

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000A1
Revision No:
2

This is to certify:

That

Fine Besteel

Changnyeong-gun, Gyeongsangnam-do, Republic of Korea

is an approved manufacturer of
Rolled Steel Products

in accordance with
DNV GL rules for classification – Ships
DNVGL-OS-B101 – Metallic materials

and the following particulars:

Application area	Normal strength steel, High strength steel
Products	Steel for low temperature service
Manufacturing method	Sections and flat bars Basic Oxygen Converter, Continuous Casting
Max. thickness	See page 2
Heat treatment condition	See page 2

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 **2020-05-05**

for **DNV GL**

This Certificate is valid until **2023-04-30**.

DNV GL local station: **Gimhae**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section

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Job Id: **263.11-005270-2**
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Particulars of the approval

Normal strength steel

Grade	Product	Steel making ¹⁾	Fine grain elements	Max. thickness [mm]	Heat treatment condition ²⁾
VL A	Sections	BOC, CC	-	20	AR
			Al+Nb	18	AR
VL B, VL D, VL E	Sections	BOC, CC	Al+Nb	18	AR
VL A	Flat bars	BOC, CC	-	20	AR
			Al	30	AR

High strength steel

Grade	Product	Steel making ¹⁾	Fine grain elements	Max. thickness [mm]	Heat treatment condition ²⁾
VL A32	Sections	BOC, CC	Al	18	AR
VL A32, VL A36	Sections	BOC, CC	Al+Nb	30	AR
VL A32, VL D32, VL E32, VL F32, VL A36, VL D36, VL E36, VL F36	Sections	BOC, CC	Al+Nb+V+Ti	18	TM
VL A32, VL A36	Flat bars	BOC, CC	Nb	20	AR
			Al+Nb	30	AR

Steel for low temperature service

Grade	Product	Steel making ¹⁾	Fine grain elements	Max. thickness [mm]	Heat treatment condition ²⁾
VL 2-4L, VL 4-4L	Sections	BOC, CC	Al+Nb+V+Ti	18	NR
				18	TM

Remarks:

- 1) BOC: Basic Oxygen Converter; CC: Continuous Casting
- 2) AR: As rolled; NR: Normalising rolling; TM: Thermo-mechanical rolling