



Lloyd's
Register

Type Approval Certificate

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

This certificate is issued to:

PRODUCER

Clemens Lammers GmbH
Offenbergweg 17
D-48432 Rheine
Germany

**PLACE OF
PRODUCTION**

Siemensstraße 15
97616 Bad Neustadt/ Saale
Germany

Nadrazni 25
78985 Mohelnice
Czech Republic

Markova 952
74411 Frenstat
Czech Republic

DESCRIPTION

Asynchronous Low-Voltage Motors
with Aluminium or Cast Iron Enclosure

TYPE

1TZ9 series
1PC1 series
1TE1 series
1PC3 series

Certificate No.

15/20110

Issue Date

07 October 2015

Expiry Date

29 July 2019

Sheet

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Thorsten Wolff
Hamburg Technical Support Office
Lloyd's Register EMEA

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS

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RATINGS

Rated Output: 0,03 kW up to 378 kW
 Synchronous Speed: 750 rpm to 3600 rpm
 Rated Voltage: 200 V up to 690 V
 Rated Frequency: 50 Hz, 60 Hz, converter operation ≤ 690 V
 Number of Poles: 2, 4, 6, 8 and pole-changing types
 Insulation Class: 155 (F), 180 (H)
 Ambient Temperature: -20 °C - +50 °C
 Type of Enclosure: IP55, IP56, IP65 or IP66
 Frame Size: 71M up to 315L

Motor types 1TE102.1A... to 1TE102.1D... and 1TE103.1A... to 1TE103.1D... are certified safe type as:
 II 3 D Ex tc IIIB T120°C Dc IP55 or
 II 3 D Ex tc IIIB T140°C Dc IP55
 according to PTB 15 ATEX 3005.

Motor types 1TE101.1A... to 1TE101.1D... are certified safe type as:
 II 2 D Ex tb IIIC T120°C Db IP65 or
 II 2 D Ex tb IIIC T140°C Db IP65
 according to PTB 15 ATEX 3007.

APPLICATION

Marine and Offshore use

STANDARDS

IEC/ EN 60034-1: 2010 with all relevant parts
 IEC 60092-301: 1980, including Amd 1: 1994 and Amd 2: 1995

OTHER CONDITIONS

All motors of 100 kW and over, intended for essential services, are to be surveyed by the surveyor acc. to the applicable Rules and currently as follows: Ship Rules July 2013, Chapter 2, 9.1.3 and Special Service Craft Rules July 2013, Chapter 2, 9.1.3.

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 LR031.1.2013.12




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**OTHER CONDITIONS
(continued)**

Where the low-voltage motors are intended for essential services the shaft materials are to comply with the applicable Rules and currently as follows:

- Rules for Materials July 2013, Chapter 5, 1.2.8 or 1.2.9;
- Ship Rules July 2013, Part 6, Chapter 2, 9.1.4 and
- Special Service Craft Rules July 2013, Part 16, Chapter 2, 9.1.4

The ratings and conditions for the application of the certified safe type motors in hazardous zones and areas are to be obtained from the applicable PTB certificates.

"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 attached Design Appraisal Document No. HTS/ETS 32517-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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