



# TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MERB00003R4**  
Revision No:  
**1**

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 Line-throwing appliances**

with type designation(s)  
**Ikaros Line Thrower**

Issued to

**Hansson PyroTech AB**  
**Lindesberg, Sweden**

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

Regulation **MSN 1874 Amendment 7,**

**item No. UK/1.11. SOLAS 74 as amended, Regulation III/4, III/18, 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 **2028-09-25**.

Issued at **London** on **2023-09-26**

DNV local unit:  
**Finland CMC**



for **DNV UK Ltd.**

Approval Engineer:  
**Tessa Biever**

Approved Body No.: **0097**

**Christine Mydlak-Roeder**  
**MER Service Responsible**



**Maritime &  
Coastguard  
Agency**

UK Approved Body Authorised  
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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. In case limitations of use apply, these should be indicated in the Annex.

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 line thrower"

Is a unit composed of a water-resistant hand-held plastic container with handle, containing a steel cased projectile with cartridge and line. The line is not directly attached to the rocket. A coiled metal wire designed to dampen the pull from the rocket at ignition and keep the line away from the nozzle, joins the line and rocket.

Minimum length of line: 340 m  
 Projectile design weight: 662 g  
 Fully equipped weight: 4 kg

For further details see test report and drawing listed under Type Examination documentation below.

## Application/Limitation

The design assessment is based on IMO Res. MSC.48(66).

To conform to the requirements of the paragraph 7.1.1 of IMO Resolution MSC 48(66), one Line-throwing Appliance is constituted by 4 units.

Acceptable lifetime 4 years for rocket and 10 years for unit and line.

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

## Type Examination documentation

Drawing no.	Date
690000 Rev.4 – Line thrower container complete	2018-03-02
690013 Rev.5 – Plastic container	2018-03-08
690020 Rev.5 – Line pack	2018-03-01
690047 Rev.9 – Mortar assembly	2023-03-14
690096 Rev.3 – line thrower rocket	2018-02-15
Test reports	Date
Prototype test report iaw LSA Code part 1, witnessed by BV.	2015-03-31 2015-08-18
Test report for the breaking strength of the PP line (=2.5 kN), performed by line manufacturer Coldgarn AB	2015-06-09
Test report SBTC 15-0351R, Rev.1 – Immersion test for Rocket iaw LSA Code Part 1 item 9.1 and item 4.3.1, see prototype test report	2015-08-17
Test report SBTC 15-0344, Rev.1 – function test of Ikaros line	2015-08-18
Test report SBTC 15-0084R, Rev.1 including the following tests:	2015-03-30
- SBTC 15-0084P01: Temperature cycling	2015-03-04
- SBTC 15-0084P02: Immersion test	2015-03-31
- SBTC 15-0084P03: Salt water spray	2015-03-27
- SBTC 15-0084P04: Drop test	2015-03-04
- SBTC 15-0084P05: Temperature /Humidity	2015-03-30
Test report SBTC 15-0073, Rev.1 – Acceptance test of Ikaros line	2015-03-31
Test report TR 17-006, Rev.1 – Verification of line attachment	2017-09-08
Test report TR 15-004, Rev.1 – Activation of safety products using buoyant immersion suit gloves	2015-01-28

## Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC.81(70) Part 1.

## 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 UK Mark of Conformity (see first page).

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