

HELICAL RODS QUALITIES

Chemical Composition (%)

Qualities	Standard	C	Mn	Si	P	S	Cr	Ni	Cu	Mo	V	N	Ceq
		max.	max.	max.	max.	max.	max.	max.	max.	max.	max.	max.	max.
A 630- 420H	NCh 204 : 2006	0.45 max	1,60	0.30 max.	0.050	0.050	0.30	0.30	0.50	0.050	0.030		
A 440- 280H	NCh 204 : 2006	0.33 max	1,00	0.30 max.	0.050	0.050	0.30	0.30	0.50	0.050			
St 450/700	DIN Material No 1.1165	0.27- 0.34	1,50	0.15-0.40	0.035	0.035	0.30	0.30	0.50	0.050	0.050		

* Different chemical requirements and qualities shall be discussed.

Mechanical Properties (%)

Qualities	Standard	Yield Strength (Re) N/mm ² (min.)	Tensile Strength (Rm) N/mm ² (min.)	Elongation % (min.)	(Agt) % (min.)	Rm/Re (min.)	Re, act /Re, nom (max.)
A 630- 420H	NCh 204 : 2006	420 - (Max = 580)	630	8		1,25	
A 440- 280H	NCh 204 : 2006	280	440	16		1,25	
St 450/700	DIN Material No 1.1165	450	700	15			

* Different requirements shall be discussed.