



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13638**

This is to certify that the  
**Level Indicator**

with type designation(s)  
**Sensors: 600ES, 600IM, 600IS, 600IS(T), 600SM**  
**Indicators: 100 mm, 160 mm**

Issued to  
**AJD Instruments**  
**LINDFIELD, United Kingdom**

is found to comply with  
**Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**

Application  
**Location Classes:**

Type	Temperature	Humidity	Vibration	Enclosure
<b>Sensors: 600ES, 600IM, 600IS, 600IS(T), 600SM</b>	<b>D</b>	<b>B</b>	<b>A</b>	<b>IP68</b>
<b>Indicators: 100 mm, 160 mm</b>	<b>D</b>	<b>B</b>	<b>A</b>	<b>IP56</b>

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2014-01-22**

DNV local station: **London**

Approval Engineer: **Jens Erling Bråten**

for **Det Norske Veritas AS**

.....  
**Odd Magne Nesvåg**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

## Product description

Series 600 self powered hydrostatic contents gauges, including

- Sensors 600ES, 600IM, 600IS, 600IS(T) and 600SM
- Indicators, 100mm and 160mm

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 A 202 will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

## Application/Limitation

When used on tanks containing flammable liquids in engine spaces it is required to have either self closing valves or remotely operated quick closing valves between the gauge and the tank flange. On such applications the process connection is required to be of flanged type.

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 Approval documentation

Environmental data test report, Test File No. TL1330, dated 2009-09-07  
Enclosure class (IP rating) test report, Test File No. TL1330-B, dated 2009-11-12  
Initial survey report, AJD Instrumentation Level Indicators, dated 2008-12-10  
Environmental data information letter from AJD  
Fire Resistance test, Test File No. TL1330-A, dated 2009-09-07  
Type approval periodical assessment report by Shaughn Quinn, DNV London, dated 2013-12-06

## Tests carried out

- Applicable tests according to Standard for Certification No. 2.4, April 2006.  
- Fire Resistance Test, AJD instruments, Test File No. TL1330-A, documenting compliance with IACS P2.11.5.5.6

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE