

Estd Since 1975



# Foundation For The Future

Crafting Homes. Creating Futures



Foundation for  
The Future  
Primary Steel



High Tensile  
Strength



Earthquake  
Resistant



Corrosion  
Resistant



Anti-Rust  
Technology



High Strength  
& Ductility

Mazbooti ki **Pehchan**  
Har **Imarat** ka **Armaan**

# TSL 550 SD

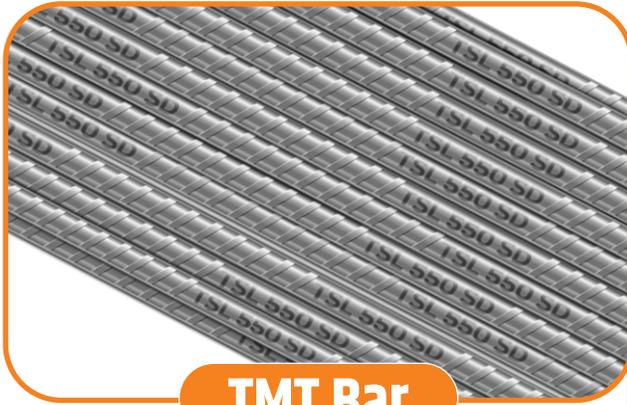
Primary Steel

Heart of Building

 [www.tslsteel.com](http://www.tslsteel.com)

 [info@tslsteel.com](mailto:info@tslsteel.com)

# Our Product



**TMT Bar**



**GIRDERS**



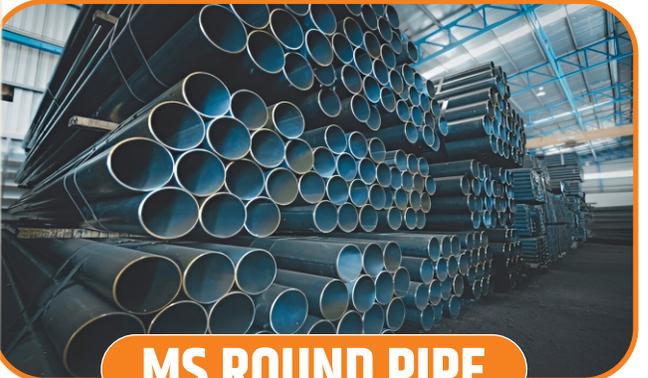
**Angels**



**Channels**



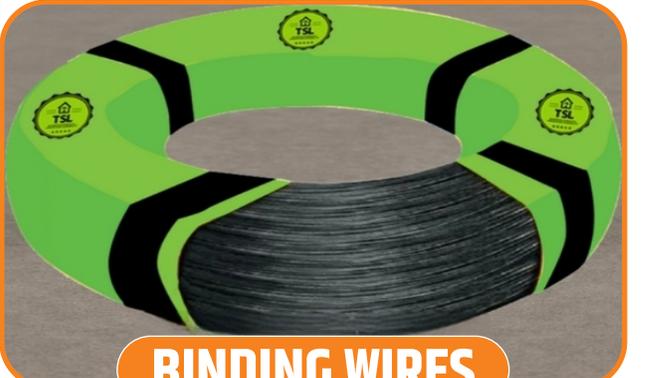
**DURO COLOUR SHEET**



**MS ROUND PIPE**



**MS SQUARE PIPE**



**BINDING WIRES**

TSL 550 SD

TSL 550 SD

# WHO ARE WE

The story of TSL is a testament to vision, perseverance, and deep-rooted expertise in the steel industry, bringing together decades of practical knowledge and a deep understanding of India's industrial landscape. They didn't just enter the steel business - they transformed it, from the very foundation: iron ore which is extracted through international technology from Jharkhand. In fact, the base of the company is also based in Tata Nagar, Jamshedpur (Jharkhand) making it more powerful and trustworthy.

Long before industry trends made headlines, TSL had already mastered the complexities of TMT BAR iron ore refining, girders, angles, channels, MS Roundpipe, MS squarepipe and Binding wire, and all varieties of coils and sheets. This early control over raw materials gave TSL a critical edge -balancing cost and quality with remarkable precision. From smelting and refining to rolling and final production, they established a process that was not only efficient but future-ready. This led to a major economic buildup in India. After five decades of excellence, our company is ready to cross borders and redefine possibilities on a global stage with unwavering ethics and a relentless pursuit of perfection,

This is not merely a business expansion; it is the rise of a legacy, spreading its wings across continents, inspiring new partnerships, and setting new benchmarks in global excellence. We are not stepping into the world - we are shaping it, one creation at a time.

Every TSL product was engineered to exceed expectations - not just meet them. Their vision was clear: to make steel that builds a stronger, safer India. With an unwavering vision to shape the future of steel, TSL stands as a force of innovation, strength, and trust. Our powerful venture with L&T Suffin marks a new era of industrial excellence, a venture built on shared values of precision, performance, and progress. Together, we are not just building infrastructure; we are forging the backbone of a stronger, more resilient nation.

TSL's Bitumen Plant stands as a testament to the company's vision of expanding beyond steel into high-value infrastructure materials. Built with cutting-edge technology and driven by TSL's unwavering commitment to quality, the plant produces premium-grade bitumen designed to meet global standards of durability, performance, and sustainability.

We are not just a steel company - We are a legacy. A force. A name that stands for power, pride, and progress. 50 Years of Strength. 50 Years of Trust. 50 Years of Shaping the Future.

This legacy - rooted in knowledge and powered by values. Every bar of steel we produce is part of a bigger promise: forged in strength, guided by wisdom, and delivered with pride.

At TSL, ethics and moral values are not just principles - they are the very soul of our existence. Every

decision we make, every product we create, and every relationship we build is guided by an unwavering sense of honesty, fairness, and respect.

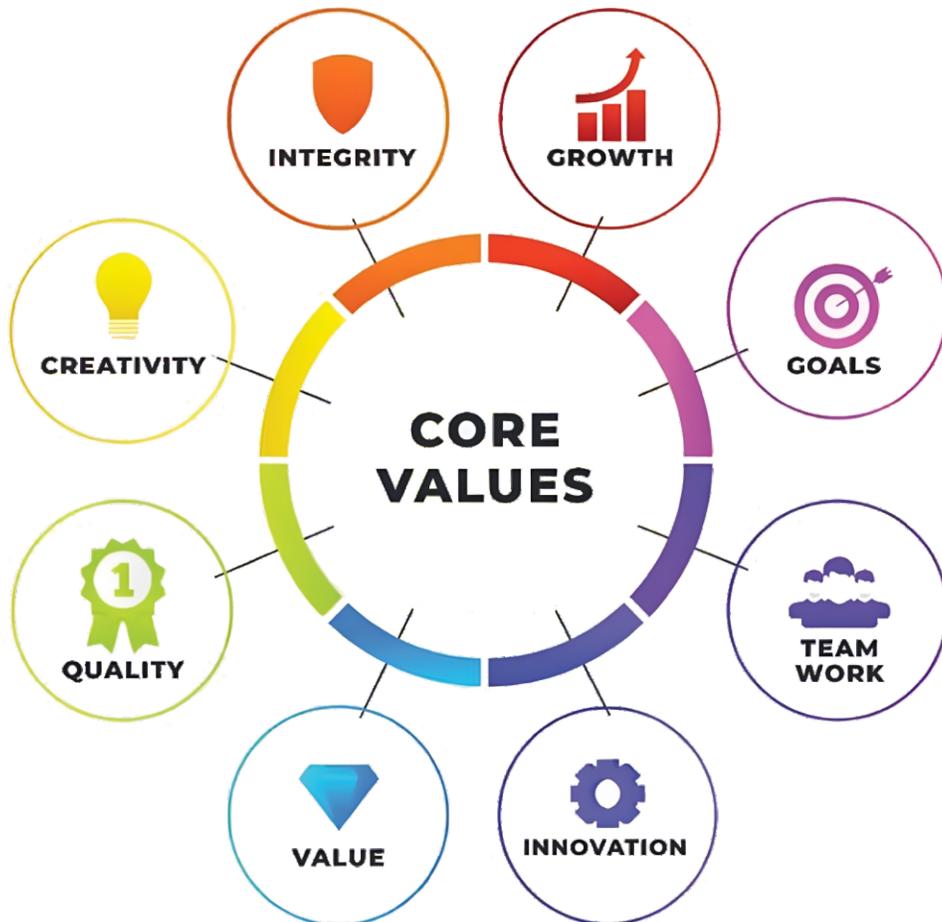
It's not just the Story of steel. It's the story of vision becoming reality - and a legacy built to last for generations. At TSL, steel is not just our product - it's our promise. A promise forged in fire, shaped by integrity, and strengthened by fifty years of trust. As we step into the future, we carry our heritage in our hearts and our vision in our hands - to build a world that stands tall on the strength of TSL. Because in every sheet we roll, in every beam we raise, and in every milestone we achieve - we don't just create steel, we create stories that last forever.

This journey - rooted in knowledge and driven by values - ensured that every TSL product, especially the flagship TSL colour coils, was built to last for generations. It's not just a story of steel. It's the story of a promise - forged in fire, refined with wisdom, and delivered with pride.

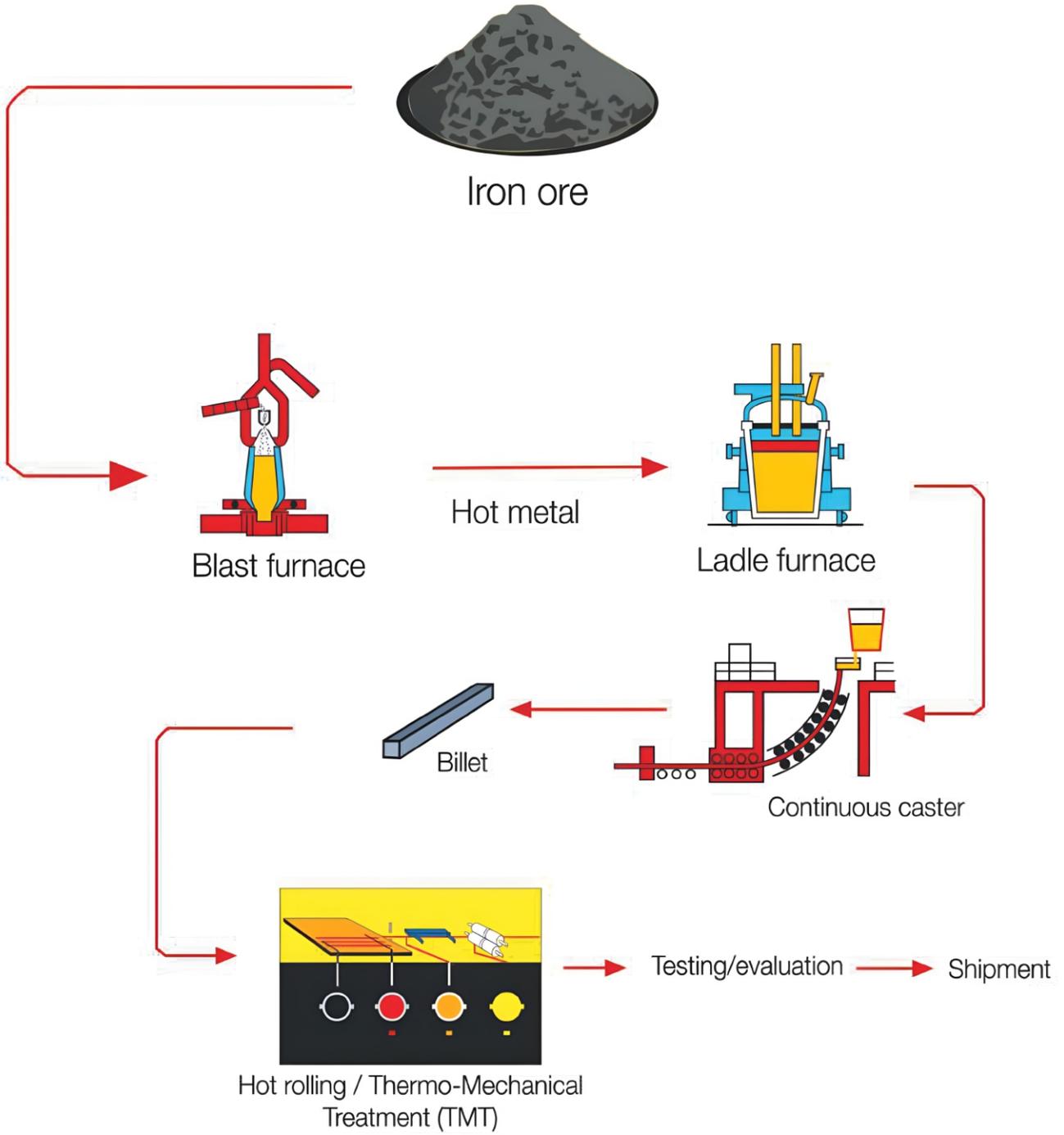
## # Haryana Achievers



A mark of excellence- TSL Steel proudly receives the Haryana Achievers Award from the Honourable Chief Minister Nayab Singh Saini, celebrating our commitment to quality and nation-building.



# TMT BAR MANUFACTURING PROCESS



# PRODUCTION CAPACITY

At TSL Steel, we don't just produce steel - we shape the core of tomorrow's India. TSL proudly powers some of the country's most ambitious infrastructure dreams. Standing firm on a foundation of trust, innovation, and excellence, our growth reflects the leadership and legacy of TSL.

-visionaries who transformed a mission into a movement.

As we look ahead, TSL is prepared to elevate its annual capacity to over 1 Million tons, driven by increasing demand for stronger, more reliable steel. This journey is not just about numbers - it's about our commitment to being the Heart of Building across India and beyond. Our TMT bars, angles, girders, pipes, and channels don't just construct buildings they reinforce progress, one beam at a time.

Engineered to Endure. Designed to Inspire.

-At the heart of every modern structure lies steel that can be trusted and TSL Saria delivers exactly that. Our TMT bars are crafted from premium-grade steel and undergo advanced refining processes that ensure high tensile strength, excellent ductility, and reliable corrosion resistance. With BIS certification -(IS 1786:2008), TSL products are built to outperform whether it's high-rise towers, earthquake-resistant buildings, or critical government infrastructure. Our bars aren't just materials; they are promises -to engineers, builders, architects, and generations to come. TSL is more than a manufacturer. We're your construction's invisible strength, pushing India forward one building at a time

TSL Steel ensures that every bar we produce fortifies the foundation of a thriving nation, reinforcing our position as a trusted partner in shaping India's

tomorrow.

The Founders' Journey in the Steel Industry

TSL Saria (TMT Rebar) is available in a wide range of sizes and grades to meet the evolving needs of modern construction:

Sizes:

8mm, 10mm, 12mm, 16mm, 20mm, 25mm, 32mm, 40mm

Grades:

Fe 415 Perfect for small-scale housing projects requiring high flexibility

Fe 500 The all-rounder for commercial and -residential projects

Fe 500SD - Designed for seismic zones and taller structures needing both strength and ductility

Fe 550 Trusted for industrial-scale loads and infrastructure builds

Fe 550SD - When flexibility meets high performance ideal for demanding applications

Fe 600 - Maximum strength for marine, dam, and heavy load-bearing environments

Lengths:

Standard 12 meters (custom sizes available on request)

Applications:

Used across homes, apartments, commercial towers, bridges, dams, industrial plants, ports, and more

TSL Premium Saria (TMT Bars), our flagship offering, are manufactured from high-quality steel and tested rigorously to meet BIS specifications (IS 1786:2008). With guaranteed strength, ductility, and reliability, TSL Saria stands as the trusted backbone for modern construction across the nation.

# BENEFITS OF USING CCM

## (CONTINUOUS CASTING MACHINES)

At TSL, delivering excellence begins right at the foundation and that means using cutting-edge Continuous Casting Machines (CCMs) to produce steel that's not only consistent, but world-class. CCMs play a pivotal role in crafting high-performance TSL Saria (TMT Bars) that meet the strictest structural demands. Here's how CCMs elevate every aspect of our bar quality, making them the Heart of Building across India

### 1. Uniform Microstructure & Mechanical Properties

CCMs ensure gradual and consistent cooling of molten steel into billets, which refines the internal grain structure and eliminates porosity.

Result:

A homogeneous microstructure with uniform strength and ductility across the full length of the bar ideal for Fe 415 / Fe 500 / Fe 550 SD grades.

### 2. Elimination of Defects

The continuous casting process minimizes internal segregation of elements like carbon and manganese which often weaken steel in traditional ingot-based methods

Result:

Defect-free billets with smooth surface finish and high fatigue resistance, fully compliant with IS 1786:2008 standards

### 3. Precise Dimensional Accuracy

CCMs deliver tight control over billet dimensions (e.g., 165 mm<sup>2</sup>), ensuring consistency in size and structure throughout rolling.

Result:

TSL Saria with uniform rib patterns, perfect diameters, and enhanced grip and ease of site work. critical for construction safety

### 4. Enhanced Chemical Homogeneity

Through Ladle Refining Furnace (LRF) integration,

CCMs allow precise control over elements like sulfur, phosphorus, and carbon.

Result:

Predictable chemical composition for certified grades, including seismic-resistant Fe 500SD / Fe 550SD, enhancing structural safety.

### 5. Improved Response to Quenching & Tempering

Optimized billet quality from CCMs ensures efficient heat transfer during the TMT process:

Rapid Quenching forms a tough martensitic outer layer

Self-Tempering refines the inner ferrite-pearlite core

Result:

Balanced strength (550-600 MPa) with elongation (12-18%) ideal for earthquake zones and -heavy-duty applications.

### 6. Reduced Residual Stresses

CCMs allow uniform solidification, avoiding stress concentration and thermal warping in the final rebar.

Result:

TSL Saria maintains dimensional stability under heavy loads and dynamic construction environments.

### 7. Compliance with Global Standards

Compliance with Global Standards

Every CCM-crafted bar meets top international benchmarks:

IS 1786:2008 (India)

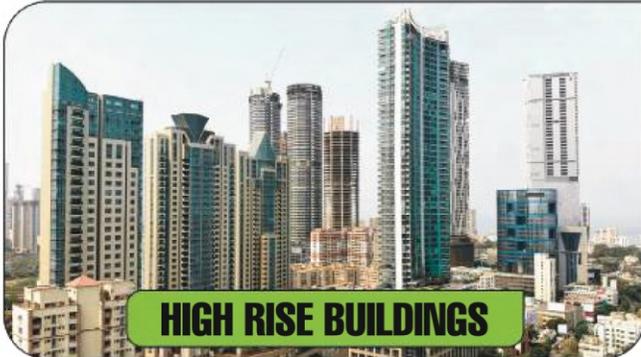
ASTMA615 (USA)

BS 4449 (UK)

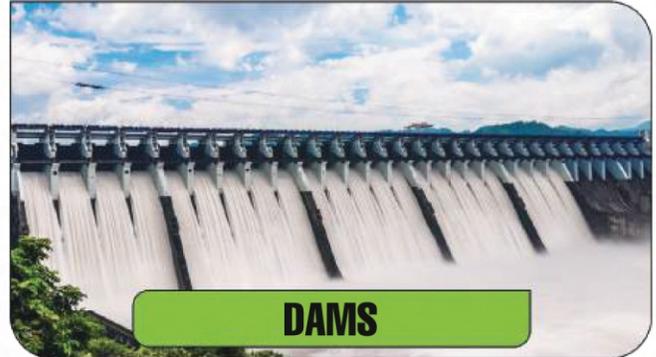
Result:

Global-standard steel with complete traceability, thanks to automated CCM data logs supporting seamless quality audits and export-readiness.

# APPLICATIONS



**HIGH RISE BUILDINGS**



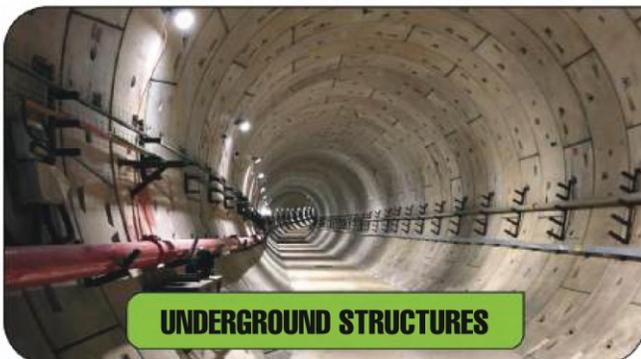
**DAMS**



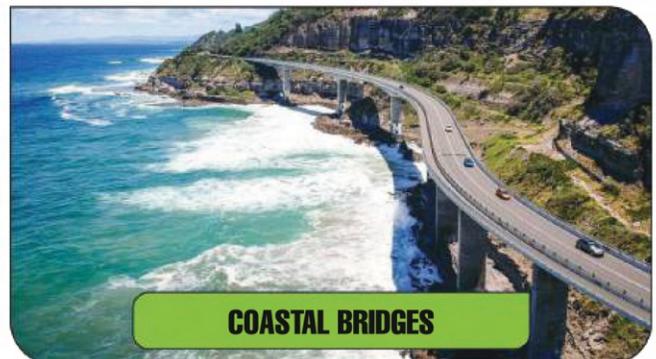
**RESIDENTIAL BUILDINGS**



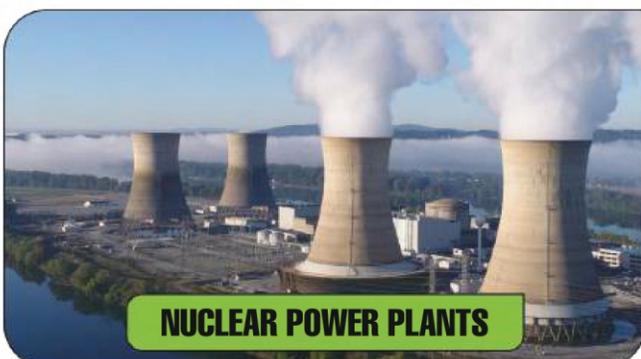
**INDUSTRIAL STRUCTURES**



**UNDERGROUND STRUCTURES**



**COASTAL BRIDGES**



**NUCLEAR POWER PLANTS**



**RAILWAYS**

### CHEMICAL PROPERTIES COMPARISON CHART

Parameters	ISI Benchmark		TSL Steel	
	Fe 550	Fe 550 SD	Fe 550	Fe 550SD
Grade	Fe 550	Fe 550 SD	Fe 550	Fe 550SD
Carbon	0.30	0.25	0.16-0.23	0.15
Sulphur	0.055	0.040	0.040	0.035
Phosphorus	0.055	0.040	0.050	0.035
S + P	0.100	0.075	0.090	0.070
Manganese (Min.)			0.060	0.065

### MECHANICAL PROPERTIES COMPARISON CHART

Parameters	ISI Benchmark		TSL Steel	
	Fe 550	Fe 550 SD	Fe 550	Fe 550 SD
Grade	Fe 550	Fe 550 SD	Fe 550	Fe 550 SD
Yield Stress (n/mm <sup>2</sup> )	550	550	570-620	570-620
Tensile Strength (n/mm <sup>2</sup> )	585	600	650-750	670-770
Elongation % (Min)	10	14.5	15-20	16-24
UTS/YS Ratio	1.06	1.08	1.12-1.20	1.15-1.22

### MANDREL SIZE SPECIFIED FOR BEND / REBEND (Ø = DIA OF BAR)

Parameters	ISI Benchmark		TSL Steel	
Bend (upto & incl. 20mm)	4 Ø	3 Ø	3 Ø	2 Ø
Bend (Over 20 mm)	5 Ø	4 Ø	4 Ø	3 Ø
Rebend (upto & incl. 10mm)	5 Ø	4 Ø	4 Ø	3 Ø
Rebend (Over 10mm)	7 Ø	6 Ø	6 Ø	5 Ø

### SELECTION WEIGHT

		ISI Benchmark		TSL Steel		
Size (Dia in mm)	Nominal Spex in Kg/Mtr.	Tolerance Limit in Kg/Mtr	Indy. Sample %Var	Weight Tolerance Kg/Mtr.	Weight Tolerance Kg/Feet.	Indv. Sample %Var
6	0.222	0.206 - 0.237	± 7	0.210 - 0.220	0.064 - 0.067	-5/-1
8	0.395	0.367 - 0.423	± 7	0.367 - 0.383	0.112 - 0.117	-7/-3
10	0.617	0.574 - 0.660	± 7	0.574 - 0.598	0.175 - 0.182	-7/-3
12	0.888	0.844 - 0.932	± 5	0.844 - 0.870	0.257 - 0.265	-5/-2
16	1.580	1.501 - 1.659	± 5	1.501 - 1.548	0.457 - 0.471	-5/-2
20	2.470	2.396 - 2.544	± 3	2.396 - 2.445	0.730 - 0.745	-3/-1
25	3.850	3.735 - 3.965	± 3	3.735 - 3.811	1.138 - 1.161	-3/-1
28	4.830	4.685 - 4.974	± 3	4.685 - 4.781	1.428 - 1.458	-3/-1
32	6.310	6.121 - 6.499	± 3	6.121 - 6.246	1.866 - 1.904	-3/-1

# EARTHQUAKE-PRONE AREAS

## Building Safer Futures with TSL 550 SD Saria

In regions vulnerable to earthquakes, construction materials can determine the line between survival and catastrophe. That's why engineers, architects, and builders across India trust TSL 550 SD Saria the high-performance reinforcement bar engineered for seismic resilience -

Crafted with a perfect blend of strength, flexibility, and durability, TSL 550 SD Saria is designed to perform under pressure bending without breaking, enduring without failing. Whether it's a residential tower or critical infrastructure in a seismic belt, TSL bars provide the assurance that your structure is ready for nature's toughest test.

## WHY TSL 550 SD SARIA IS IDEAL FOR EARTHQUAKE ZONES

### 1. Superior Durability for Seismic Resilience:

TSL 550 SD Saria is engineered to absorb seismic energy through high ductility allowing buildings to sway, not shatter. This ability to flex under extreme stress helps prevent catastrophic failure during earthquakes

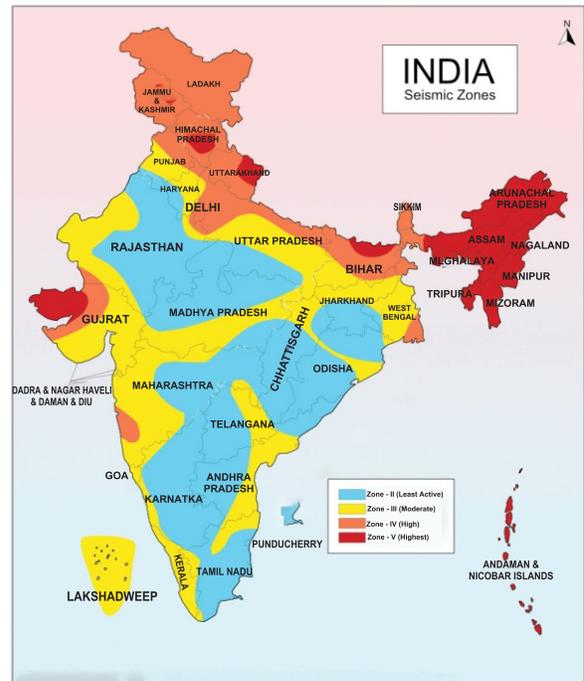
### 2. High Yield Strength: With a minimum yield

strength of 550 MPa, these bars offer exceptional load-bearing capacity and resilience under dynamic forces. From multi-story buildings to bridges, they hold structures together when the ground shifts beneath them

### 3. Advanced Tempcore Manufacturing:

Each bar is manufactured using cutting-edge Temp core TMT technology, producing a tough martensitic surface for impact resistance and a soft, ductile inner core. This dual-phase structure is ideal for structures exposed to seismic shocks.

### 4. Superior Bonding with Concrete: TSL bars



feature uniform ridges and parallel ribs that grip concrete tightly, minimizing slippage during tremors and maintaining structural integrity.

### 5. Low Impurity Composition

With minimal levels of sulphur and phosphorus, TSL 550 SD Saria resists brittleness and cracking -ensuring long-term reliability even after repeated seismic activity.

## BENEFITS OF USING TSL 550 SD SARIA IN SEISMIC ZONES

**1. Enhanced Safety:** Their unmatched ductility ensures buildings can flex during tremors without collapsing, reducing the risk to human life and property.

**2. Cost Efficiency:** Higher strength allows for fewer or smaller-diameter bars, cutting down construction costs by up to 15% while maintaining full structural performance

**3. Long-Term Durability:** Made with corrosion-resistant

pure steel, these bars are ideal for coastal and humid zones where both moisture and seismic activity pose risks

**4. Compliance with IS 1786:2008:** Every TSL 550 SD Saria is certified as per IS 1786:2008 standards, delivering trusted performance backed by rigorous quality controls.

# TSL 550 SD SARIA

## THE UNSHAKABLE FOUNDATION OF YOUR DREAMS

At TSL Steel, we don't just produce reinforcement bars - we create legacy materials designed to protect your vision, your structures, and your people. With over a century of metallurgical expertise, we bring you a product that blends cutting-edge technology with unwavering reliability.

Whether it's a towering skyscraper, a residential home, or an urban bridge, TSL 550 SD Saria is your trusted companion in seismic zones. When the earth shakes, TSL stands strong.

### WIDE-RANGE APPLICATIONS

**Residential Marvels:** Elegant homes that stand strong

**Commercial Giants:** Offices, malls, and complexes that define skylines

**Infrastructure Icons:** Bridges, flyovers, and dams

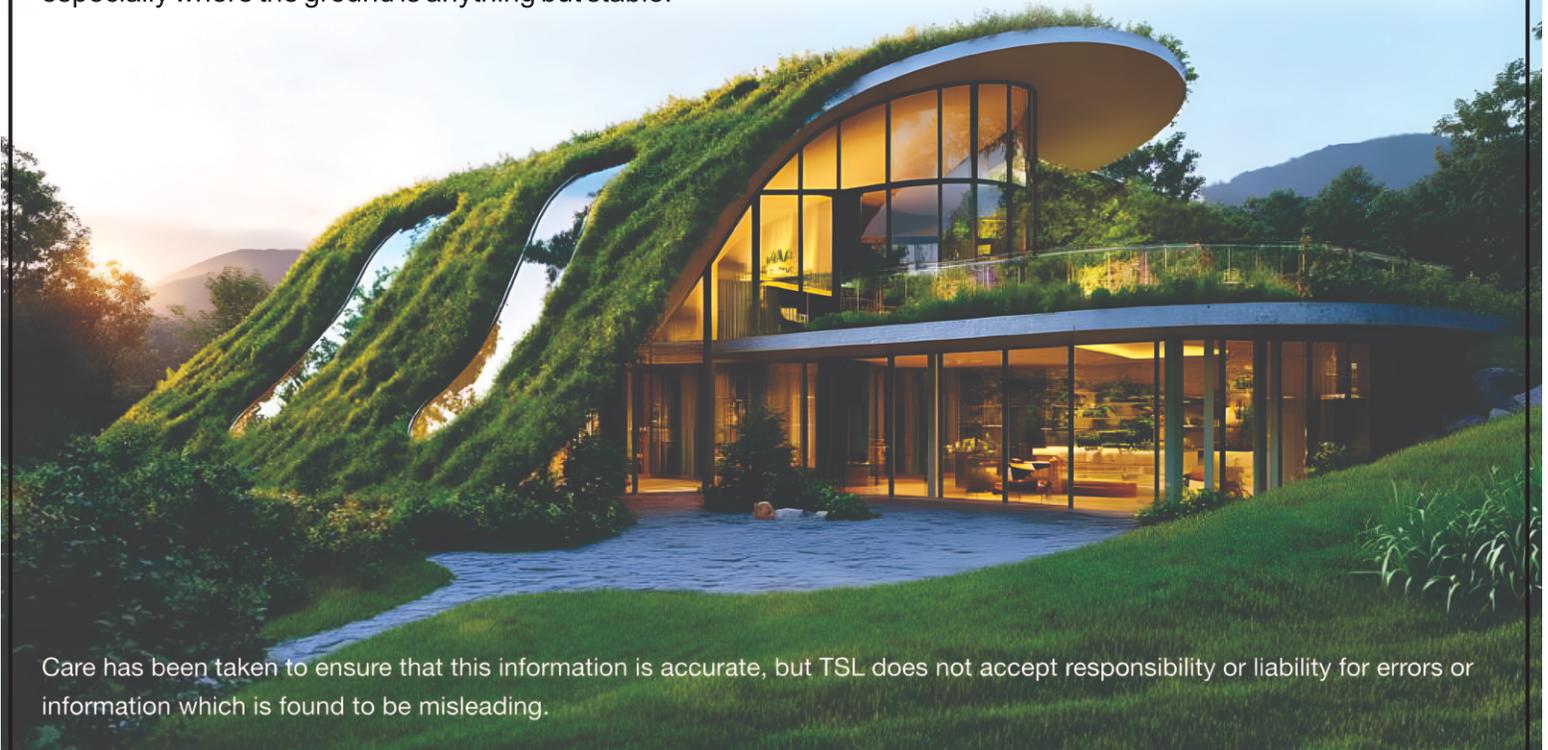
**Retrofitting Projects:** Reinforcing old structures for tomorrow's safety

### A LEGACY OF TRUST

Backed by a vast dealer network, admired by engineers, architects, and homeowners alike - TSL is the backbone of India's modern infrastructure. Every TSL 550 SD bar is a promise of strength you can measure and trust you can build on.

**Build with Confidence. Build with TSL 550 SD Saria.**

Available in sizes from 6mm to 40mm, TSL 550 SD Saria is your answer to a stronger, safer, and sustainable future especially where the ground is anything but stable.

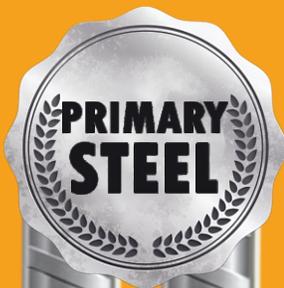


Care has been taken to ensure that this information is accurate, but TSL does not accept responsibility or liability for errors or information which is found to be misleading.

IS : 1786



An ISO 9001 : 2015



TSL 550 SD

TSL 550 SD

# Foundation for The Future



# Primary Steel



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