



**Marine & Offshore  
Division**

**Certificate number:** 34893/A1 BV

**File number:** PYR 2466/09

**Product code:** 6005H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Nammo LIAB AB**  
Lindesberg - SWEDEN

*for the type of product*

### LIFEBUOY SELF-ACTIVATING SMOKE SIGNALS

Ikaros MOB MK IV smoke signal, Art.N°345205

**Requirements:**

SOLAS 74 Convention as amended

Reg. III/4, X/3, III/7 and III/34

IMO Res. MSC.48(66) amended by MSC.207(81), MSC.218(82), MSC.272(85), MSC.293(87) & MSC.320(89)

IMO Res. MSC.36(63) 8 - IMO Res. MSC.97(73) 8

IMO Res. MSC.81(70) amended by MSC.200(80), MSC.226(82), MSC.274(85), MSC.295(87), MSC.321(89) & MSC.323(89)

IMO MSC/Circ. 980

*This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 09 Jul 2018**

**For BUREAU VERITAS,**

At BV GOTHENBURG, on 28 Jul 2014,

Magne MOLLER



This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarp.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=z2hknngoow>

BV Mod. Ad.E 530 May 2009

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

<b>Trademark</b>	Nammo LIAB AB
<b>Type</b>	Ikaros MOB Mk IV smoke signal
<b>Reference</b>	345205

Dimensions	Weight	Body colour	Smoke duration time	Maximum stowage height
200 mm x 485 mm	4.8 Kg	Yellow	minimum 15 minutes	60 m

### 2. DOCUMENTS AND DRAWINGS

- Manufacturer's specification and drawings:

Code	Title	Revision	Date
TR07-019	Technical report "List of drawings and changes to MOB Smoke"	-	12/10/2007
620325	Label, MOB MkIV, Smoke	00	05/06/2013
620333	MOB Mk IV smoke	00	08/08/2013

- Manuals for installation, use and maintenance.

*No departure from the drawings shall be made without the prior consent of the Society.*

### 3. TEST REPORTS

Date	Test report	
03/03/1997	TB 703-3	Initial Type Test according to the Manufacturer's Technical specification's test protocol
27/03/1997	6005/6891/AO/O-H	Initial Type Test
19/06/2001	Type Approval Tests of MOB Mk III	Additional type tested performed by the manufacturer after modifications as described in "Technical Specification Article No 345105 dated 10/10/2001"
13/03/2001	21/01	Additional Vibration test performed by "Forsvarets Materielverk ProvFFK"
14/09/2007	TR-017	Additional type test
30/10/2007	TR-020	Additional Drop test
17/12/2007	07-0983R	"Vibration test" and for the "Corrosion and Seawater resistance test" by Bofors Test Center AB
20/12/2007	TR-025	Additional smoke obscuration tests
21/12/2007	Annual Tests 2007	Additional type test
02/10/2013	Annual Tests 2013	Additional type test Including Drop Test 60m
02/04/2014	Annual Tests 2013	Additional type test

### 4. APPLICATION / LIMITATION

- As per requirements of regulations stated on front page of this certificate.
- Is not to be stowed at a height above the waterline exceeding 60 meters.
- Lifbuoy self-activating smoke signals shall be replaced prior the expiry date marked on its casing but not later than **Four years** after date of manufacture.
- Each lifbuoy self-activating smoke signal to be supplied operating and training information suitable for insertion into the ship's on-board training manual in English and French.

### 5. PRODUCTION SURVEY REQUIREMENTS

The self-activating smoke signals are to be supplied by **Nammo LIAB AB** in compliance with the type described in this certificate.

This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

**Nammo LIAB AB** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

For information concerning the production survey requirements, **Nammo LIAB AB** has declared that the product may be manufactured at the following manufacturing places :

**Nammo LIAB AB**  
**Box 54**  
**711 22 Lindesberg**  
**SWEDEN**

#### **6. MARKING OF PRODUCT**

Brief instructions or diagrams clearly illustrating the use of the lifebuoy self-activating smoke signal shall be printed on the casing.

All necessary markings shall be in English and French.

The signal body shall bear the following marks:

- Trade name
- Date of manufacture and date of expiry
- Maximum stowage height
- SOLAS approved
- Lot number
- BV TAC number : 34893/A1 BV

#### **7. OTHERS**

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out at any time and that manufacturer will accept full responsibility for informing Shipowners of proper methods of use, storing and maintenance of the self-activating smoke signal and of the conditions of this approval.

This certificate supersedes BV Type Approval Certificate No 34893/A0 BV issued on 09/07/2013 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***