

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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

This is to certify:**That the Buoyant smoke signals (pyrotechnics)**

with type designation(s)

JHB-4

Issued to

**Huahai Marine Signals Manufacturing Co., Ltd.
Haimen, 100, China**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397**,
item No. MED/1.10. SOLAS 74 as amended, Regulation III/4, III/34 & X/3 and LSA Code

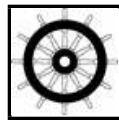
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-11-20**.

Issued at **Hamburg** on **2019-11-21**

DNV GL local station:
Nantong

Approval Engineer:
Roland Priebe



Notified Body
No.: **0098**

for **DNV GL SE**

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Gerhard Aulbert
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 Directive 2014/90/EU.

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. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-009820-1**
Certificate No: **MEDB00005XS**

Product description

JHB-4 is a buoyant smoke signal, which when activated emits smoke of a highly visible color for a period of not less than 3 min when floating in clam water.

Application/Limitation

Approved for use as Buoyant Smoke Signals (pyrotechnics).

Acceptable lifetime: Expiration date not to exceed 48 months after month of manufacture

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

A statistically adequate sample of the production shall be tested in accordance with IMO Res. MSC.81(70), Part 2, Ch.4.

Type Examination documentation

Test report from GL Nantong dated 2013-07-31.

Technical drawings JHB-4-00 – JHB-4-5.

This certificate is based on the previous MED-B 13615-14 HH dated 2015-06-12.

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC.81(70), Part 1, including IMO Res. MSC.200(80), IMO Res. MSC.226(82) and IMO Res. MSC.323(89).

Marking of product

The product is to be marked with name and address of manufacturer, type designation, date of manufacture, date of expiry, operational restrictions, Mark of Conformity and USCG number.

The product should be provided with brief instructions or diagrams clearly illustrating the use printed on the casing.