



CSROLL CHODANSAZAN

Rolls for Flat Ferrous Products
Rolls for Non Ferrous Products
Rolls for Non-Flat Ferrous Products
Rolls for Food Industries

Chodan Sazan Products					
Hot Strip Mill Rolls	Position	Maximum Size (mm)	Grades	Hardness(shc)	Production Method
	Plate Mill	Ø 1300x5800	Indefinite Chill	70-78	Centrifugal Casting
			High Chromium Iron	70-78	
	Work Rolls	Ø 1300x3000	High Chromium Iron	70-82	Centrifugal Casting
			Indefinite Chill	70-82	
			High Chromium Steel	70-85	
			Graphitic Steel	48-56	
			High Speed Steel	72-85	
			Steel Base	48-56	
	Back Up Rolls	Ø 1600x2200	3% Cr Cast Steel	60-65	Static Casting
			5% Cr Cast Steel	65-70	
			3% Cr +1% Mo Cast Steel	65-70	
	Edjer Rolls	Ø 1300x1500	Pearlitic Cast Iron	55-65	Static Casting
			Pearlitic Molybdenum Cast Iron	55-65	
			Graphitic Steel	45-55	
Steel Base			45-55		
Pinch Roll	Ø 1000x3000	Pearlitic Cast Iron	60-70	Static & Centrifugal Casting	
		Pearlitic Molybdenum Cast Iron	60-70		
		Graphitic Steel	45-55		
Section Mill Rolls (small and heavy section)	Roughing Roll	Ø 1400x2000	Pearlitic Cast Iron	45-65	Static Casting
			Pearlitic Molybdenum Cast Iron	40-55	
			Steel Base	40-55	
			Graphitic Steel	40-55	
	Intermediate Stands Roll	Ø 1000x2000	High Chromium Iron	50-60	Static & Centrifugal Casting
			Indefinite Chill	50-60	
			High Chromium Steel	50-56	
			Graphitic Steel	60-70	
			High Speed Steel	60-70	
			Steel Base	50-56	
	Finishing Stands Roll	Ø 800x2000	Pearlitic Cast Iron	55-65	Static & Centrifugal Casting
			Pearlitic Molybdenum Cast Iron	55-65	
			Graphitic Steel	55-65	
			Acicular Cast Iron	65-75	
			Indefinite Chill	65-75	
High Speed Steel			65-80		
Pipe Mill Rolls	Sizing	Ø 800x1000	Steel Base	55-65	Static & Centrifugal Casting
			Acicular Cast Iron	60-70	
			Pearlitic Cast Iron	60-70	
			Graphitic Steel	50-60	
			Acicular Cast Iron	60-70	
			Pearlitic Cast Iron	40-55	
Other Rolls	Crusher Rolls	Ø 1400x2000	Clear Chill-Acicular-High Chromium Iron	70-80	Static & Centrifugal Casting
	Flour Mill Rolls	Ø 300x1500	Clear Chill	60-75	
	Rubber Mill Roll	Ø 1200x1500	Acicular	60-75	
			Clear Chill-Acicular	60-75	





Chodan Sazan Company Profile

Chodan Sazan Co.(P.J.S) are the leading Iranian Stock Share holder companies involved in designing, producing and supplying high quality Cast Rolls, Ingot Moulds and Accessories and heavy industrial part for the steel and other industries since 1982 . Chodan Sazan Co. has an active presence in the local and foreign markets. The rolls produced by Chodan Sazan Co. are used almost in every rolling mill in Iran. Due to Chodan Sazan's outstanding quality it has maintained complete customers satisfaction. Chodan Sazan Co. is the combination of highly skilled, motivated employer, recognized and rewarded for their efforts. Our employees take ownership of the company's successes and failures and are empowered, encouraged and equipped to make a difference .

the rolling process of steel products, rolls play a crucial part. The quality of the final product and the efficiency of the mills are primarily dependent on selecting right roll grade. Rolls are produced in a wide range of grades and manufacturing methods each suitable for a specific task. The correct selection of the roll grade requires knowledge of the actual mill, its stands, cooling system, rolling speed and mill forces etc. They all determine the properties of the rolls and their behavior in the mill. The behavior and wear of rolls in the mill are depends on above factors and rolling mill conditions such as cooling systems, lubrication, rolling parameters etc .



Melting Shop & Process

The melting process is carried out in several induction furnaces with different size before taping and during the melt preparing process the chemical composition of all melts are checked through using Emission Spectrometer and Carbon Sulfur analyzer. Liquidus and taping temperatures are measured with immersion thermocouples.



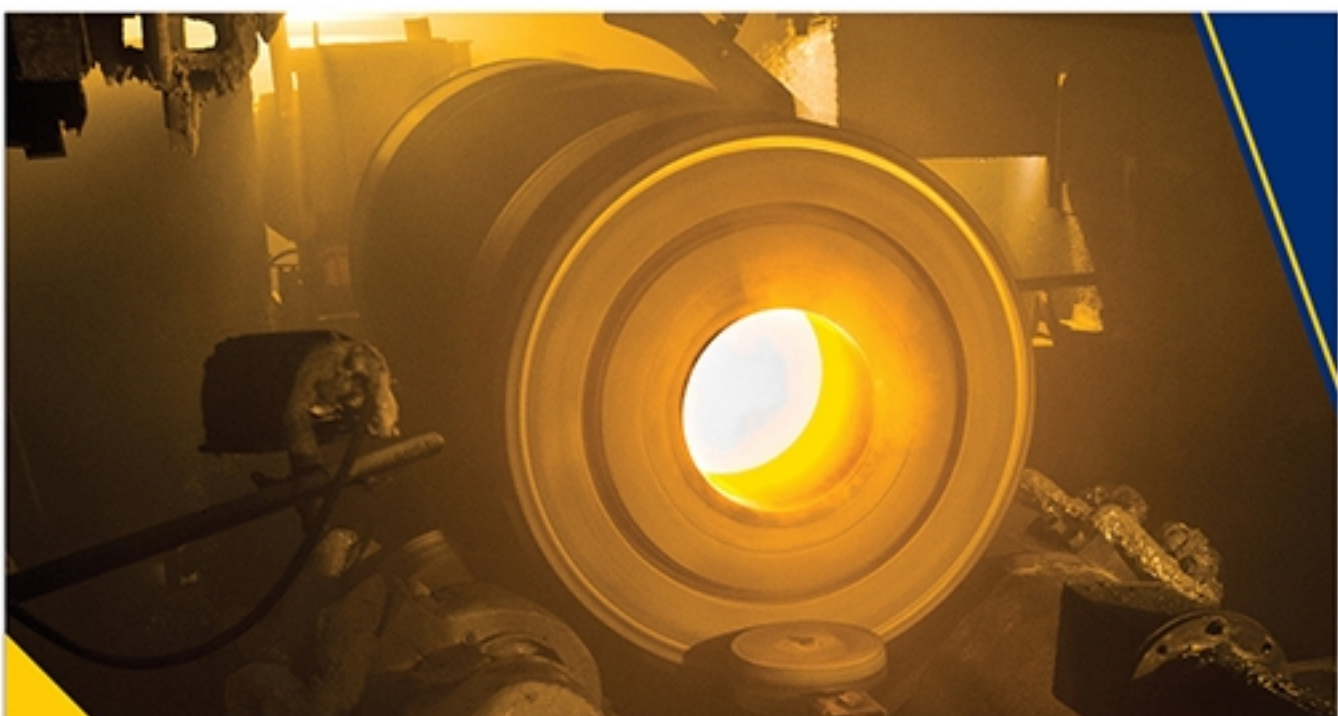
Moulding

Sands and other additives are subjected to strict quality control throughout the moulding process.



Centrifugal Casting

Horizontal and vertical centrifugal casting machines are used for casting single and double poured rolls and Rings. The core is produced in high quality ductile cast iron while the shell is an alloyed iron or special steels ensuring low wear and more uniform hardness .



Static Casting

The static casting method is used for single poured and double poured (over flow and slide gate system) rolls .



Heat Treatment

Electrically and gas fired furnaces are used for heat treatment operations. All furnaces are equipped with modern computer controlled heat regulating systems. The heat treatment program comprises of low temperature cycles like tempering and stress relieving as well as high temperature cycles like soft annealing and normalizing.



Machining

In Chodan Sazan Group, there are five daughter companies involved in machining products with more than 65 heavy duty and medium size turning lathes (CNC, NC and manual), rough grinding machine, finishing grinding machines, boring and milling machines that cover a wide range of roll size and weight.



QC & Laboratory

CSCo. has always dedicated a big part of its resources for the quality control of its products. All necessary quality checks and testing of manufacturing processes are carried out whether the process is Casting, Machining or Heat Treatment. The melt chemical composition is frequently checked using an emission spectrometer and carbon analyzer ensuring conformity with the specifications. Our laboratory checks the microstructure and hardness of shell and core materials in as cast condition and after the heat treatment. The ultrasonic test assures the absence of bonding failures and internal flaws. Our quality control ensures that the rolls meet the specification regarding hardness and hardness drop, microstructure, shell thickness and mechanical /physical properties and providing our customers with rolls that meet their stringent quality requirements.



Research And Development & Customers Service

Bases on Chodan Sazan's development ambition and policy of continuous quality improvement and customer satisfaction, a close integration of research activities and customer services has formed to define development guidelines by understanding the client's need and market trends. With a close cooperation with customers, feed backs from delivered roll performance and behavior, the research policies are formed. Improving existing grades, development of new materials and roll manufacturing processes has been achieved by a close cooperation between Chodan Sazan's R&D department and other research associations, universities and with experienced world wide consultants.





CSROLL CHODANSAZAN

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