

# APPROVAL OF MANUFACTURER CERTIFICATE

**This is to certify:**

**That**

**Korea Steel Shapes Co. Ltd. Noksan Works**  
**84, Noksansandan 407-ro, Gangseo-gu, Busan,**  
**Republic of Korea**

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

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

and the following particulars:

<b>Application area</b>	<b>Normal strength steel,</b>
<b>Products</b>	<b>High strength steel</b>
<b>Manufacturing method</b>	<b>Structural sections,</b>
<b>Max. thickness</b>	<b>Bars</b>
<b>Heat treatment condition</b>	<b>Electric arc furnace</b>
	<b>Continuous casting</b>
	<b>15 mm</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 **2020-10-07**

for **DNV GL**

This Certificate is valid until **2023-10-30**.

DNV GL local station: **Gimhae Station**

Approval Engineer: **Andreas Koch**

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**Thorsten Lohmann**  
**Head of Section**

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Job Id: **263.11-007689-2**  
Certificate No: **AMMM00001GN**  
Revision No: **2**

## Particulars of the approval

### Normal strength steel

Grade	Product	Steel making 1) 3)	Fine grain elements	Max. thickness / diameter [mm]	Heat treatment condition 2)
VL A	Section, Bar	EAF, BOC, CC	-	15 / 65	AR

### High strength steel

Grade	Product	Steel making 1) 3)	Fine grain elements	Max. thickness / diameter [mm]	Heat treatment condition 2)
VL A32	Section, Bar	EAF, CC	Al or Al+V	15 / 30	AR
VL A36	Section, Bar		Al+V		
VL A32, VL D32, VL A36, VL D36	Section, Bar	EAF, CC	Al+V	15 / -	AR

#### Remarks:

- 1) BOC: Basic oxygen converter  
EAF: Electric arc furnace  
CC: Continuous casting
- 2) AR: as rolled
- 3) Semi-finished products from DNV GL approved manufacturer