

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM0000082**  
Revision No:  
**5**

**This is to certify:**

**That**

**Ozkan Demir Celik Sanayi A.S.**  
**Aliaga-Izmir, Turkey**

is an approved manufacturer of  
**Steelmaking and Rolled Steel Products**

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>Normal strength steel</b>
	<b>High strength steel</b>
	<b>Bars for chain cables</b>
<b>Products</b>	<b>Semi-finished products (billets, blooms),</b>
	<b>Sections,</b>
	<b>Bars</b>
<b>Manufacturing method</b>	<b>Electric arc furnace or basic oxygen converter,</b>
	<b>continuous casting</b>
<b>Max. thickness / diameter</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 **2020-05-27**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **Istanbul**

Approval Engineer: **Stefan Röhr**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian

Location: DNV GL Hamburg, Germany

Signing Date: 2020-06-02, on behalf of

**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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **263.11-006654-4**  
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## Particulars of the approval

### Semi-finished products

Grade	Product	Steel making <sup>1)</sup>	Fine grain treatment
VL A, VL B	Billet, Bloom	EAF, CC	-
VL A32, VL A36, VL D32, VL D36, VL E32, VL E36, VL D40	Billet, Bloom		Al+V
VL K2, VL K3	Billet, Bloom		Al

### Sections made from normal strength steel

Grade or type	Steel making <sup>1)</sup>	Fine grain treatment	Heat treatment condition <sup>2)</sup>	Max. thickness [mm]
VL A, VL B	EAF, CC	-	AR	25
VL E	EAF, CC	Al+V	TM	102

### Sections made from normal strength steel

Grade or type	Steel making <sup>1)</sup>	Fine grain treatment	Heat treatment condition <sup>2)</sup>	Max. thickness [mm]
VL A32, VL A36 VL D32, VL D36	BOC or EAF, CC	Al+V	AR	25
VL E32, VL E36	BOC, CC	Al+V	NR	10
	EAF, CC		TM	28
VL D40	EAF, CC	Al+V	TM	45

### Sections made from steels acc. to other standards <sup>3)</sup>

Grade	Steel making <sup>1)</sup>	Fine grain elements	Heat treatment condition <sup>2)</sup>	Max. thickness [mm]
Steel acc. to EN 10025-2				
S355JR, 355J0, S355J2, S355K2	BOC, CC	Acc. standard	AR, TM	25

### Round bars for chain cables

Grade	Steel making <sup>1)</sup>	Fine grain treatment	Heat treatment condition <sup>2)</sup>	Max. diameter (mm)
VL K2	EAF, VD, CC	Al	AR	100
VL K3				65

Remarks:

- 1) BOC: Basic oxygen converter; EAF: Electric arc furnace; CC: Continuous casting
- 2) AR: As rolled; NR: Normalizing rolling; TM: Thermo-mechanical rolling; N: Normalised
- 3) Possible application and certification of any material to classed object is subject to case by case approval