



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000020M
Revision No:
1

This is to certify:

That

SIJ METAL RAVNE d.o.o.
RKoroška cesta 14, Si-2390, Ravne na Koroškem,
Slovenia

is an approved manufacturer of
Steelmaking and Rolled Steel Products

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

| | |
|---------------------------------------|---|
| Application area | Normal strength steel, High strength steel, Bars for chain cables, Stainless steel |
| Product | Semi-finished products for rolling or forging stock Bars intended to be machined into components Bars for chain cables |
| Steel type | Carbon and carbon-manganese, Alloy, Austenitic stainless, Ferritic stainless, Martensitic stainless |
| Manufacturing method | Electric arc furnace, Ingot casting |
| Max. thickness / diameter | See page 2 |
| Heat treatment condition | See page 2 |
| Additional approval conditions | 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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2021-12-15**

for **DNV**

This Certificate is valid until **2024-12-31**.

DNV local station: **Rijeka**

Approval Engineer: **Andreas Koch**

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



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Page 1 of 2

Particulars of the approval

Rolled steel

| Steel type ¹⁾ | Grade ⁴⁾ | Product | Steel making ¹⁾ | Max. thickness [mm] | Heat treatment condition ²⁾ |
|--------------------------|--|---------|----------------------------|---------------------|--|
| C and C-Mn | Acc. EN 10084 | Bars | EAF, IC | 105 | Acc. standard |
| | Acc. EN 10083-2 | Bars | EAF, IC | 105 | N, QT |
| | S235JR, S235J0, S235J2, S275JR, S275J0, S275J2, S355JR, S355J0, S355J2, S355K2 acc. EN 10025-2 | Bars | EAF, IC | 105 | Acc. standard |
| Alloy | Acc. EN 10083-3 | Bars | EAF, IC | 105 | QT |
| | Acc. EN 10084 | Bars | EAF, IC | 105 | Acc. standard |
| | Acc. EN 10089 | Bars | EAF, IC | 105 | QT |
| | Acc. EN 10222-2 | Bars | EAF, IC | 105 | N, NT, QT |
| Ferritic stainless | Acc. EN 10088-3 | Bars | EAF, IC | 105 | A, QT |
| Martensitic stainless | Acc. EN 10088-3 | Bars | EAF, IC | 105 | QT |

Bars for chain cables

| Steel type | Product | Steel making ¹⁾ | Max. Thickness [mm] | Heat treatment condition ²⁾ |
|------------|----------------------|----------------------------|---------------------|--|
| VL K1 | Bars for chain cable | EAF, CC or BOC, CC | 250 | AR, AF |
| VL K2 | | | 250 | |
| VL K3 | | | 2500 | |

Semi-finished products

| Steel type ³⁾ | Product | Steel making ¹⁾ | Max. weight [kg] | Max. thickness [mm] | Heat treatment condition ²⁾ |
|--------------------------|---------|----------------------------|------------------|---------------------|--|
| C and C-Mn | Ingot | EAF, IC | 42 000 | 1 400 | AC |
| Alloy | Ingot | EAF, IC | 42 000 | 1 400 | AC |
| Stainless steels | Ingot | EAF, IC | 42 000 | 1 400 | AC |

Remarks:

- 1) EAF: Electric arc furnace
IC: Ingot casting
- 2) AF: as formed (forged)
AC: as cast
A: annealed
N: normalised
NT: normalized and tempered
QT: quenched and tempered
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Possible application and certification of any material to classed object is subject to case by case approval