Quality	**X6CrMoS19-2**	**Ferritic Stainless Steel**	*Technical card 2018*
Number	**1.4114**		*Lucefin Group*

Chemical composition

C% max	Si% max	Mn% max	P% max	S%	Cr%	Mo%	Ni% max	
0,08	1,00	2,50	0,040	0,15-0,35	17,5-19,5	1,50-2,50	0,75	FD A 35-570: 1996

Temperature °C

Melting range	**Hot-forming**	**Soft annealing +A**
1500	preheat 870-820 hot-forming 1100-1040	850-775 air
Isothermal annealing +I	**Quenching +Q**	**Tempering +T**
not suitable	not suitable	not suitable

MMA **welding –** AWS electrodes

pre-heating *annealing after w.*

not recommended

joint with steel

carbon CrMo alloyed stainless

cosmetic welding

Chemical treatment ▪ Passivation (20 - 50% HNO_3) + (2 - 6% $Na_2Cr_2O_7 \cdot 2H_2O$) hot or cold

Mechanical properties

Heat-treated material +A FD A 35-570: 1996

size mm		Testing at room temperature			
		R	**Rp** 0.2	**A**%	**KV_2** +20 °C
from	to	N/mm²	N/mm² min	min	J min
	100	430-630	240	14	-

Thermal expansion	$10^{-6} \cdot K^{-1}$	►	10.2	10.4	11	11.5		
Modulus of elasticity	longitudinal GPa	216			200			
Electrical resistivity	Ω • mm²/m	0.60						
Electrical conductivity	Siemens•m/mm²	1.66						
Specific heat	J/(Kg•K)	460						
Density	Kg/dm³	7.70						
Thermal conductivity	W/(m•K)	25						
°C		**20**	**100**	**200**	**300**	**400**	**600**	**800**

The symbol ► indicates temperature between 20 °C and 100 °C, 20 °C and 200 °C …..

Corrosion resistance	Atmospheric		Chemical			**x** food and organic substances, chlorides
Fresh water	*industrial*	*marine*	*medium*	*oxidizing*	*reducing*	
x	**x**		**x**			

Magnetic	yes
Machinability	high
Hardening	cold-drawn and other cold plastic deformations
Service temperature in air	up to 870 °C

Europe EN	**USA** UNS	**USA** ASTM	**France** FD A	**Russia** GOST	**Japan** JIS	**India** IS	**Republic of Korea** KS
X6CrMoS17	S18200	**XM-34**	Z8CDF 19-2				