

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB00002RY
Revision No:
0

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

with type designation(s)
Vesuvius N-pipe Type 2V-BM1

Issued to

Vid Fire-Kill ApS
Svendborg, Denmark

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

Regulation **MSN 1874 Amendment 7,**

item No. UK/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 **2027-10-30**.

Issued at **London** on **2023-04-14**

DNV local unit:
Denmark 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

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. The product liability rests with the manufacturer or his representative in accordance with the Merchant Shipping (Marine Equipment) Regulations 2016.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV UK Ltd. of any changes to the approved equipment. 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. This certificate remains valid unless suspended, withdrawn, re-called, or cancelled.

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

"Vesuvius N-pipe Type 2V-BM1",
 is a low pressure water mist system, composed of nozzles, stainless steel piping, section valves and supply component(s).

The galley protection system should be designed according to SOLAS Ch. II-2, Reg.10, 6.4.1-5. This certificate addresses only item Reg.10, 6.4.1.

Only the nozzles are type approved by this certificate. Pumps, pipes, valves, couplings and other systems components are subject to case-by-case approval.

Application/Limitation

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

The nozzles are to be installed in according to the following specifications:

| | |
|------------------------------|---|
| Fat fryer protection | |
| Distance above fryer: | 1.0 - 1.5 m |
| Number of nozzles: | Six per 1.8 m pipe (3 pairs each 600 mm) |
| Position of nozzles (pairs): | Two centrally over the protected area with approx. spreading angel of 60 degrees between nozzles and distance of 50 mm nozzle to nozzle |
| Maximum size of vats: | 0.45 x 0.48 m (W x H) |
| Maximum volume of vats: | 30 L |
| Operating pressure: | 7 - 9 bar |
| nozzle type: | Vesuvius N-pipe Type 2V-BM1 |

Nozzle information:

| Nozzles | k-factor [lpm/bar ^{1/2}] | Flow [lpm] | Pressure [bar] | Drawing no. |
|---|---------------------------------------|---------------|-------------------|-------------|
| Vesuvius N-pipe Type 2V-BM1 (per 1.8 m N-pipe) | 16.8 | 44.4 | 7.0 | 80704-557 |
| Vesuvius N-pipe Type 2V-BM1 (per micro nozzle) | 2.8 | 7.4 | 7.0 | 80704-557 |
| The nozzles are made of stainless steel AISI 316. Maximum operating pressure is 16 bar. | | | | |

For all systems:

- The pump(s) unit shall be delivered with product certificate, whereas other system components are to be inspected in accordance with Class Rules (or equivalent standard as specified by the Flag Administration).
- Only stainless-steel piping, or equivalent corrosion resistant pipes are to be applied (to avoid clogging of nozzles). Primary water supply shall be fresh water of potable quality.
- Pipes, couplings and other components are regarded as "Class III" piping.
- Ambient room temperature for pump unit should be between 4 °C and 45 °C

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

- System arrangement plans including location of nozzles, section valves, release stations and supply component(s).
- Specification of pipes, supply component(s), and associated components.
- Shut down of function defined by SOLAS II-2/10.6.4.2-5.
- Manual containing operating and maintenance instructions.

Installation testing:

- Function testing of the system.
- Pressure testing of water pipe system to at least 1.5 times maximum working pressure.
- Other tests as required by Class Rules (pressure testing of piping, etc.) or a similar standard acceptable to the Flag Administration and according to maker's manual shall be carried out.

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 and Service Manual No. 120829-01-01 dated 29 August 2012 from manufacturer.

Fire performance test:

Test report No. 120321-66, dated 5 July 2012 from Danish Fire Laboratories, Svendborg, Denmark.

Component test:

Test report No. 110914-6, both dated 28 October 2011 from Danish Fire Laboratories, Svendborg, Denmark.

Drawing, nozzle:

Drawing No. 80704-557, Rev. E, dated 24 June 2020 from manufacturer.

Tests carried out

Tested according to ISO 15371:2009 and satisfying ISO 15371:2015.

Component testing in accordance with MSC/Circ.1165.

Marking of product

The nozzles are to be marked with type designation and MER Mark of Conformity (see first page) whereas the pump unit is to be marked with name of manufacturer and type designation.