

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00001HE**  
Revision No:  
**3**

**This is to certify:**

**That**  
**Schmiedewerke Gröditz GmbH**  
**Riesaer Straße 1, 01609 Gröditz,**  
**Germany**

is an approved manufacturer of  
**Steelmaking**

in accordance with  
**DNV GL rules for classification – Ships**  
**DNVGL-OS-B101 – Metallic materials**

and the following particulars:

|                                 |   |
|---------------------------------|---|
| <b>Application area</b>         | <b>Steelmaking</b>  |
| <b>Products</b>                 | <b>Semi-finished products for rolling or forging stock (ingots)</b>   |
| <b>Steel type</b>               | <b>Carbon and carbon-manganese,<br/>Alloy,<br/>Austenitic stainless,<br/>Martensitic stainless<br/>Austenitic-ferritic (duplex) stainless</b> |
| <b>Manufacturing method</b>     | <b>Electric Arc Furnace, Electro Slag Remelting,<br/>Ingot Casting</b>  |
| <b>Deoxidation</b>              | <b>Killed</b>   |
| <b>Max. weight</b>              | <b>See page 2</b>   |
| <b>Heat treatment condition</b> | <b>See page 2</b>   |

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 **2020-12-01**

for **DNV GL**

This Certificate is valid until **2023-03-31**.

DNV GL local station: **Magdeburg**

Approval Engineer: **Christian Wildhagen**

**Thorsten Lohmann**  
**Head of Section**

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Job Id: **263.11-004346-3**  
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## Particulars of the approval

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### Semi-finished products

| Steel type            | Product <sup>3)</sup> | Steel making <sup>1)</sup> | Max weight [kg] <sup>3)</sup> | Heat treatment condition <sup>2)</sup> |
|-----------------------|-----------------------|----------------------------|-------------------------------|--|
| C and C-Mn            | ingots                | EAF, ESR, IC               | 76 500 / 84 000               | AC                                     |
| Alloy                 | ingots                | EAF, ESR, IC               | 76 500 / 84 000               | AC                                     |
| Martensitic stainless | ingots                | EAF, ESR, IC               | 76 500 / 84 000               | AC                                     |
| Austenitic stainless  | ingots                | EAF, ESR, IC               | 76 500 / 84 000               | AC                                     |
| 22 Cr duplex          | ingots                | EAF, ESR, IC               | 76 500 / 84 000               | AC                                     |

Remarks:

- 1) EAF: Electric arc furnace; ESR: Electro slag remelting; IC: Ingot casting
- 2) AC: As cast
- 3) Max. weight: 76 500 kg for EAF process, 84 000 kg for ESR process