



## Confirmation of Product Type Approval

**Company Name:** KONGSBERG MARITIME CHINA JIANGSU, LTD.

**Address:** NO. 711 CHANGJIANG ROAD,, ZHENJIANG, China, 212002

**Product:** Alarm System, High Level and Overfill

**Model(s):** K-Gauge HLA/TOP System

**Endorsements:**

<b>Certificate Type</b>	<b>Certificate Number</b>	<b>Issue Date</b>	<b>Expiry Date</b>
Product Design Assessment (PDA)	18-1801766-PDA-DUP	21-DEC-2018	20-DEC-2023
Manufacturing Assessment (MA)	18-NJ3443527	23-FEB-2018	22-FEB-2023
Product Quality Assurance (PQA)	NA	NA	NA

### **Tier**

3 - Type Approved, unit certification not required

### **Intended Service**

High Level and Overfill alarm system used on ABS classed Oil & Chemical Tankers, LNG & LPG Carriers with AMS, ACC, ABCU, ACCU notations and Offshore Installations. The system is suitable for use in hazardous locations.

### **Description**

Intrinsically safe High Level and Overfill alarm system designed to monitor overfilling in all type of cargo tanks.

The system may comprise the following components:

- Operator Panels NL-5/HLA-M, NL-5/HLA-S, NL-5/TOP.
- Process Control Units RCU 500/510.
- Level Sensors: GL-7B
- Remote I/O Modules (optional) RDIO 400/401, RDIOR 400, RMP 420, RMP 400/401.
- Zener barriers Z-972, DZ-110, Ex isolated amplifiers KDF2-SR2-Ex2.W, power supply, network switch (optional).

The RCU processing units include dual Ethernet connections allowing fully integration of the High Level and Overfill alarm system and connection to Integrated Automation Systems (IAS).

### **Ratings**

Power supplies: 230 V AC;

Safety Certificate: ATEX Code II 1 G EEx ia IIC T5 Ta: 70 deg C

### Service Restrictions

Unit Certification is not required for this product.

### Comments

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- Tests and approval are for hardware only. Each application/configuration and external connection is to be submitted for approval by system integrator.
- Drawings to include system block diagram, single line diagram for IS-circuits, location of equipment, power supply arrangement and instrumentation list.
- Any specific instructions regarding onboard installation are to be adhered to.

### Notes, Drawings and Documentation

Drawing No. IECEX\_TUN\_13, IECEX\_TUN\_13, Revision: -, Pages: 1

Drawing No. TA ABS K-Gauge HLA\_TOP Renewal bhj, TA ABS K-Gauge HLA\_TOP Renewal bhj, Revision: -, Pages: 1

Drawing No. TUV13ATEX124272X-Issue 1, TUV13ATEX124272X-Issue 1, Revision: -, Pages: 1

### Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 20/Dec/2023 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

### ABS Rules

The Rules applicable to this assessment are:

- Steel Vessel Rules (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-9-8/7, 4-9-8/13, 4-9-8/Table1, 5C-1-7/13, 5C-8-13/2, 5C-8-13/3
- Steel Vessels Under 90 Meters (295 Feet) in Length (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4
- Facilities on Offshore Installations (2018): 1-1-4/9.7, 1-1-A2, 1-1-A3
- Offshore Support Vessels (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-9-8/7, 4-9-8/13, 4-9-8/Table1
- Mobile Offshore Drilling Units (2018): 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-1-1/7.9, 4-3-1/11, 6-1-1/9, 6-1-1/13
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2018): 1-1-4/7.7, 1-1-A3, 1-1-A4
- High Speed Crafts (2018): 1-1-4/11.9, 1-1-A2, 1-1-A3
- Steel Barge Rules (2018): 1-1-4/7.9, 1-1-A3, 1-1-A4

### International Standards

IEC 60079-0 Ed. 7.0: 2017

IEC 60079-11 Ed. 6.0 b:2011  
IEC 60079-26:2014-10 Ed.3.0  
EN 60079-14:2013 + Corr.2016

**EU-MED Standards**

NA

**National Standards**

EU-Type Examination Certificates:

TUV 13 ATEX 124272 X

IECEX Certificate of Conformity

IECEX TUN 13.0030X

**Government Standards**

NA

**Other Standards**

NA



Corporate ABS Programs  
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ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.