Certificate No: LR2006665TA
Issue Date: 24/07/2020
Expiry Date: 19/07/2025

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**MTU Friedrichshafen GmbH**
Address	Maybachplatz 1, Friedrichshafen, 88045, Germany
Type	Exhaust Gas Systems
Description	High speed rotating exhaust gas turbocharger
Trade Name	ZR5.225.I and ZR5.250.I
Application	As exhaust turbochargers for MTU engine types 16V 595 TEx0 and 12V / 16V / 20V 1163 TBx3
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, 2020

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Ratings

ZR5.225.I - Engine Type 16V 595 TEx0

Turbine Wheel Diameter [mm]	Compressor Wheel Diameter [mm]	Speed [rpm]	Exhaust Gas Temp. [°C]
210	225 AI	40.000	700

ZR5.250.I - Engine Type 12V /16V / 20V 1163 TBx3

Turbine Wheel Diameter [mm]	Compressor Wheel Diameter [mm]	Speed [rpm]	Exhaust Gas Temp. [°C]
240	250 AI	35.000	700

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. HPC/HMD 4049-00, Issue No. 6 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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