

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cargo Monitoring and Control System**

with type designation(s)

Level Pressure Transducers, Other Control Systems

Issued to

U.P.I. Co., Ltd.**Ayase, Kanagawa, Japan**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Level Pressure Transducers	D	B	A	A	D
Other Control Systems	A	A	A	A	B

Issued at **Busan** on **2018-04-27**This Certificate is valid until **2023-01-16**.for **DNV GL**DNV GL local station: **Yokohama**Approval Engineer: **Baeg Soon Choi**

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Michael Jost Auf der Stroth
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.



Product description

Tank Draft Level Measuring and Valve Remote Control System

1. Control Cabinet composed of:
 - Yokogawa PLC F3 series (modules acc. to test items), firmware vers. 02
 - Modbus communication board UCB-16A5D5R
 - Noise Filter TDK-Lambda RSKN-2006
 - Switching Power Supply PS5R-V***
 - TFT Panel: Hakko Electronics Monitouch V9 Series, which is certified by TAA0000067
2. TIL TIX Inclinator; ACS-020-2-SC00-HE2-PM
3. Bubbling Pressure Transducer:
 - BT-**** brass coupling, for water and oil, 4...20mA
4. Level Pressure Transducers:
 - RC-****, rubber or ceramic diaphragm, for water and oil, 4...20mA
 - RT-*****, rubber diaphragm, for water, 4...20mA
 - CT-*****, ceramic diaphragm, for oil 4...20mA.
5. With Safety Barriers: Z787, KFD2-STC-Ex1, KFD2-STC-Ex2, Z954:
Ex ia IIC T6 (related report RIME 11-595(E) referenced only).
6. Tank Level Gauging, Alarms, Manual Remote Control of Pumps and Valves.

Software version: Ver.1.X

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, 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 DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Software update notification

When the type approved software is revised (affecting all future deliveries) DNV GL is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Application software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board.

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

Guidelines for the Performance of Type Approvals Chapter 2, Edition 2003
Regulations for the Use of Computers and Computer Systems

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.

Job Id: **262.1-027662-1**
Certificate No: **TAA00001U6**

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