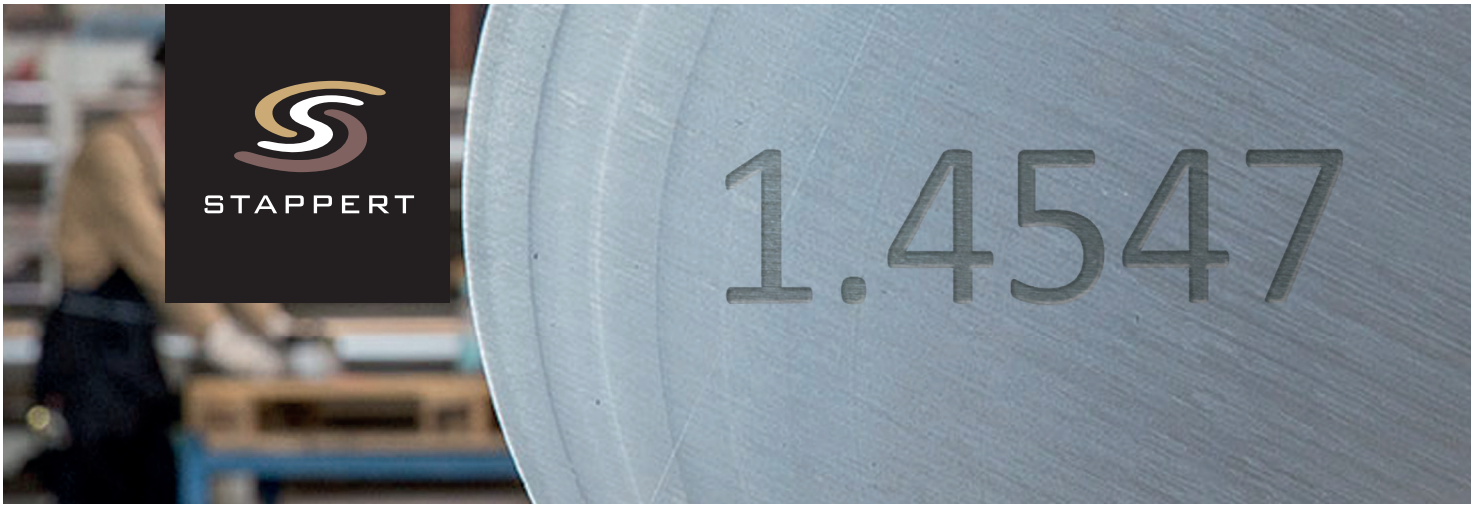

First choice for Off Shore and Industry

Information about **1.4547 | S31254 | X1 CrNiMoCuN 20-18-7 | 254SMO**

The material 1.4547 is an **austenitic**, **corrosion resistant stainless steel**. Due to its high molybdenum content and the addition of nitrogen the material has good mechanical properties and **very good resistance** to nilting, splitting and surface corrosion and shows a PRE-value of > 42.

The standard condition of heat treatment of the material 1.4547 is **solution annealed**. In this condition the material is non-magnetic.

The material is suitable for applications in which **chlorides** or **dilute sulfur or phosphoric** acid are used. It is also resistant against **sea water**.

AVAILABLE DIMENSIONS

20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140 and 150 mm

APPLICATIONS

- Offshore and shipbuilding
- Plants of the chemical industry
- Parts for flue gas desulphurisation plants
- Parts for bleaching plants of the pulp/paper industry
- Seawater desalination plants
- Water treatment plants

WELDING

Due to the low carbon content the material 1.4547 is weldable with all common welding methods.

MACHINING

Due to the high alloying elements, the material is difficult to machine. Because of his inclination to cold work hardening a low cutting speed should be selected. If possible, the cutting tool should constantly be kept in touch.

MECHANICAL CHARACTERISTICS AT INCREASED TEMPERATURES

Strength characteristic	Delivery condition	Temperature °C				
		100	200	300	400	500
Rp0,2	solution annealed	230	190	170	160	148
Rp1,0	solution annealed	270	225	200	190	180

MECHANICAL CHARACTERISTICS AT ROOM TEMPERATURES

Stated values apply to steel bars up to max. 160 mm
(EN 10088-3)

Yield strength Rp0,2 (N/mm²):
minute 300

Yield point Rp1,0 (N/mm²):
minute 340

Tensile strength Rm (N/mm²):
650 - 850

Elongation at break (%):
minute 35

Impact Value (ISO-V) J:
minute 100

HEAT TREATMENT

Melting range:
1325 – 1400 °C

Solution annealing:
1140 – 1200 °C

Hot forming:
1200 – 1000 °C

Stress relief:
500 °C

Cooling:
air

CHEMICAL ANALYSIS

chemical element	EN 10088-1	
	min.	max.
C	0	0.020
Si	0	0.70
Mn	0	1.00
P	0	0.030
S	0	0.010
Cr	19.5	20.50
Mo	6.00	7.00
Ni	17.5	18.5
N	0.18	0.25
Cu	0.50	1.00

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