

# APPROVAL OF MANUFACTURER CERTIFICATE

**This is to certify:**

**That**

**Dongkuk Steel Mill Co., Ltd., Pohang Works**  
**195 Cheolgangsandan-ro Daesong-myeon, Nam-gu, Pohang, Republic of Korea**

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

in accordance with  
**DNV GL rules for classification – Ships**  
**Offshore Standard DNV GL-OS-B101**

and the following particulars:

<b>Product</b>	<b>Semi-finished products (slabs, beam blanks, blooms, Billets), Sections</b>
<b>Grades</b>	<b>See table page 2</b>
<b>Steelmaking</b>	<b>See table page 2</b>
<b>Deoxidation</b>	<b>Killed</b>
<b>Fine grain elements</b>	<b>See table page 2</b>
<b>Delivery conditions</b>	<b>See table page 2</b>
<b>Max. thickness</b>	<b>See table page 2</b>

Manufacturer approved by this certificate is 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 **Høvik** on **2017-05-18**

for **DNV GL**

This Certificate is valid until **2020-06-30**.

DNV GL local station: **Ulsan**

Approval Engineer: **Dechun Lou**

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**Hanne Anita Hjerpetjønn**  
**Head of Section**



Job Id: **263.11-000194-4**  
Certificate No: **AMMM00001DM**

## Particulars of the approval

### Sections:

<b>Normal Strength Steels:</b>					
Grade or type	Steelmaking <sup>1)</sup>	Fine grain treatment	Delivery condition <sup>2)</sup>	Max. Thick-ness (mm)	Z-quality
VL A, VL B	EAF, CC	Al	AR	32	-
VL D	EAF, CC	-	AR	25	-
<b>High Strength Steels:</b>					
Grade or type	Steelmaking <sup>1)</sup>	Fine grain treatment	Delivery condition <sup>2)</sup>	Max. Thick-ness (mm)	Z-quality
VL A32	EAF, CC	Al+V	AR	32	-
VL D32	EAF, CC	Al+V	AR	25	-

Remarks:

<sup>1)</sup> EAF: Electric Arc Furnace; CC: Continuous Casting.

<sup>2)</sup> AR: As Rolled.