



TYPE APPROVAL CERTIFICATE

Certificate no.:
TALB000002R
Revision No:
1

This is to certify:

that the **Buoyant smoke signals (pyrotechnics)**

with type designation(s)
IKAROS MOB Smoke Signal MKIV

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

Application:

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

Issued at **Høvik** on **2024-02-12**

This Certificate is valid until **2029-02-11**.

DNV local unit: **Sweden Fleet In Service**

Approval Engineer: **Tessa Bieber**

for **DNV**



Digitally Signed By:
Jowita Permoda

Location: **DNV Gdynia, Poland**

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 MOB Smoke Signal MKIV"

lifebuoy self-activating smoke signal. The smoke signal is producing smoke for at least 15 minutes.

Tested with drop height 60 m.

Design weight: 4.5 kg

Body colour: Yellow

The smoke signal can be combined with the 'IKAROS MOB Light Signal MKIV', the complete unit will then be called Ikaros 'IKAROS MOB Light & Smoke Signal MKIV'.

Application/Limitation

Approved for use as lifebuoy self-activating smoke signal.

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) and the Canadian Life Saving Appliance Standard – TP14475 E , Part I, Ch. III, item 3.1.4.

The lifebuoy self-activating smoke signal is not to be stowed at a height above the waterline exceeding 60 m. Else a drop test shall be performed to verify correct working at installation heights of more than 60 metres.

Production and installation testing shall be carried out according to IMO Res. MSC.81(70), Pt. 2, Ch.4 and in compliance with ISO 15736:2006 A.2.4.

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

Type Approval documentation

Technical documentation:

Drawing no.	Rev.	Title	Date
SBTC 15-0085R		Test record (Temp. cycling, salt & vibration)	2015-03-30
SBTC 15-0074		Test record (60 m drop and 30 cm wave test)	2015-04-13
		MOB smoke - Evaluation and test report (IMO MSC/Circ.980)	2015-08-19
DS 345205	1	Document structure (technical documentation)	2018-05-29
PP 15-04		Test program	2015-04-14

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC.81(70) Part 1, as amended by IMO Res. MSC.226(82), IMO Res. MSC.323(89) and the Canadian Life Saving Appliance Standard – TP14475 E, Part II, Ch. 4.

Marking of product

The product is to be marked in accordance with ISO 15736:2006 4.3, LSA code 1.2.2.9 and 1.2.3, name and address of manufacturer, type designation, date of manufacture (month and year), date of expiry, lot number and operational restrictions.

The instructions for operating the pyrotechnic distress signal are to be permanently marked on the casing, or the signal is to carry a diagram clearly showing the manner of operating the signal.

All markings are to be provided in both English and French translations.

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 Programme DNV-CP-0338, Section 4.