

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Programmable Electronic System**with type designation(s)
Experion PKS C300 (Process Knowledge System)

Issued to

Honeywell International Inc.
Phoenix, AZ, United Statesis found to comply with
DNV GL rules for classification – Ships and offshore units**Application :****This Type Approval Certificate covers Hardware only.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	B
Humidity	B
Vibration	A
EMC	A (copper seals and ferrites to be installed according to makers datasheet)
Enclosure	Required protection according to the rules to be provided upon installation onboard

This Certificate is valid until **2017-12-31**.Issued at **Høvik** on **2015-12-02**DNV GL local station: **Tianjin**for **DNV GL**Approval Engineer: **Andrzej Gdaniec**-----
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.

Product description

Honeywell's Experion PKS C300 (Process Knowledge System) is an integrated monitoring and control system that can be scaled and configured for required size or type of vessel, incorporating components according to document "LNGC Modules List" as listed below:

- EPKS C300 Controller
- EPKS Series C I/O Modules
- Foundation Field Bus Devices
- Cisco switch series devices
- Experion Profibus interface module devices

For detailed and specific information see document "LNGC Modules List".

Place of manufacture

Honeywell (Tianjin) Ltd.

No. 158 Nan Hai Road, TEDA, PRC

101 A2 Building, 6 # Huafeng Rd. Huaming Industrial Park, Dongli District, Tianjin, PRC.

Approval conditions

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)
- List of control and monitored points
- Description of functions covered by software
- Test program for certification at manufacturer

The Type Approval covers hardware listed under Product description.

Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The Certification of Application Functions is to be performed at the manufacturer of the application system before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV GL for evaluation and approval.

Major changes in the software are to be approved before being installed in the computer.

A Certification of Application Functions may be required for the particular vessel.

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

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:

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Certificate No: **TAA000007B**

- 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