

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Inflatable liferafts**with type designation(s)
SMLR-A-4(I)

Issued to

Shanghai Star Rubber Products Co., Ltd.
Shanghai, China

is found to comply with

**SOLAS 74, Regulation III/4, III/21, III/31, III/34. IMO Res. MSC 48(66) - Lifesaving
Appliance Code. Tested to IMO Res. MSC 81(70)****Application :****Not for use on board SOLAS ships. Carrying capacity is only 4 persons and does not fulfil item
4.1.2.1 (minimum capacity 6 persons).**This Certificate is valid until **2021-04-26**.Issued at **Høvik** on **2016-04-27**DNV GL local station: **Shanghai CMC**for **DNV GL**Approval Engineer: **Tessa Biever**

Petter Langnes
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id:
Certificate No: **TALB000000A**

Product description

SMLR-A-4(I), inflatable liferaft:

Container material:	GRP
Buoyancy tube fabric:	XB-21
Seam fabric	XB-03
Exterior canopy fabric:	2x3-2PU
Interior canopy fabric:	190 T
Insulated floor	XB-21

Application/Limitation

Container No.	Emergency Pack	Max. Installation height
GRP-/MQ-88-00 (820 mm x 570 mm x 360 mm)	SOLAS A	18 meter
Number of person, max:	4	
Required towing force:	3 knots – 0.55 kN	

- Not for use on board SOLAS ships. Carrying capacity is only 4 persons and does not fulfil LSA Code 4.1.2.1 (minimum capacity 6 persons).
- Gas cylinders shall be of an approved type.
- Components in the gas inflation system should be approved according to ISO 15738:2002.
- The liferaft is intended to be installed with external weak link and a hydrostatic release unit. Float free arrangement to be checked upon installation on board.
- Production testing shall be carried out according to IMO Res. MSC 81(70) part 2, as amended.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Basis for approval:

Description	Reference No.	Date
General drawing of "SMLR-A-4(I)"	274MQ-239-00A	2014-05
Structure drawing of "SMLR-A-4(I)"	274MQ-239-01A	2014-05
The drawing of "SMLR-A(I)-4" Inflatable Liferaft Canopy	274MQ-239-02A	2014-05
The drawing of "SMLR-A-4(I)" Inflation Liferaft Floor	274MQ-239-03A	2014-05
Inflation System for "SMLR-A-4(I)"	278MQ-65-07	2014-06
Window – ventilation calculation	278MQ-225-0	2013-06
Prototype test report "SMLR-A-4(I)" witnessed by DNV GL	MCS/Circ.980/Add.1	2015-06-25
Material test report, Shanghai Monitoring and Inspection Center for Rubber Products Quality, Shanghai, China	Test report No. W(X)20140931	2014-08-15
Material test report, Shanghai Monitoring and Inspection Center for Rubber Products Quality, Shanghai, China	Test report No. W(X)2011-2095	2011-12-15
Design Calculation Book	SMLR-A(I)/JCB-2014	2014-05-20
Operations instructions, edition 1.0	-	February 2014
Service manual, edition 3.0	-	February 2014
Liferaft Technical data	-	May 2014

Tests carried out



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Prototype tests and test reports in accordance with the Recommendation on Testing of Life-Saving Appliances, IMO Res. MSC 81(70) part 1, including IMO Res. MSC 226(82), IMO Res. MSC 295(87) and MSC. 323(89), have been witnessed and evaluated and found to be in compliance.

Marking of product

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.