

Quality	35NiCrMo15	Quenching and Tempering Steel	<i>Technical card Lucefin Group rev. 2018</i>
According to standard	UNI 6925: 1971		
Number	-		

Chemical composition

C%	Si	Mn%	P% max	S% max	Cr%	Mo%	Ni%	Product deviations are allowed
0,30-0,38 ± 0.02	0,15-0,35 ± 0.03	0,30-0,60 ± 0.04	0,025 + 0.005	0,020 + 0.005	1,60-1,90 ± 0.05	0,25-0,45 ± 0.04	3,80-4,00 ± 0.07	

Temperature °C

Hot-forming	Normalizing +N	Quenching +Q	Tempering +T	Stress-relieving +SR	Stress-relieving +SR		
1000-900	840-860 air	830-860 oil, polymer	550-600 air	50° under the temperature of tempering	180-210 air		
Soft annealing +A	Full annealing	End quench hardenability test		Pre-heating welding	Stress-relieving after welding		
650-680 air (HB max 275)	780 slow furnace cooling to 350 then air	830 water		250	550 furnace cooling		
				Ac1	Ac3	Ms	Mf
				700	750	240	20

Mechanical properties

Hot-rolled mechanical properties in **quenched and tempered** condition

size mm		esting at room temperature (longitudinal)						Kv J min.	quenched and tempered steel quenched and stress-relieving steel
from	to	R N/mm ²	Rp 0.2 N/mm ² min.	A% min.	Z% min.				
	40	1230-1370	1030	9	-	20			
	11	1716-1960	1275	7	-	18			

Jominy test HRC

distance in mm from quenched end

mm	1.5	3	5	7	9	11	13	15	20	25	30	35	40	45	50
min	50	49	48	48	48	48	48	47	47	47	47	47	47	47	47
max	57	56	56	56	56	55	55	55	55	55	55	55	55	55	55

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

HB		518	496	468	448	432	409	385	357	327	301			
HRC		52.5	51	49	47.5	46	44	41.5	38.5	35	32			
R	N/mm ²	1900	1820	1720	1610	1520	1420	1320	1200	1090	1000			
Rp 0.2	N/mm ²	1550	1500	1430	1360	1290	1200	1100	990	900	870			
Rinv. °C		200	250	300	350	400	450	500	550	600	650			

EUROPE EN	ITALY UNI	CHINA GB	GERMANY DIN	FRANCE AFNOR	U.K. B.S.	RUSSIA GOST	USA AISI/SAE
36NiCrMo16	35NiCrMo15				835M30 ~		

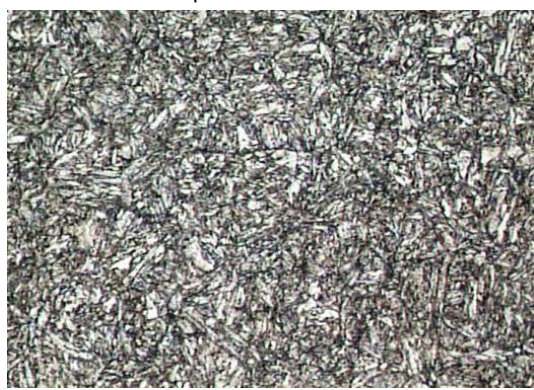
Spheroidized steel



ferrite-pearlite and carbides

x500

Quenched and tempered steel



martensite and bainite

x500