



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR LIQUID LEVEL GAUGE / HIGH LEVEL ALARM

Certificate No. TA16285M

**This is to certify** that the undernoted product(s) has/have been approved in accordance with the requirements specified in the Chapter 7, Part 6 and Chapter 4, 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:	<b>Autronica Fire and Security AS</b>
Place of Manufacturing:	<b>Stalsbergveien 9, 3124 Tonsberg, Norway</b>
Product description:	<b>High Level &amp; Overfill Alarm System</b>
Model:	<b>OAS-5</b>

Approval No.:	<b>95LG006</b>
Valid until:	<b>19 May 2021</b>

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

Issued at Tokyo on 20 June 2016

  
Y. Shibata  
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. Ratings:

Power Supply :	AC230/115V, DC24V
Intrinsically Safe Type :	EEx ia IIC
Operating Max. Pressure:	3.4 MPa
Operating Temperature :	-190°C ~ 250°C

## 2. Components and reference drawings:

Components	Type	Drawings
Level Switch	HL-8903, HHL-8903 HL-8903A, HHL-8903A	A3-89021, A4-91002, A4-90008, ES5-008, ES5-010, ES5-011, EW5-021, EW5-022, ES5-015, EW5-026, EW5-027, EW5-350, MD3-221, MD3-220, EM5-309, EM5-501, ES5-331, ES5-141, ES5-350, EW5-316, EW5-317, EM5-210, EM5-316A, ES5-236, EW5-326, EW5-327, MD3-223, MD3-222, EM5-215, ES5-326, ES5-353, ES5-142, EW5-331, EW5-332, EW5-336, EW5-337, EM5-134, EM5-317A, ES5-321, ES5-353, EW5-341, EW5-342, EW5-346, EW5-347, MD3-123 MD3-451, MD3-300F, MD3-301D, MD3-504, MD3-300, MD3-404
Alarm Unit (including I.S. Barrier)	AU1 (I.S. Barrier Ex1-W100)	
Common Alarm Unit	CU1, CU2	
Alarm Panel	Type A/B/C/D	

## 3. Documentation and Test Reports:

Reference No. 95F50693 (1995-05-03)  
 TEST REPORT No. 199512239 (1995-05-09)  
 Project No. 200007274 (2000-02-21)  
 Nemko Test Report (No. 33961, 2004-11-30)

- To be continued -

**Test items & approval conditions:**

## 1. Test items:

(Applied testing items are marked with X.)

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 ± 0.7g × 1.5 hours)		X
Inclination test		X
Cold test (Temperature -25°C × 2 hours for sensors)		X
Salt mist test		X
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
Mechanical test for float		--
Flame retardant test		--

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Attached sheet -3/3 to the Certificate No. TA16285M

**2. Approval conditions:**

- 1) The following tests on the individual product are to be carried out at the manufacturing plant.
  - (1) Visual Inspection
  - (2) Performance Test
  - (3) Pressure Test
  
- 2) Compatibility of construction material with individual cargos is to be checked on each vessel.

**- The End -**