

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000046Y
Revision No:
4

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Position indicating lights for life-saving appliances: (b) for lifebuoys

with type designation(s)
Ikaros MOB Mk IV Light Signal

Issued to
Hansson PyroTech AB
Lindesberg, Örebro Län, Sweden

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170,**
item No. MED/1.2b. SOLAS 74 as amended, Regulation III/4, III/7, III/22, III/32, III/34 & X/3, LSA Code, 2000 HSC Code 8

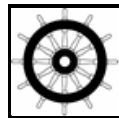
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-12-16.**

Issued at **Høvik** on **2020-11-29**

DNV GL local station:
Sweden CMC

Approval Engineer:
Tessa Bieber



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 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 AS 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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: **344.1-008273-7**
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Product description

"Ikaros MOB Mk IV Light signal"
lifebuoy position indicating light signal. Tested with drop height 60 m.

Design weight: 4.5 kg
Body colour: Yellow

The light signal can be combined with the "Ikaros MOB Mk IV Smoke signal", the complete unit will then be called Ikaros "MOB Mk IV Light and Smoke signal".

Application/Limitation

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).

Production and installation testing shall be carried out according to IMO Res. MSC.81(70), Part 2, Ch.4.

Each lifebuoy is not to be stowed at a height above the waterline exceeding 60 m.

Expiration date not to exceed 4 years after date of manufacture.

Type Examination documentation

Our evaluation is based on:

Drawing no.	Rev.	Title	Date
204GTB15		BV Test report	2015-05-19
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 lights - Evaluation and test report (IMO MSC/Circ.980)	2015-03-30 2015-04-02
DS 345105	1	Document structure (technical documentation)	2018-05-29
PP 15-04		Test program	2015-04-14
		Lifebuoy Self-Igniting Light, Test Report	2015-04-13 2015-05-19
TR19-012	0	IKAROS MOB Light & Smoke LED light luminous intensity test	2019-12-20

Tests carried out

Tested in accordance with the requirements of IMO Res. MSC.81(70), as amended by IMO Res. MSC.200(80), IMO Res. MSC.226(82) & 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 if applicable (see first page).

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