

Alloy Indefinite Chilled Cast Iron Rolls

Alloy Indefinite Chilled Cast Iron Rolls is a cast iron with fine intercrystalline graphite evenly distributed throughout the working layer of roll barrel. The sizes, shapes and distributions of graphite and carbide are controlled by the chilling effect and the contents of alloy elements. The addition of alloy elements such as Manganese, Nickel, Chromium, and Molybdenum changes the matrix microstructure from pearlite, bainite to martensite. The present of small amount of fine graphite enhances the roll's resistance to spalling, thermal crack and wearability. This roll has small hardness gradient in the working layer of roll barrel and is suitable to medium and finishing stands for bar, wire and section mills.

Chemical Element %:

Brand	C	Si	Mn	Cr	Ni	Mo
IC 0	2.90-3.70	0.60-1.20	0.40-1.20	0.60-1.20		0.20-0.60
IC 1	2.90-3.70	0.60-1.20	0.40-1.20	0.70-1.20	0.50-1.00	0.20-0.60
IC 2	2.90-3.70	0.60-1.20	0.40-1.20	0.70-1.20	1.01-2.00	0.20-0.60
IC 3	2.90-3.70	0.60-1.20	0.40-1.20	0.70-1.30	2.01-3.00	0.20-0.60
IC 4	3.00-3.50	0.60-1.20	0.40-1.20	0.70-2.00	3.01-4.80	0.40-1.00

Properties and Applacation:

Brand	Barrel Hardness(HS)	Tensile Strength(Mpa)	Bending Strength(Mpa)	Application
IC 0	58-70	≥160	300-400	Moderate and small profiled bar, stick wire and narrow steel moderate and finishing mill frame
IC 1	60-72	≥160	300-400	
IC 2	62-72	≥200	300-400	
IC 3	65-75	≥300	500-700	
IC 4	70-80	≥300	500-700	

