Quality	**100CrMo7-3**	*Technical card*
According to standard	**ISO 683-17: 2001**	***Lucefin Group***
Number	**1.3536 B6**	

Chemical composition

C%	**Si%**	**Mn%**	**P%** max	**S%** max	**Cr%**	**Mo%**	**Cu%** max	**Al%** max	
0,93-1,05	0,15-0,35	0,60-0,80	0,025	0,015	1,65-1,95	0,20-0,35	0.30	0.050	Product deviations are allowed
± 0.03	± 0.03	± 0.04	+ 0.005	+ 0.005	± 0.05	± 0.03	+0.03	+0.010	

Temperature °C

Hot-forming	**Pre-heating**	**Quenching**	**Tempering**	**Stress relief annealing** x)	x) annealing must be carried out after machining and before final heat treatment
1100-850	400 stop in furnace, then 860	840-880 oil or polymer salt bath 500-550	150-200 air	600-640 furnace cooling	

Subcritical annealing	**Isothermal annealing +AC**	**+AC+C**	**Pre-heating welding**	**Stress-relieving after welding**
730-760 air (HB max 240)	800 furnace cooling to 720 then furnace to 500, then air (HB max 230)	(HB max 251)	not recommended	

AC1	**AC3**	**Ms**	**Mf**
770		160	-40 b)

b) subcooling

Mechanical properties

Table of tempering values obtained at room temperature on round of Ø 10 mm after quenching at 850 °C in oil

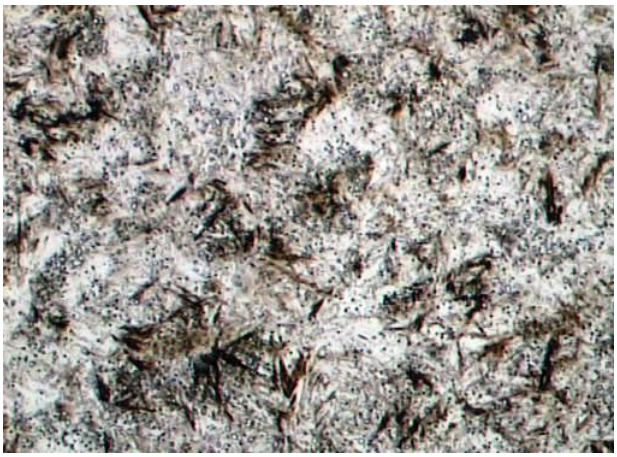
HB	739	722	706	688	654	644	577	551	512	455	409	344
HRC	65	64	63	62	60	59,5	56	54,5	52	48	44	37
R N/mm²							2160	2040	1880	1640	1430	1140
Tempering at **°C**	**50**	**100**	**150**	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**

End quench hardenability test (reference: Jominy, indicative valuesi)
distance from quenched extremity

mm	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**
HRC	66	66	65	64	62	58	52	48	47	46	45	45

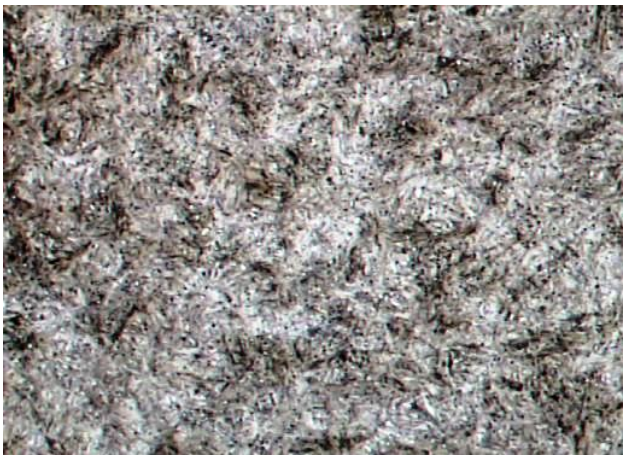
EUROPE EN	**ITALY** UNI	**CHINA** GB	**GERMANY** DIN	**FRANCE** AFNOR	**U.K.** B.S.	**RUSSIA** GOST	**USA** AISI/SAE
100CrMo7-3	100CrMo7-3		100CrMo7-3		100CrMo7-3		~ K19965

quenched material



micrography x500
martensite with undissolved carbides
mikroscopic world of iron and steel

quenched and tempered material



micrography x500
ferrite free heat treated structure with undissolved carbides