



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000017Z
Revision No:
2

This is to certify:

That

H.E.S. Hennigsdorfer Elektrostahlwerke GmbH
Wolfgang-Künstscher-Str.18, 16761 Hennigsdorf,
Germany

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
DNV rules for classification – Ships

and the following particulars:

Application area	Steelmaking
Products	Semi-finished products for rolling or forging stock (billets, bars) Bars for chain cables
Steel type	Carbon and carbon-manganese, Alloy
Manufacturing method	Electric arc furnace, Continuous casting
Deoxidation	Killed
Max. thickness / diameter	See page 2
Heat treatment condition	See page 2

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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2022-07-01**

for **DNV**

This Certificate is valid until **2025-06-30**.

DNV local station: **Magdeburg**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section

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Particulars of the approval

Semi-finished products

Steel type	Product	Steel making ¹⁾	Max. thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	Billets	EAF, CC	140	AR
C and C-Mn	Bars	EAF, CC	120	acc. standard
Alloy	Billets	EAF, CC	140	AR
Alloy	Bars	EAF, CC	120	acc. standard

Bars for chain cables

Steel type	Product	Steel making ¹⁾	Max. Thickness [mm]	Heat treatment condition ²⁾
NV K1, NV K2	Bars	EAF, CC	120	AR

Remarks:

- ¹⁾ EAF: electric arc furnace
 CC: continuous casting
- ²⁾ AR: as rolled