



Certificate no.:
TAP00002ZX

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Exhaust gas cleaning systems for the reduction of NOx

with type designation(s)
K19-D(M)-SCR

issued to

FUJIAN MT POWER CO., LTD.
Shishi City, Fujian Province, China

is found to comply with

DNV rules for classification – Ships Pt.6 Ch.7 Sec.7 Emission reduction system for NOx or SOx – ER
DNV class programme DNV-CP-0353 – Type Approval - Selective catalytic reduction systems

Application:

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

Design pressure: 8.5 bar (dosing side)
Pressure drop: max. 50 mbar
Design temperature: 280-580 °C (reactor side) / 0-50 °C (dosing side)

Issued at **Hamburg** on **2025-03-03**

This Certificate is valid until **2030-03-02**.

for **DNV**

DNV local unit: **China South NB**

Approval Engineer: **Sven Neddenien**

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 USD 300 000.

Product description

Exhaust gas aftertreatment system based on selective catalytic reduction (SCR) for a marine Diesel engine.

Components of the exhaust gas aftertreatment system:

- injection mixer pipe element, incl. urea nozzle
- SCR reactor box
- urea cabinet incl. urea pump

Application/Limitation

The system is approved for use on the engine type Cummins K19-D(M). The maximum exhaust gas flow is 1439 l/s.

The used fuel oil is DMA or DMZ with a sulphur content of maximum 0.1% (m/m).

Type Approval documentation

Tests carried out

2024-12-04 initial type approval test / integration test, K19-D(M)-SCR
marking of SCR MT-SCR-K19-2501
test engine Cummins K19-DM, serial no. 41364679
Fujian MT Power Co., Ltd., Shishi City, Fujian Province, China

Marking of product

The product shall as a minimum be marked with the manufacturer's name or trademark and the type designation as specified on the first page of this certificate.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore, Periodical Assessment shall be carried out randomly at these companies.

Other conditions

The tank and the supply system to the urea cabinet for the reducing agent is not covered by this certificate.

Documentation for the tank and the supply system shall be submitted for approval according to DNV Rules Ships Pt.6 Ch.7 Sec.7, table 4.

The control and monitoring system of the SCR system, incl. sensors and actuators, is not covered by this certificate. Documentation for the control and monitoring system shall be submitted for approval according to DNV Rules Ships Pt.6 Ch.7 Sec.7, table 4 and Pt.4 Ch.9 Sec.1, table 5 and/or as listed in relevant Type Approval certificate.

END OF CERTIFICATE