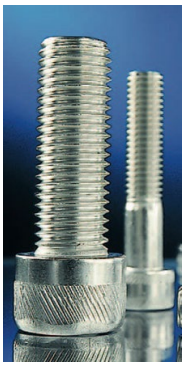
MARCEGAGLIA
FAGERSTA STAINLESS



EN 1.4404

Fagersta Type: **R425.10 / R425.20**
316L

EN 1.4404 is an austenitic stainless steel grade. Its austenitic structure combined with added Molybdenum makes the grade very useful for general applications where there are high demands regarding corrosion resistance such as chlorinated environments and processing industries etc. Besides that it has good forming properties and good weldability and is therefore very useful for general applications. This grade is non magnetic in annealed condition but will be a bit magnetic in a cold worked condition since a part of the austenite will be transformed into deformation martensite. It is often used for cold heading, springs and bright forming applications.

CHEMICAL COMPOSITION (Nominal) %

	C*	Si	Mn	Cr	Ni	Mo	N*	PRE
R425.10	0.020	0.35	1.55	16.8	11.2	2.1	0.050	25
R425.20	0.030	0.60	1.60	16.7	10.1	2.1	0.050	24

(PRE = Cr + 3.1 x Mo + 25 x N)

* = max

PHYSICAL PROPERTIES

Condition: Annealed

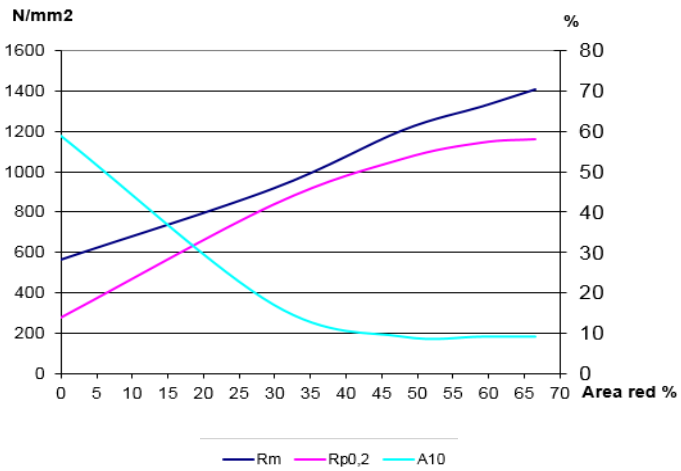
Density	7.9	g / cm^3
Moduls of elasticity, E	190 - 200	GPa
Specific heat 0-100°C	480	J / kg°C

TYPICAL MECHANICAL PROPERTIES

Condition: Annealed or DST-annealed (Direct Solution Treatm.)

Proof strength	**Rp0.2**	min 180	N / mm^2
Tensile strength	**Rm**	520 - 620	N / mm^2
Elongation	**A10**	min 45	%

DEFORMATION GRAPH



THERMAL TREATMENT

Annealing temperature	1030 - 1110	°C
	1886 - 2030	°F

MAX. OPERATING TEMPERATURE

Operating temp. in air	800	°C
	1472	°F
Scaling temp. in air	850	°C
	1562	°F

THERMAL CONDUCTIVITY

20 °C	15.0	W / mK
100 °C	16.0	W / mK
200 °C	18.0	W / mK
400 °C	19.0	W / mK

THERMAL EXPANSION

Thermal expansion per °C x 10-6 from 20°C to:

100 °C	16.5
200 °C	17.0
300 °C	17.5
400 °C	
500 °C	

RESISTIVITY

20 °C	800	µΩmm
100 °C	850	µΩmm
200 °C	900	µΩmm
300 °C	950	µΩmm