Roll Grade Descriptions

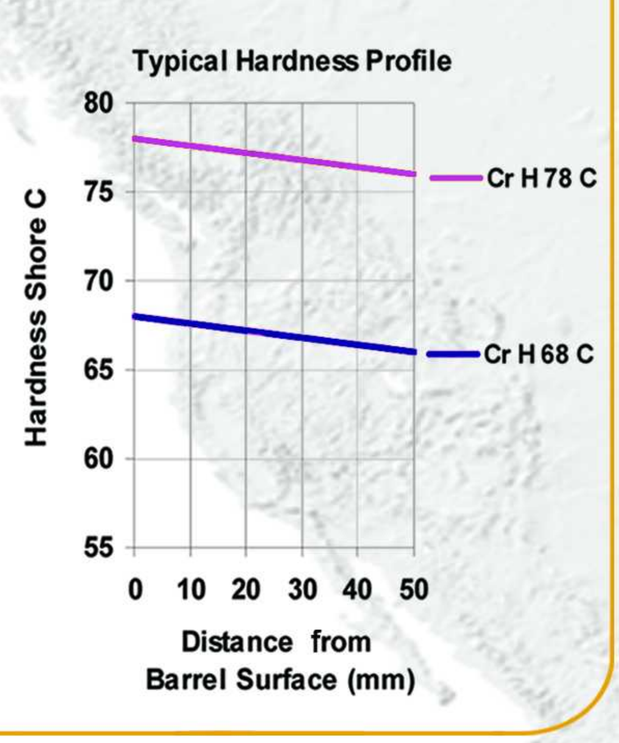
CSROLL CHODANSAZAN

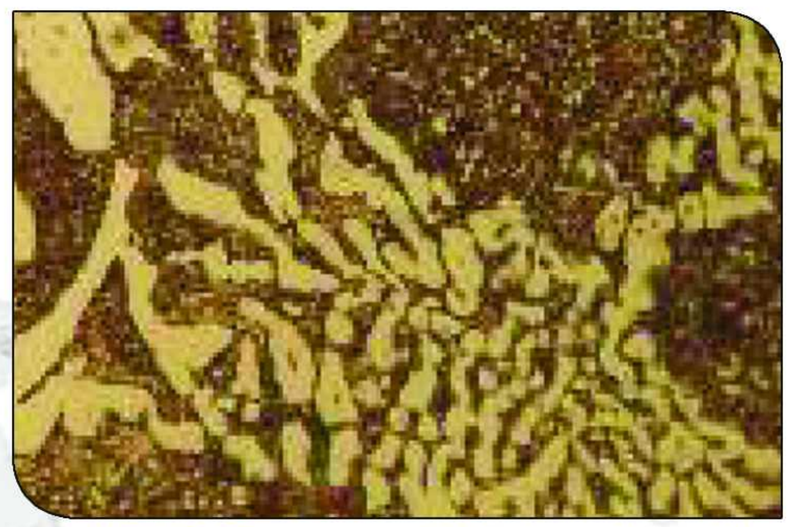
Cr

High Chromium Cast Iron Rolls ;Enhanced High Chromium Cast Iron Rolls

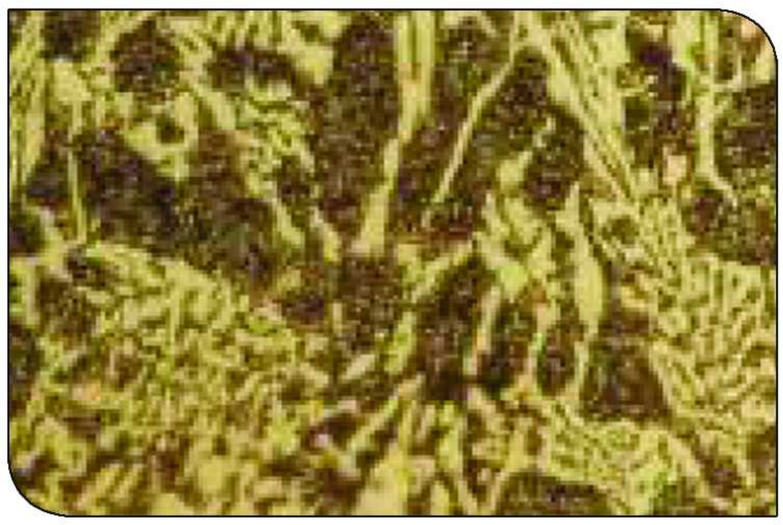
The high Cr content of the shell material and the absence of free graphite characterize these grades. Different types of carbides with high hardness and a tempered martensitic microstructure guarantee an excellent wear resistance. All Hi Cr rolls are high temperature heat treated and tempered to obtain optimal properties. They bring high performance figures in the first finishing stands of Hot Strip Mills, skin pass stands and in finishing stands of small section mills.
Hi Cr rolls have hardly any hardness drop in the shell. The core can be made of nodular or lamellar graphite iron. This grade due to lack of graphite in the shell is sensitive to fire cracks and require mills with well designed cooling system.

Enhanced Hi Cr rolls are alloyed additionally with W, V and Nb to increase the hardness of eutectic carbides ,hence increasing the performance of the rolls significantly.



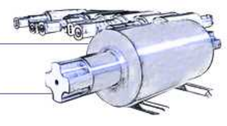


CrH76C-Tempered Martensite with Eutectic and Secondary Carbide(x500)



CrH76C-Tempered Martensite with Eutectic and Secondary Carbide(x100)

Chemical Composition and Mechanical Properties of High Chromium Rolls

Roll Grade	Barrels Hardness (shc)	C (%)	Si (%)	Mn (%)	Cr (%)	Ni (%)	Mo (%)	V+Nb (%)	composition,hardness and mechanical properties of core material
Cr H 72C	72	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	-	See Page A
Cr H 76C	76	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	-	See Page A
Cr H 78C	78	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	-	See Page A
Cr H 80C	80	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	-	See Page A
Cr H 84C	84	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	-	See Page A
Cr AH 72C	72	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	0.2-1.5	See Page A
CrA H 76C	76	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	0.2-1.5	See Page A
CrA H 78C	78	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	0.2-1.5	See Page A
Cr AH 80C	80	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	0.2-1.5	See Page A
CrA H 84C	84	2.5-3.2	0.3-0.8	0.7-1.6	16.0-22.0	1.0-2.5	1.0-2.5	0.2-1.5	See Page A

Note: Other roll grades,not specified in the table can be produced on request. Cores for compound rolls can be produced on request with Grey, Compact or Nodular cast iron.