DNV·GL

Certificate No:
TALB000003Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Inflatable Liferafts, throw over-board type, SOLAS-A or B Pack

with type designation(s)
SMLR-A-6/ -8/ -10/ -12/ -15/ -16/ -20/ -25

Issued to
Shanghai Star Rubber Products Co., Ltd.
No.4968 Sichen Highway,
Sheshan Town, Songjiang District,
Shanghai, China

Trade Name: FitzWright and CSM

is found to comply with
SOLAS 74 as amended, 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 :

This certificate is recognized by Transport Canada.

Issued at **Hamburg** on **2020-11-18**
This Certificate is valid until **2025-11-17** .
DNV GL local unit: **Shanghai**

Approval Engineer: **Peter Zell**

for **DNV GL**

Jörg Kallies
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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Job Id: **262.1-033929-1**
Certificate No: **TALB000003Y**

Product description

SMLR-A-6/ -8/ -10/ -12/ -15/ -16/ -20/ -25, Inflatable Liferafts, throw over-board type, SOLAS-A or B Pack

Container material:	GRP
Buoyancy tube fabric:	XB-21
Seam fabric	XB-03
Exterior canopy fabric:	2x3-3PU
Interior canopy fabric:	170T

The design assessment is based on IMO Res. MSC.48(66) as amended including IMO Res. MSC.293(87) and Canadian Lifesaving Appliance Standard TP 14475E, Part I Ch.IV [4.1] and [4.2] and Life saving equipment regulations C.R.C.1436 Schedule VIII.

Application/Limitation

Type	Persons (each 82.5 kg)	SOLAS A Weight [kg]	SOLAS B Weight [kg]	Required bollard pull [kN]		Maximum stowage height [m]
				2 kn	3 kn	
SMLR-A-6	6	82	70	0.5	0.8	40
SMLR-A-8	8	88	72	0.7	1.1	40
SMLR-A-10	10	112	92	0.8	1.3	40
SMLR-A-12	12	112	92	1.1	1.4	40
SMLR-A-15	15	142	110	1.1	1.5	40
SMLR-A-16	16	145	112	1.1	1.6	40
SMLR-A-20	20	171	128	1.5	1.8	40
SMLR-A-25	25	185	132	1.6	2.1	40

- The liferafts are to be serviced annually, provided where in any case this in impracticable, the administration may extend this to a period to 17 months. They shall be serviced at approved service stations which are authorized by the manufacturer.
- The liferaft shall be packed with a SOLAS A PACK or SOLAS B PACK.
- Gas cylinders shall be of an approved type.
- First aid kits shall comply with the minimum requirements of the Canadian Lifesaving Appliance Standard TP 14475E Part II Ch.VII [7.5.1].
- 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 2020.

This certificate is a renewal of and is replacing previous Certificate No. 1367914 HH.

Basis for approval:

Description	Reference No.	Date
SMLR-A-6 General drawing, Ed.1.0/Ed. 5.0	274MQ-123-00	2014-06/2020-09
SMLR-A-6 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-123-01	2014-06/2020-09
SMLR-A-6 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-123-02	2014-06/2020-09
SMLR-A-6 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-123-03	2014-06/2020-09

GRP-RF-590x1050 GRP Container (A+B-Pack)	GRP/MQ-1-00	2014-06
SMLR-A-8 General drawing, Ed.1.0/Ed. 5.0	274MQ-222-00	2014-06/2020-09
SMLR-A-8 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-222-01	2014-06/2020-09
SMLR-A-8 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-222-02	2014-06/2020-09
SMLR-A-8 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-222-03	2014-06/2020-09
GRP-RF-644x1085 GRP Container (A-Pack)	GRP/MQ-63-00	2014-06
GRP-RF-590x1050 GRP Container (B-Pack)	GRP/MQ-1-00	2014-06
SMLR-A-10 General drawing, Ed.1.0/Ed. 5.0	274MQ-124-00	2014-06/2020-09
SMLR-A-10 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-124-01	2014-06/2020-09
SMLR-A-10 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-124-02	2014-06/2020-09
SMLR-A-10 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-124-03	2014-06/2020-09
GRP-RF-644x1185 GRP Container (A-Pack)	GRP/MQ-2-00	2014-06
GRP-RF-590x1050 GRP Container (B-Pack)	GRP/MQ-1-00	2014-06
SMLR-A-12 General drawing, Ed.1.0/Ed. 5.0	274MQ-223-00	2014-06/2020-09
SMLR-A-12 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-223-01	2014-06/2020-09
SMLR-A-12 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-223-02	2014-06/2020-09
SMLR-A-12 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-223-03	2014-06/2020-09
GRP-RF-644x1250 GRP Container (A-Pack)	GRP/MQ-64-00	2014-06
GRP-RF-644x1085 GRP Container (B-Pack)	GRP/MQ-63-00	2014-06
SMLR-A-15 General drawing, Ed.1.0/Ed. 5.0	274MQ-203A-00	2014-06/2020-09
SMLR-A-15 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-203A-01	2014-06/2020-09
SMLR-A-15 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-203A-02	2014-06/2020-09
SMLR-A-15 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-203A-03	2014-06/2020-09
GRP-RF-690x1200 GRP Container (A-Pack)	GRP/MQ-3-00	2014-06
GRP-RF-644x1185 GRP Container (B-Pack)	GRP/MQ-2-00	2014-06
SMLR-A-16 General drawing, Ed.1.0/Ed. 5.0	274MQ-203-00	2014-06/2020-09
SMLR-A-16 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-203-01	2014-06/2020-09
SMLR-A-16 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-203-02	2014-06/2020-09
SMLR-A-16 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-203-03	2014-06/2020-09
GRP-RF-690x1200 GRP Container (A-Pack)	GRP/MQ-3-00	2014-06
GRP-RF-644x1185 GRP Container (B-Pack)	GRP/MQ-2-00	2014-06
SMLR-A-20 General drawing, Ed.1.0/Ed. 5.0	274MQ-126-00	2014-06/2020-09
SMLR-A-20 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-126-01	2014-06/2020-09
SMLR-A-20 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-126-02	2014-06/2020-09
SMLR-A-20 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-126-03	2014-06/2020-09
GRP-RF-690x1450 GRP Container (A-Pack)	GRP/MQ-4-00	2014-06
GRP-RF-690x1200 GRP Container (B-Pack)	GRP/MQ-3-00	2014-06
SMLR-A-25 General drawing, Ed.1.0/Ed. 5.0	274MQ-127-00	2014-06/2020-09
SMLR-A-25 Inflatable Liferaft Structure, Ed.1.0/Ed. 5.0	274MQ-127-01	2014-06/2020-09
SMLR-A-25 Inflatable Liferaft Canopy, Ed.1.0/Ed. 5.0	274MQ-127-03	2014-06/2020-09
SMLR-A-25 Inflation Liferaft Floor, Ed.1.0/Ed. 5.0	274MQ-127-02	2014-06/2020-09
GRP-RF-690x1450 GRP Container (A-Pack)	GRP/MQ-4-00	2014-06
GRP-RF-690x1200 GRP Container (B-Pack)	GRP/MQ-3-00	2014-06
SMLR-A Technical Specification	SMLR-A/JT-2019	2019-04
SMLR-A Liferaft Technical Data Ed.3.1	SMLR-A/JCB-2018	2018-08
SMLR-A Design Calculation Book, Ed. 3.1	SMLR-A/JS-2018	2018-02
SMLR-A Inflation System, Ed. 2.0	278MQ-65-01	2020-09
SMLR-A/D Logo Sketch Manual (Canada), Ed. 2.0	SMLR-A/D BS-2020	2020-09
Inflatable Liferaft Operational Instructions, Ed. 1.0	---	2016-02
SMLR-A Evaluation & test reports witnessed by DNVGL	MCS/Circ.980/Add.1	2014-07
SMLR-A/D Material & Equip. list for Inflatable Liferafts	SMLR-A/D/CB-2020	2020-09
Outer canopy material test report	2016YW071	2016-12-02
Inner canopy material test report	W (X) 2009-26	2009-04-15
Test report f. hose assembly (TP 14475E Part II [5.1.2])	---	2020-07-31

Tests carried out

- 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 IMO Res. MSC.323(89), have been witnessed and evaluated and found to be in compliance.
- Tested to the requirements given in the Canadian Lifesaving Appliance Standard TP 14475E, Part II [5.1.2].

Marking of product

The product is to be indelibly marked with name and address of the manufacturer, type designation and date of manufacture.
The marking shall comply with the LSA Code (IMO Res.MSC48(66) item 4.2.6.3 and 4.2.7, and the Canadian Lifesaving Appliance Standard TP 14475E Part II [15.1].

All instructions and markings accompanying the liferafts, or printed directly on the liferafts, shall be in both English and French, as per "Procedures for Approval of Life-Saving Appliances and Fire Safety Systems, Equipment and Products", TP 14612E [2.2.1.3].

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products, TP 14612", DNV GL confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

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.