

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Peiner Träger GmbH
Gerhard-Lucas-Meyer Straße 103
31226 Peine, Germany

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
DNV GL rules for classification – Ships
DNV GL offshore standards

and the following particulars:

| | |
|-----------------------------|---|
| Product | Sections |
| Grade(s) | See particulars of the approval |
| Steelmaking | Electric Arc Furnace, Continuous Casting |
| Deoxidation | Killed |
| Fine grain elements | See particulars of the approval |
| Delivery conditions | See particulars of the approval |
| Max. thickness/diam. | See particulars of the approval |
| Remarks | See particulars of the approval |

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2017-07-04**

for **DNV GL**

This Certificate is valid until **2020-06-30**.

DNV GL local station: **Essen**

Approval Engineer: **Gabi Dau**

Thorsten Lohmann
Head of Section



Particulars of the approval

Normal strength steel

| Grade ³⁾ | Product | Steel making ¹⁾ | Fine grain elements | Max. thickness / diameter [mm] | Delivery condition ²⁾ | Z-quality |
|--|---------|----------------------------|---------------------|--------------------------------|----------------------------------|-----------|
| VL A ⁴⁾ VL B ⁴⁾ VL D ⁴⁾ | Section | EAF, CC | Al+V | 50 | AR | - |
| | | | Al+Nb+V | | N | - |
| | | | | | NR | - |
| | | | | | TM | - |
| VL E ⁴⁾ | Section | EAF, CC | Al+V | 50 | N | - |
| | | | Al+Nb+V | | NR | - |
| | | | | | TM | - |

High strength steel

| Grade ³⁾ | Product | Steel making ¹⁾ | Fine grain elements | Max. thickness / diameter [mm] | Delivery condition ²⁾ | Z-quality |
|--|---------|----------------------------|---------------------|--------------------------------|----------------------------------|-----------|
| VL A32 ⁴⁾ VL D32 ⁴⁾ VL A36 ⁴⁾ VL D36 ⁴⁾ | Section | EAF, CC | Al+V | 50 | AR | - |
| | | | Al+Nb+V | | N | - |
| | | | | | NR | - |
| | | | | | TM | - |
| VL E32 ⁴⁾ VL E36 ⁴⁾ | Section | EAF, CC | Al+V | 50 | N | - |
| | | | Al+Nb+V | | NR | - |
| | | | | | TM | - |

Remarks:

- 1) EAF: Electric arc furnace
CC: Continuous casting
- 2) AR: as rolled
NR: normalising rolling
TM: thermos-mechanical rolling
N: normalised
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Incl. equivalent grades in acc. to other standards, e.g. EN 10025-2, -3, -4 and EN 10225