

Hot Plate and Strip Mill Rolls

High Chrome Steel Vertical Rolls



Description

High Chrome Cast Steel Roll (HiCrI)

High Chromium Cast steel roll is manufactured with special process of triple casting and double duplex technology. High chromium cast steel roll is characterized by high nipping capability, high thermal resistance and high wear resistance.

Chemical Composition

Symbol	C	Si	Mn	Cr	Ni	Mo	V
HiCrI Steel	1.0-2.0	0.40-1.40	0.5.-1.40	10.0-18.0	0.60-1.60	1.0-2.0	<0.5

Physical Performance

Barrel Harness (HSD)	Journal Hardness (HSD)	Tensile Strength (Mpa)	Hardness Uniformity(HSD)	Thickness Difference Shell(mm)	of
70-85	35-45	>400	<3	<10	

Finishing Stand HSS Rolls



Description

Finishing Stand HSS Rolls

The microstructure of HSS roll shows fine and diffuse carbide of MC and M6C embedded in the Martensite. The performance of wear resistance, thermal hardness and thermal fatigue resistance of HSS roll is excellent.

1, Regarding the breakdown mill: due to the high temperature of steel, the roll should have relative high strength and steel-biting ability, moderate wearability and accident-resistant ability, thus improve the breakdown rate.

2, Regarding the intermediate stands: as roll pass changes, steel temperature dropping, we should focus more on non-uniformity between the bottom and two flanks of grooves, rolls should have relative strength, relative high fire-cracking resistance and wearability

3, Finishing stands: for this period, the temperature of steel is lowest, the speed of rolls are relatively fast, rolling capacity is relative small, to ensure the steel products surface quality and amount, we would focus on moderate hardness, hardness uniformity, hardness drop, thus to ensure every spot of roll pass wearability is the same, by which improve the amount and quality of rolled products, lower the steel cosuming, improve economic returns.

Chemical Composition

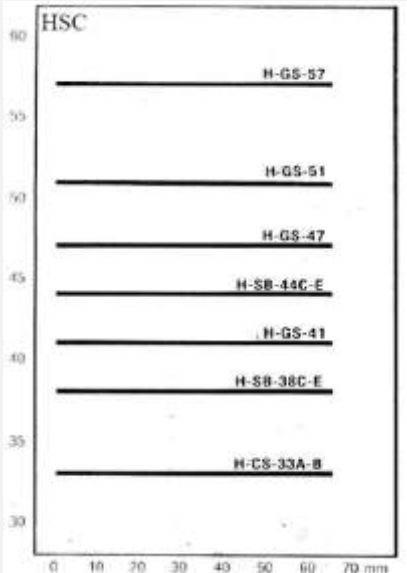
Symbol	C	Si	Mn	Cr	Ni	Mo	V	W
HSS	1.5-2.2	0.3-1.0	0.4.-1.20	3.0-8.0	0.5-1.5	2.0-8.0	2.0-8.0	0.0-8.0

Physical Performance

Barrel Harness	Journal	Tensile Strength	Hardness Uniformity	Thickness
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WINHAM

(HSD)	Hardness (HSD)	(Mpa)	(HSD)	Difference of Shell(mm)
60-90	35-45	>400	<3	<10



Enhanced High Chromium Cast Iron Rolls



Description

Enhanced High Chromium Cast Iron Roll (En-HiCr)

Enhanced high chromium cast iron roll is widely applied as work roll of the front stand of HSM. The constitutions are characterized by 20-30% of M7C3 carbides of great hardness evenly distributed in the matrix of tempered Martensite so that the durability and anti-thermal fatigue performance are great.

Chemical Composition

Symbol	C	Si	Mn	Cr	Ni	Mo	V
En-HiCr	2.6-3.2	0.40-1.20	0.3.-1.20	16.0-22.0	1.0-2.0	1.0-3.0	<1.5

Physical Performance

Barrel Harness (HSD)	Journal Hardness (HSD)	Tensile Strength (Mpa)	Hardness Uniformity (HSD)	Thickness Difference of Shell(mm)
70-95	30-45	>400	<3	<10

Enhanced Indefinite Chill Cast Iron Rolls



Description

Enhanced Indefinite Chill Cast Iron Roll (En-ICDP)

The enhanced indefinite chilled cast iron roll is developed basing on the traditional ICDP. By adding the element of V, W, Ti, Nb, the wear resistance of the En-ICDP is improved. By the graphite formed inside the material, En-ICDP gets a better performance to prevent the thermal crack and the performance of anti-thermal fatigue is improved.

Chemical Composition

Symbol	C	Si	Mn	Cr	Ni	Mo	V+W+Ti+Nb
E-ICDP	2.90-3.60	0.60-1.50	0.5.-1.50	1.00-2.50	3.50-5.00	0.20-1.00	<2.5

Physical Performance

Barrel Harness (HSD)	Journal Hardness (HSD)	Tensile Strength (Mpa)	Hardness Uniformity (HSD)	Thickness Difference of Shell(mm)
65-85	35-45	>400	<5	<10