



Certificate No:
TAA00003AT

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
OPL Control Cabinet

Issued to

LITTAU GmbH
Kiebitzreihe, Schleswig-Holstein, Germany

is found to comply with
DNV rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Temperature	A
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to DNV Rules shall be provided upon installation on board

Issued at **Hamburg** on **2023-07-27**

This Certificate is valid until **2028-07-26**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Didier Girardin**

Joannis 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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

OPL Control Cabinet with 4-20 mA control signal to limit the movement of a spring assembly before Caterpillar engines injection pump control shaft.

Note: details, see memo under documentation

Approval conditions

The Type Approval covers hardware listed under product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems

The following documentation is to be submitted:

- Reference to present certificate
- A 'White paper,' including a declaration of conformity of the OPL equipment to the present certificate or a description of any technical deviations and their impact on initial type approval tests, for DNV approval.

Product certificate

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 will **not be required** for system applications made and delivered by Caterpillar Inc. production facilities. for DNV Type Approved diesel engines series.

Type Approval documentation

80001012337

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

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

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE