DNV·GL

Certificate No:
MEDB00001M8

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Sample extraction smoke detection systems components

with type designation(s)
SDS-72

Issued to
safetec Brandes und Niehoff GmbH
Lüneburg, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306,**
item No. MED/3.63. SOLAS 74 as amended, Regulation II-2/7, II-2/19 & II-2/20 and IMO FSS Code 10

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

This Certificate is valid until **2022-06-20**.

Issued at **Hamburg** on **2017-06-21**

DNV GL local station:
Hamburg

Approval Engineer:
Heinz Scheffler

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
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 GL SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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Product description

The smoke detection system SDS-72 is a sample extraction smoke detection system for up to 72 detection lines for cargo holds onboard ships.

The main features of the system are:

- Simultaneously monitoring of air samples for smoke via sampling pipes
- Separate detection loop for smoke detectors monitoring exhaust ventilation ducts
- Using the CO2 extinguishing pipes up to DN150 for smoke sampling
- Possibility to connect the smoke detection panel to the remote panels with two redundant data and power bus cables
- Interface to voyage data recorder according IEC 61162-1 and potential free signals to the Machinery Alarm System
- Flexible configuration settings, including on site configuration via configuration menu
- Self-monitoring features

The smoke detection system SDS-72 is available in three main variants configured to the below listed hardware:

Variant A: The sampling pipes for all cargo holds run separately into the CO2 room, where they are connected via 3/2-way-valves to the smoke detection panel. It is recommended for sampling pipe diameters of max. DN20/DN25.

Variant B: The sampling pipes for all cargo holds run separately into the CO2 room, where they are connected via valves to the smoke detection unit. The smoke detection unit(s) is/are connected with the smoke detection panel. It is recommended for sampling pipe diameters of max. DN150.

Variant C: The sampling pipes for all cargo holds run separately into the suitable passage way beneath the cargo holds, where they are connected via valves to the smoke detection unit. The smoke detection unit is connected via loop isolator with the smoke detection panel. It is recommended for sampling pipe diameters of max. DN150.

Fan unit SDS-M0440/ SDS-M0441 or SDSD-M0460 is to be used in variants A...C according to the airflow volume requirements of the project.

Hardware:

Type	Name	Typical Location	Remark
ADP-3500	Adapter module	near Remote Panel	required for Remote Panel
SDS-3000	Smoke detection panel	CO2 room or passage way	without integrated detection lines
SDS-3104	Smoke detection panel	CO2 room	1-4 detection lines integrated
SDS-3108	Smoke detection panel	CO2 room	5-8 detection lines integrated
SDS-3112	Smoke detection panel	CO2 room	9-12 detection lines integrated
SDS-3208	Extension panel	CO2 room	5-8 detection lines
SDS-3212	Extension panel	CO2 room	9-12 detection lines
SDS-3216	Extension panel	CO2 room	13-16 detection lines

Type	Name	Typical Location	Remark
SDS-3300	Smoke detection unit (SDU)	CO2 room or passage way	1 detection line for pipes up to DN150
SDS-3500	Remote Panel	bridge or fire control station	flush mount / wall mount
SDS-3600	junction box	passage way	for SDS-M460
SDS-3700	junction box	safe area	for SDS-3300 (SDU)
SDS-3800	3/2-way flap	CO2 room or passage	for fan module SDS-M0460
SDS-M440	fan unit	CO2 room or passage	2 fans on a frame, 230V~
SDS-M441	fan unit	CO2 room or passage	2 fans on a frame, 110V~
SDS-M460	fan module	CO2 room or passage	1 fan

Software
- Firmware: CM3100A-01.00.000
- Application configuration is part of the project.

Application/Limitation
The certificate covers the control and monitoring system. External piping system is not covered by this Type Approval.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the rules and Ex-certification/ special condition for safe use listed in valid Ex-certificate issued by a notified/recognized certification body.

Type Examination documentation
Test Report: 16185-1-R01; 16185-2-R00 ; 16185-3-R00 ; 15012-3-R01(1) ; 320-16 (Issue 3); 058-16 (Issue 3); 15-7421; DOK22.002 (Rev.1).
Documentation: System Manual No. DOK02.140 Rev.2; Installation and Operation Instructions no. DOK02.055 Rev.6; List of Submitted Documents (Rev.1).

Tests carried out
MSC.98(73)-(FSS- Code) 10; EN 54-2 (1997) including AC (1999) and A1(2006); EN 54-4 (1997) including AC(1999), A1(2002) and A2(2006); EN 54-20 (2006) including AC(2008); IEC 60092-504 (2016); IEC 60533 (2015), EN 60079-0 (2012) including A11 (2013).

Marking of product
For identification to this type examination certificate the products shall be marked with:
- Manufacturer's name
- Type designation with device type
- Serial Number
- Mark of Conformity

END OF CERTIFICATE