DNV·GL

Certificate No:
TAA00001WN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Transmitter

with type designation(s)
TA840 Radar Level Gauge

Issued to
2 FRANCE MARINE S.A.S.
Verrieres le Buisson, France

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

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

Issued at **Høvik** on **2018-07-17**
This Certificate is valid until **2023-06-30**.
DNV GL local station: **Marseille**

Approval Engineer: **Nils Jarem**

for **DNV GL**

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.

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Job Id: **262.1-019081-2**
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Product description

The TA840 level gauge is a stand-alone distance measuring device using a microwave signal to measure the distance between a flst antenna and the surface of the product in the tank (ullage). The microwave signal is directly processed by the STEM TA840 radar device. The calculated ullage is then sent to the STEM IS-Power unit and finally to the STEM control unit. The present Type Approval covers only the TA840 radar which can be used only in combination with the STEM IS-Power unit.

Main technical data

Power Supply *U*i	Ex ia [ia Ga] IIB model: ≤14.4 V Ex ia [ia Ga] IIC model: ≤12.12V
Nominal power	12 V DC
Range	0,5m to 40m
Intrinsic safety approval	II 1(1) G Ex ia [ia Ga] IIC or IIB T6 or T5 Ga
Protection Class	IP66/67
Maximum tank pressure	1 bar
Operating temperature	-40° Celsius to 70° Celsius

For more details see the manufacturers data sheets.

Place of manufacture

EOLANE Combrée
ZA de l'Ombrée
Bld Jean Baptiste Colbert
49520 Combrée

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

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

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number
- power supply ratings

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE