



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA23247M

This is to certify that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, 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

Applicant:	VAF Instruments B.V.
Manufacturer:	VAF Instruments B.V.
Place of Manufacturing:	Vierlinghstraat 24, 3316EL Dordrecht, The Netherlands
Product description:	Viscosity sensor & Interface box
Model:	ViscoSense VS3, VS3D
Approval No.:	99A118
Valid until:	7 March 2028

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 5 June 2023.



S. Oishi
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:
- Power Supply AC 110/240V, 50/60Hz
 - Output Signal DC 4~20mA (3 x Viscosity, Temperature, Density) , RS485, MOD BUS (OPTIONAL)
 - Viscosity Range 0~25mPa·s, 0~50mPa·s, Other ranges on request.
 - Temp. Range 0~200°C

2. Components and reference drawings:

Component	Documents
ViscoSense VS3	0279-0096-4
ViscoSense VS3D	0279-0110, 0739-0143, 0379-0144/0145/0146, 0409-0103/0107
Interface Box	0279-0111, 0279-0112
PCB Main Interface Box	0397-0414

3. Documentation and Test Reports:

- DARE Consultancy B.V. Report No.07C00076RPT02 (6 Mar., 2007)
- DARE Consultancy B.V. Report No.01C00797RPT03 (11 Jan., 2002)
- Product Bulletin 753 for ViscoSense VS3
- Test Report Reference number: 14C00655RPT01, 13C01765RPT02, 17C00339RPT04, 17C00340RPT01, 21C00070RPT01, 20210621RPT01, 20210079RPT02
- DEKRA EMC test report: 2169489.0501-EMC
- Report M14.001-P14.001, Report M21.001-P21.001, Report M22.003-P22.003 rev.01
- Technical Manual: TIB-775-GB-1216 for ViscoSense VS3
- Technical Manual: TIB-778-GB-1216 for ViscoSense VS3D
- Product Bulletin 774 for ViscoSense VS3D
- Statement: Type Approval VS3 and V3D (May 12th 2023)

- To be continued -

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS UR E10 Rev.8 basis)		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		X
Inclination test		--
Cold test (Temperature 5 ± 2°C × 2 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 condition:

The product is not allowed to be installed in the bridge or on open deck.

- The End -