

6.6.2019

447758

| | | | | |
|--|---------------------|---|-----------------------|------------------------------|
| Customer's order number 011040 | | Manufacturer's order number 151131 1 | | |
| Customer/consignee Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere | | Buyer Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere | | |
| Customer reference number 011040-5130/96-721007 | | | | |
| Product Round bar As rolled Hot rolled, cold drawn | | Steel grade IMATRA 550 | | |
| | | Specification IS 2722.01.05 | | |
| Charge 37006 | Abbreviation U9K | Diameter/dimensions 35 mm | Tolerance type h09 | Reduction ratio 106,73 :1 |

CAST ANALYSIS

| | C | SI | MN | P | S | CR | NI | MO | |
|--------|-------|--------|-------|--------|-------|-------|--------|--------|--|
| | % | % | % | % | % | % | % | % | |
| Min | | | | | 0,020 | | | | |
| Result | 0,13 | 0,28 | 1,09 | 0,010 | 0,034 | 0,17 | 0,16 | 0,04 | |
| Max | 0,20 | 0,55 | 1,60 | 0,025 | 0,040 | | | | |
| | V | TI | CU | ALS | AS | SN | B | CA | |
| | % | % | % | % | % | % | % | % | |
| Min | | | | | | | | 0,0020 | |
| Result | 0,05 | 0,0013 | 0,19 | 0,011 | 0,006 | 0,011 | 0,0002 | 0,0052 | |
| Max | 0,09 | | 0,30 | | | | | | |
| | N | NB | CO | PB | W | SB | CEV | | |
| | % | % | % | % | % | % | % | | |
| Min | | | | | | | | | |
| Result | 0,013 | 0,003 | 0,013 | 0,0005 | 0,005 | 0,001 | 0,38 | | |
| Max | | | | | | | 0,47 | | |

TENSILE TEST FROM 1/3 RADIUS EN ISO 6892-1

| | Rp0.2 | Rm | A | 5 | Z |
|--------|-------|-----|----|----|---|
| | MPa | MPa | % | % | |
| Min | 500 | 550 | 12 | | |
| Result | 621 | 635 | 14 | 65 | |
| Max | | 750 | | | |

This material meets also the requirements of S355J2C+C according to EN 10277:2018
Steel production process: Electric Arc Furnace, Vacuum Degassing and Continuous Casting

Country of origin: Finland

The products supplied are in compliance with the requirements of the order

This certificate is issued electronically and is valid without a signature

Kumpulainen Helena
Authorized Representative