

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001M7
Revision No:
2

This is to certify:

That

ArcelorMittal Warszawa Sp. z o.o.
132, Kasprowicza Street, 01-949 Warszawa, Poland

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Steelmaking,
Products	Bars for chain cables
Steel type	Rolled bars intended to be machined into components,
Manufacturing method	Bars for chain cables
Deoxidation	Carbon and Carbon-Manganese,
Fine grain elements	Alloy
Max. thickness/diameter	Electric Arc Furnace,
Heat treatment condition	Continuous Casting, Ingot Casting
	Killed
	Al
	See page 2
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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 **2020-11-04**

for **DNV GL**

This Certificate is valid until **2023-10-31**.

DNV GL local station: **Katowice**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section

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Job Id: **263.11-011077-1**
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Particulars of the approval

Rolled round bars intended to be machined into components

Steel type	Product	Steel making ¹⁾	Max. Thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	Round bars	EAF, IC	150	N
C and C-Mn	Round bars	EAF, CC	125 ³⁾	N
Alloy	Round bars	EAF, IC	150	QT
Alloy	Round bars	EAF, CC	125 ³⁾	QT

Bars for chain cable

Steel type	Product	Steel making ¹⁾	Max. Thickness [mm]	Heat treatment condition ²⁾
VL K3	Round bars	EAF, IC	150	AR

Remarks:

- ¹⁾ EAF: Electric Arc Furnace; CC: Continuous Casting; IC: Ingot Casting
- ²⁾ AR: As rolled; N: Normalized; QT: Quenched and tempered
- ³⁾ Minimum rolling reduction ratio 4:1