EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00000HA
Revision No:
1

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)
WHDR-125 and WHDR-260 Wet Chemical System

Issued to
Kidde-Fenwal, Inc.
Ashland, MA, USA

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 **2026-05-02**.

Issued at **Høvik** on **2021-06-17**

DNV local station:
Certification & Inspection Services

Approval Engineer:
Helge Bjørnarå

Notified Body
No.: **0575**

for **DNV AS**
Digitally Signed By: Sæle-Nilsen, Dag
Location: DNV Høvik, Norway
on behalf of

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"WHDR-125 and WHDR-260 Wet Chemical System"
fire extinguishing system consisting of nozzles, piping, section valves (as applicable), cylinders and a mechanical release module. The system is a pressure vessel system.

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 shut down function has to be verified in each case.

Only the spray 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
Cylinder for WHDR-125	Part no. 87-120001-001 Expellant gas: Nitrogen Capacity: 5 L
Cylinder for WHDR-260	Part no. 87-120002-001 Expellant gas: Nitrogen Capacity: 10 L
System release	Manual activation and/or automatic mechanical activation (fusible-link or thermo-bulb links) and/or automatic electrical activation
Extinguishing agent	Kidde APC Wet Agent
nozzle	Type "F"
Piping system	15 mm steel pipes

System specifications:

	WHDR-125 (single fryer)	WHDR-260 (2 fryers)
Vertical distance from vat	762 to 1270 mm	762 to 1270 mm
Max. length of piping	7.9 m	18.4 m
Max. number of Elbows and Tees	15 elbows, 0 Tees	24 elbows, 1 Tee
Position of nozzle	One "F" nozzle, centrally over the vat	Two "F" nozzle, one centrally over each vat
Max. size of vat / protected area	495 x 641 mm	495 x 641 mm (each vat)
Cylinder operating pressure	Max. 13 bar	Max. 13 bar

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 documents are to be approved and filed by the Flag State Administration for each project:
- System arrangement plans including location of nozzles, section valves, release stations and cylinders.
- Specification of pipes, supply component(s), and associated components.
- Shut down of function defined by SOLAS Ch.II-2, Reg.10, 6.4.2-5.

Installation testing:
- Pressure testing of pipe system to at least 1.5 times maximum working pressure.
- Function testing of the system.
- Other tests according to maker's 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, Operation and Maintenance Manual No. 87-122000-001 April 2009 from Kidde Fire Systems.

Test Report No. PEO10011A dated 2015-10-15 from DBI, Denmark.

Drawing No. 87-120012-001 Rev AC (Nozzle).

Tests carried out

Fire tested according to ISO 15371:2009 (test requirements same 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).