



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000016F
Revision No:
2

This is to certify:

That

Deutsche Edelstahlwerke Specialty Steel GmbH & Co. KG
Siegen Works
Obere Kaiserstraße, 57078 Siegen, Germany

is an approved manufacturer of
Steelmaking and Rolled Steel Products

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

and the following particulars:

Product	Rolled Round Bars Semi-finished products
Steelmaking	Electric Arc Furnace (EAF), Electroslag Remelting (ESR), Ingot Casting, Continuous Casting
Grade(s)	Carbon, Carbon-Manganese, Alloy, Ferritic Stainless, Martensitic Stainless, Austenitic Stainless, 22Cr Duplex Stainless, NV K1, NV K2 and NV K3
Max. 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 **2022-10-26**

for **DNV**

This Certificate is valid until **2025-05-31**.

DNV local unit: **Essen**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Particulars of the approval

Semi-finished products

Steel type	Product	Steel making ¹⁾	Max weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	Ingot castings	EAF, IC	40 000	-	AC
C and C-Mn	Ingot castings	EAF, ESR, IC	19 000	-	AC
C and C-Mn	Continuous cast billets	EAF, IC	-	265	AC
Alloy	Ingot castings	EAF, IC	40 000	-	AC
Alloy	Ingot castings	EAF, ESR, IC	19 000	-	AC
Alloy	Continuous cast billets	EAF, CC	-	265	AC
Stainless Steel	Ingot castings	EAF, IC	40 000	-	AC
Stainless Steel	Ingot castings	EAF, ESR, IC	19 000	-	AC
Stainless Steel	Continuous cast billets	EAF, CC	-	265	AC

Rolled round bars

Steel type	Product	Steel making ¹⁾	Max. thickness [mm]	Heat treatment condition ²⁾
C and C-Mn ³⁾	Round bars	EAF, ESR, IC, CC	89	AR
Alloy ⁴⁾	Round bars	EAF, ESR, IC, CC	89	AR
Ferritic Stainless ⁵⁾	Round bars	EAF, ESR, IC, CC	89	acc. to standard
Austenitic Stainless ⁵⁾	Round bars	EAF, ESR, IC, CC	89	SHT
Martensitic Stainless ⁵⁾	Round bars	EAF, ESR, IC, CC	89	QT
Austenitic-Ferritic (22Cr duplex) ⁵⁾	Round bars	EAF, ESR, IC, CC	89	SHT
NV K1, NV K2, NV K3	Round bars	EAF, ESR, IC, CC	89	AR, AS

Remarks:

- 1) EAF: Electric Arc Furnace; ESR: Electroslag Remelting, CC: Continuous Casting; IC: Ingot Casting
- 2) AC: As cast; AR: As rolled; QT: Quenched and tempered; SHT: Solution annealed; SA: Spheroidized Annealed
- 3) Acc. to EN 10083-2, EN 10084, ISO 683-1, ISO 683-3
- 4) Acc. to EN 10083-3, EN 10084, ISO 683-2, ISO 683-3
- 5) Acc. to EN 10088-3