Roll Grade Descriptions

CSROLL CHODANSAZAN

Core Materials for Double Poured Rolls

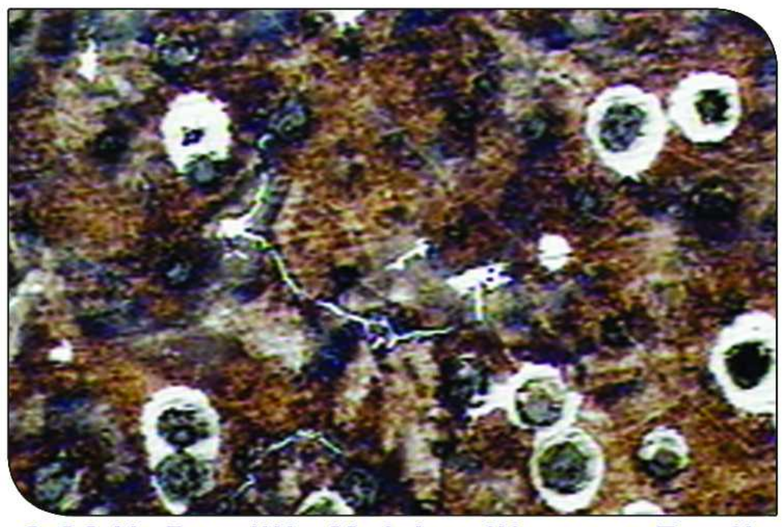
The core and neck material of a roll must have sufficient strength and ductility to withstand the different kinds of loads for the rolling process. The conventional core material used for rolls in CSCo. is nodular iron. On customer's request, rolls with Lamellar Graphite (grey iron), Compact Graphite or Nodular Graphite cores can be produced.

Chemical Composition and Mechanical Properties of Core Materials Rolls

Core Grade Description	Hardness (shc)	C (%)	Si (%)	Mn (%)	Cr (%)	Ni (%)	Mo (%)
C 36 L	36	2.8-3.6	1.5-2.5	0.2-0.8	0.0-0.3	0.5-1.5	0.0-0.3
C 42 L	42	2.8-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.3
C 46 L	46	2.8-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.5
C 32 N	32	2.6-3.5	1.6-2.8	0.2-0.8	0.0-0.3	0.5-1.5	0.0-0.3
C 36 N	36	2.6-3.6	1.6-2.8	0.2-0.8	0.0-0.3	0.5-1.5	0.0-0.3
C 42 N	42	2.8-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.5
C 46 N	46	2.8-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.5
C 36 V	36	2.6-3.5	1.6-2.5	0.2-0.8	0.0-0.3	0.5-1.5	0.0-0.5
C 42 V	42	2.6-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.5
C 46 V	46	2.8-3.6	1.5-2.5	0.2-0.8	0.2-0.6	0.5-1.5	0.0-0.5

Gore Grade	UTS(N/mm^2)		Elongation (%)	Bending Strength(N/mm^2)	Young's Modulus E(KN/mm^2)
	Min	Max			
C 42 L	150	250	<1.5	320-480	130-150
C 46 L	150	280	<1.5	320-480	130-150
C 36 N	350	500	0.5-1	700-900	150-180
C 42 N	450	600	2-4	600-1000	150-180
C 46 N	400	600	2-4	600-1000	150-180
C 36 V	280	380	2-3	450-750	150-170
C 42 V	280	400	<2	500-800	150-170
C 46 V	300	500	<2	500-800	150-170

C 42 N: Pearlitic Matrix with some Carbide (x400)



C 36 N: Pearlitic Matrix with some Ferrite (x100)

Note: Other roll grades not specified in the table can be produced on request.