

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Nozzles for fixed pressure water spraying fire extinguishing systems for special category spaces, ro-ro cargo spaces, ro-ro spaces and vehicle spaces

with type designation(s)

VID FireKill OH-OPX1 Suez, VID FireKill OH-OPX1 Panama

Issued to

Vid Fire-Kill ApS
Svendborg, Denmark

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

Regulation **(EU) 2015/559,**

Annex A.1, item No. A.1/3.49 and Annex B, Module B in Directive; SOLAS 74 as amended
Regulation II-2/19, II-2/20 & X/3, 2000 HSC Code 7 and FSS Code 7

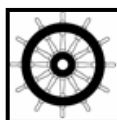
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2017-11-20**.

Issued at **Høvik** on **2017-01-17**

DNV GL local station:
Fredericia

Approval Engineer:
Tessa Biever



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



Job Id:
Certificate No: **MEDB000020R**

Product description

"VID FireKill OH-OPX1 Suez, VID FireKill OH-OPX1 Panama"

is a water mist system of deluge type. The system consists of nozzles and section valves, in addition to pump unit(s), piping, control system as associated equipment.

The system is to be designed in accordance with the "Principal Requirements" of IMO MSC.1/Circ.1430. Only nozzles are type approved by this certificate. Other components are to be approved and/or certified case by case.

Nozzles are manufactured by Vid Fire-Kill Aps, Svendborg, Denmark.

Application/Limitation

Approved for use as a fixed water-based fire-fighting systems for ro-ro spaces and special category spaces equivalent to that referred to in resolution A.123(V).

Installation should be in accordance with Principal Requirements of IMO MSC.1/Circ.1430 with the following parameters:

System type	Nozzle	Maximum spacing (m) ⁱ⁾	Min. pres. at nozzles (bar)	Min. coverage area (m ²)
Deck height up to 5.0 m ⁱⁱ⁾				
Deluge	OH-OPX1 Panama	3.5	6	See note ⁱⁱⁱ⁾
Deck height up to 2.5 m				
Deluge	OH-OPX1 Suez	4.0	6	See note ⁱⁱⁱ⁾

Notes

- i. Distance to bulkheads should be half spacing
- ii. Installations with height above 5.0 will be considered case by case
- iii. According to Principal Requirements of IMO MSC.1/Circ.1430 for type B or type C systems (as applicable)

Spray head information

Sprinkler / nozzle type	k-factor (lpm/bar ^{1/2})	Flow (lpm)	Pressure (bar)	Drawings
OH-OPX1 Panama	23	56.3	6	Ref. type examination documentation
OH-OPX1 Suez	23	56.3	6	Ref. type examination documentation
Nozzles are made of brass coated with NiSn. Maximum operating pressure is 16 bar.				
Nozzles are to be installed in a pendant (downward) position.				

For all applications

- The pump unit(s) shall be delivered with product certificate. Other system components are to be certified or inspected in accordance with Class Rules (or equivalent standard as specified by the Flag Administration).
- Redundant pump arrangement is to be approved on a case by case basis.
- Restrictions apply to use of this system on open ro-ro and open special category spaces (see IMO MSC.1/Circ.1430).
- The pump unit and section / sprinkler valves shall be installed in a room having ambient temperature between +4 degree C and +45 degree C.
- Pipes, couplings and other components are regarded as "Class III" piping.

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

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- System arrangement plans including routing of pipes, location of nozzles, sections valves, release stations and pump unit.
- Documentation of power supply and control system.
- Specification of pipes, section valves, pumps, including drivers and associated components.
- Pressure drop calculations and water mist capacity calculations.
- Design, installation, operation and maintenance manual.

Installation testing:

- The system is to be cleaned in accordance with routines outlined in maker's system description manual.
- At least 2 sections should be tested with full flow through the nozzles. Manual release of all section valves (without water accepted) shall be carried out.
- Manual start of pumps shall be carried out.
- Alarms at the manned control stations shall be tested.
- Other tests as required by Class Rules (or equivalent standard as specified by the Flag Administration) (pressure testing of piping, etc.) and according to maker's manual shall be carried out.

Periodical testing:

- Periodical control and inspection shall be carried out in accordance with maker's system description manual.
- At least one section should each year be tested with full flow through the spray heads (not the same section every year).

Type Examination documentation

Fire Performance Test Reports:

- No.120413-68 dated 21 June 2012 from Danish Fire Laboratories (DFL) ApS;
- No.120413-69 dated 21 June 2012 from Danish Fire Laboratories (DFL) ApS.

Component testing:

- No. 110415-5 dated 14 April 2012 from Danish Fire Laboratories (DFL) ApS.
- Letter from Danish Fire Laboratories (DFL) ApS dated 02-11-2012 regarding component tests.
- No. 160129-164 dated 7 March 2016 from Danish Fire Laboratories (DFL) ApS (clogging test + statement manufacturer (no use of filter))
- No. 120802-1057 dated 2012-08-02;
- No. 120802-1058 dated 2012-08-02;
- No. 101116-852A dated 2011-05-05;
- No. 71120-473 dated 2007-11-21;
- No. 120802-1055 dated 2012-08-02;
- No. 120802-1056 dated 2012-08-02;
- No. 81021-607A dated 2009-09-11;
- No. 71121-476A dated 2010-06-15

All from manufacturer.

Tests carried out

Fire performance test in accordance with IMO MSC.1/Circ.1272.

Component test in accordance with IMO Res. A.800(19) and IMO Res. MSC.265(84), and in compliance with IMO MSC.1/Circ.1272.

Marking of product

The sprinklers heads and nozzles are to be marked with manufacturer name and type designation and Mark of Conformity (see below) whereas other main components are to be marked with name and address of the manufacturer.