Certificate no.:
TAA00003UB

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Monitoring System

with type designation(s)
SENSFIB Hull Stress Monitoring System (HSMS), PRISM Ship Performance Monitoring System (SPMS)

issued to
Light Structures AS
Oslo, **Norway**

is found to comply with
DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

This type approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27 Rev.1 (Sep 2023), subject to conditions stated in this certificate.

Issued at **Høvik** on **2026-02-18**

This Certificate is valid until **2028-02-17**.

for **DNV**

DNV local unit: **East & South Norway CMC**

Approval Engineer: **Pål Børre Kristoffersen**

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

The Light Structures Hull Stress Monitoring System (HSMS) monitors stress responses in hull structures during operation. It assists with decision-making, by providing the navigator with information about the load margins of the structure.

The Light Structures Ship Performance Monitoring System (SPMS) software monitors the shaft torque and other performance data of vessels during operation. It provides the navigator with information about the operational status, featuring tools designed to assist with performance assessment.

Both systems collect monitoring data from various sources aboard vessels and display it on a graphical user interface. The main difference between the two software systems is the method of which each type of data is being collected, processed and displayed. Even through the systems deliver slightly different functionality, they are based upon the same OS and to a large extent also the software.

Application/Limitation

This type approval covers cyber security capabilities at security profile 1 for the systems listed in Product description.

The type approved products shall be installed in restricted areas. Access to the components shall be restricted and controlled.

If the type approved product is used in applications subject to cyber security requirements by DNV rules for classification, correct configuration shall be verified by DNV.

Major changes affecting the type approved security capabilities shall be informed to DNV. Such modifications may require witnessing of type testing and update of this type approval certificate to reflect new products or versions listed in Product description.

Type Approval documentation

I020 – Control system functional description:
LS97044MA006 Description of Security Capabilities Rev 0104
Z252 – Test procedure at manufacturer:
LS97044_250039 Test procedure for Type Testing SPMS Rev 0103
LS97044_250039Test procedure for Type Testing HSMS Rev 0103
F141 - Guidelines for hardening and configuration of security capabilities
LS97044PR008 CS Operation and Maintenance Manual Rev 0100
LS97044PR007 User Account Management Rev 0101
F071 - Inventory list:
LS97044LS013 Asset Inventory Rev 0102
LS97044LS010 Software Register Rev 0101
F030 - System topology:
LS97044D050 System Architecture Diagram Rev 0103
F259 - Description of secure development lifecycle processes:
LS97044MA006 Description of Security Capabilities Rev 0104
I320 – Software change handling procedure:
LS 072 Change Management Rev 0101
LS97044PR006 Change Work Instruction Rev 0101
LS97044PR008 CS Operation and Maintenance Manual Rev 0100

Tests carried out

Applicable tests according to DNV-RU-SHIP Pt.6 Ch.5 Sec.21 edition July 2024, security profile 1.
Relevant manuals and instructions of Light Structures management system have been verified for compliance with IACS UR E27 chapter 5.

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number
- power supply ratings.

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
- Review documented evidence of adherence to Secure Development Lifecycle processes.

A renewal assessment will be performed at renewal of the certificate.

Manufactured by:

Light Structures AS, Oslo, Norway