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- ☒ 1. Accepted
- ☐ 2. Accepted with comments incorporated
- ☐ 3. NOT accepted, revise and resubmit
- ☐ 4. Issued for Information Only
- ☐ 5. Interface Information as clouded (is accepted and frozen)

Name: Geir Hauan Date: 05.04.16

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03E	10/09/2015	Issued for Review	ASL	SJA	ALA
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MOB BOAT - TECHNICAL SPECIFICATION

Package Title: N5403 Mob Boat w/davit

Area Code: L100	System Code: 76	Project Tag Numbers: 76SB0904	No. of Pages: 7
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Technical Specification For Mako 655 Water-jet R-002



03E	09.09.15	Revised for customer	ASL		
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Norsafe Project No.: 6011		Project Title: Apply Leirvik			
Norsafe Doc. No.: TSB-0113		Technical specification for Mako 655 Water-jet R-002			
Customer Document No.: DN02-N5403-Z-SP-0002			Rev. No.: 03E	Total Pages: 7	
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Norsafe Project No.: 6011	Norsafe Doc. No.: TSB-0113	Rev. Date.: 03.04.2016	Rev. No.: 2
Document Title: Technical specification for Mako 655 Water-jet R-002		Customer Doc.No.: DN02-N5403-Z-SP-0002	Rev. No.: 04L

1. TECHNICAL INFORMATION

Dimensions

Length overall	6,75 m
Length on fender	6,55 m
Beam	2,70 m
Height	2,26 m
Height, keel to lifting point	1,92 m

Boat Data

Capacity, maximum	10 Persons
Weight, fully equipped	2,100 kg
Davit load, with 10 pers@100 kg	3,200 kg
Lifting arrangement	Off Load Release Hook
Propulsion	236 Hp inboard diesel engine with waterjet
Colour	Orange (RAL 2004)

Operational Performance

Speed, approx. with 3 pers	Minimum 25 knots
Range, approx. with 3 pers	Minimum 4 hours

2. MATERIALS

Hull and deck	Fire retardant glassfibre reinforced polyester (GRP)
Buoyancy material	Polyurethane foam
Console and sprayhood	Fire retardant glassfibre reinforced polyester (GRP)
Self-righting frame	Aluminum
Deck fittings	Galvanised and stainless steel
Fender	Polyethylene foam, reinforced PVC cover
Fuel tank	Seawater resistant aluminium
Painter release	Galvanized steel
Release hook	Stainless steel (Duplex)
Waterjet protection frame	Seawater resistant aluminum

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3. GENERAL DESCRIPTION

The fast rescue boat is designed and manufactured according to latest NORSOK R-002, NMD, SOLAS, Classifications Society and National Authority requirements.

The rescue boat has excellent reliability, maneuverability, and sea keeping abilities in order to fulfil its prime function - to provide an effective means of search and recovery for persons missing at sea. Design and construction fulfil the need for reliable, low maintenance standby and operation. When installed with an approved davit, the boat fulfils the requirements for fast rescue boats on offshore installations and standby vessels, and is fully compliant with latest requirements for Ro-Ro ships.

The boat is further designed to serve the patrol, boarding and inspection role, with deck layout allowing the crew to operate efficiently and comfortably over long time periods.

The layout and performance of the boat ensures optimum diving support, survey and work boat duties.

4. HULL AND DECK

The fast rescue boat is fabricated in fire retardant glass fibre reinforced polyester (GRP).

Two longitudinal bulkheads along the length of the hull, transverse bulkheads and spray rails provide structural strength. The hull is a fully planning, deep-V type with transom, giving optimum sea keeping ability at all speeds in all sea conditions.

The space between hull and inner liner is filled with polyurethane buoyancy foam. If damaged below the waterline, the boat will float at safe level in fully flooded and loaded condition. The boat is self-bailing through two drainage outlets at the stern.

The deck has an anti-slip surface. Lifelines are fitted on the gunwale.

A heavy duty polyethylene fender protects the hull by absorbing impacts. The foam fender is protected by a double skin of reinforced PVC, secured with sail tracks at gunwale and chine level. The fender provides additional buoyancy.

The FRB is equipped with one electrical, and one manual bilge pump.

5. LIFTING ARRANGEMENT AND ADDITIONAL HOOKS

Lifting is by a single point arrangement. An approved Off Load release hook, with connection ring for davit hook, is installed on top of the console reinforced with backing plates and structural connections down to each side in the console and bolted in to the deck.

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There is a painter hook in bow and pullers on each side astern.

The off load hook on the console is made of stainless steel. A handle ensures remote release for painter hook, placed in front.



Henriksen off load hook



Painter hook



Bollard

6. ENGINE, STEERING AND PROPULSION SYSTEM

The fast rescue boat is fitted with an SOLAS approved inboard diesel engine with a suitable water-jet with the following features:

- Electrical starter with two independent start batteries
- Fresh water engine cooling with heat exchanger to seawater cooling
- Engine is EPA US Tier 3 approved
- Alternator Distribution ensures charging of batteries while motor is running.
- Water-jet with dry run capability, allowing the boat to run in the davit for a maximum of 5 minutes
- A Fuel tank of 110 l is located forward of the engine and filled through fitting on sprayhood
- Water-jet protection frame fixed to the transom.
- Engine air intake designed to prevent water ingress in case of capsize
- Wet exhaust system, with outlet at the transom, which expels water from the seawater engine cooling system
- Transmission includes neutral gear for idle running and reverse gear for back flushing

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7. CONSOLE AND DECK FITTINGS

Console with a large spacious engine room makes service and maintenance easier and more comfortable. All electrical equipment will be placed inside.

It has a watertight instrument panel and controls for engine start-stop, steering and maneuvering and electrical equipment.

The boat has been designed to provide a protected and safe working environment for the crew, engine and equipment. It has the following additional features:

- Spacious storage with watertight hatch for loose equipment in front of the deck with room for SOLAS equipment and more
- Inspection hatch under the seating positions gives access to batteries, bilge pump, drive shaft and water-jet
- Secure grab handles throughout the boat.
- Sprayhood to protect persons on deck, designed to use for boarding etc.
- Individual seating for three persons, with pilot and co-pilot side by side.
- Manual and electrical bilge pump



Example panel



Console/engine room

8. ELECTRICAL SYSTEM

The boat is fitted with a 12 volt DC electrical system.

Basic equipment consists of:

- Positive pole switches for all three battery banks
- Dead man switch for emergency engine shut off.
- Electrical starter powered by two independent batteries
- Standby battery charging from ship's/Rig's power supply
- Engine has a 12 volt alternator for charging batteries while boat is running
- Electrical switch panel with switches for all consumers
- 12 volt power outlet for searchlight
- Circuit breakers for all electrical equipment
- Electric, automatic bilge pump with level switch

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9. CAPSIZE EQUIPMENT

In the event of capsize, the engine is automatically shut off. The self-righting frame is fitted with a self-righting bag inflated by a CO₂ bottle. Release handle for inflation is placed at the water-jet protector, easy reachable for persons in the water.

10. EQUIPMENT

- Electrical and manual bilge pump
- Bollards aft , painter hook in bow, off load hook on console
- Water-jet protection frame
- Fuel level sensors
- Fuel gauge
- Alternator distribution
- Shore supply box
- Shore supply cable
- Navigation lights
- SOLAS equipment: Oars, buoyant bailer, sea anchor, painter and tow line, waterproof torch with extra batteries and bulbs, whistle, first aid kit, buoyant rescue quoit with 30m rescue line, Radar reflector, thermal protective aids, fire extinguisher, boat hook , bucket, jack knife and rope ladder, compass and handheld searchlight
- NMD 853 Electrical system
- Communication equipment
- VHF equipment
- GPS equipment
- Working lights in self-righting frame
- Rescue net for MOB