Certificate No: LR2006615TA
Issue Date: 20/07/2020
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	ZR2.140.I
Application	As exhaust turbochargers for MTU engine types 16V396 TBx4 and 8V/12V 396 TEx4 and 12V 595 TEx0
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, 2020

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Olaf Schmidt

Lead Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

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Ratings

Engine Type 16V 396 TBx4

Turbine Wheel Diameter [mm]	Compressor Wheel Diameter [mm]	Speed [rpm]	Exhaust Gas Temp. [°C]
130	140 Ti	75.000	800

Engine Types 8V/12V 396 TEx4 and 12V 595 TEx0

Turbine Wheel Diameter [mm]	Compressor Wheel Diameter [mm]	Speed [rpm]	Exhaust Gas Temp. [°C]
130	140 Al	72.500	800

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 4057-00, Issue No. 6 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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