

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:**That the Fast rescue boats: rigid**with type designation(s)
Alusafe 700 MkII

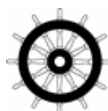
Issued to

Maritime Partner AS
ÅLESUND, Norway

is found to comply with the requirements in the following Regulations/Standards:

Annex A.1, item No. A.1/1.20b and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation III/4, III/26, III/34, LSA Code and IMO MSC/Circ. 1016 & 1094

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-04-07**.Issued at **Høvik** on **2016-04-08**DNV GL local station:
ÅlesundApproval Engineer:
Helge BjørnaraNotified Body
No.: **0575**for **DNV GL AS**-----
Vidar Dolonen
Head of Notified Body

Product description

Alusafe 700 MkII is rigid fast rescue boat with single point lifting hook and inflatable bag for re-righting after capsizing. The rigid fast rescue boat comes in two versions:

- Single inboard engine w/ waterjet
- Twin inboard engines w/ waterjets

Length over all incl. fenders:	7.11 m
Breadth max:	2.70 m
Depth to gunwale:	0.92 m
Weight of boat, fully equipped:	2793 kg
Weight of boat, fully manned (82.5 kg/person):	4031 kg

Hook manufacturer and type:	HMK 3.5 or 5 or 8, offload
Lifting frame SWL:	
o Dulpex:	5000 kg
o Aluminium:	3500 kg
Hull material:	Aluminium

Propulsion system:	Inboard engine(s) w/ waterjet(s)
Engine manufacturer and type:	Yanmar 4LHA-STP
	Volvo Penta D3-150
	Volvo Penta D3-170
	Volvo Penta D3-200
	Volvo Penta D3-220
	Volvo Penta D4-260
	Volvo Penta D4-300
	2 x Yanmar 4JH3-DTE
	2 x Volvo Penta D3-150
	2 x Volvo Penta D3-170
	2 x Volvo Penta D3-200
	2 x Volvo Penta D3-220

Waterjet types:	Vosper PP90
	Hamilton 213
	Hamilton 241
	Hamilton 274
	Kamewa FF240
	Kamewa FF270
	2 x Hamilton 213

Bollard pull (measured for 221 kW engine):	7.2 kN
Bollard pull (measured for 2 x 89.1 kW engines):	10.0 kN

Application/Limitation

Approved engine power:	177 kW for Yanmar 4LHA-STP
	110 kW for Volvo Penta D3-150
	125 kW for Volvo Penta D3-170
	147 kW for Volvo Penta D3-200
	162 kW for Volvo Penta D3-220
	191 kW for Volvo Penta D4-260
	221 kW for Volvo Penta D4-300
	2 x 89.1 kW for Yanmar 4JH3-DTE

Number of persons, max (single & twin engine):	15
Max load of persons (82.5 kg/person) (single & twin engine):	1238 kg

- Fast rescue boat equipment and marking/instructions to be inspected after installation onboard the ship. Equipment shall comply with LSA Code and IMO Res. MSC.81(70).

- The fast rescue boat is fitted with a release hook without on-load release capabilities, in accordance with LSA Code 4.4.7.6.9. Hence, if it is to be combined with launching appliances with permanent high speed tensioning device (LSA Code 6.1.7.3), compatibility must be assured.
- The normal equipment of the fast rescue boat to include a hands-free and watertight VHF radio communication set, in addition to the ones required on the bridge.
- The design assessment is based on IMO Res. MSC.48(66) as amended by IMO Res. MSC.207(81), IMO Res. MSC.218(82), IMO Res. MSC.272(85) and IMO Res. MSC.320(89).
- Production and installation testing shall be carried out according to IMO Res. MSC.81(70) as amended, Part 2.

Type Examination documentation

Basis for approval:

Alusafe 770:

- Doc. No A01-029, Technical spec. for Alusafe 770 2002-12-03
- Drawings as specified in approval letter 2004-05-18
- Prototype tests carried out 2003-12-08 and 2003-12-18

Twin engine version:

- Dwg. as spec. in approval letter 2008-07-09
- Doc. No. MP-200502, Rev.A, Strength analysis of the lifting Arrangement for Alusafe 770 Twin Steyer
- Prototype tests carried out 2006-09-11 and 2008-05-28

Plate built version:

- Dwg. as spec. in approval letter 344.1-000607-J-107 2008-08-24
- Dwg. as spec. in approval letter 344.1-000607-J-126 2009-05-13
- Dwg. as spec. in approval letter 344.1-000607-J-139 2010-02-01

Additional number of persons:

- Dwg. No. E03-152-01, Rev.02, Seating Plan 15 Pers. 2010-10-05
- Prototype test 2009-05-04

Alusafe 700 MkII:

- Dwg. No. C02-117-28, General Arrangement
- Dwg. No. E03-359, Rev.C, Seating Plan 15 Pers. 2011-01-28
- 12 V Distribution Alusafe 700 – FMV
- Prototype tests 2011-01-31
- Hull structural drawings as per approval letter 2010-11-15

Additional documentation for twin engine version:

- Dwg. No. C02-259-01, Rev.C, General Arrangement AS700 MkII Twin 2011-12-12
- Dwg. No. E03-366, Rev.A, Alusafe 700-V2 MkII Seating Plan 15 Pers. 2012-01-02
- Dwg. No. AS700-V2-001, Rev.A, Plan Alusafe 700 Twin MkII 2012-01-09
- Dwg. No. AS700-V2-002, Rev.A, Profile Alusafe 700 Twin MkII 2012-01-09
- Dwg. No. AS700-V2-003, Rev.A, Frames Alusafe 700 Twin MkII 2012-01-09
- Prototype test Alusafe 700 Twin MkII 2012-02-06
- Prototype test Alusafe 770 Twin 2008-05-28
- Surveyors' checklist for rescue boat & fast rescue boat 2012-02-06

Water tight compartment and weight increase:

- Dwg. No. AS700-V1-007, Rev.C, Water Tight Compartments 2013-03-19
- Calculation of Buoyancy Volume w/ One Tank Punctured 2013-03-19
- Prototype tests 2013-03-06

Additional documentation for new lifting frame:

- Doc. No. MP-2013-02, Rev.0, Strength Analysis of Lifting Frame, 2013-09-25
- Doc. No. MP-2013-03, Rev.2, Strength Analysis of Lifting Frame, 2013-09-25
- Dwg. No. E01-080, Rev. A, Lifting Frame NORSOK 5T MP Boats 2013-09-13
- Dwg. No. AS700-V2-040, Rev.B, New Lifting Structure Alusafe 700 Twin (+100mm) 2013-09-12

Job Id: **344.1-005331-1**
Certificate No: **MEDB00000XK**

Additional documentation for aluminium lifting frame:

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|--|------------|
| - Doc. No. MP-2015-01, Rev.1, Strength analysis of a lifting frame | 2015-11-30 |
| - Dwg. No. E01-090, Rev.B, Lifting frame SOLAS 3,5T Aluminium Liftingframe | 2015-08-29 |
| o Dwg. No. 70016-101 to 114, Various parts | 2015-08-29 |

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC.81(70) Part 1, as amended by IMO Res. MSC.226(82), IMO Res. MSC.274(85), IMO Res. MSC.321(89) and IMO Res. MSC.323(89).

Marking of product

The product is to be indelibly marked with name of manufacturer, type designation, dimensions and date of manufacture, according to LSA code item 4.4.1.2 and the mark of conformity. In addition, the manufacturer shall affix the Mark of Conformity followed by DNV GL Notified Body No. and the two last digits of the production year.

List of fast rescue boat equipment to be posted in the boat.