IS:1786
CM/L-6700025808
CM/L-6607573
Billet IS 2830

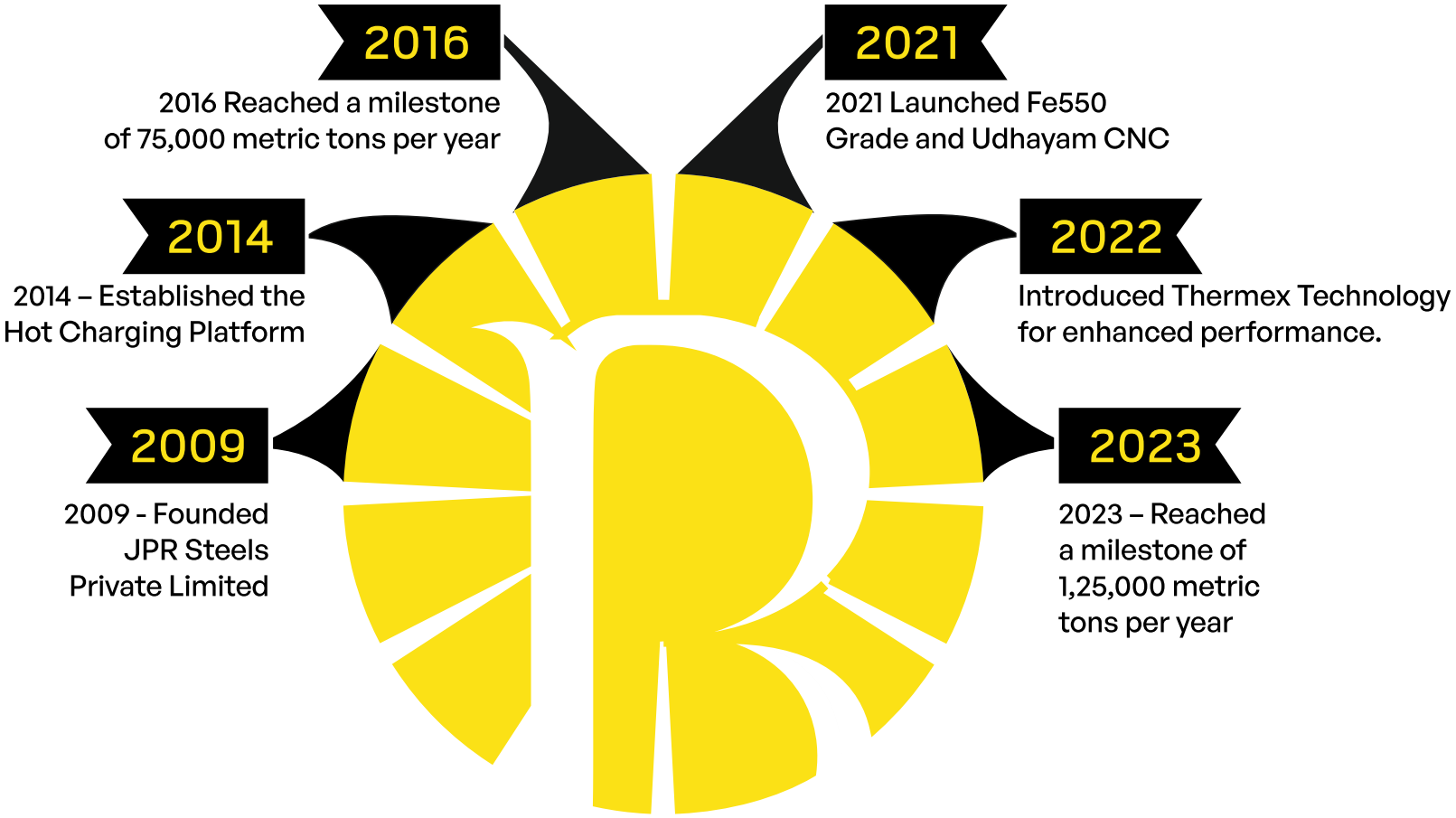
JPR
TMT BARS
TRUST OF BUILDINGS

JPR STEELS PRIVATE LIMITED

550D

JPR 550D TMT

வலிமையின் வாக்குறுதி



FROM THE DESK OF THE DIRECTOR

At JSPL (JPR Steels Private Limited), we redefine excellence in TMT rebar manufacturing with a relentless focus on innovation, quality, and sustainability. Trusted by builders and engineers, our TMT rebars are crafted to create structures that stand the test of time.

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About Us

JSPL (JPR Steels Private Limited) has grown into a trusted name in reinforcement steel production. From the inception of our furnace division in 2009 to the unification of our operations in 2010, we have continuously evolved to meet industry standards and exceed customer expectations. Under the visionary leadership, relentless hard working, expertise, strategic decision-making skills and dedication to operational excellence of our Managing Director, Mr. JAHIR HUSSAIN, the brand has achieved remarkable growth.

Thermex Technology

TMT (Thermo-Mechanically Treated) bars manufactured using Thermex Technology offer superior strength, durability, and earthquake resistance. This advanced German technology ensures rapid cooling of the outer surface while retaining a soft inner core, resulting in high ductility and better weldability. Thermex treated TMT bars provides enhanced power towards corrosion resistance, making them ideal for constructing long-lasting and resilient structures.

Our Commitment to Quality

High quality Raw material and value added products are sourced and tested. At each stage of production, the work in progress material are tested at the in house facility to ensure that the JPR TMT Bars meets and exceeds ISI Standards for Tensil strength, bend and rebendability. Such rigorous testing leads to consistency in the Quality of end products.

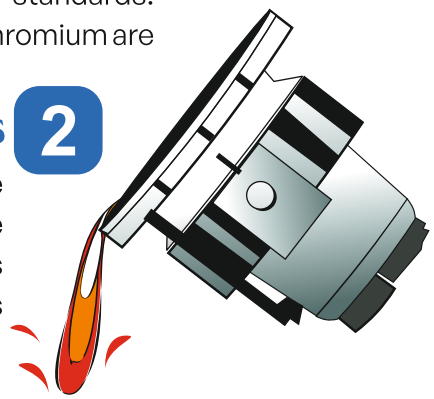
1. **Raw Material Inspection** High-grade iron ore and billets are tested for purity and composition.
2. **Chemical Composition Test** Ensures the correct balance of carbon, sulfur, and phosphorus for strength and flexibility.
3. **Thermo-Mechanical Treatment Check** Verifies proper quenching, self-tempering, and cooling for durability.
4. **Physical & Mechanical Testing** Checks tensile strength, elongation, and bending properties to meet industry standards.
5. **Surface & Dimensional Inspection:** Ensures uniform rib patterns, diameter accuracy, and surface finish for better bonding with concrete.

OUR PROCESS

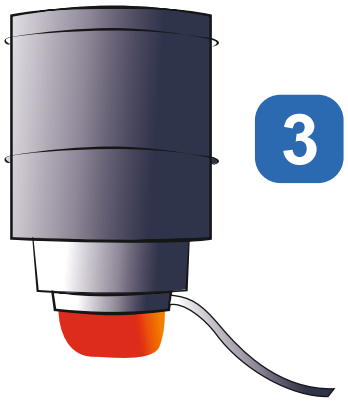
1 Raw Material Processing

The raw material which includes various grades of Mild Steel Scrap & Sponge Iron are inspected and segregated as per the quality standards. Raw material that contains metals such as copper nickel, and chromium are charged in to furnace.

Melting Process 2



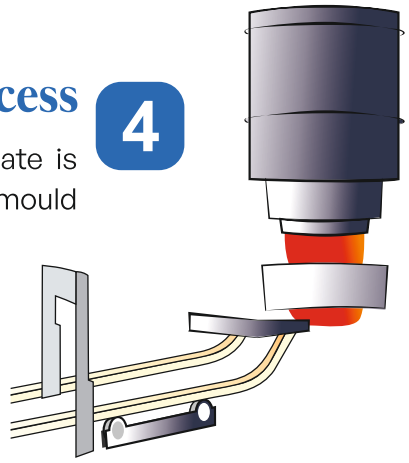
Raw materials are charged into the induction furnace are converted into molten metal. Our Quality team ensures that the liquid metal is at optimal temperature and grade before it is tapped off. At the end of metal processing final chemistry is obtained by adding ferro alloys.



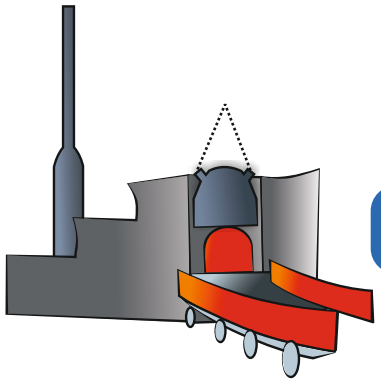
3 Ladle Purging Process

Liquid metal is transferred in to the Ladle and subjected in to purging process where it is oxidized to reduce the percentage of impurities and gases.

Continuous Casting Process 4



Ladle is placed on the Tundish car and bottom gate is opened hydraulically. Liquid metal flows into copper mould tubes and billet is casted.



5 Hot Charging

The Hot Billets comes out from the continuous casting machine are fed in to rolling mill through roller conveyers.

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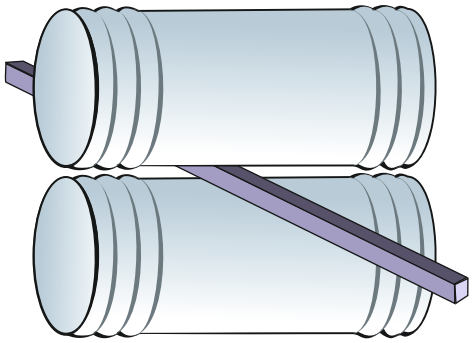
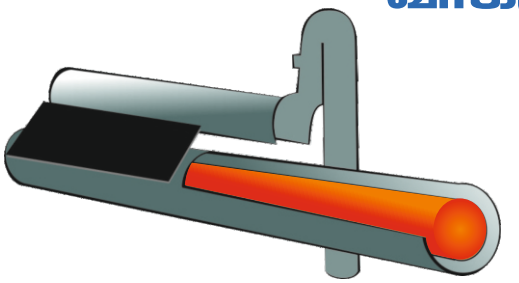




6 Rolling Process

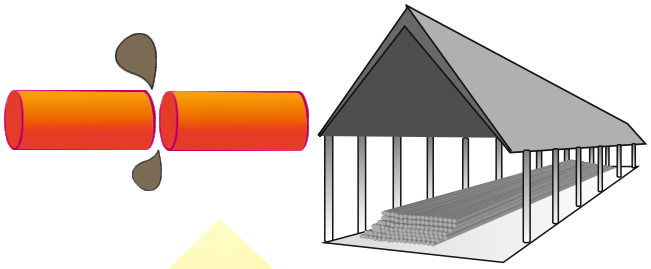
Hot Billets are rolled in continuous rolling mill having 20 passes. Various passes such as Roughing, Intermediate and finishing stands are used depending upon the size and length of the required end product.

7 Quenching Process

Hot rolled re-bars undergo quenching using the Thermex process. Rapid cooling forms a tough Martensite outer layer, while gradual air cooling creates a Ferrite Pearlite core for enhanced elongation.

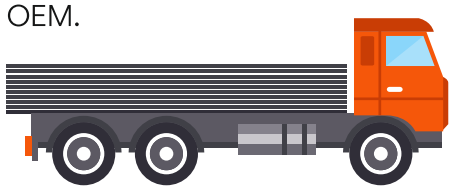
8 Bundling & Storage Process

Strengthened bars are uniformly cut to 40 feet long. They are then transferred for U-bending, bundling, tagging, and stored in a fully covered yard above ground to prevent environmental damage.



9 Dispatch Process

Dispatch division is equipped with two in-house weigh bridges and third-party logistic arrangements to eliminate any delay in transportation of finished goods to our customers. Accuracy in weight is maintained by periodic maintenance of the Scales by the OEM.



OUR PRODUCTS

Fe550D

Superior Strength for Smarter Construction

JPR Fe550D TMT rebars offer 20% more strength than conventional steel, ensuring:

Lower Steel Consumption
Up to 5-6% savings with optimized design.

Reduced Congestion
Fewer, smaller bars for better spacing.

Lower Labour Costs
Less steel, less work, more savings.

Faster Construction
Easier handling and quicker placement.

More Floor Space
Efficient design for extra usable area.

Choose JPR Fe550D for strength, efficiency, and cost-effectiveness.

Fe550

Strength Meets Versatility

JPR Fe550 TMT bars offer exceptional strength and high ductility, making them ideal for diverse construction needs. Whether it's residential, commercial, or large-scale infrastructure projects, their superior elongation ensures durability and flexibility, even in earthquake-prone areas.

Chemical & Mechanical Properties

All products are manufactured according to ISI standard IS code IS 1786. ISI Specification is given below. Test certificates will be provided for every batch. Our ISI License number for Billets is CM/L-6700025808 and for TMT is CM/L-6607573

Chemical Composition Elements - IS 1786: 2008

	IS Fe550D	JPR 550D	IS Fe550	JPR 550
Carbon	0.25 (Max)	0.25 (Max)	0.30 (Max)	0.30 (Max)
Sulphur	0.040 (Max)	0.035 (Max)	0.055 (Max)	0.050 (Max)
Phosphorous	0.040 (Max)	0.035 (Max)	0.050 (Max)	0.045 (Max)
Sulphur +Phosphorous	0.075 (Max)	0.070 (Max)	0.100 (Max)	0.090 (Max)
Carbon Equivalent (CE)	0.50 (Max)	0.42 (Max)	0.50 (Max)	0.40 (Max)

Mechanical Properties Elements - IS 1786: 2008

	IS Fe550D	JPR 550D	IS Fe550	JPR 550
Yield Strength (N/mm^2)	550 (Min)	> 550	550 (Min)	> 550
Tensile Strength, (N/mm^2)	585 (Min)	> 585	585 (Min)	> 585
Elongation (%)	14.5 (Min)	> 15	10 (Min)	> 14

Weight Tolerances

Size of Bar (mm^2)	IS 1786	JPR	No of Rods Per Bundle
08	0.367 - 0.423	0.370 - 0.410	10
10	0.574 - 0.660	0.575 - 0.615	7
12	0.844 - 0.932	0.845 - 0.885	5
16	1.501 - 1.659	1.510 - 1.580	3
20	2.396 - 2.544	2.400 - 2.470	2
25	3.735 - 3.966	3.750 - 3.850	1

Additional Benefits

FIRE RESISTANCE

Our TMT Bars can withstand up to 600 degrees Celsius of heat, significantly extending the lifespan of a home.

COST EFFECTIVE

High strength and durability, which allows for less material usage, reduced maintenance needs over time, and a longer lifespan compared to traditional

EASY BENDABILITY

Our TMT bars offer excellent bendability, allowing easy shaping and forming without compromising strength, making them ideal for complex structural designs.

BETTER WELDABILITY

Our TMT bars offer superior weldability, allowing for seamless joining without compromising their strength or integrity.

HIGHER BONDING STRENGTH

Our TMT bars provide higher bonding strength with concrete, ensuring better adhesion and stronger, more durable structures.

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Trusted Clients

Our clients are our top priority, and we are committed to providing them with the highest level of service

SPR CITY
A PROJECT WITH BINNY LTD

TAMILNADU BLOCK DEVELOPMENT OFFICE

TAMILNADU SCHOOL EDUCATION DEPARTMENT

CASAGRAND
COMMERCIAL

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

PSP Medical College Hospital and Research Institute

KARPAGA VINAYAGA
EDUCATIONAL GROUP
MEDICINE
DENTISTRY
ENGINEERING
NURSING

TAMILNADU STATE HIGHWAY

BUILDERS ASSOCIATION OF INDIA
Estd.1941

PSK GROUP

EPE Eco Protection Engineers

Tamil Nadu Public Works Department

ARUNAI ENGINEERING COLLEGE
An AUTONOMOUS Institution
Thiruvannamalai, Tamil Nadu

Bharath UNIVERSITY
பாரத் பல்கலைக்கழகம்

LEGENDARY BUILDERS

GD BUILDERS

GEMINI INFRA India Pvt Ltd.

SAN LOGISTIK PARK

VISHAAL Promoters Pvt.Ltd.,
உங்கள் இல்லக்கனவுகள் நிஜமாகட்டும் எங்களோடு

PANIMALAR ENGINEERING COLLEGE
AN AUTONOMOUS INSTITUTION
COUNSELLING CODE 1210

Deccan Engineers

PANIMALAR MEDICAL COLLEGE HOSPITAL & RESEARCH INSTITUTE
MAKING A HEALTHY TOMORROW

JEPPIAAR FISHING HARBOUR

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