DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-11421**

Holder of Certificate

Micro Motion Inc.

Boulder CO, United States

This is to certify that the
Viscosity Transmitter

with type designation(s)
7829 Viscomaster

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:

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**A**
Enclosure	**C**

Høvik, 2010-10-22
for **Det Norske Veritas AS**

This Certificate is valid until
2014-12-31

for **Odd Magne Nesvåg**
Head of Section

DNV local office:
DNV Long Beach

Aleksandra Górowska
Surveyor

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.

Product description
Viscosity/Density Transmitter, type 7829 Viscomaster.

Place of Manufacture
Tecnologias de Flujo S.A. de C.V.
Miguel de Cervantes 111, Chihuahua, Chih
Mexico 31109

Mobrey Limited
Emerson Process Management
Slough, United Kingdom

Responsibility
The Holder of Certificate takes the responsibility that both design and production are in compliance with the Rules and standards listed on page 1 and 2 of this Type Approval Certificate.

Application/Limitation
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.

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.

The transmitter is to be connected to a stable power supply delivering 20 – 28 V.d.c.

Type Approval documentation

Mechanical drawings	78295001, issue 2 (4 sheets)
Assembly drawings:	78295001, issue 2 – "Transducer assy" (4 sheets) 78295031, issue 1 – "Assy.drg.pcb 7829 Boards"
Schematic diagrams:	78295002, issue 3 – "Circ.Diag.7829 Analogue Microprocessor Board" (4 sheets) 78295003, issue 2 – "Circ.Diag.7829 Connector Board" (2 sheets)
Technical manual:	Doc. No.: 78295005 MMI-20015441, rev. AA – "Installation and Configuration Manual"
Test reports	Solartron: TR No. 270734, dtd. 1999-08-27
	RFI No. RFI/EMCB1/RP39476A, dtd. 1999-09-09
	RFI No. RFI/EMCB1/RP43484ETF01A, dtd. 2002-05-17
	TÜV No. TS285, dtd.1999-08-23
	ALSTOM Cert. No. 982/562
Initial Survey Report and Survey Report no.: LBE-51510016, Long Beach dated 2010-03-02.	

Certificate retention survey
The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE