



Chodan Sazan Company profile

Chodan Sazan Co (P.J.S.) is the leading Iranian Company, registered on Public Stock Exchange, involved in design, production and supply of High Quality Cast Rolls, Ingot Moulds, Accessories, and Heavy Industrial Parts for the Steel Industry and Miscellaneous Industries.

Chodan Sazan was founded in 1982. Chodan Sazan is present and active in Domestic and International Markets. The Mill Rolls produced by Chodan Sazan are used in almost every Rolling Mill in Iran. Chodan Sazan's outstanding and consistent quality has resulted in Overall Total Customer Satisfaction. Chodan Sazan operates on base of a fruitful combination of Employers and Employees. A Highly Skilled and Driven Employer, recognized and rewarded for its Technological and Social Achievements, with Employees that take Ownership of company's successes and failures, Empowered and Equipped to Make the Difference. Mill Rolls play a crucial Role in the Rolling Process of steel products. The Quality of the Final Product and the Efficiency of the Mill are primarily depending on Proper Roll Grade Selection. Mill Rolls are available in a Wide Range of Grades and Manufacturing Processes, in order to Comply with all Applications and Requirements of the Industry.

The Correct Grade Selection requires In Depth Knowledge of the Specific Rolling Mill, Stands, Cooling System, Rolling Speed, and Mill Loads. All those factors are taken in consideration for Roll Grade Selection.

The Specific Behavior and Wear Characteristics of the rolls Depend on Above Factors and Operating Conditions such as Lubrication, Rolling Mill Parameters etc.



Melting Shop & Processes

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.



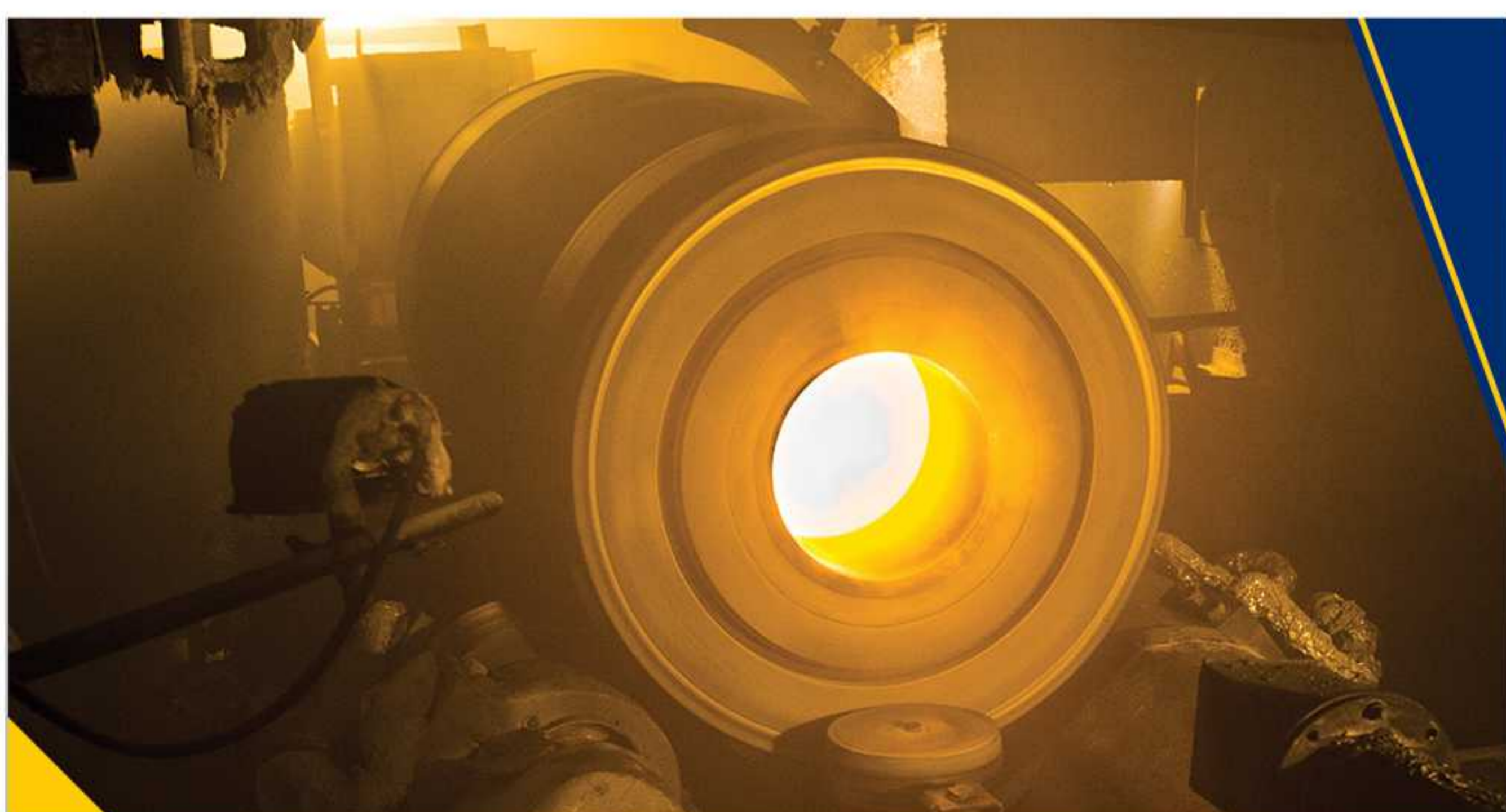
Moulding

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



Centrifugal Casting

Horizontal and Vertical 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 Steel, generating Minimum Wear and 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

Electrical 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 the Chodan Sazan Group, a total of Five Daughter Companies are involved in the Machining of the Cast Rolls, Rings and other Products. They have more than 65 Heavy Duty and Medium Size Turning Lathes (CNC, NC, and Manual), Rough Grinding Machines, Finish Grinding Machines, Boring and Milling Machines available to cover the Complete Range of Products.



QC & Laboratory

CSCo. has always dedicated a big part of its Resources to 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 continuously monitored by Emission Spectrometers and Carbon Analyzers ensuring conformity with the specifications. Our laboratory checks the microstructure and Hardness of Shell and Core Materials in As-Cast Condition, and after 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, Mechanical / Physical properties, and provide our Customers with Rolls that meet their Rigorous Quality Requirements.



Research & Development & Customer Service

Based upon Chodan Sazan's Drive for Total Customer Satisfaction, by means of Continuous Product and Operational Development, R&D Department and Customer Service Department are fully integrated.

Market Trends and Customer's Requirements are translated into Guidelines for Product Development. Close Cooperation with Customers allows Exhaustive Evaluation of Roll Performance and Behavior, which is the Base for R&D Requirements. Improvement of Existing Grades, Development of new Grades and Manufacturing Processes, is an Ongoing Successful Process in which Chodan Sazan cooperates with Independent Research Associations, Technical Universities, and Experts from all over the World.



Chodan Sazan Products

	Position	Maximum Size (mm)	Grades	Hardness(shc)	Production Method
Flat Product Hot Mill Rolls	Plate mill Rolls	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	
	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		
	Edger 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 Rolls	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 Stands Rolls	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 Rolls	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	
	Finishing Stands Rolls	Ø 800x2000	Steel Base	50-56	Static & Centrifugal Casting
			Pearlitic Cast Iron	55-65	
			Pearlitic Molybdenum Cast Iron	55-65	
			Graphitic Steel	55-65	
			Acicular Cast Iron	65-75	
			Indefinite Chill	65-75	
Pipe Mill Rolls	Ø 800x1000	High Speed Steel	65-80	Static & Centrifugal Casting	
		Steel Base	55-65		
		Pearlitic Cast Iron	60-70		
		Graphitic Steel	50-60		
		Acicular Cast Iron	60-70		
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 Rolls	Ø 1200x1500	Acicular	60-75	
			Clear Chill-Acicular	60-75	





CSROLL
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CSROLL CHODANSAZAN

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