



TYPE APPROVAL CERTIFICATE

Certificate no.:
TALB0000032
Revision No:
1

This is to certify:

that the **Hand flares (pyrotechnics)**

with type designation(s)
IKAROS Hand Flare Red

issued to

Hansson PyroTech AB
Lindesberg, Örebro Län, Sweden

is found to comply with

SOLAS 74 as amended, LSA Code as amended. IMO Resolution MSC.81(70) as amended.
TP14612E Ed.4 (2019-02) Procedures for approval of life-saving appliances and fire safety systems,
equipment and products

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2024-05-16**

for **DNV**

This Certificate is valid until **2029-05-15**.

DNV local unit: **Sweden CMC**

Approval Engineer: **Tessa Biever**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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.



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 ±10% g

Application/Limitation

Approved for use as Hand flares (pyrotechnics).

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

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.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Approval documentation

Certification in accordance with DNV Class Programme DNV-CP-0338, September 2021.

Documents	Date
Drawings as listed in “Document structure”, No. DS 341500 Rev. 2	2024-02-14
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 and operational restrictions.

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

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled “Procedures for Approval of Life Saving Appliances, Fire Safety Systems, Equipment and Products (TP 14612)”, DNV confirms that the product listed in this certificate is in accordance with Transport Canada requirements.

Transport Canada Application/Limitation

All of the required instructions and markings must be in both French and English.

Periodical assessment

DNV’s surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Program DNV-CP-0338, Section 4.