STANDARD REFERENCE:

EN 10088-3: 2014 (Hot-rolled and bright products)

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10088-3: 2005		(UNI 6900: 71)	(DIN 17440 - 85)		(NF A 35-574-90)	(BS 970 pt. 3-91)	AISI
Grade	**N°**		**Werkstoff**	**N°**			
X14CrMoS17	1.4104	X 10 CrS 17	X14CrMoS17	1.4104	Z 13 CF 17	-	430F

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

C	Si / max	Mn / max	P / max	S	Cr	Mo
0,10÷0,17	1,00	1,50	0,040	0,15÷0,35	15,5÷17,5	0,20÷0,60

MECHANICAL PROPERTIES - Rough turned (1X) in the annealed condition

Size max (mm)	Heat treatment	Hardness HB max*	$Rp_{0,2}$ (MPa) min	R_m (MPa)	A_5 (%) min
100	Annealed (+A)	220	-	730 max	-
≤ 60	Quenched + Tempered (+QT 650)	-	500	650÷850	12
> 60 ≤ 100	Quenched + Tempered (+QT 650)	-	500	650÷850	10

* only for guidance

MECHANICAL PROPERTIES - Cold drawn (2H, 2B) and ground bars (2G) in the solution annealed condition

Size max (mm)	Annealed		Quenched + Tempered			
	R_m (MPa) max	HB max*	Heat treatment	$Rp_{0,2}$ (MPa) min	R_m (MPa) max	A_5 (%) min**
≤ 10	880	280	Quenched + Tempered (+QT 650)	580	700÷980	7
> 10 ≤ 16	880	280		530	700÷980	7
> 16 ≤ 40	800	250		500	650÷930	9
> 40 ≤ 63	760	230		500	650÷880	10
> 63 ≤ 100	730	220		500	650÷850	10

* for reference only ** values valid only for size ≥5 mm

MECHANICAL PROPERTIES - Cold drawn wire and coils (2H)

Tensile strength levels	+C 500	+C 650	+C 800	+C900
Rm (MPa)	500÷700	650÷850	800÷1000	900÷1100

Note: the desired tensile strength level shall be evaluated depending on diameter required

rev. 10/2018

MECHANICAL PROPERTIES - Cold drawn wire and coils in the solution annealed condition (2D)

Size	0,50 ≤ d ≤ 1,00	1,00 ≤ d ≤ 3,00	3,00 ≤ d ≤ 5,00	5,00 ≤ d ≤ 16,00
Rm (MPa) max	1100	1050	1000	950
A (%) max	10	10	10	15

Note: If skin passed, Rm might be increased by up to 50 MPa

WORKING TEMPERATURES RECOMMENDED

Operation	Hot forgings deformation	Annealing (furnace, air)	Quenching in air or oil	Tempering (QT 650)
°C	900÷1100	750÷850	950÷1070	550÷650