

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Automatic Smoke Detection System for Cargo Hold

with type designation(s)
SES-36, SES-RP

Issued to

Yangzhou Win Bang Electric Co., Ltd.
Yangzhou, China

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 ¹⁾
SES-36	B	B	A	B	
SES-RP	B	B	A	B	

¹⁾ Required protection according to DNV GL Rules shall be provided upon installation on board

This Certificate is valid until **2019-01-02**.

Issued at **Hamburg** on **2017-01-03**

DNV GL local station: **Nanjing**

Approval Engineer: **Didier Girardin**

for **DNV GL**

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Dr Papanuskas
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.

Job Id:
Certificate No:

Product description

**Sample Extraction Smoke Detection System for Cargo Holds
with up to 36 detection lines in hazardous areas**

Components

SES-CP Control Panel

Power supply module
Detection Box

Galvanic Isolator KFD0-CS-Ex1.54, KFD0-CS-Ex2.54

SES-RP Repeater Panel

Adapter module

Control module

SES-DB4 / SES-DB8 Detection Box

Smoke Detector Apollo XP95 I.S

Pressure Switch for Airflow Monitoring

SES-FU220 / SES-FU110 Fan Unit

RB Relay Module in SES-RB Relay Box

Article

WB7.820.003/ WB7.820.008
WB7.820.001

WB7.820.004
WB7.820.009

Part No 55000-940 (TAA00000WD)
WB02-PT05.008

WB7.820.005

Software Version Number: 1.31

Application/Limitation

System configuration and application to be in accordance with relevant DNV GL Rules.

External piping is not covered by the Type Approval.

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.

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test 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.

The Type Approval covers hardware and software listed under Product description.

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)
- Arrangement drawing showing location of suction points and central units.

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 implementation.

Tests carried out

- Applicable tests according to GL Guidelines for the Performance of Type Approvals Chapter 2, Edition 2003
- Performance tests EN54-2, EN54-4

Marking of product

The products to be marked with:

- manufacturer name
- model name:



Job Id:
Certificate No:

- serial number
- power supply rating

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE