

# Cast Rolls

## Classification of Tayo Cast Iron Rolls (Centrifugally Cast)

Application	Classification	Characteristics	Hardness *Sh C	Tayo Roll Grade
Rolls for Plate Finishing, Strip Finishing, Roughing Stand of Hot Strip Mills, Steckel Mills	Double Poured Indefinite Chilled Rolls with Nodular of Grey Iron Core	Graphite Rich Indefinite Chilled Rolls	65-75	SC / SS-1
Rolls for Finishing Stands of Hot Strip Mills, Steckel Mills	Double Poured Indefinite Chilled Rolls with Nodular of Grey Iron Core	Medium Graphite Indefinite Chilled Rolls	75-80	SC / SS-2
Rolls for Strip Finishing with lower reduction	Double Poured Indefinite Chilled Rolls with Nodular of Grey Iron Core	Lower Graphite Indefinite Chilled Rolls	78-83	SC / SS-3
High performance Rolls for Steckel Mills, Later Finishing Stands of Hot Strip Mills	Double Poured Indefinite Chilled Rolls with Nodular or Grey Iron Core	Finer Rounder Graphite with Special Carbide	74-78 75-80	TEK-1
High performance Rolls for Hot Strip Mills Later Finishing Stands	Double Poured Indefinite Chilled Rolls with Nodular of Grey Iron Core	Finer Rounder Graphite with Special Carbide	75-82	TEK-2

## Classification of Tayo High Chrome Rolls (Centrifugally Cast)

Application	Classification	Characteristics	Hardness *Sh C	Tayo Roll Grade
Rolls for Early Finishing Stands of Hot Strip Mills	HiCr Iron Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Iron Rolls	65-75	SH-1
Rolls for Early Finishing Stands of Hot Strip Mills	HiCr Iron Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Iron Rolls	75-80	SH-2
Anti Banding Grade HiCr Rolls for Early Finishing Stands of Hot Strip Mills	HiCr Iron Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Iron Rolls	70-75	TH-1
Anti Fire Cracking HiCr Rolls with improved Wear Resistance	HiCr Iron Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Iron Rolls	70-75	FH-1
Rolls for Roughing Stands of Hot Strip Mills	HiCr Steel Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Steel Rolls	65-75	AH-1
Rolls for Roughing Stands for Stainless Steel Rolling	HiCr Steel Rolls with Nodular Iron Core, with special intermediate cushioning steel layer	Tempered Cr Cast Steel Rolls	75-80	AH-2

**Classification of Tayo New Generation Rolls (Centrifugally Cast)**

<b>Application</b>	<b>Classification</b>	<b>Characteristics</b>	<b>Hardness *Sh C</b>	<b>Tayo Roll Grade</b>
High performance Rolls for Early Finishing Stands	High Speed Steel Roll with Nodular Iron Core	High Alloys Specially Heat Treated	73-82	TSS-1
High performance Rolls for Roughing Stands	Semi High Speed Steel Roll with Nodular Iron Core	High Alloys Specially Heat Treated	75-80	STSS-2
High performance Rolls for Finishing Stands	Super nickel grain cast roll with Nodular Iron Core	High Alloys Specially Heat Treated	76-81	SNG (Type - 1 to Type 5)

**Classification of Tayo Cast Steel Rolls (Static Cast)**

<b>Application</b>	<b>Classification</b>	<b>Characteristics</b>	<b>Hardness *Sh C</b>	<b>Tayo Roll Grade</b>
Breakdown Mill, Blooming Mill Rolls	Cast Steel	Low Carbon	30-35	CS-1
Rolls for Roughing Stand Section Mill	Cr Mo Steel	Medium Carbon	35-40	CS-2
Rolls for Billet Mill, Intermediate Stands of Section Mill	Cast Steel	High Carbon	40-45	CS-3
Rolls for Structural Mill Intermediate Stands, Heavy Section Mill Intermediate Stands	Cr Mo Steel	Medium Carbon	40-45	AD-1
Rolls for Bar Mill Roughing Stands, Section Mill Finishing Stands	Cr Mo Steel	High Carbon	45-50	AD-2
Roughing Stand Rolls for Hot Strip Mill, Back-up Rolls for Narrow Strip Mill	Ni Cr Mo Steel	Super High	50-55	AD-3
Edger Rolls, Finishing Stand Rolls for Heavy Section Mill, Medium Section Mill, Bar Mill Roughing Stand	Graphitic Cast Steel	High Carbon	42-47	AG-1

<b>Classification of Tayo Cast Iron Rolls (Static Cast)</b>				
<b>Application</b>	<b>Classification</b>	<b>Characteristics</b>	<b>Hardness *Sh C</b>	<b>Tayo Roll Grade</b>
Show Wire Mill Rolls (Finishing Stands), Narrow Strip Finishing Rolls	Alloy Chilled Rolls	Plain Clear Chill	65-75	NC-1
Heavy Section Finishing Mill Rolls	Alloy Indefinite Chilled Rolls	Indefinite Chilled with better Hardness Drop	48-53	G-1
Rail Finishing Mill Rolls	Special Grain Rolls	Indefinite Chilled with Lower Hardness Drop	55-60	G-2
Intermediate Stands of Bar Mill, Wire Rod Mill	Alloy Indefinite Chilled Rolls	Indefinite Chilled Higher Hardness Rolls	60-65	G-3
Breakdown Mill Rolls for Brass Rolling, Finishing Stand Rolls for Bar Mill			65-75	G-4
Rolls for Plate Finishing, Non Ferrous Strip Finishing	Alloy Indefinite Chilled (Duplex) Static Cast Rolls	Indefinite Chilled Roll with Grey Iron/SG Iron Core	65-75	DG-1
Finishing Stand Rolls for Narrow Wire Rod Mill/Strip Mill, Steckel Mill			75-80	DG-2
Finishing Rolls for Skin Pass Mill			80-85	DG-3
Roughing Stands of Bar Mill, Wire Rod Mill, Section Mill	Nodular Cast Iron Rolls	Pearlitic / Ferritic Spheroidal Graphite	47-53	SG-1
Roughing Stands of Bar Mill, Wire Rod Mill	Nodular Cast Iron Rolls	Pearlitic / Ferritic Spheroidal Graphite	50-55	SG-2
Intermediate stands of Rail Mill, Bar Mill, Medium Section Mill, Finishing Stand Rolls for Channel Rolling	Nodular Cast Iron Rolls	Pearlitic / Ferritic Spheroidal Graphite	55-65	SG-3
Finishing Stand Rolls for Bar Mill	Nodular Cast Iron Rolls	Bainitic SG Rolls	65-70	SG-4
Finishing Stand Rolls for Wire Rod Mill, Bar Mill, Small Section Mill	Nodular Cast Iron	Bainitic SG Rolls	72-76	SG-5
Roughing Stand Rolls for Stainless Steel Rolling	Special Nodular Cast Iron Roll	Pearlitic / Bainitic Spheroidal Graphite Rolls with Soft Core	65-70	SG-6
Finishing Stand Rolls for			72-78	SG-7
Rolls for Paper Calendaring (King-Queen and Intermediate Rolls)	Non Metallurgical Rolls	Alloy Chilled Rolls with Clear Chill	70-75	NM
Rubber Mixing, Refing & Calendaring Rolls	Hollow Core Rolls	Clear Chill Rolls	65-70	HC
Cracker Mill Rolls for Rubber	Hollow Core Rolls (Fluted)	Indefinite Chilled	65-70	HG