DNV·GL

Certificate No:
MEDB00001EE

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment (MED) as amended by directive (EU) 2015/559. This Certificate is issued by DNV GL SE based on the notification of the German Federal Ministry of Transport, Building and Urban Development.

This is to certify:

That the Automatically self-righting liferafts

with type designation(s)
HYF-Z10, HYF-Z15, HYF-Z16, HYF-Z20, HYF-Z25 (HYF, HUAYANG & Ocean Safety)

Issued to
Yantai Huayang Lifesaving Equipment Manufacturing Co., Ltd.
Yantai 120, China

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/1.14 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation III/4, III/26, III/34 & X/3, LSA Code, IMO MSC/Circ.809 & 811 and 2000 HSC Code 8

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

This Certificate is valid until **2021-07-20**.

Issued at **Hamburg** on **2016-07-21**

DNV GL local station:
Qingdao

Approval Engineer:
Marius Mørner

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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Job Id:
Certificate No: **MEDB00001EE**

Product description

"YF-Z10, HYF-Z15, HYF-Z16, HYF-Z20, HYF-Z25 (HYF, HUAYANG & Ocean Safety)"
automatically self-righting liferafts.

Application/Limitation

Type	Persons (82,5 kg)	Weight [kg]		Required towing force [kN]		Maximum stowage height [m]
		SOLAS A	SOLAS B	2 knots	3 knots	
HYF-Z10	10	119	93	1.39	1.86	36
HYF-Z15	15	154	117	2.08	3.10	36
HYF-Z16	16	156	117	2.15	3.20	36
HYF-Z20	20	168	121	2.56	3.40	36
HYF-Z25	25	194	136	2.86	3.70	36

The design assessment is based on IMO Res. MSC.48(66)-(LSA Code) Ch. I and IV, as amended by:

- IMO Res. MSC.207(81),
- IMO Res. MSC.218(82),
- IMO Res. MSC.293(87).

The liferaft shall be packed with a SOLAS A PACK or SOLAS B PACK.

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.

The liferafts may be approved for extended service intervals up to 30 months in accordance with SOLAS Ch. III, Regulation 20.8.3 on the condition that:

1. Such extended service intervals has been approved by the ships flag administration.
2. The liferafts are checked onboard in accordance with SOLAS Ch. III Regulation 20.8.3.2 at intervals in accordance with SOLAS Ch. III Regulation 20.8.1.1, according to procedures accepted by the Notified Body.
3. The liferafts shall be serviced at approved servicing stations in accordance with the recommendations in IMO Res. A.761(18) at intervals not exceeding 30 months.

Type HYF-Z25 (with SOLAS A pack) is not suitable for side-to-side transfer and have to be stowed for launching directly from the stowed position under unfavourable conditions of trim and list, according to SOLAS Reg. III/16.1.2.

Type Examination documentation

Prototype test witnessed by GL, all dated 2013-10-06:
- HYF-Z10 test report no. CS/HYF-Z10/201301,
- HYF-Z15 test report no. CS/HYF-Z15/201301,
- HYF-Z16 test report no. CS/HYF-Z16/201301,
- HYF-Z20 test report no. CS/HYF-Z20/201301,
- HYF-Z25 test report no. CS/HYF-Z25/201301.

Drawings issued by the Manufacturer, all dated 2013-01-10:
- no HYF-Z10-00, -01, -02 and HYQ-Z00,
- no HYF-Z15-00, -01, -02 and HYQ-Z01,
- no HYF-Z16-00, -01, -02 and HYQ-Z01,
- no HYF-Z20-00, -01, -02 and HYQ-Z02,
- no HYF-Z25-00, -01, -02 and HYQ-Z03.

Equipment list and Repair tools list of HYF-Z liferafts, file no BP/GJ/ZFZ201300, issued by the Manufacturer, dated 2013-01-10.

HYF-Z throwing over self-righting inflatable liferaft Design Calculations, file no. HY/HYF-Z /201301, issued by the Manufacturer, dated 2013-01-10.

Fabric of liferaft test report no W(X)2012-785, dated 2012-09-10, issued by Testing Center of Shanghai Institute of Rubber Products.

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 MSC. 323(89), have been witnessed and evaluated and found to be in compliance.

Marking of product

The product is to be indelibly marked with name of manufacturer, type designation and date of manufacture. The marking shall comply with the LSA Code (IMO Res. MSC. 48(66)) item 4.2.6 and 4.2.7.