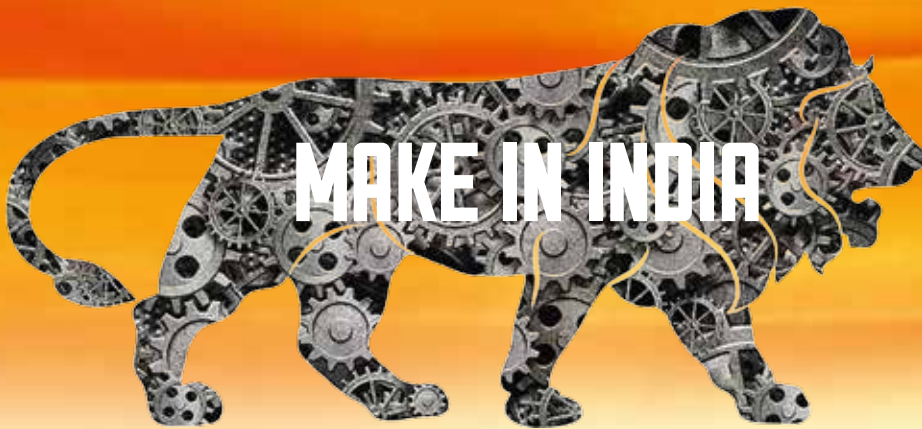




Fe 550

IS 1786:2008



CMIL6300046804

INDIA GOLDTM



THERMEX[®] TMT BARS



A ONE ISPAT

A ONE ISPAT as the name says stand for its quality i.e A-1 Quality.

A ONE ISPAT Pvt Ltd was established by Shri Sanjay Kumar Jallan specializing in the manufacture of MS Billets. Along with time the company got developed by Mr. Abishek Jallan into the manufacturing of MS Billets, TMT bars, steel section with increased production capacity.

With its brand name "INDIA GOLD" for the first time in South India A ONE ISPAT has come up with Fully Automatic Steel Rolling unit from start to finish with 100% uniform quality TMT BARS.





By adopting the most modern and advanced technology it has become possible for us to obtain best quality of Thermo Mechanically Treated Bars with corrosion resistant for the first time in south India.



FEATURES OF A ONE ISPAT AUTOMATIC ROLLING PLANT:

- A uniform and accurate weight distribution throughout the bar.
- Higher production for timely delivery.
- Reduced pull tension from material for better bonding of molecules.





Thermex Quenching System

Thermex is World Leaders in QST Technology & Systems.

For high strength high ductility steel rebars as per Grade desired.

German Thermex QST System for production of rebars as per international standards. Thermex® QST technology enables production of desired high-strength steel rebars that meet all requirements of civil construction yield strength, toughness, ductility, weldability and excellent bend properties.

Quenching:

A short, intensive but very precise in-line cooling of the rolled bar is imparted through proprietary equipment, and this treatment results in a hardened periphery without any major effect on the core.

Tempering:

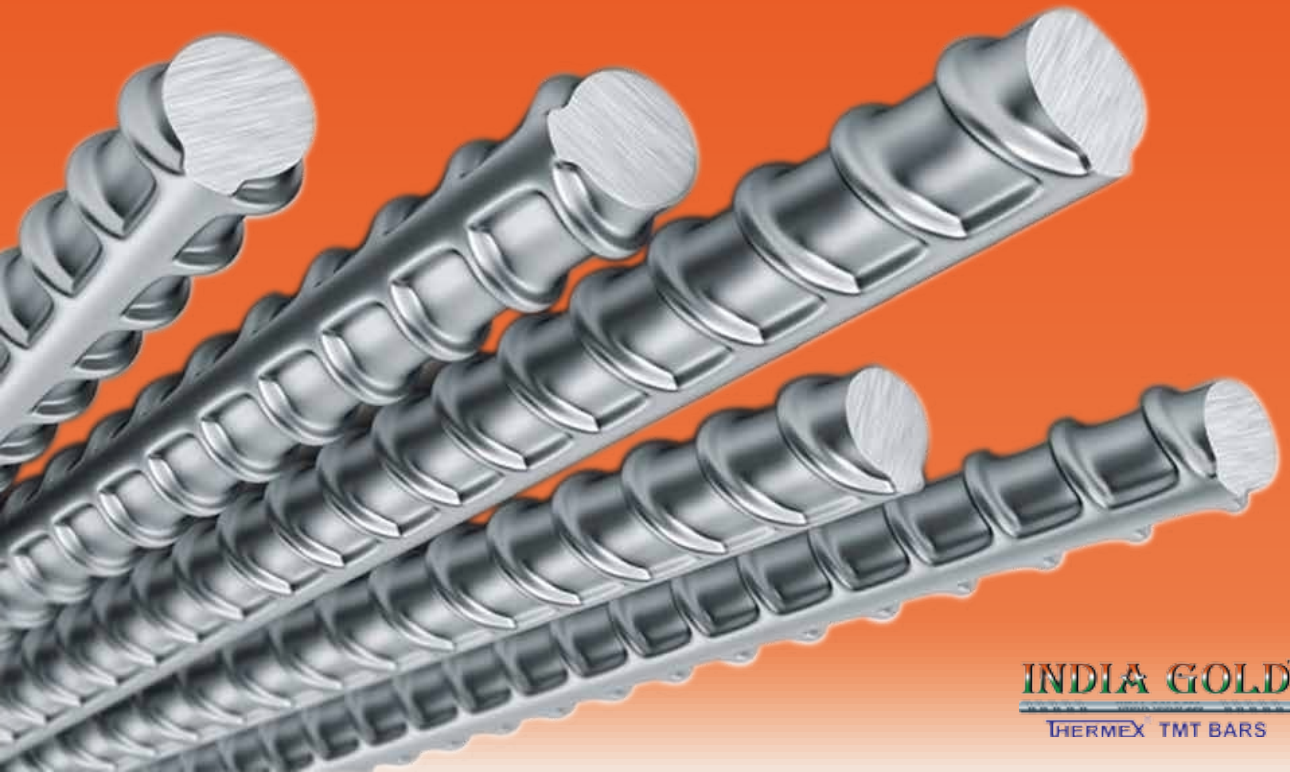
The bars are allowed to cool naturally on leaving the proprietary quenching pipes. At this stage a thermal exchange (THERMEX) occurs between the hot inner core and the quenched martensite surface whereby the resultant bar structure is a distinct tempered martensite at periphery and a fine grained ferrite-pearlite structure in the central zone. The Thermex® bar so produced has unique qualities of high strength, toughness and ductility with elongation (A5) values of 18 to 25 per cent.

TMT Bar Ribs

The rings and lines on TMT Bars are called lugs and ribs, these are placed at regular intervals across the TMT bars of all grades. These lugs and ribs are there give a gripping effect in concrete structures, they give traction to concrete overlay on them. The angular placing on the surface gives the concrete a surface which it can cling on to.

With the right placing ribs and lugs, the TMT bars can give the structures an optimum lifespan as well as stability. As the heights and complexities go upwards, the importance of properly placed ribs at correct angles has only gone up. **INDIA GOLD** have maintained the original design of Ribs which gives best bonding of **TMT BARS** with cement.

There have studies which have proved that lugs and ribs have in fact been effective in increasing the bendability and concrete bonding index. This has also led to reducing the length of TMT bars while retaining the strength and tensile strength. These ribs and lugs also reinforce the protective coating against rust and corrosion which is painted on all TMT bars.





TMT Bar Ribs

Popular across the emerging markets, Sparkonix's Rib cutting machines are ideal for fast growing steel companies aiming for higher productivity without compromising on the world-class 'quality'.

The solutions combine the rib cutting and name marking operation in a single machine and provide an unmatched competitive edge to the TMT Bars.

Fully automated computerized sparkonix machine for best rib and lugs on the TMT Bars. It provides a uniform depth and length of the ribs. Equal distance between ribs for best bonding of TMT bars with Cement.

Automated Cooling Beds

Automatic cooling bed is a mechanical device equipped with steel bar automatic stop motion. There are braking apparatuses which comes to a halt with the movement of the motion steel bars running freely into the run-in table at or around the predetermined position. Besides, there are one or more oscillators to operate the braking apparatuses and an automatic control board. The signal received from the oscillator transforms to power control by a selective delay apparatuses to operate the braking apparatuses. When a steel bar produced by rolling at the end of the final finishing stand of hot steel bar rolling equipment cools down and is then transferred to the next step. The automatic stop motion further prevents the movement of steel bars into run-in table of the cooling bed and halts the leading ends of each running in steel bar near the terminal end of the bed.

Advantages of Cooling Beds

- For Cooling of each and every Bar individually.
- Uniformity throughout the TMT bars and give best shine.
- Automated Cooling bed maintains 100% bars in streight line and remove any chance of material twisting.



Comparison Chart

Properties/ Compositions	Unit	India (IS: 1786)	INDIA GOLD TMT
Mechanical Properties			
Grade	Unit	Fe - 550	Fe - 550
Yield Strength	N/mm ²	550 min	575 min
Tensile Strength	N/mm ²	585 min	650 min
Elongation	Ratio	10 min	15 min
UTS/YS	%	1.06 min	1.12 min
Chemical Composition (%)			
Carbon	%	0.30 max	0.25 max
Sulphur	%	0.055 max	0.045 max
Phosphorous	%	0.050 max	0.050 max
S+P	%	0.100 max	0.095 max
Si.	%	0.10 min	0.20 min

Advantages of choosing india gold:

- Earthquake resistant, increasing the sturdiness of construction
- Decreasing the level of sulphur and phosphorus, ensuring less impurities
- Non-vulnerable to cracking under extreme hot and cold conditions
- Bonding strenght with higher ductility
- Better ductility, bendability and weldability
- Higher thermal stability
- Anti-corrosive properties to prevent the formation of coarse carbides
- Bear dynamic and seismic loading (high fatigue resistance)



INDIA GOLDTM



THERMEX[®] TMT BARS

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