METALLURGICA VENETA
ACCIAI SPECIALI

Certified Company

X82WMoV-6-5

Quality	X82WMoCrV6-5-4
According to standards	ISO 683-17: 2001
Number	1.3553 B62

Chemical composition

C%	Si% max	Mn% max	P% max	S% max	Cr%	Mo%	V%	W%	Cu% max
0,78-0,86	0,40	0,40	0,025	0,015	3,90-4,30	4,70-5,20	1,70-2,00	6,00-6,70	0,30
± 0.03	±0.03	±0.04	+ 0.005	+ 0.005	± 0.10	± 0.10	± 0.10	± 0.10	+0.03

Deviations allowed for analysis product

Product deviations are allowed

Temperature °C

Hot-forming	Quenching	Tempering	Stress relief annealing x)
1100-900	1190-1230 oil or polymer salt bath 500-550	Immediately after quenching 540-570 air at least **2** cycles	600-650 furnace cooling

x) annealing must be carried out after machining and before final heat treatment

Soft annealing +A	Spheroidizing +AC	+AC+C	Pre-heating welding	Stress-relieving after welding
780-820 (HB max 280)	770-840 furnace cooling 15 °C/h to 600, then air (HB max 248)	Annealed and cold-drawn (HB max 298)	not recommended	

Ac1	Ac3	Ms	Mf
820	870	150	-70 subcooling

Mechanical properties

Table of tempering values obtained at room temperature after quenching at 1210 °C in oil

HB						688	679	688	697	739	758	758	722	615	482
HRC						62	61.5	62	62.5	65	66	66	64	58	50
N/mm²														2330	1760
Tempering at **°C**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**490**	**530**	**560**	**600**	**650**	**700**

Thermal expansion	$10^{-6} \cdot K^{-1}$		11.5	11.7	12.2	12.4	12.7	13.0	12.9
Modulus of elasticity	long. GPa	217							
Modulus of elasticity	tang. GPa	83							
Testing at	**°C**	**20**	**100**	**200**	**300**	**400**	**500**	**600**	**700**

Specific heat capacity J/(Kg•K)	Density Kg/dm³	Thermal conductivity W/(m•K)	Specific electric resist. Ohm•mm²/m	Electrical conductivity Siemens•m/mm²
460	8.1	19	0.54	1.85

EUROPE EN	ITALY UNI	CHINA GB	GERMANY DIN	FRANCE AFNOR	U.K. B.S.	RUSSIA GOST	USA AISI/SAE
X80WMoCrV654	X82WMoV65		X82WMoCrV6-5-4	Z85WCDV6			A597 CM2