usable platform area should b	e at least equal to:	No. of persons platform is designed for	
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	(20% of total number of persons the or 10 m ² whichever is the greater.	at the System is certified for)/4 m ²	Capacity of platform using buoyancy Capacity of platform using area	
O.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.			Lesser of 1 and 2 above 3. Usable area requirement for platform. 4. Number of persons platform can actual carry. Comment/Observation	
However, Administrations may approve alternative arrangements which are demonstrated to comply with all of the prescribed performance requirements.			Passed Failed	

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	Manufactur	er:		_ Date:	Time:
Marine Evacuation Systems	Model:			Surveyor	or:
	Lot/Serial N	Number:		_ Organiza	ation:
6.2.0.5 Markings on Contai	ner		Regulations:- LSA Co	ode I/1.2 &	& VI/6.2.4.2 & 6.2.4.3
Test Procedure		Acceptano	ce Criteria		Significant Test Data
The container should be marked with Maker's name or trade mark; Serial number; Name of approval author capacity of the system; (6.2.0 SOLAS; Date of manufacture (month Date and place of last service Maximum permitted height above water-line; and Stowage position on board. Launching and operating instructio	and year); it of stowage			Indicate markings on container below:-	
marked on or in the vicinity of the co	ontainer.				Passed Failed
6.2.0.6 Markings on Passag	e		Regulations:- LSA Co	ode I/1.2 &	& VI/ 6.2
Test Procedure		Acceptano	ce Criteria		Significant Test Data
The marine evacuation system shou with: Maker's name or trade mark; Serial number; Date of manufacture (month Name of approving authority Name and place of servicing it was last serviced, along wis servicing; and The capacity of the system.	and year); ; station where	All instructions & markings to be in	ndelible.		Indicate markings on container below:- Passed Failed

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Manufactu	rer:	Date:	Time:
Marine Evacuation Systems Model:		Surveyor:	:
Lot/Serial	Number:	Organizat	ion:
6.2.0.7 Visual Inspection		Regulations:- Chapter III/13.4; L	SA Code I/1.2 & 6.22; MSC81(70) 1/12.5.5
Test Procedure	Acceptano	ce Criteria	Significant Test Data
Liferaft Release From Passage Inflatable liferafts associated with marine	If the passage is to give direct ac demonstrated that it can be easily a		1. Are liferafts launched with passage Yes/No
evacuation systems		4	2. Method of connection of liferafts to passage
Any inflatable liferaft used in conjunction with the marine evacuation system should be provided with			3. Method of release from passage
pre-connected or easily connected retrieving lines to the platform.			4. Method of release acceptable Yes/No
the pathorns			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	Acceptano	ce Criteria	Significant Test Data
Inflated materials used in the construction of marine	71 11	accordance with Test Report 4.3.4,	Fabric Complies Yes No
evacuation systems are to be tested to the standards laid down in test report 4.3.4. Material Tests for Liferafts.			Comments/Observation
			Passed Failed

Marine Evacuation Systems Model:		Surveyor	Time:	
Lot/Serial N	fumber:	Organizat	tion:	
6.2.2 Deployment Instructions		Regulations:- LSA Code I/1.2 &	× VI/6.2.2.1; MSC81(70) 1/12.2.1	
Test Procedure	Acceptano	ce 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.			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	Acceptano	ce 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 sign as a result of this factory test.	iificant deformation or other damage	1. Calculated static loadtonnes 2. 2.2 x calculated loadtonnes 3. Period of test load min Method used to calculate static load test Comments/Observations Passed Failed	

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	Manufacturer:	Date:	Time:
Marine Evacuation Systems	Model:	Surveyor:	:
	Lot/Serial Number:	Organizat	ion:
		T	
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	Acceptan	nce Criteria	Significant Test Data
Marine Evacuation System Container; To ensure the effectiveness of the operating water entering the con-	water and there should be no signification container.	weathertight to prevent the ingress of icant accumulation of water inside the	Capacity of water hosel/min Diameter of hosemm Ingress of water in containerlitres
efficiency of the sealing arrangements demonstrated by means of a hose test other equally effective method. The r for the hose test is that about 2,300 l o minute be directed at and around to	s should be t or by any requirement of water per		3. Drainage adequate Yes/No 4. Diameter of drain holes mm
arrangements through a 63.5 mm hose f 3.5 m away for a period of 5 min. Al when hose testing is required to verify the of the structures the minimum pressure at least equal to 2 bar, is to be ap	from a point lternatively, he tightness in the hose,		Number of drain holes Comment/Observations
maximum distance of 1.5 m.	1		Passed Failed
(Note:- If the system is installed intership and the door is not part of the ship then this test is not required to be carried	ps structure		
6.2.3.2 Container Door Dry R	Release Test.	Regulations: LSA Code I/1.2 &	VI/6.2; MSC81(70) 1/12.2.4
Test Procedure	Acceptan	nce Criteria	Significant Test Data
Marine Evacuation System Container; After completing the test in the release a arrangements for any internal or externato be satisfactorily tested by 5 doperations carried out consecutively.	this test. and securing al doors are	ry and not be damaged as a result of	Door operation: 1. Pass/Fail 2. Pass/Fail 3. Pass/Fail 4. Pass/Fail 5. Pass/Fail Comments/Observations.

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Passed _____ Failed _____

Manufacture	er:	Date:	Time:
Marine Evacuation Systems Model:		Surveyor:	
Lot/Serial N	Jumber:	Organizat	ion:
6.2.3.3 Container Door Trim Release Tes	st	Regulations: LSA Code I/1.2 & V	VI/6.2; MSC81(70) 1/ 12.2.5
Test Procedure	Acceptance	e 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.		 Height of deployment m Adverse trim and list 10° trim 20°list (low side) Operation of system Passed Failed 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	e 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 be	ecome unduly distorted.	 Height of slide above ground m Length of slide m Number of slide paths Angle of slide path ° Comments/Observations. Passed Failed

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	Manufacture	er:	Date:	Time:
Marine Evacuation Systems	Model:		Surveyor:	·
	Lot/Serial N	umber:	Organizat	ion:
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		Acceptano	ee Criteria	Significant Test Data
Marine Evacuation Inclined Inflated P	Passage;	On completion the passage path condition.	should remain in a serviceable	1. Number of slide paths
A fully inflated passage should be individual sliding operations twice the				2. Number of persons passage is certified for
which it is to be certificated. For thi persons of varied physique and weigh	is test actual			3. Number of sliding operations
used.	nt should be			Comments/Observations.
				Passed Failed
6.2.4.2 Loss of Pressure Test			Regulations LSA Code I/1.2 & V	VI/6.2; MSC81(70) 1/12.3.1.3
Test Procedure		Acceptano	ee Criteria	Significant Test Data
Marine Evacuation Inclined Inflated F	Passage;	Passage should remain usable through slide de-pressurised.	ghout with the relevant section of the	1. Height of slide above groundm.
It should be demonstrated using actual		side de-pressurised.		2. No. of persons using system
the loss of pressure in any one set passage will not limit its use as evacuation.				 Sequence of deflation of slide tubes; Section deflated 2. 4.
				4. Angle of passage° Comments/Observations. Passed Failed

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	Manufacture	er:	Date:	Time:
Marine Evacuation Systems	Model:		Surveyor	r:
	Lot/Serial N	Number:	Organiza	tion:
6.2.4.3 Load Test of Passa	ige to Containe	r	Regulations: - I SA Code I/1 2 &	z VI/6.2; MSC81(70) 1/ 12.2.2 & 12.3.1.4
Test Procedure	ege to Containe	1	ce Criteria	Significant Test Data
		-		
Marine Evacuation Inclined Inflate A static load of 2.2 times the may which the system is to be design applied for a period of 30 minutes to between the passage and the contain. This static load is to be equivalent to load imposed by the maximum number fully loaded liferaft's for which designed, attached to the loaded plaship moving through the water at 3 head wind of force 10 on the Beautier.	ximum load to ned should be the connection ner. o the calculated ober and size of the system is atform with the knots against a	On completion there must be no sig connections, or other damage as a n	ns of any fracture or stranding of its result of this factory test.	 Calculated static loadtonnes 2. 2.2 x calc. loadtonnes Period of test load min Calculated breaking load of connection T. Method used to calculate static load test Comments/Observations.
				Passed Failed

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

6.2.4.4 Cold Inflation Test		Regulations:- LSA Code I/1.2 &	VI/	VI/6.2; MSC81(70) 1/12.3.1.5	
Test Procedure	Acceptance	e 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°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 slippage or other defects. The gas inflation system should sh defects.		.:	Cold Chamber temperature	

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

6.2.4.4 Cold Inflation Test (continued)		Regulations:- LSA Code I/1.2 &	ns:- 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			

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1 450 2 10	Manufacturer:	Date:	Time:
Marine Evacuation Systems	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	Acceptano	ce Criteria	Significant Test Data
Test Procedure Marine Evacuation Inclined Inflated Passage; The uninflated passage with its gas cylinders should be placed in a hot chamber at a temperature of +65°C for not less than 7 hours.	On inflation the pressure relief va sufficient capacity to prevent press working pressure. The passage and cracking, seam slippage or other de	alves on the passage should be of ure in excess of twice the designed components should show no sign of	1. Hot chamber temperature
			Passed Failed

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	Manufacture	er:	Date:	Time:
Marine Evacuation Systems	Model:		Surveyor	:
	Lot/Serial N	[umber:	Organizat	tion:
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	e Criteria	Significant Test Data
Marine Evacuation Inclined Inflate	ed Passage;	The speed of descent should not be o	considered excessive or dangerous.	Height of slide above ground m
It should be demonstrated with at				2. Angle of slide path to horizontal°
operations on a slide path thorough water to simulate wet weather cond				3. No. of persons sliding
				Comments/Observation
				Passed Failed
6.2.4.7 3 Times Pressure T	Гest		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	e Criteria	Significant Test Data
Marine Evacuation Inclined Inflate Each inflatable compartment in the be tested to a pressure equal to working pressure. Each pressure rel be made inoperative, compressed ai to inflate the passage and the ir removed. The test should continue min.	passage should three times the lief valve should r should be used inflation source e for at least 30	The pressure should not decrease without compensating for temper changes, and there should be no sear in the passage.	rature and atmospheric pressure	Passage Design Working Pressure kpa 3 x working pressure kPa Ressure at start kPa A Calculated 5% pressure drop maximum kPa Pressure drop after 30 minutes kPa A Percentage drop % Comment/Observations
The measurement of pressure drop can be started when it has been compartment rubber material l stretching due to the inflation stabilized. This test should be of equilibrium condition has been ach	n assumed that has completed pressure and conducted after			Passed Failed

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	Manufacture	er:	Date:	Time:	
Marine Evacuation Systems Model:		Surveyor:			
	Lot/Serial N	lumber:	Organiza	tion:	
6.2.5 2 x Times Sliding test	t		Regulations:- LSA Code I/1.2 &	VI/6.22; MSC81(70) 1/12.3.2.1	
Test Procedure		Acceptanc	e 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 condition.	should remain in a serviceable	Number of vertical passages Number of sliding operations per passage Ressage remains in serviceable condition Yes/No Comments/observations. Passed Failed	
6.2.5.1 Load Test of Passage	to Container	r	Regulations:- LSA Code I/1.2 & VI/6.22; MSC81(70) 1/12.3.2.2		
Test Procedure		Acceptanc	e Criteria	Significant Test Data	
Marine Evacuation Vertical Passage; A static load of 2.2 times the maxim the system is to be designed should be period of 30 minutes to the connection passage and the container. This static load is to be equivalent to the load imposed by the maximum number fully loaded liferaft's for which the designed, attached to the loaded platf ship moving through the water at 3 km head wind of force 10 on the Beaufor	um to which applied for a a between the he calculated er and size of he system is form with the nots against a	On completion there must be no sign connections, or other damage as a re		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	

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	Manufacture	er:	Date:	Time:		
Marine Evacuation Systems	Model:		Surveyor	:		
	Lot/Serial N	Number:	Organiza	tion:		
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		Acceptanc	e Criteria	Significant Test Data		
Marine Evacuation Vertical Passage		At this temperature the passage shother defects.	ould show no signs of cracking or	Cold chamber temperature °C		
The stowed passage should be place				Time in Time out		
chamber at a temperature of -30°C for a period of 24 hours.				Total time in chamber hr		
				Total time to deploysecs		
				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		Acceptanc	e Criteria	Significant Test Data		
Marine Evacuation Vertical Passage		The speed of descent should not be	considered excessive or dangerous.	Height of vertical passage above ground m.		
It should be demonstrated with at least apparations in the case of open year				2. No of persons sliding		
operations, in the case of open vertical passages with the path thoroughly wetted with water to simulate wet weather conditions.				Comments/Observation		
				Passed Failed		

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1 age 2			
	Manufacturer:	_ Date:	_ Time:
Marine Evacuation Systems	Model:	_ Surveyor:	
	Lot/Serial Number:	Organization:	

6.2.6.1 Loaded Freebaord and 50% Buoy	Regulations:- LSA Code I/1.2 &	VI/6.22; MSC81(70) 1/12.4.2		
Test Procedure	Acceptanc	e 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 romm. and should have a positive free	· ·	No. of persons on platform Freeboard in undamaged condition Freeboard recorded Positive Negative 12 o'clock mm	

	Manufacturer:	Date:	Time:
Marine Evacuation Systems	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	There should be no appreciable accumulation of water on the platform.	1. Hose delivery ratel/min	
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.	The platform should remain stable and usable during this test.	2. Period of delivery of water min 3. Area of platform m ² 4. Area of drainage point m ² 5. Drainage area sufficient to remove water Yes/No Comments/observations.	
		Passed Failed	

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	Manufacturer:	Date:	Time:
Marine Evacuation Systems	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°C.	The passage and components must slippage or other defects. The gas inflation system should sho defects.		1. Cold temperature ⁰ C Time in Time out Hours in chamber @ -30 ⁰ C 2. Design WP kPa
After a period of not less than 24 hours at this temperature the platform should reach its working pressure within 5 minutes.	The Pressure Relief Valves should to operate satisfactorily after inflation a liferaft.	•	 System usable in min Time to reach working pressure min Relief valves blowing at:- Gas Inflation System Acceptable to Administration Yes/No Details of gas inflation system Platform - No. of cylinders Weight of cylinders Kg. Gas charge kg CO₂, kg N₂ Bottle details Details of high pressure hose Material of Hose Pressure rating of hose

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		Manufacturer:		Date:	Time:	
Marine Evacuation Systems	Model:		Surveyo	Surveyor:		
		Lot/Serial Number:		Organization:		
6.2.6.3 Cold Inflation Test (continued)		Regulations:- LSA Code I/1.2 &	v VI/6.22; MSC81(70) 1/12.4.4			
	Test Procedure		Accentar	nce Criteria	Significant Test Data	

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		ce Criteria	Significant Test Data
Continued: -	Continued:-		8. Details of Cylinder valve9. Details of Operating Head
			10. Details of Inflation Valve
			11. Details of Pressure Relief Valve

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	Manufacturer:	Date:	_ Time:
Marine Evacuation Systems	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°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 temperatureOC Time inTime out @ +65°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	

				Page 249	
	Manufactur	er:	Date:	Time:	
Marine Evacuation Systems	Model:		Surveyor	:	
	Lot/Serial N	Jumber:	Organiza	tion:	
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;		The pressure should not decrease by more than 5% as determined		1. Passage	
Each inflatable compartment in the be tested to a pressure equal to the second control of the second control o				.1 Design Working Pressure kPa	
working pressure. Each pressure rel	ief valve should	in the platform.		.2 PRV lifting pressure kPa	
be made inoperative, compressed air should be used to inflate the platform and the inflation source removed. The test should continue for at least				.3 PRV reseat pressure kPa	
30 minutes.	de for at least			.4 3 x working pressure kPa	
The measurement of pressure drop due to leakage can be started when it has been assumed that				.5 Pressure at startkpa	
compartment material has completed stretching due to the inflation pressure and stabilised. This test				.6 Calculated 5% pressure drop maximumkpA	
should be conducted after equilibriu been achieved.				.7 Pressure drop after 30 minutes kPa	
				.8 Percentage drop %	
				Comment/Observations	

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Passed _____ Failed

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1 uge 250			
	Manufacturer:	Date:	Time:
Marine Evacuation Systems	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	

6.2.7 Liferaft Construction	Regulations:- LSA Code I/1.2 IV/4		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	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	
Any inflatable liferaft used in conjunction with the marine evacuation system should conform with the			Conforms to LSA Code section 4.2. Yes/No	
requirements of the LSA Code section 4.2.			Tested to Test Report 4.4.3 Inflatable liferaft's. Yes/No	
			Comments/observations.	
		_	Passed Failed	
6.2.7.1 Liferaft Release From Stowage Posi	ition. Regulations:- Chapter III/ 13.4; L		.SA Code I/1.2 & VI/6.22; MSC81(70) 1/12.5.4	
Test Procedure	Acceptanc	e Criteria	Significant Test Data	
Inflatable liferafts associated with marine evacuation systems	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.	
Any inflatable liferaft used in conjunction with the			2 Certified drop height of liferaftm.	
marine evacuation system should, where applicable;			3 Operation carried out successfully Yes/No	
1. be sited close to the system container but be capable of dropping clear of the deployed system and boarding platform.			4 Method of release automatic manual	
			nanda	
			5 Description of release method	
2. be capable of release one at a time from its stowage rack with arrangements which will enable it to be				
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.			5 Description of release method	
2. be capable of release one at a time from its stowage rack with arrangements which will enable it to be			5 Description of release method 6 Liferafts launched independently of the MES Yes/No	

		- 11-54 - 44
	Manufacturer:	Date: Time:
Marine Evacuation Systems	Model:	Surveyor:
	Lot/Serial Number:	Organization:
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6.2.7.2 Liferaft Release From Passage	Regulations:- Chapter III/13.4; I	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	

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1 480 202			
	Manufacturer:	Date:	Time:
Marine Evacuation Systems	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	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
A marine evacuation system should be evaluated for capacity by mean of timed evacuation deployments conducted in harbour.			No. of platform crew Number evacuated after 17.40
It should be demonstrated in harbour by a full			Number evacuated after 30 minutes
deployment of a system, including the launching and inflation of all the associated liferafts, that the system will provide a satisfactory means of			Number actually evacuated
evacuation.			Time taken
For this trial the number of persons to be used should be that for which the system is to be			No. of associated liferafts
certificated.			Carrying capacity of liferafts
The various stages of this trial should be timed so as			Height of embarkation deck above water m
to permit the calculation of the number of persons that can be evacuated in any specified period, a			Weather conditions:
representative composition of persons with normal health, height and weight should be used in the			Comments/Observations
demonstration, and should consist of different sexes			
and ages so far as it is practicable and reasonable.			
Time Trial Sheets Attached to be completed			
			Passed Failed

Marine Evacuation Systems Model:		Time: :: tion:
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:	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.	Weather conditions at start BF;
Phase 1 - Initial deployment of system.		Average drift of ship during trial m/s
.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		Time taken for system to become usable min Weather conditions remained with test limits Yes/No
.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;		Comments/Observations Passed Failed

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Manufactur	rer:	Date:	Time:
Marine Evacuation Systems Model:		Surveyor	:
Lot/Serial I	Number:	Organizat	tion:
		Т	
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	Acceptan	ce 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.	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		2 Number of platform crew Number of liferafts deployed
state associated with a wind of force. 1. the ship to be manoeuvred to place the system on the lee side and then allowed to freely drift. (The design of Marine Evacuation configuration of the arrangement of		n Systems may vary, such that the f the liferafts as described in the test he Heavy weather sea trial should be esign concept, for the system, for	Safe to evacuate 20 persons to liferafts Yes/No 3 Evacuation satisfactory Yes/No Comments/Observations.

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Passed _____ Failed _____

	Manufaataa		Data	T:
				Time:
Marine Evacuation Systems				:
	Lot/Serial N	lumber:	Organiza	tion:
6.2.9.2 Heavy weather sea	a trial (Phase 3)		Regulations LSA Code I/1.2 &	VI/6.22; MSC81(70) 1/12.6.2.3
Test Procedure		Acceptano	ce Criteria	Significant Test Data
Conditions during the heavy we should not fall below a sea state as		System to remain usable through damage to the platform, passage, li	out the trials and should not suffer ferafts, or other defects.	Number of persons platform can carry
wind of force 6 on the Beaufort sca	ale.		factory means of evacuation in a sea	Platform weight loaded = persons X 75 kg = kg
Phase 3 - Loaded trial lee side		state associated with a wind of force	ee 6 on the Beautort scale.	Number of liferafts inflated
		The system should continue to presystem.	ovide a safe and stable evacuation	Carrying capacity of liferaft
When loaded with the required wei is to be observed for a period of 30	ights the system			Liferaft weight loaded = persons X 75 kg =kg
the vessel free to drift,				Method of loading liferafts
Vessel allowed to drift for a minimum minutes.	um period of 30			Average drift speed during trialm/s
				Length of loaded trial lee sidemin
				Comments/Observations
				Passed Failed

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	Manufactur	er:	Date:	11me:
Marine Evacuation Systems	Model:		Surveyor	r:
	Lot/Serial N	Jumber:	Organiza	ation:
6.2.9.3 Heavy weather sea	a trial (Phase 4)		Regulations: LSA Code I/1.2 &	VI/6 22: MSC81(70) 1/12 6 2 4
Test Procedure	ii thiii (Thuse 4)	1	ce Criteria	Significant Test Data
Conditions during the heavy we should not fall below a sea state as wind of force 6 on the Beaufort sca	ssociated with a	System to remain usable through damage to the platform, passage, li	out the trials and should not suffer ferafts, or other defects.	Number of persons platform can carry Platform weight loaded = persons X 75 kg
Phase 4 - Loaded trial weather s The platform, if fitted, and the requ		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		Number of liferafts inflated
liferafts are to be loaded to their co with weights representing 75 kg/pe	ertified capacity	1	of ships the equipment is to be fitted	
The trials of phase 2 and 3 should be the system deployed on the weather. The lee side trials and the weather should be conducted in any convenient order.	side of the ship.			=kg Method of loading liferafts
Where ship manoeuvres are required system on any one side, any dark sustained during this manoeuv constitute a failure of the system.	mage or failure			Average drift speed during trial m/s Length of loaded trial weather side min
Vessel allowed to drift for a minim minutes.	um period of 30			Comments/Observations

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Passed _____ Failed _____

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

6.2.10	Evacua	ation 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 op	pen	
2	MES in water	er -	
3	MES slide/pl	latform inflated	
4	4 platform cr	rew on platform	
5	Signal to rele	ease liferafts given	
6	1ST LIFER	AFT 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 LIFER	AFT 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.....

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

(Co	ontinued)		TIMINGS
8	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 LI	FERAFT 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 LI	FERAFT 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.....

Date:	Time:	
Surveyor:		
Organization:		
TIMINGS		
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I	a	gc	_	U	v

1 450 200			
	Manufacturer:	Date:	Time:
Marine Evacuation Systems	Model:	_ Surveyor:	
	Lot/Serial Number:	Organization:	

6.2.11	Evacua	ation 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 op	pen	
2	MES in water	er	
3	MES passage	e, liferafts inflated and boardable	
4	MES crew de	escend	
	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 PE	RSON DESCENDS (liferaft No 1)	
	6.1	Last person in liferaft No 1	
	6.2	Liferaft marshalled clear	
7	1ST PE	RSON DESCENDS (liferaft No 2)	
	7.1	Last person in liferaft No 2	
	7.2	Liferaft marshalled clear	
8	1ST PE	RSON DESCENDS (liferaft No 3)	
	8.1	Last person in liferaft No 3	
	8.2	Liferaft marshalled clear	

Continued.....

				Page 261
		Manufacturer:	Date:	Time:
Marine Evacuati	on Systems	Model:	Surveyor:	
		Lot/Serial Number:	Organization:	
Continued			TIMINGS	
9 1ST PE I	RSON DESCEN	NDS (liferaft No 4)		
9.1	Last person i	n liferaft No 4		
9.2	Liferaft mars	shalled clear		
10	1ST PERSO	ON DESCENDS (liferaft No 5)		
10.1	Last person i	n liferaft No 5		
10.2	Liferaft mars	shalled clear		
11	1ST PERSO	ON DESCENDS (liferaft No 6)		
11.1	Last person i	n liferaft No 6		
11.2	Liferaft mars	shalled clear		
12	1ST PERSO	ON DESCENDS (liferaft No 7)		
12.1	Last person i	n liferaft No 7		
12.2	Liferaft mars	shalled clear		
13	1ST PERSO	ON DESCENDS (liferaft No 8)		
13.1	Last person i	n liferaft No 8		
13.2	Liferaft mars	shalled clear		
Evacuation trial co	-	hr min sec	,	

6.3 MEANS OF RESCUE

EVALUATION AND TEST REPORT

6.3.1	Submitt	ed drawings,	reports and documents			
	6.3.1.1	General data	and specifications			
	6.3.1.2	Quality assu	rance			
	6.3.1.3	Visual inspe	ection			
6.3.2	Means of	of rescue – Ma	arine evacuation systems			
	6.3.2.1	Visual inspe	ection of means of rescue types			
	6.3.2.2	Means to as	cend to the deck			
		6.3.2.2.1	Visual inspection of means to ascend to the deck			
		6.3.2.2.2	Handholds on inclined MESs			
		6.3.2.2.3	Visual inspection of ladders (or equivalents)			
	6.3.2.3	Mechanical	hoist			
		6.3.2.3.1	Static proof load test of safety hoist			
		6.3.2.3.2	Operational load test			
		6.3.2.3.3	Turning in test			
		6.3.2.3.4	Winch brake test			
		6.3.2.3.5	Safety hoist recovery speed test			
		6.3.2.3.6	Hand operation test			
6.3.3	Means of	Means of Rescue – Davit launching system				
	6.3.3.1	Visual Inspe	ection of davit launched means of rescue			
	6.3.3.2	Markings or	davit launched means of rescue			
	6.3.3.3	Impact test				
	6.3.3.4	Inflatable m	eans of rescue			
		6.3.3.4.1	Damage test of inflatable means of rescue			
		6.3.3.4.2	Inflation test			
		6.3.3.4.3	Pressure test			
		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 re	scue 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	

: Date:_	Time:
Survey	or:
mber: Organ	ization:
1	Survey Imber: Organ

6.3.1 Submitt	6.3.1 Submitted drawings, reports and documents				
	Submitted drawings and documents				
Drawing No.	Revision No. & date	Title of drawing	Status		

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

Manufacturer:	Surveyor:	n:
Lot/Serial Number: 6.3.1.1 General Data and Specifications	Organization	n:
<u> </u>	Regulations: LSA Co	J. 4 4 5 1 MOC 01/50\1/5 3 1/
General Information		de 4.4, 5.1, MSC.81(70)1/7.2.16
	MOR Dimensions	MOR Weight
Fire retardancy documentation:	n:	Design Weight: Unloaded: Loose Equipment: Persons: Calculated Loaded Weight: Fully Equipped: With Persons: Weight As Tested: Fully Equipped: Comments/Observations

	Manufacturer:	Date:	Time:	
Means of Rescue	Model:	Surveyor:		
	Lot/Serial Number:	Organization:		
6.3.1.2 Quality Ass	urance	Regulations: -		
Except where all appliance International Convention inspected, representatives of manufacturers to ensure the comply with the specificati Manufacturers should be relife-saving appliances are p	es of a particular type are required by Chapter III of the for the Safety of Life at Sea, 1974, as amended, to be of the Administration should make random inspections of at the quality of life-saving appliances and materials used ion of the approved prototype life-saving appliance. Equired to institute a quality control procedure to ensure that provided to the same standard as the prototype life-saving Administration and to keep records of any production tests	Quality Assurance Standard Used: -		
	with the Administration's instructions.	Description of System. Quality Assurance System acceptable Young Comments/Observations	ľes/No	

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

6.3.1.3 Visual Inspection	Regulations: Ch.III/26.4; LSA	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.	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 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		

1 uge 200			
	Manufacturer:	Date:	
Means of Rescue	Model:	Surveyor:	
	Lot/Serial Number:	_ Organization:	

6.3.2.1 Visual Inspection of Means of Res	scue 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 acc Is a suitable floating platform prov Is a ladder or other means of ascer Is a mechanical hoist provided?	rided?	Yes / No Yes / No Yes / No Yes / No
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.			Yes / No Inflatable / Rigid Comments/Observations

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

6.3.2.2.1 Visual Inspection of means to asc	end to the deck	Regul	lations: MSC/Circ.810 –2	2.4.1
Test Procedure	Acceptano	ce Criteria	Significant Test Data	
The MES is to be provided with means for ablebodied persons to ascend to the deck.	A means of ascending to the deck i the approved drawings.	s to be provided and corresponds to	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 shoul	d be restricted to a minimum	Passed Comments/Observations	
Visually inspect the appliance. Conduct measurements and verify clearance as required	Parts which require maintenance sl maintained	nould be easily accessible and easily	Comments/Observations	
			Means provided to ascer	nd to the deck: -

6.3.2.2.2 Handholds o	n inclined MESs	Regulation	ns: MSC/Circ. 810 –2.4.1	
	Lot/Serial Number:	Organization:		
Means of rescue	Model:	Surveyor:		
	Manufacturer:	Date:	Time:	
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6.3.2.2.2 Handholds on inclined MESs		Regulations: MSC/Circ. 810 –2.4.1		
Test Procedure	Acceptance	ce Criteria	Significant Test Data	
Materials used for handholds are to be suitable for the intended purpose.	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 ed	quivalents)	Regulations: MSC/Circ. 810 –2.4.1		
Test Procedure	Acceptance	ce Criteria	Significant Test Data	
The steps of the ladder (or its equivalent) should be suitable for the intended purpose.	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; MS	C.81(70) 1/8.1.1
Test Procedure	Acceptano	ce 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.	The launching appliance and its at should be of sufficient strength to v of not less than 2.2 times the maxi	withstand a static proof load on test	MWL : Test load (2.2 x MWL):	kN
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.	There should be no evidence of damage as a result of this test.	significant deformation or other	There should be no evidence other damage Passed/Failed	e of significant deformation or
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.			Upright 20 ⁰ inboard list	Passed/ Failed Passed/ Failed
			20 ⁰ outboard list	Passed/ Failed
			Comments/Observations	

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

6.3.2.3.2 Operational load test Regulati		Regulations: LSA	LSA Code 6.1.1.1 - 6.1.1.3; MSC.81(70) 1/8.1.2		
Test Procedure	Acceptano	ce Criteria	Significant Test D	Significant Test Data	
For safety hoists a mass equal to 1.1 times the maximum working load should be suspended from	The appliance should successfull conditions, and there should be no		Weight of the lightest the safety hois	st intended for use:	
the lifting points with the launching appliance in the upright position.	or other damage as a result of the	tests.	LWL:	kN	
			MWL:	kN	
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.	Each launching appliance together gear should be so arranged that the can be safely lowered against a trir	fully equipped safety hoist it serves	Test load (1.1 x MWL):	kN	
	either way:		Clear of davit horn ?*	Passed/ Failed	
The test should be repeated with the launching appliance positioned to simulate a combined 20° inboard list and 10° trim.	When boarded by its full complem Without persons in the safety hois	•	Does the appliance successfully lower conditions without evidence of significant damage? Passed/Failed		
All the tests should be repeated with a mass equal	without persons in the safety hors	ι.	Upright (1.1x MWL)	Passed/Failed	
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			20° inboard list +10° trim (1.1xMV	VL) Passed/Failed	
functioning of the davit under very light load conditions.			20 ⁰ inboard list +10° trim (LWL)	Passed/Failed	
conditions.			Stored power I	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		

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

6.3.2.3.3 Turning in test	Regulations:	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:		

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	Manufacturer:	Date:	Time:
Means of rescue	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	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 (except that the stopping distance brake is wetted).		Weight of the lightest the safet : MWL : 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. 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 launching appliance should s that of a fully equipped safety hoi safety hoist intended for use with t Inspection of the stripped winch shor undue wear.	st, without persons, or the lightest he winch.	Does the brake test hold the pass/fail MWM: Drum diam. Wire diam. Number of turns Max. lowering speed Test 2 Dynamic Test load (1.1 x MW Brake test carried out after > 3r Stop within 1 meter?	kNm mm Mm m/s	

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

6.3.2.3.4 Winch brake test (continued)	Regula	ations: 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:

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

6.3.2.3.5 Safety hoist recovery speed test		Regulations: I	LSA Code 6.1.1.9; MSC.81(70) 1/8.1.5
Test Procedure	Acceptano	ce 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 appliant winch motor capable of raising the full safety hoist complement of per less than 0.3 m/s.	safety hoist from the water with its	Hoisting load: Measured recovering speed of	the safety hoist : - m/s
			Comments/Observations	
			Passed	Failed

	Manufacturer:	Date:	Time:
Means of rescue	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 proposed to hoist. Hand gear handles or wheels parts of the winch when the safety being hoisted by power.		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	

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

6.3.3.1	5.3.3.1 Visual Inspection of davit launched Means of rescue Regulations: LSA Code - 1			2.2.9 MSC/Circula	ar.810 -2.2, 2.4.2.1, 2.4.	2.4, 2.4.2.9
	Test Procedure	Acceptance	ee Criteria	Significant Test Data		
Visual	examination.	The means of rescue should:-				
1.	Approval markings	Administration which approved it, date of manufacture and expiry and operational restrictions,		Passed	Failed	
				Passed	Failed	
		Be conspicuously marked with the means of rescue is permitted to the means of the means of the means of rescue is permitted to the means of the	ne maximum number of persons the 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 instruction the use of the means of rescue:	ons or diagrams clearly illustrating	Passed	Failed	
3.	Landing Area at water level.	The means of rescue is to have persons:	at least 9m ² for receiving rescued	Passed	Failed	
4.	Colour.	Be of a highly visible colour:		Passed	Failed	
5.	Protection	Be protected against damage wh	en moving against the ship's side;	Passed	Failed	N/A
		Offer protection to the rescued p appliance;	erson from injury by the launching	Passed	Failed	-

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

6.3.3.1	3.3.1 Visual Inspection of davit launched Means of rescue (continued) Regulations: MSC/Circula			ar.810 -2.4.2.1, 2.4.2	2.2, 2.4.2.5 to 2.4.2.8 &	2.4.2.11
	Test Procedure	Acceptano	e Criteria	Significant Test Data		
Visual o	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 LSA Code, at each bowsing po	accordance with 4.1.5.1.2 of the point:	Passed	Failed	N/A
9.	Controls	The inflation system controls; manual controlled:	if of an inflatable type, are to be	Passed	Failed	N/A
10.	Retro-reflective material	Be fitted with retro-reflective to A.658(16), Annex 1, Section 4	ape in accordance IMO Resolution	Passed	Failed	N/A
11.	Boarding ramps	Be fitted with at least two boar	rding ramps	Passed	Failed	N/A

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

6.3.3.1 Visual Inspection of davit launched	Means of rescue (continued)	Regulations	s: LSA Code – 4.1.3.1 ar	nd 4.1.5.1.1
Test Procedure	Acceptance	ce Criteria	Significant Test Data	
Visual examination (cont.).	The means of rescue should (cont.):-		
12. Lifelines should be securely becketed around the inside and outside of the means of rescue.	Lifelines provided and securel	y fitted	Passed Fair	led
13. A buoyant rescue quoit, attached to not less than 30m of buoyant line.	A buoyant rescue quoit, attach line is provided	ed to not less than 30m of buoyant	Passed Fair	led
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.	Fixing arrangements are provid A puncture repair kit is provid	ded which are of adequate strength		
15. Every inflatable means of rescue is to be provided with at least one repair outfit for repairing punctures in buoyancy compartments.	One topping-up pump or pair o	of bellows is provided	Passed Fail	
16. Every inflatable means of rescue is to be provided with at least one topping-up pump or a pair of bellows.			Passed Fail Comments/Observation	

	Manufacturer:	Date:	Time:
Means of rescue	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;	such that it is so constructed a	ner packed in a container or stowed as to withstand hard wear under as far as practicable weather tight,	Makers name:
Serial number;	All instructions and markings to b		Serial No.: -
Name of approval authority and the capacity of the system;			Approval authority:
SOLAS;			
Date of manufacture (month and year);			Date of manufacture:
Date and place of last service;			Date and place last serviced:
Maximum permitted height of stowage above water-line; and			Maximum permitted height:
The maximum number of persons the means of rescue is permitted to			Maximum number of persons:
accommodate. Launching and operating instructions should be			Launching & operating instructions acceptable? YES/NO
marked on or in the vicinity of the container.			Comments/Observations
			Passed Failed

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	Manufacturer:	Date:	Time:
Means of rescue	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 T	est 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 would affect its efficient functioni	show no signs of damage which ng.	Comments/Observations Passed	Failed

						Page 28
	Manufacture	er:	Date:		Time:	
Means of rescue	Model:		Surveyor:			
Lot/Ser		lumber:	Organization:			
6.3.3.4.1 Damage test	of inflatable means of	of rescue	Regulations: La	SA Code IV/4.2.	2.1; MSC.81(70) 5.16.2	
Test Proced	dure	Acceptan	ce Criteria		Significant Test Data	
It should be demonstrated the one of the buoyancy of damaged or failing to compartment or compartment with positive freeboard over periphery, the number of periphery, the number of periphery with persons et al., and seated in their not an equally distributed mass.	compartments being inflate, the intact ents should support, the means of rescue's ersons for which the proved. This can be each having a mass of ormal positions or by	The intact compartments should so the means of rescue's periphery, the	apport, with positive freeboard over ne number of persons for which the ed, with any one of the buoyancy => n n n	Freeboards: Compartment of Freeboards: Compartment of Freeboards: 12 o'clock 3 o'clock 6 o'clock	deflated:	mm mm mm mm
				Passed	Failed _	

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
	Lot/Serial Number:	Organization:
Means of rescue	Model:	Surveyor:
	Manufacturer:	Date: Time:
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6.3.3.4.2 Inflation test		Regulations: LSA C	Code IV/4.2.2.3; MSC.81(70) 5.17.3 to 5.17.6
Test Procedure	Acceptance	ee 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°C and 20°C; .2 at a temperature of -30°C; and .3 at a temperature of +65°C. 	When inflated in an ambient temper should achieve total inflation in not. When inflated at -30°C the means pressure in 3 min. There should be redefect in the means of rescue and it so that the means of rescue and it so the work of the means of the mea	more than 1 min. s of rescue should reach working no seam slippage, cracking, or other hould be ready for use after the tests. pressure relief valves must be of ge to the means of rescue by excess in pressure during the inflation from f the release valve. There must be no fect in the means of rescue.	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 OC Hours: h Inflation times: - Raft 1 Raft 2 Container open sec Boardable sec Relief valves: Upper open sec
For the inflation test at -30°C 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°C 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°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°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			Lower opensec Lights int./ext /sec Working Pressure MPa 3) Hot temperature OC 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
ambient temperature.			Passed Failed

			Page 28:
Manufa	turer:	Date:	Time:
Means of rescue Model:_		Surveyor:	
Lot/Seri	l 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	Acceptan	ce Criteria	Significant Test Data
Each inflatable compartment in the means rescue should be tested to a pressure equal three times the working pressure. Each pressure lief valve should be made inoperation compressed air should be used to inflate inflatable means of rescue and the inflation sour removed. The test should continue for at least min. The measurement of pressure drop due to leake can be started when it has been assumed to compartment rubber material has been comple stretching due to the inflation pressure a stabilized. This test should be conducted aftequilibrium condition has been achieved.	The pressure should not decrease without compensating for temper changes, and there should be no defects in the means of rescue.	e by more than 5% as determined erature and atmospheric pressure seam slippage, cracking or other	Design WP Design temp OC
The term "operational pressure" has the sa meaning as the term "working pressure"; i.e. pressure determined by the designed re-s pressure of the relief valves, if fitted, except the fitten actual re-seat pressure of the relief valve determined by testing, exceeds the designed seat pressure by more than 15%, the higher figs should be used.	ne at tt, s, e-		Comments/Observations Passed Failed

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

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

	Manufacturer:	Date:	Time:
Means of rescue	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 fi	re 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 pro	_	Passed	Failed	
	The rigid means of rescue is to support the occupant out of the water.		Passed	Failed	
			Comments/Observations		
			Passed	Failed	

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1 uge 200			
	Manufacturer:	Date:	Time:
Means of rescue	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	
Test Procedure 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 from such a loading		Passed Comments/Observations	Failed

	Manufacturer:	Date:	Time:
Means of rescue	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	e 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.	The launching appliance and its att should be of sufficient strength to w of not less than 2.2 times the maxim	ithstand a static proof load on test	MWL : Test load (2.2 x MWL):	kN
With the load at the full outboard position, the load should be swung through an arc of approximately 10° 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° both inboard and outboard.	There should be no evidence of damage as a result of this test.	significant deformation or other	There should be no evidence other damage Passed/Failed upright 20 ⁰ inboard list 20 ⁰ outboard list Comments/Observations	

1 486 250			
	Manufacturer:	Date:	Time:
Means of rescue	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			Weight of the means of rescue intend	led for use:
suspended from the lifting points with the launching appliance in the upright position.	or other damage as a result of the te		LWL	kN
The load should be moved from the full inboard to			MWL:	kN
the full outboard position using the means of operation that is used on the ship.	Each launching appliance together vigear should be so arranged that the		Test load (1.1 x MWL) :	kN
The test should be repeated with the launching	rescue boat it serves can be safely loand a list of up to 20° either way:		Clear of davit horn ?**	Passed/ Failed
appliance positioned to simulate a combined 20° inboard list and 10° trim.	when boarded, as required by regular complement of persons;	ation III/23 or III/33, by its full	Does the appliance successfully lower conditions without evidence of significant damage? Passed/Failed	
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	without persons in the survival craft	or rescue boat.	Upright (1.1x MWL)	Passed/Failed
the use with the davit to ensure the satisfactory functioning of the davit under very light load			20 ⁰ inboard list +10° trim (1.1xMW)	L) Passed/Failed
conditions.			20 ⁰ inboard list +10° trim (LWL)	Passed/Failed
Note:	A launching appliance should not of		Stored power	Passed/Failed
Notwithstanding the 10°trim and 20° list	gravity or stored mechanical power		Start pressure:	k Pa
requirements, lifeboat launching appliances for oil tankers, chemical tankers and gas carriers with a	power supplies to launch the survive the fully loaded and equipped condit		Min. pressure: Pressure drop after one movement:	k Pa k Pa
final angle of heel greater than 20° should be capable of operating at the final angle of heel on			Time from inboard to outboard:	sec
the lower side of the ship, taking into consideration the final damaged waterline of the			Comments/Observations	
ship.			** if applicable	

	Manufacturer:	Date:	Time:
Means of rescue	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 successful hoisting load from the outboard causing permanent deformation or	to the inboard position without	maximum designed hoisting load:	

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

6.3.3.6.4 Winch brake test	Regulations: 1		SA 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			Weight of the lightest means of	of rescue
1.5 times the maximum working load should be	The test load should drop no more	than 1 m whan the broke is applied	:	kN
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	_	e may be exceeded if an exposed	MWL :	kN
lowered at maximum lowering speed through a distance of at least 3 m and stopped by applying			Test 1:	
the hand brake sharply.			Static test load (1.5 x MWL):	kN
This test should be repeated a number of times.			Does the brake test hold the pass/fail	ne test load (1.5x MWL)?
If the winch design incorporates an exposed brake, one of these tests should be carried out with			MWM:	kNm
the brake wetted.			Drum diam.	mm
			Wire diam.	Mm
The various tests should achieve a cumulative	The launching appliance should st	•	Number of turns	,
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,	that of a fully equipped means o lightest means of rescue intended f		Max. lowering speed	m/s
without persons, or the lightest means of rescue intended for use with the winch should also be			Test 2	
demonstrated.			Dynamic Test load (1.1 x MW Brake test carried out after > 3	
Following completion of these test (and 6.3.3.6.5 and 6.3.3.6.6), the winch should be stripped for	Inspection of the stripped winch shor undue wear.	nould reveal no significant damage	Stop within 1 meter?	Passed/Failed
inspection.				continued

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

6.3.3.6.4 Winch brake test (continued)	Reg	gulations: 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

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	Manufacturer:	Date:	Time:
Means of rescue	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	ce 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.	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: I	LSA Code 6.1.2.6; MSC.81(70) 1/8.1.6	
Test Procedure	Acceptance	ce 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.	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.		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 an	d documents
/ • 1 • 1	Duomittea	ara willian,	10ports un	a accumination

- 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	
Туре	
Date	
Place	
Name Surveyor printed	
Signature	
Approving Organization	

7.1.1 Submitt	7.1.1 Submitted drawings, reports and documents					
	Submitted drawings and documents					
Drawing No.	Revision No. & date	sion No. & date Title of drawing				

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

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	Manufacturer:	Date:	Time:	
Line Throwing Appliances	Model:	Surveyor:		
	Lot/Serial Number:	Organization:		
7.1.1.1 Quality Assura	ance	Regulations: - SOLAS III/5, MS	C.81(70) 2/4	
Except where all appliances of International Convention for the representatives of the Administration ensure that the quality of life specification of the approved publication of the approved publication appliances are provappliance approved by the Administration of the t	of a particular type are required by Chapter III of the e Safety of Life at Sea, 1974, as amended, to be inspected, ration should make random inspections of manufacturers e-saving appliances and materials used comply with the	Quality Assurance Standard Used: Quality Assurance Procedure:		

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

7.1.1.2 Visual inspection	Regulations: LSA Code Chapter	r I/1.2 and MSC81(70) 1/9.4			
Test Procedure	Acceptano	ee Criteria Significant Test Data			
Visual examination:-	Line Throwing Appliance should:	-			
Approval markings		oval information including the date of manufacture and expiry and are to be indelible;	Passed	Failed	
Operating instructions.	Be provided with clear and precise the casing clearly illustrating the u	instructions or diagrams printed on use of the line throwing appliance;	Passed	Failed	
Outer casing.		scomfort to the person holding the with the manufacturers instructions; s or plastic envelopes for its water-	Passed	Failed	
Comfort.		n which the rocket is ejected can be nt and be capable of throwing a line	Passed	Failed	
Ignition System.	an integral rocket and line, contain addition, in the case of a pistol-	ket, or the assembly, in the case of med in a water-resistant casing. In fired rocket, the line and rockets n should be stowed in a container, he weather.	Passed Comments/Observations	Failed	

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

7.1.1.3 General Data and Specifications	Regulations: LSA Code 1.2; MS		SC.81(70) 1/9.1	
General Information	Line Thrower Dimensions		Line Thrower Weight	
Construction Material:	Dimensions:			
Rocket Casing:	Length of Rocket:		Design Weight: Rocket:	
Outer Casing (If applicable):	Diameter of Rocket:			
	Length of Line:		Weight As Tested: Fully Equipped:	
Line Material:	Number of Strands:		Comments/Observations	
	Diameter of Line:			

	Manufacturer:	Date:	Time:
Line Throwing Appliances	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)	В								1.2.1, 4.2.1	
Low temperature conditioning (7.1.3)		В							9.5, 4.2.2	
High temperature conditioning (7.1.4)			В						9.5, 4.2.3	
Humidity conditioning (7.1.5)				В					9.5, 4.2.4	
1 metre for 24 hours (7.1.6.1)					В				9.1, 4.3.1	
Salt water spray (7.6.1.2)						В			9.1, 4.3.3	
Drop test (7.1.7.1)							В		9.5, 4.4.1	
Safety inspection (7.1.10)	С	С	С	С	С	С	С	С	9.1, 4.5.1, 4.5.5, 4.5.6	
Visual inspection(7.1.1.2)	С	С	С	С	С	C	С	С	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	

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	Manufacturer:	Date:	Time:
Line Throwing Appliances	Model:	Surveyor:	
	Lot/Serial Number:0	Organization:	

TEST ITEMS CONDITIONING		SPECIMEN NUMBER						REFERENCES	REMARKS	
SEQUENCE										
	1-3	4	5	6	7 - 9	10- 12	13-15	16	MSC 81(70)	
Operational test using immersion suit (7.1.7.2)							Е		9.1, 4.4.2	May be carried out with any specimen and the number recorded on the test sheet.
Function test Line firing	Е	Е	Е	Е	Е	Е	Е	Е	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.

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		Manufacture	er:	Date:		Time:		
Line 7	Throwing Appliances	Model:		Surveyor:				
		Lot/Serial N	al Number: Organization:					
<u> </u>								
7.1.2	Temperature cycli	ing test		Regulations: LSA Code 1.2 ar	nd 7.1; MSC81(70) 1/	9.5 & 4.2.1		
	Test Procedure		Acceptano	ce Criteria		Significant Test Data		
	hree specimens of parachut d be alternately subjected		Each specimen should show no s cracking, swelling, dissolution or			2	3	
tempe	eratures of -30°C and - ating cycles need not follo	+65°C. These	The projectiles should carry the lin		Condition after con	nditioning (Pass/Fail)	
after	each other and the follow	ing procedure,						
repeated for a total of 10 cycles, is acceptable:		_	The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile			Distance travelled by line (metres)		
1.	an 8 h cycle at +65°C to b one day; and	e completed in						
2.	the specimens removed f			Lateral deflection	Lateral deflection (%)			
	chamber that same day an under ordinary room cond							
	next day;							
3. an 8 h cycle at -30°C to be completed the next day; and				Comments/Observ	Comments/Observations			
4.	the specimen removed for chamber that same day an under ordinary room condinext day;	nd left exposed						
The 3 projectiles should be fired connected to a line and should then function effectively.								
					Passed	Failed	l	

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

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

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

7.1.4 High temperature conditioning te	st	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°C for at least 48 h. The specimens should function effectively at that temperature.	The specimen should show no si cracking, swelling, dissolution or of the specimen should carry the line. The lateral deflection from the line the length of flight of the projectil	change of mechanical qualities. e at least 230 m in calm conditions. e of firing should not exceed 10% of	Specimen 5 Condition after conditioning (Pass/Fail) Distance travelled by line (metres) Lateral deflection (%) Comments/Observations Passed Failed	

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1 uge 500			
	Manufacturer:	Date:	Time:
Line Throwing Appliances	Model:	Surveyor:	
	Lot/Serial Number:	Organization:	

7.1.5 Humidity conditioning	Regula	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 shrinking, cracking, swelling, dissolution qualities The specimen should carry the line at least. The lateral deflection from the line of firing the length of flight of the projectile	or change of mechanical 230 m in calm conditions.	Specimen 6 Condition after conditioning (Pass/Fail) Distance travelled by line (metres) Lateral deflection (%) Comments/Observations		
			Passed Failed		

						1 450 50	
	Manufacture	er:	Date:		Time:		
Line Throwing Appliances	Model:		Surveyor:				
	Lot/Serial N	Number:	Organization:				
7.1.6.1 1 m immersion for	or 24 hours test		Regulations: LSA Code 1.2 & 7	7.1; MSC81(70) 1/9	0.1 & 4.3.1		
Test Procedure		Acceptan	ce Criteria		Significant Test Dat	a	
Three rockets used in the line-throunits, should be immersed horiz			ow no sign of damage such as solution or change of mechanical	7	8	9	
under 1 m of water.	ontaily 101 24 II	qualities.	solution of change of incentanear	Condition after co	nditioning (Pass/Fai	1)	
The specimens should be fired co and should function efficiently at		The 3 specimens should carry conditions.	the line at least 230 m in calm				
	1		of firing should not avoing 10% of	Distance travelled by line (metres)			
		The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.					
				Lateral deflection (%)			
				Comments/Observ	vations		
				Passed	Failed	4	
				1 asscu			

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1 480 200			
	Manufacturer:	Date:	Time:
Line Throwing Appliances	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%	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.		10	11	12
natrium chloride solution) at a temperature of +35±3°C for at least 100 h.			Condition after con	nditioning (Pass/Fa	il)
The specimens should be fired connected to a line	The 3 specimens should carry th conditions.	e line at least 230 m in calm			
and should function correctly at ambient temperature		66.	Distance travelled	by line (metres)	
temperature	The lateral deflection from the line of firing should not exceed 10% of the length of flight of the projectile.				
			Lateral deflection	(%)	
			Comments/Observ	rations	
Note: Natrium and Sodium are the same compound			Passed	Faile	d

Passed _____ Failed _____

						1 450 50
	Manufactur	er: Date:			Time:	
Line Throwing Appliances	Model:	Surveyor:				
Lot/S	Lot/Serial N	fumber: Organization:				
7.1.7.1 2 m Drop Test		Regulations: LSA Code	e 1.2 & 7	7.1; MSC81(70) 1/9.1	1 & 4.4.1	
Test Procedure		Acceptance Criteria		S	ignificant Test Dat	a
Three line-throwing appliances re		The three specimens should remain in a safe condition after t		13	14	15
dropped in turn end-on and hor height of 2 m on to a steel plate a cemented on to a concrete floor.	bout 6 mm thick	test and should show no sign of damage such as cracking, so dissolution or change of mechanical qualities	welling,	Condition after con	Condition after conditioning (Pass/Fail)	
		The 3 specimens should carry the line at least 230 m conditions.	in calm			
The specimens should be fired connected to a line.	connected to a		Distance travelled by line (metres)			
				Lateral deflection (%)	,
				Comments/Observa	ations	

1 450 310			
	Manufacturer:	Date:	Time:
Line Throwing Appliances	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			13	14	15
manufacturer's operating instructions by an operator wearing an insulated buoyant immersion	firing.	ny person merose proximity during	Condition after conditioning (Pass/Fail)		
suit or the gloves taken from an insulated buoyant immersion suit.	The 3 specimens should carry conditions.	the line at least 230 m in calm			
The specimens should be fired connected to a	The lateral deflection from the lin	ne of firing should not exceed 10%	Distance travelled	by line (metres)	
line.	of the length of flight of the project	ctile.			
			Lateral deflection (%)		
			Operation using immersion suit glove (Pass/fail)		
			Comments/Observ	rations	
			D 1	F 11 1	
			Passed	Failed	
					Pass/fail)

	Manufacturer:	Date:	
Line Throwing Appliances	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	

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1 age 312			
	Manufacturer:	Date:	_ Time:
Line Throwing Appliances	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	Acceptano	ce 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 st	rain 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

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

7.1.10 Safety inspection Regu		Regulations: LSA Code 1.2 & 7.	7.1; MSC81(70) 1/4.5.1, 4.5.5 & 4.5.6		
Test Procedure	Acceptano	ee 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 enveloperesistant properties.	es are not used to maintain water-	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 outside.	of expiry indelible printed on the	Line throwing appliance rocket and striker unit indelible date stamped. (Pass/Fail)		
			Comments/Observation.		
			Passed Failed		

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