

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 Hand flares (pyrotechnics)

with type designation(s)
JHH-3

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) 2020/1170,**

item No. MED/1.9. SOLAS 74 as amended, Regulation III/4, III/34 & X/3, LSA Code and 2000 HSC Code 8

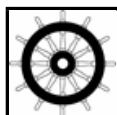
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-11-04.**

Issued at **Hamburg** on **2020-11-05**

DNV GL local station:
Nantong

Approval Engineer:
Michael Oberländer



Notified Body
No.: **0098**

for **DNV GL SE**

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, and amended by Decision No 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

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.



Job Id: **344.1-011058-1**
Certificate No: **MEDB0000735**

Product description

"JHH-3" is a hand flare burning with bright red colour for at least 1 minute and an average luminous intensity of minimum 15.000 candela.

Application/Limitation

Approved for use as Hand flares (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

The following documentation is basis for the DNV GL approval:

Documents	Date
Drawing: Hand Flare JHH-3-00	
Prototype test report by Wuhan Testing Center of Marine Life-saving Appliances /China, No.2015067	2015-08-14
Evaluation and test report in accordance with MSC/Circ.980 3.2 witnessed by DNV GL surveyor	2015-05-26 until 2015-07-23 / 2015-08-13

This certificate is replacing the previous MED certificate 42077-15 HH.

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 ISO 15736:2006.

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 if applicable USCG number (see page 1).

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