PREMIER GROUP

JAIPUR OFFICE
4th Floor, Nidhi Kamal Tower
Ajmer Road, Jaipur
Tel - 0141 4053444
Fax - 0141 4053450

KANPUR OFFICE
4th Floor, Shiv Som Tower 1
The Mall, Kanpur(U.P.) 208001
Tel - 0512-2360854
Tel/Fax - 0512-2360560

FOR ANY INFORMATION EMAIL
support@premierispat.com
www.premierispat.com

STRIVING FOR EXCELLENCE

ASK FOR Fe550D COMPLIANCE

IS 1786 : 2008
CM/L-8647191

PREMIER
EQR TMT REBARS

1st

LICENSEE AWARDEE
FOR
Fe550D GRADE
TMT REBARS IN RAJASTHAN

20
YEARS OF
EXPERIENCE

5 UNITS

10 LAKH
TON STEEL PER YEAR

PREMIER

EQR TMT REBARS

DUCTILITY &
UNIFORM ELONGATION
PROTECTS FROM EARTHQUAKE

MADE ONLY FROM BILLETS

20
YEARS OF
EXCELLENCE

ABOUT US

With growth comes dignity, and so does responsibility to maintain our ground. Pis an esteemed brand so long applauded for its consistency and reputation earned across years of hard work, brainstorming innovating ideas and team spirit.

Premier Group is a well diversified 20 Yr old Conglomerate with annual turnover of Rs 1500 Cr whose operations range from manufacturing of reinforcement steel (Tmt bars, Billets, Pvc & Steel pipes & Precast concrete) and has recently ventured into Real Estate operations.

Premier Group has more than 5 Manufacturing units situated across Northern India & is growing at an exponential pace across all the verticals to achieve its dominant position within its Peer Group and markets its product under brand name “PREMIER”.

Premier has recently ramped up its production facility at Bindki Road, Fatehpur (U.P) to produce Hollow section Structura SHS/RHS/CHS along with High- end industrial Mild Steel Pipes ERW, Black Pipes, Poles and is venturing into solar Mounting structures where the company would provide services right from design to Implementation of the project.

In Premier, we work striving towards excellence in everything we do so as to keep up with our brand repute as well as to emerge even stronger as a team. We have been entrusted with years of trust from customers and it's our responsibility to deliver only the best, affirming everyone's faith and to stand tall each time as the defending champions in the industry.

PREMIER
EQR TMT REBARS

ELONGATION AT MAXIMUM FORCE
EMF
APPROVED

SAVE 25% MORE | UTS/YS

MAXIMUM VALUE OF SULPHUR & PHOSPHOROUS
(0.055%)*

SULPHUR 0.03% + 0.03% PHOSPHOROUS

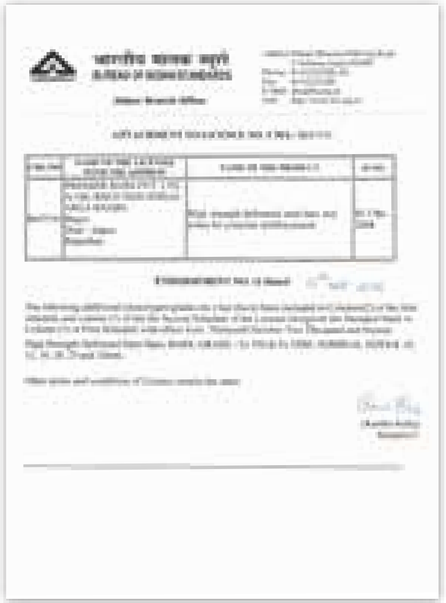
BOND WITH CONCRETE
CORROSION RESISTANCE
BENDABILITY
ELONGATION
DUCTILITY

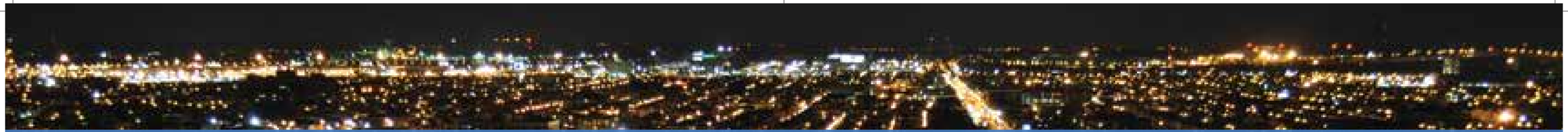
PREMIER EQR TMT REBARS

NOW AVAILABLE IN
Fe 550D 550

ALSO AVAILABLE IN
Fe 500D 500

BIS CERTIFICATION





EQR TMT REBARS

In accordance with the intensity of seismic activities, observed over vast period of time in different parts of the country, India has been divided in to five seismic zones, 1 to 5, with intensity of earthquake least in zone 1 and maximum intensity in zone.

Majority of INDIA falls in zone 4 and 5, where plate tectonic disturbances are prominent.

For buildings, utility services, and vital infrastructure, intensity ratings of earthquakes from 7 to 10 on richter scale are important and potentiality of damage likely to be caused in case of severe earthquake is indicated here under:

07 STRONG SHOCK

Overthrow of valuable objects from cupboards, fall of plaster, swinging of bulbs and ceiling fans, general panic, and minor but no real damage to the building.

08 VERY STRONG SHOCK

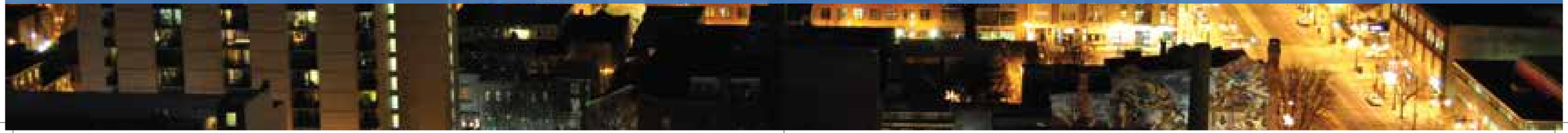
Cracks in the walls, shatters old buildings and producing slight cracks in the ground.

09 EXTREMELY STRONG SHOCK

Uproots buildings, causing huge cracks in the ground and triggers landslides.

10 EXTREME INTENSITY SHOCKS

Total destruction in the region.



SURVIVAL OF THE FITTEST

Most of the casualties take place due to collapse of the structures during major earthquakes and in order to avoid or minimize the loss of lives, the only course open to engineers is to design the structures that are earthquake resistant which undergo large deformations and damage but do not collapse, thereby avoiding major loss to property life.

> AGAINST NATURE BEING DEFENSIVE IS **THE BEST STRATEGY**

Earthquake resistance could be achieved by conceiving of sound structural form and configuration by the architect and the structural engineer proportioning the member sizes.

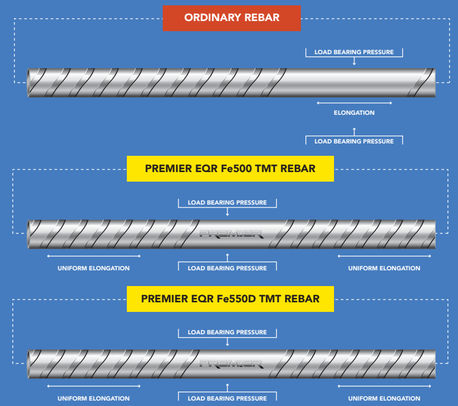
If the configuration is not sound, the structure becomes vulnerable for attack easily by earthquake, any amount of strengthening the selection will not be of any use and poor structural form cannot be made to behave satisfactorily in an earthquake.
Capacity design procedure for the earthquake-resistant reinforced concrete (RC) structures is effective when actual member capacities do not greatly exceed the assumed design capacities. Moreover, RC members are expected to undergo large inelastic deformations for adequate seismic energy dissipation. Since flexural capacity and post-yield behavior of an RC member is largely controlled by steel reinforcing bars lately rechristened as TMT QUENCH TEMPERED REBARS it places certain special requirements on their properties, such as, yield strength (YS), ultimate tensile strength to yield strength ratio (UTS/YS ratio) and elongation, which are sensitive to the method of rebar manufacturing.

THE STRATEGY

EMF

ELONGATION AT MAXIMUM FORCE

Key is to allow the building to swing, quake-resistant buildings, are designed to withstand the shock of earthquakes and not crumble. Depending on the seismic zone they are in, buildings are constructed to withstand a certain magnitude of earthquake. But earthquake-resistant is not earthquake-proof. Faced with earthquakes of higher magnitudes, they would go down. The key idea in making a building earthquake-resistant is to make it ductile, that is, to give it a certain flexibility to shake horizontally. Stiff buildings, when faced with earthquakes, would go down, but the flexible ones would sway and come back to their original position. The idea is to soften the impact of the earthquake, and to let the building absorb the energy. Most of the newer high-rises these days, especially those in the high-seismic regions, are constructed to withstand the impact of earthquakes of up to certain strength.



TMT REBARS THE HEART AND SOUL OF EVERY CONSTRUCTION

TMT is at the heart and soul of construction. It is the backbone of the whole structure. More attention is required while buying the TMT bars as once they are used they become irreplaceable. Little more consciousness, a penny more invested for the sake of quality can lead to enhanced life and safety of your dream house.

Thermo mechanically treated rebars (TMT rebars) impart strength and ductility to RCC structure to withstand various kinds of loads impacting a building. These days a lot of focus is given in designing structures that have high earthquake resistance. TMT bars have high fatigue resistance to Seismic loads due to its higher UTS/YS ratio. This makes them most suitable for use in earthquake prone areas. Usage of TMT has enabled economy in design, construction of high risers with improved earthquake resistance along with added advantage of superior weldability, corrosion resistance, ductility and durability.

EARTHQUAKE RESISTANT REBARS

HOW DUCTILE IS YOUR REBAR ?

Properly designed steel structures can have high ductility, which is the key characteristic for resisting shock such as blasts or earthquakes. Steel bars are also used to improve the bond with concrete. The concept of reinforced concrete evolved due to the fact that steel and concrete act together in resisting force. Concrete has high compressive strength but low tensile strength. But, when it is used for beams, girders, foundation walls, or floors, concrete must be reinforced to attain the necessary tensile strength

HOW DOES A TMT REBAR DEFENDS?

THE POWER OF 5

1. EMF: ONLY EMF CAN SAVE
2. THE QT PROCESS THAT INFUSES
3. DUCTILITY DEFENDS
4. PERFECT BALANCE
5. BONDING WITH LIVES

ONLY EMF CAN SAVE

Elongation at maximum force or EMF is a property by the virtue of which TMT Bars will undergo an elongation before developing a stress/strain that would eventually lead to the breaking of bar.

Higher the ductility in the bars longer is the elongation and vice versa. Construction practices and code worldwide look out for Maximum elongation at Maximum force as one of the most vital feature to certify whether Tmt rebar is ductile or not.

DOES YOUR TMT HAVE IT?

EMF

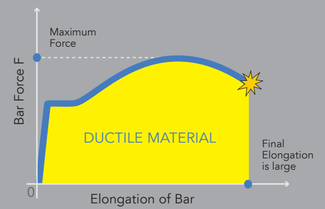
ELONGATION AT MAXIMUM FORCE

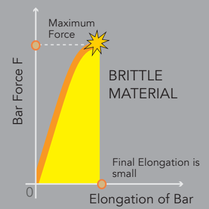
SIGNIFICANCE OF EMF (DUCTILITY)

Ductility is a measure of how much deformation or strain a material can withstand before breaking. The most common measure of ductility is the percentage of change in length of a tensile sample after breaking.

Ductility or EMF (Elongation at Maximum Force) plays the most important role in today's construction practices.Tmt bars made using Fe500D /550D grade steel are considered ideal for earthquake resistant bars, with the "D" standing for "Ductility". Premier EQR was tested along with bar of same length and cross sectional area, one made of a ductile material and another of a brittle material.

It was noticed that Premier EQR Rebars elongates by a large amount before it breaks, while the brittle bar breaks suddenly on reaching its maximum strength at a relatively small elongation.





INTERNATIONALLY RECOMMENDED CODES FOR REBARS

Worldwide, very stringent codes are being adopted as far as usage of steel in reinforcement concrete is concerned. Priority is given to REBARS which have higher ductility in terms of uniform elongation, tensile strength along with appropriate yield strength. Rebars with higher strength and lesser ductility are being discarded and avoided.

Across the country, special earthquake grade code for using of rebars is being adopted and conventional grade Fe450 is being discounted.

INTERNATIONAL STANDARDS

ATTRIBUTE	ASTM 706 Grade 60	AS/NZS 4671 Grade 500E	IS:1786, IS:2830 Grade 500D	JIS G3112 SD 490
ORIGIN	U.S.A	Australia - New Zealand	India	Japan
YIELD STRENGTH, Fy, Mpa	540≥Fy≥420	600≥Fy≥500	500	625≥Fy≥490
ULTIMATE STRENGTH Ts, Mpa	550Min ≥1.25Fy	1.40Fy≥Ts ≥1.25Fy	565	620 Min
EARTHQUAKE RESISTANT DESIGNING CODE	200 mm	5d	3d	5d
ELONGATION FRACTURE	10% - 14%	-	16%	12% Min
ELONGATION: MAX. FORCE	-	≥10%	-	-

MADE ONLY FROM BILLETS

Chemical composition tested billets are used as a raw material for manufacturing our Rebars. If chemical analyses of billets are satisfactory and confirming to the requirements the said raw material is utilized for further processing otherwise marked and returned.

QUENCH TEMPERED PROCESS

PREMIER EMF REBARS DRAW THEIR STRENGTH FROM A COMPUTER CONTROLLED INLINE PROCESS OF HARDENING & TEMPERING.

WHICH INVOLVES :

QUENCHING

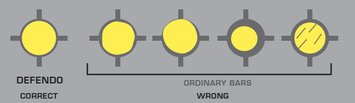
The hot rolled bar leaves the final mill stand and is rapidly quenched by a special water spray system. This converts the surface layer of the bar to a hardened structure called Martensite while the core remains austenitic.

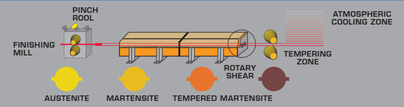
SELF TEMPERING

The bar leaves the quenching box with the core temperature being higher than that at the surface. This allows the heat to flow to the surface from the core, thereby tempering the surface, resulting in a structure called Tempered Martensite. The core remains austenitic at this stage.

ATMOSPHERIC COOLING

Cooling takes place on the walking cooling bed, where the austentic core is transfored to a ductile Ferrite-Pearlite core leaving a strong outer layer of tempered martensite and a ductile core of ferrite-pearlite.





A PERFECT BALANCE

‘ PERFECT COMBINATION OF PHYSICAL & CHEMICAL PROPERTIES MAKES PREMIER BARS INVINCIBLE. ’

MADE TO THE HIGHEST STANDARDS

Available in sizes (mm)

QUALITY CONTROL APPROVALS & CERTIFICATIONS

DEFORMATION REQUIREMENTS

NOMINAL DIAMETER IN (MM)	MAX.AVERAGE SPACING OF RIBS	HEIGHT TOLERANCE OF RIBS		MAX. SUMMATION OF GAPS (MM)
		MIN.	MAX.	
8	5.6	.3	.6	6.2
10	7.0	.4	.8	7.8
12	8.4	.5	1.0	9.4
16	11.2	.7	1.4	12.6
20	14.0	1.0	2.0	15.7
25	17.5	1.2	2.4	19.6
28	19.6	1.4	2.8	22.0
32	22.4	1.6	3.2	25.1

CHEMICAL PROPERTIES

ELEMENT	Fe 500 (IS:1786/ 2008)	PREMIER Fe 500 TMT (MIN.)	BIS Fe 500D	PREMIER Fe500D	BIS Fe 550	PREMIER Fe550	BIS Fe 550D	PREMIER Fe550D
CARBON%	0.30 max	0.25	0.25	0.20-0.25	0.30	0.25	0.25	0.22-0.25
SULPHUR%	0.055 max	0.40	0.040	0.03	0.055	0.050	0.04	0.03
PHOSPHORUS%	0.055 max	0.40	0.040	0.03	0.050	0.045	0.04	0.03
S+P%	0.105 max	0.100	0.075	0.055	0.100	0.090	0.075	0.055

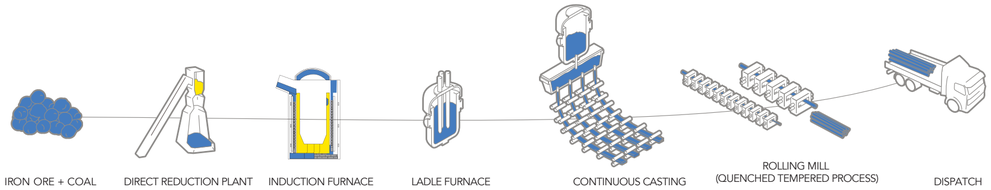
PHYSICAL PROPERTIES

PROPERTIES	Fe 500 (IS:1786/ 2008)	PREMIER Fe 500 TMT (MIN.)	BIS Fe 500D	PREMIER Fe500D	BIS Fe 550	PREMIER Fe550	BIS Fe 550D	PREMIER Fe550D
YIELD STRESS (MIN.,N/MM2)	500	520	500	525	550	575	550	575
% ELONGATION	12	16	16	18	8	8	14.5	16
ULTIMATE TENSILE STRESS - UTS	545	580	565	600	585	585	600	645
UTS/YS RATIO	1.08	1.10	1.13	1.15	1.06	1.01	1.08	1.12

FULLY INTEGRATED STEEL PLANT

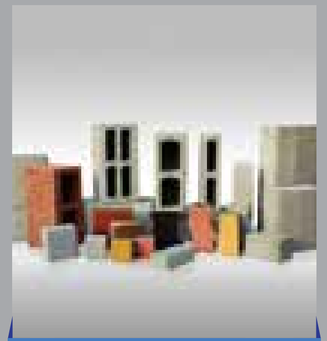
Premier has a fully integrated steel plant where TMT Bars are produced directly from minerals i.e. iron ore and coal. Firstly in sponge iron division, Iron ore is first deoxidized to produce sponge iron, sulphur & other such impurities that can only be controlled at this stage of production Thereupon, this purified sponge iron is melted in Steel melt shop division to produce M.S.Billets.

It is only during this stage of process alone, various chemicals such as manganese, silicon etc which have a very active role in providing ductility and ensuring elongation etc can only be controlled thereafter, these billets are rolled into TMT bars in Rolling Mill division. It is very important to understand that only physical properties and yield stress can be controlled at the rolling stage, thus any manufacturer not having either of these intermediate stages of integration will not be able to produce standardized chemically controlled TMT bars as amalgamation of all these chemicals in the requisite percentage results into a TMT bar which is capable of all the characteristics i.e. elongation, ductility, etc



OUR GROUP VERTICALS

STEEL TUBES | PIPES | TUBULAR POLES



BLOCKS | PAVERS | PRECAST | EPS BLOCKS | RMC

READY MIX CONCRETE

SCAFFOLDING FITTING & SYSTEM

SOLAR MODULE MOUNTING STRUCTURE

HOUSING & INFRA