TYPE EXAMINATION CERTIFICATE – EC MODULE B

Certificate no.:
MEDB000099C

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

that the Immersion suits and anti-exposure suits designed to be worn WITHOUT a lifejacket: (b) Immersion suit with inherent insulation

with type designation(s)
Immersion Suits type : HXB-II

issued to
Shanghai Martian Ship Equipment Co., Ltd.
Shanghai, **China**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2024/1975,**
item No. MED/1.6b. SOLAS 74 as amended, Regulation III/4, III/7, III/22, III/32, III/34 & X/3, LSA Code, 2000 HSC Code 8, IMO MSC/Circ.1046, IMO MSC.1/Circ.1628 and IMO Res. MSC.481(102).

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

This Certificate is valid until **2030-02-12**.

Issued at **Hamburg** on **2025-02-13**

DNV local unit:
Shanghai

Approval Engineer:
Timo Linn

Notified Body
No.: **0098**

for **DNV SE**

Mydlak-Röder, Christine
Head of Notified Body

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 Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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 USD 300 000.

Product description

“Immersion Suits type : HXB-II”
The HXB-II Suit is an insulated immersion suit designed to be worn without a lifejacket.

The suits are available in the following sizes:

Size	S	M	L	XL	XXL
Recommend height	1450-1600 mm	1600-1750 mm	1750-1850 mm	1850-1950 mm	1950-2100 mm
Max chest girth	1060 mm	1130 mm	1190 mm	1250 mm	1270 mm

Main Components

Object	Material	Manufacturer
Main fabric	CR Rubber (5.5 mm)	Changzhou meilisheng plastic products Co., Ltd
Buoyancy foam	EPE Pearl Wool	Yancheng Huyuan Packaging Technology Co., Ltd.
Zipper	Rubber Sealed Zipper	Wuxi Hailong Sealing Technology Co., Ltd
Retro-reflective Material	DM1101A PC (polycarbonate)	Zhejiang Longyou Daoming Optics & Chemical CO.,Ltd

For further details, see documentation under Type Examination documentation below.

Application/Limitation

Approved as an insulated immersion suit with buoyancy. It has to be worn without a lifejacket.

Position indicating light and retro-reflective materials shall be approved in accordance with the Marine Equipment Directive and bear the MED Mark of Conformity.

The design assessment is based on IMO Res. MSC.48(66) as amended by IMO Res. MSC.207(81), IMO Res. MSC.218(82) and IMO Res. MSC.481 (102).

Production and installation testing shall be carried out according to IMO Res. MSC.81(70), Part 2.

Type Examination documentation

Drawings	**Date**
Technical Documentation HXB-20200711,01,02,03,04,05,07,08,09	2024-12-28
Reports	**Date**
Evaluation and Test Report No.2020109	2020-08-31 – 2020-09-30
Documentation	
HXB-II Immersion suits Operating instructions	-

Tests carried out

Tests are documented in accordance with recommendation on testing of Life-Saving Appliances (IMO Res. MSC.81(70)) Part 1, including IMO Res. MSC.200(81), IMO Res. MSC.226(82) and IMO Res. MSC.323(89) and IMO Res. MSC.481(102) – Type II.

Marking of product

The product is to be indelibly marked with name and address of the manufacturer, type designation, dimensions, date of manufacture and the MED Mark of Conformity (see page 1). The marking shall comply with the LSA Code (IMO Res. MSC.48(66)) item 1.2.2.9.