



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR CRANKCASE OIL MIST DETECTION ARRANGEMENTS

Certificate No. TA19449M

This is to certify that the undernoted products have been approved in accordance with the requirements specified in Chapter 6, Part 7 of "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use" and the relevant Society's Rules.

This certificate is issued to

Manufacturer:	Schaller Automation Industrielle Automationstechnik GmbH & Co. KG
Place of Manufacturing:	D-66440 Blieskastel / Germany / Industriering 14
Product description:	Oil mist detection system
Model:	VISATRON VN2020 / VN2020EX
Approval No.:	19A024
Valid until:	4 August 2024

This certificate is subject to the conditions specified in the attached sheets.

Issued at Tokyo on 5 August 2019.

T. Shimada
General Manager
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

Specification & documents:

1. Particulars:

Power supply:	18 - 31.2V DC, max. 2A
Nominal voltage:	24V DC
Enclosure:	IP 54
For VN2020EX:	II(2G) [Ex op is IIB T4 Gb] $+5^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}\text{C}$
Software:	V1.02 (Version No. as of the date of issuance)

2. Measuring range & Default alarm setting: 0.5 - 2.5mg/liter & 1.2mg/liter

3. Documentation and Test Reports:

Operation Manual (April 2019),

Circuit diagram No.1000194, 1000196, 1000198, 260064,

Release Notes Firmware VN2020 (July 2019),

Witness test report FB_7.1_012_V03 under IACS members (May 2019),

Photographic records,

Test report CTC advanced GmbH : No.1-7830/19-01-04 (February 2019),

Test report CTC advanced GmbH : No.1-7830/19-01-05 (March 2019),

IECEX Certificate of Conformity: Certificate No. IECEX IBE 19.0010 (July 2019),

EU-Type Examination Certificate: No.IBExU19ATEX1048 (April 2019)

- To be continued -

Test items & approval conditions:

1. Test items: Applied testing items are marked with X in accordance with the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use as amended by IACS UR M67.Rev2 and UR E10.Rev7 as applicable.

ENVIRONMENTAL TESTS		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test (Acceleration ±4g × 1.5 hours)		X
Inclination test		X
Cold test (Temperature 5°C × 16 hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

2. Approval conditions:

- 1) The product is not allowed to be installed in the bridge and on open decks.
- 2) Where there are multi engine installations, each engine is to be provided with oil mist detection / monitoring and a dedicated alarm.