



TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB00005F3
Revision No:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

That the Hand flares (pyrotechnics)

with type designation(s)
IKAROS Hand Flare, Red

Issued to

Hansson PyroTech AB
Lindesberg, Sweden

is found to comply with the requirements in the following Regulations/Standards:

Regulation **MSN 1874 Amendment 6,**
item No. UK/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 **2024-07-03.**

Issued at **London** on **2022-09-30**

DNV local station:
Sweden CMC

Approval Engineer:
Helge Bjørnarå



Approved Body No.: **0097**

for **DNV UK Ltd.**

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. The product liability rests with the manufacturer or his representative in accordance with the Merchant Shipping (Marine Equipment) Regulations 2016.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV UK Ltd. 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. This certificate remains valid unless suspended, withdrawn, re-called, or cancelled.

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 300,000 USD.



Form code: MER 201.GBR

Revision: 2022-07

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Product description

"IKAROS Hand Flare, Red",
hand flares burning with a bright red colour for at least 1 minute and average luminous intensity of minimum 15.000 candela.

Design weight: 235 g ± 10%

Application/Limitation

Approved for use as hand flares (pyrotechnics).

Acceptable lifetime: 4 years

Liferaft drop test has to be performed before installation on liferafts.

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 approval:

| Documents | Date |
|---|--|
| Drawings as listed in "Document structure", No. DS 341510 Rev. 2 | 2019-03-04 |
| Prototype test reports witnessed by Bureau Veritas | 2015-03-30-04-02 2013-09-30-10-01 2012-05-29 2011-08-16-08-19 |
| Temperature cycling test and Salt spray test report No. SBTC 15-0080R by Bofors Test Center, Sweden | 2015-03-30 |

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 and MER Mark of Conformity (see first page).

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