

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Control system for fire extinguishing**

with type designation(s)

Water Mist Local Pump Starter, Water Mist Controller, Water Mist Repeater

Issued to

**Seaplus Co., Ltd.
Busan, Republic of Korea**

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**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
Water Mist Local Pump Starter	A	B	A	B	B
Water Mist Controller	A	B	A	B	A
Water Mist Repeater	A	B	A	B	A

This Certificate is valid until **2020-11-18**.Issued at **Busan** on **2015-11-19**for **DNV GL**DNV GL local station: **Pusan**Approval Engineer: **Eun Sook Kim**

Baeg Soon Choi
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

SMS-TP-MIST is control system for Local Application Fire Fighting System consisting of the following units:

Unit	Type
Water Mist Local Pump Starter	LPS-2100
Water Mist Controller	Wall mounting type
Water Mist Repeater	Flush mounting type
Local Operating Box	

The following PLC's with software version can be used in the system:

PLC: OMRON CJ2M-CPU13/CJ1W-PA202/CJ1W-ID211/CJ1W-OC211
PLC SW: CX – PROGRAMMER 9.32

Application/Limitation

The type approval covers control system only. External piping is not covered by this certificate.

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

The Type Approval is valid only when the PLC holds a valid type approval certificate.

Instruction Manual covering each specific installation to be available on board.

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

- Reference to this Type Approval Certificate
- Schematic system arrangement drawing
- Power supply arrangement (may be part of schematic system arrangement drawing)

As long as the units are covered by the Type Approval, no Product Certificate will be required according to Pt.4 Ch.9 Sec.1 A 202.

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 for evaluation and approval. Major changes in the software are to be approved before implementation. Certification of application functions may be required.

Type Approval documentation

Tests carried out

Applicable tests according to:

- Hardware tested according to DNV Standard for Certification No. 2.4, April 2006
- SOLAS II-2, Part C, Regulation 10, Chapter 5.6
- IMO MSC/Circ.1387 (requirements with regard to control system only)
Local Fire Fighting System as a whole shall be a case for approval and testing for each specific installation
- Local Application Fire Fighting System Function Test Procedure - DNV witnessed 2015-10-01

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)



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Certificate No: **TAA0000074**

- 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