Quality	**430FMo**	**Ferritic Stainless Steel**	*Technical card 2018*
Number	(~ *1.4105*)		*Lucefin Group*

Chemical composition

C% max	**Si%**	**Mn%**	**P%** max	**S%**	**Cr%**	**Mo%**	**Ni%** max
0,08	0,30-0,80	0,40-1,25	0,040	0,20-0,30	16,0-18,0	0,80-1,10	1,00
± 0.01	+ 0.05	+ 0.03	+ 0.005	± 0.02	± 0.2	± 0.05	± 0.03

Product deviations are allowed

Temperature °C

Melting range	**Pre-heating**	**Hot-forming**	**Soft annealing +A**
1500-1480	870-820 pause	1140-900	800-780 air (HB max 190)
Natural state +U	**Recrystallization +RA**	**Quenching +Q**	**Annealing** for magnetic properties [a)]
(HB min 195)	820-760 slow cooling (HB max 195)	930 calm or forced air	845-800 cooling 50 °C/h to 430, then air

MMA **welding –** AWS electrodes
pre-heating *post welding*
difficult; address qualified electrodes producers
joint with steel

carbon	CrMo alloyed	stainless
E430	E430	E309

cosmetic welding
E309

Curie temperature 671 °C

Chemical treatment ▪ *Pickling* (6 - 25% HNO_3) + (0.5 - 8% HF) hot or cold. *Passivation* 20 - 25% HNO_3 hot

Mechanical properties

Hot-formed

size mm from	to	Testing at room temperature **R** N/mm² min	**Rp** 0.2 N/mm² min	**A%** min	**Kv** +20 °C J min	**HB** [a)] max
	100	430	245	16	-	200

[a)] for information only

+RA recrystallization annealing

Cold-drawing

size mm from	to	Testing at room temperature **R** N/mm² min	**Rp** 0.2 N/mm² min	**A%** min	**Kv** +20 °C J min	**HB** max
	10	520	320	7	-	-
10	16	480	300	7	-	-
16	40	420	240	12	-	-
40	63	420	240	12	-	-

+RA+C recrystallization annealing and cold-drawing

Thermal expansion	$10^{-6} \cdot K^{-1}$	►	10.6	11.4	12.0
Modulus of elasticity	longitudinal GPa	206			
Poisson number	*v*	0.29 ~			
Electrical resistivity	Ω • mm²/m	0.70			
Electrical conductivity	Siemens•m/mm²	1.42			
Specific heat	J/(Kg•K)	460			
Density	Kg/dm³	7.61			
Thermal conductivity	W/(m•K)	25			
Relative magnetic permeability	μr	600-800 ~			
°C		**20**	**200**	**400**	**600**

The symbol ► indicates temperature between 20 °C and 200 °C, 20 °C and 400 °C …..

Corrosion resistance	Atmospheric		Chemical			**x** food, nitric acid, dairy products
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	continuous service up to 780 °C; intermittent service up to 830 °C

Europe EN	**USA** UNS	**USA** ASTM	**China** GB	**Russia** GOST	**Japan** JIS	**India** IS	**Republic of Korea** KS
(X6CrMoS17)							