

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000078N

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 AS under the authority of the Government of Norway.

This is to certify:

That the Nozzles for deep fat cooking equipment fire extinguishing systems (automatic or manual type)

with type designation(s)
Nobel K-Series- K5, K15, K30

Issued to
Nobel Fire Systems Ltd.
Heywood, Lancashire, United Kingdom

is found to comply with the requirements in the following Regulations/Standards:
Regulation (EU) 2020/1170,
item No. MED/3.43. SOLAS 74 as amended, Regulation II-2/1, II-2/10 & X/3, 2000 HSC Code 7, MSC.1/Circ.1433
and ISO 15371:2015

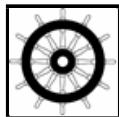
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-06-24**.

Issued at **Høvik** on **2021-06-25**

DNV local station:
Manchester

Approval Engineer:
Helge Bjørnara



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified 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-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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 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

"Nobel K-Series- K5, K15, K30",

is a low pressure wet chemical liquid firefighting system, composed of a Nobel K chemical, cylinder, gas generator, burst disc, piping and a stainless steel nozzle(s).

The galley protection system shall be designed according to SOLAS Ch.II-2, Reg.10, 6.4.1-5. This certificate addresses only item Reg.10, 6.4.1. Compliance with the shutdown function has to be verified in each case.

Only the nozzles are type approved by this certificate. Other components are to be approved and/or certified case by case.

Application/Limitation

Approved for use as a fire extinguishing system for galley deep-fat cooking equipment.

The system is composed of the following main components:

Part		Description, material
Extinguishing agent		"Nobel K" made of potassium organic and inorganic salts, water and stabilising chemicals
Cylinders	K5	5 litre, Stainless steel 304
	K15	15 litre, Stainless steel 304
	K30	30 litre, Stainless steel 304
Gas Generator		Electrical, stainless steel
Burst Disc and Filter Unit		Stainless steel
Piping	K5	Ø 15 mm stainless steel 304L
	K15	Ø 15-22 mm stainless steel 304L
	K30	Ø 15-22 mm stainless steel 304L
Nozzles	N6, N8, N16 ¹⁾	Spray angle 55°, working height 0.8-1.4 m
	W6, W8, W15 ¹⁾	Spray angle 100°, working height 0.6-0.8 m
Notes: 1) For nozzles N6, W6, N8, W8 plenum protection can be applied. For detail specification see manual.		

The nozzle is to be installed according to the following specifications:

System specifications	
Nozzle height above vat	0.8-1.4 m (N-nozzles) 0.6-0.8 m (W-nozzles)
Position of nozzle ²⁾	One over the protected area
Max. area protected ³⁾	460 mm x 460 mm (0.21 m ²)
Max. vat dimension ³⁾	550 mm x 382 mm x 340 mm
Operating pressure	3.5-14 bar
Notes: 2) One aimed at centre of cooking device, using advised spray angle, pointing at centre of cooking device (see manual for details). 3) Per single nozzle.	

System components, such as pipes and pipe connections as well as welding of pipes are to be certified or inspected in accordance with Class Rules or equivalent standards acceptable to the Flag State.

The following items are to be submitted for approval for each project:

- System arrangement plans including location of nozzle, release stations and cylinders.
- Capacity of pressure vessel system.
- Specification of pipes and associated components.
- Shut down of function defined by SOLAS 2000 Ch.II-2, Reg.10, 6.4.2-5.

Installation testing:

- Pressure testing of water pipe system to at least 1.5 times maximum working pressure.
- Function testing of the system.
- Other tests according to makers manual.

Periodical testing:

- The periodical testing shall comply with instructions from flag administration, statutory interpretations and maker's maintenance manual.

Each system is to be supplied with a manual for installation, operation and maintenance according to ISO 15371:2015, Chapter 6.

Type Examination documentation

Design, Installation & Maintenance Manual No. LPS1223-V3 Rev.6.1 dated June 2014 from manufacturer.

Test report No. 288687 dated 10 June 2014 from BRE Global Ltd., Watford, UK.

Drawing No. NFS-GG-001 Rev. A dated 19 August 2018 (General arrangement drawing for gas generator).

Drawing "P&ID K-5 Cylinder Assembly" dated 29 June 2018.

Tests carried out

Tested according to ISO 15371:2009 (same test requirements as to ISO 15371:2015).

Marking of product

The spray nozzle is to be marked with type designation whereas control unit is to be marked with name and address of manufacturer and type designation and MED Mark of Conformity (see front page).