

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

PJSC MMK

Magnitogorsk, Chelyabinskaya OBL, Russian Federation

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
DNV GL rules for classification – Ships
DNV GL offshore standards

and the following particulars:

Application Area	Normal strength steel High strength steel
Product	Plates, Strip
Grade(s)	Hull Structural Steels, see particulars
Steelmaking	Basic Oxygen Converter, Continuous Casting
Deoxidation	Killed
Fine grain elements	See particulars
Delivery conditions	See particulars
Max. thickness	See particulars

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 **2017-12-01**

for **DNV GL**

This Certificate is valid until **2020-12-31**.

DNV GL local station: **St. Petersburg**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section



Particulars of the approval

Normal strength steel

Grade ³⁾	Product	Steel making ¹⁾	Fine grain elements	Max. thickness / diameter [mm]	Delivery condition ²⁾	Z-quality
VL A	Plate	BOC, CC	Al	35	AR	-
VL A	Strip	BOC, CC	Al	10	AR	-
VL A	Plate from Strip	BOC, CC	Al	25	AR	-
VL A	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL B	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL D	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35

High strength steel

Grade ³⁾	Product	Steel making ¹⁾	Fine grain elements	Max. thickness / diameter [mm]	Delivery condition ²⁾	Z-quality
VL A32	Plate	BOC, CC	Al	25	AR	-
VL A32	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL A32	Strip	BOC, CC	Al	10	AR	-
VL A32	Plate from Strip	BOC, CC	Al	25	AR	-
VL A36	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL A40	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL D32	Plate	BOC, CC	Al	25	AR	-
VL D32	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL D32	Strip	BOC, CC	Al	10	AR	-
VL D32	Plate from Strip	BOC, CC	Al	25	AR	-
VL D36	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL D40	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL E36	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35
VL E40	Plate	BOC, CC	Al+Nb+Ti+V	50	TM	Z35



Job Id: **263.11-008283-1**
Certificate No: **AMMM00001U9**

Remarks:

- 1) BOC: Basic oxygen converter; CC: Continuous casting
- 2) AR: as rolled; TM: thermo-mechanical rolling
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules