

A composite image showing a steel mill with tall chimneys emitting smoke, set against a blue sky with white clouds. In the foreground, there are large, vibrant green leaves, suggesting a focus on sustainability or environmental aspects of the industry.

# OIL & GAS

## SPECIFICATION SHEET

With its 1,000 employees and almost 80,000 tonne annual production, SIJ Metal Ravne belongs to the group of mini mills at the global level. Therefore, we found our niche in production which is characterised by specific knowledge and experience, greater flexibility, and higher added value. We produce steel in an electric arc furnace, casting it into ingots and rolling or forging it into high-quality long steel products. For the most challenging conditions we use VOD (vacuum oxygen decarburisation) and ESR (electroslag remelting) methods. Our own steel plant, forging shop, rolling mill, and a wide range of heat treatment and machining processes allow us to produce a wide variety of more than 200 steel grades in different shapes and sizes.

SIJ Metal Ravne is a member of the SIJ Group – Slovenian Steel Group.

The oil and gas industry is a high-level industry in which products with high added value involving a lot of expertise and special knowledge are used. SIJ Metal Ravne is a globally recognised steel producer and has been supplying its steels to the oil and gas industry for many years, mainly under the brand names SINOXX and SIQUAL.



## STEEL GRADES

### AUSTENITIC STAINLESS STEEL GRADES

SIJ BRAND	W.Nr.	AISI	ASTM	CHEMICAL COMPOSITION
<b>SINOXX</b> <sup>***</sup> SINOXX 4301	1.4301	304	A276, A479	C max. 0.08   Si max. 1.00   Mn max. 2.00   Cr 18.00–20.00   Ni 8.00–10.50
<b>SINOXX</b> <sup>***</sup> SINOXX 4305	1.4305	303	A582	C max. 0.15   Si max. 1.00   Mn max. 2.00   Cr 17.00–19.00   Ni 8.00–10.00   S min. 0.15
<b>SINOXX</b> <sup>***</sup> SINOXX 4401	1.4401	316	A276, A479	C max. 0.08   Si max. 1.00   Mn max. 2.00   Cr 16.00–18.00   Ni 10.00–14.00   Mo 2.00–3.00
<b>SINOXX</b> <sup>***</sup> SINOXX 4550	1.4550	347	A276, A479	C max. 0.08   Si max. 1.00   Mn max. 2.00   Cr 17.00–19.00   Ni 9.00–12.00   Nb min. 10xC–1.1
<b>SINOXX</b> <sup>***</sup> SINOXX 4980	1.4980	660	A453	C max. 0.08   Si max. 1.00   Mn max. 2.00   Cr 13.50–16.00   Mo 1.00–1.50   Ni 24.00–27.00   Ti 1.90–2.35   V 0.10–0.50   B 0.003–0.010
<b>SINOXX</b> <sup>***</sup> SINOXX 5490		S21800	A276, A479	C max. 0.10   Si 3.50–4.50   Mn 7.00–9.00   Cr 16.00–18.00   Ni 8.00–9.00   N 0.08–0.18

### MARTENSITIC STAINLESS STEEL GRADES

SIJ BRAND	W.Nr.	AISI	ASTM	CHEMICAL COMPOSITION
<b>SINOXX</b> <sup>***</sup> SINOXX 4006	1.4006	410	A276, A479	C 0.08–0.15   Si max. 1.00   Mn max. 1.00   Cr 11.50–13.50
<b>SINOXX</b> <sup>***</sup> SINOXX 4057	1.4057	431	A276	C 0.12–0.22   Si max. 1.00   Mn max. 1.50   Cr 15.00–17.00   Ni 1.50–2.50
<b>SINOXX</b> <sup>***</sup> SINOXX 4418	1.4418			C max. 0.06   Si max. 0.70   Mn max. 1.50   Cr 15.00–17.00   Mo 0.80–1.50   Ni 4.00–6.00
<b>SINOXX</b> <sup>***</sup> SINOXX 4542	1.4542	17-4 PH	A564	C max. 0.07   Si max. 1.00   Mn max. 1.00   Cr 15.00–17.50   Ni 3.00–5.00   Nb 0.15–0.45   Cu 3.00–5.00
<b>SINOXX</b> <sup>***</sup> SINOXX 4903	1.4903	F91	A182	C 0.08–0.12   Si 0.20–0.50   Mn 0.30–0.50   Cr 8.00–9.50   Mo 0.85–1.05   V 0.18–0.25   Nb 0.06–0.10   N 0.035–0.070

## QUENCHED AND TEMPERED STEEL

SIJ BRAND	W.Nr.	AISI	ASTM	CHEMICAL COMPOSITION
<b>SIQUAL</b> <sup>***</sup> SIQUAL 0460	1.0460	LF2	A105 A350	C max. 0.03   Si 0.15-0.30   Mn 0.60-1.05
<b>SIQUAL</b> <sup>***</sup> SIQUAL S130	1.6562	4340	A29	C 0.38-0.43   Si 0.20-0.35   Mn 0.70-0.90   Cr 0.70-0.90   Ni 1.65-2.00   Mo 0.30-0.40
<b>SIQUAL</b> <sup>***</sup> SIQUAL 6580	1.6580			C 0.26-0.34   Si max. 0.40   Mn 0.40-0.60   Cr 1.80-2.20   Ni 1.80-2.20   Mo 0.30-0.50
<b>SIQUAL</b> <sup>***</sup> SIQUAL 6582	1.6582			C 0.30-0.38   Si max. 0.40   Mn 0.50-0.80   Cr 1.30-1.70   Ni 1.30-1.70   Mo 0.15-0.30
<b>SIQUAL</b> <sup>***</sup> SIQUAL 6948	1.6948			C 0.22-0.32   Mn 0.15-0.40   Cr 1.20-1.80   Mo 0.25-0.45   Ni 2.40-3.10
<b>SIQUAL</b> <sup>***</sup> SIQUAL 6958	1.6958	SA723GR3	A723	C max. 0.40   Si max. 0.35   Mn max. 0.90   Cr 0.80-2.00   Ni 3.30-4.50   Mo 0.40-0.80
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7218	1.7218			C 0.22-0.29   Si 0.10-0.40   Mn 0.60-0.90   Cr 0.90-1.20   Mo 0.15-0.30
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7225	1.7225	4140	A29	C 0.38-0.43   Si 0.15-0.35   Mn 0.75-0.90   Cr 0.90-1.10   Mo 0.15-0.25
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7335	1.7335	F11	A182	C 0.05-0.15   Si 0.50-1.00   Mn 0.30-0.60   Cr 1.00-1.50   Mo 0.44-0.65
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7362	1.7362	501, F5	A182	C 0.10-0.15   Si max. 0.50   Mn 0.30-0.60   Cr 4.00-4.60   Mo 0.45-0.60
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7380	1.7380	F22	A182	C 0.05-0.15   Si max. 0.5   Mn 0.30-0.60   Cr 2.00-2.50   Mo 0.87-1.13
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7386	1.7386	F9	A182	C max. 0.15   Si 0.50-1.00   Mn 0.30-0.60   Cr 8.00-10.00   Mo 0.90-1.10
<b>SIQUAL</b> <sup>***</sup> SIQUAL 7709	1.7709			C 0.17-0.25   Si max. 0.40   Mn 0.40-0.80   Cr 1.20-1.50   Mo 0.55-0.80 Ni max. 0.60   V 0.20-0.35
<b>SIQUAL</b> <sup>***</sup> SIQUAL 8936	1.8936			C max. 0.20   Si max. 0.60   Mn 1.10-1.70   Cr max. 0.30   Ni max. 1.00

**Melting route:** all steel grades are available as airmelted or airmelted + ESR.






### ➤ QUALITY SYSTEM MANAGEMENT

- EN/AS 9100
- ISO 9001
- ISO 14001
- OHSAS 18001
- ISO/IEC 17025




## ➤ PRODUCT RANGE AVAILABILITY:




### Rolled bars:

	ROUND	Ø 15–105 mm
	SQUARE	25–75 mm
	FLAT	width 40–150 mm with thickness 7–65 mm, width 150–255 mm with thickness 7–50 mm. Length: 3000–6000 mm.
	PEELED & POLISHED	Ø 16–80 mm, length: 2500–6000 mm.
	GROUND & POLISHED	Ø 7–80 mm, length: 2000–4000 mm.


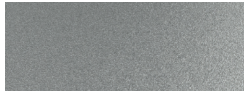
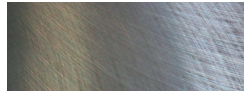
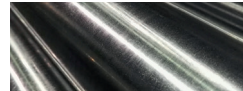
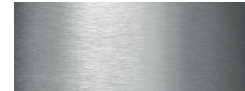
### Wide flat sections:

	WIDE FLAT SECTIONS	Width 251 – 505 mm with thickness 25 – 90 mm. Length: 1600 – 4500 mm.
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### Forged bars:

	ROUND	Ø 90–950 mm, length: 2000–10000 mm.
	FLAT	from 80x70 mm to 260x120 mm or 261x80 mm to 1600x550 mm.
	SQUARE	80–850 mm. Length for flat and square: 2000–8000 mm.

### Surface:

Black	sandblasted	milled	peeled	ground
				

### Additional offer:

We also supply different open-die machined forgings and round profiles for the oil and gas industry as well as for other sectors (energy, mechanical engineering, automotive, etc.).

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## ➤ DISCLAIMER

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