

B BEEKAY™
TURBO TMT
SOLID BHAROSA

550MAX 

INTER  LOCKING
RIBBED TMT BAR



MAXBOND

MAXSTRENGTH

MAXDUCTILITY

EARTHQUAKE RESISTANT | CORROSION RESISTANT

ABOUT THE BEEKAY GROUP

The Beekay Group started its journey in West Bengal nearly 50 years ago and, in that time, has traversed the country with its sights set on the world. The company has moved up the value chain as one of the most prestigious names in the steel industry and has won many accolades for its stringent quality standards along with timely delivery and efficient marketing support. The company has been working for the primary producers of the steel industry as a conversion agent for a few years. Using all-around expertise in the production of quality TMT bars, Beekay has set up a state-of-the-art TMT bar manufacturing unit at Parwada, Visakhapatnam using TurboQuench® technology from Germany.

With manufacturing units in Andhra Pradesh, Tamil Nadu, Jharkhand and West Bengal, the Beekay Group produces a wide range of steel products and posts an annual turnover of over ₹1000 crores.

The company manufactures customised steel using methods such as Hot Rolling, Thermo Mechanical Treatment (TMT), Cold Drawing, Peeling & Grinding and Machining. Beekay's steel is used extensively in automobile components, engineering industries, infrastructure projects, railways and many more.

Beekay has been serving renowned names all over the world. The list of national clients includes names like Tata Steel, Amtek Group, LMW Group, Amrep Group, Mahindra, Tata International, L&T, Vedanta, TVS Group, Aditya Birla Group, Raymonds Group, BHEL, Bajaj, RAMCO and BEML.

Serving beyond the national borders of India, we are serving clients from countries like Mexico, New Zealand, Canada, the UK, Saudi Arabia, Bahrain, the UAE, Qatar, Philippines, Myanmar, Bangladesh and Sri Lanka.

ANOTHER FEATHER IN THE CAP

Catering to infrastructural needs for more than 50 years, Beekay is set to add to its list of quality products. Built using state-of-the-art German TurboQuench® technology at our Parwada unit, we bring you 550MAX TMT bars. It's designed for all concrete superstructures. While the length of these bars is 12 meters, they are available in diameter of 8, 10, 12, 16, 20, 25 and 32 mm.

With an interlocking ribbed design for enhanced grip and higher yield strength, *550MAX consumes 10% less steel*. It has unaltered uniformity in quality, shape and design due to its computerized manufacturing process - a fully automatic cooling bed and online bar bending and bundling system. The bars are made from high-quality billets and have a Single Window concept for customers. Beekay Turbo TMT has an extensive distribution network across Andhra Pradesh.

THE INSIDE STORY OF BEEKAY TURBO TMT

Beekay Turbo TMT bars are produced in our state-of-the-art plant under the careful supervision of our highly experienced engineers and metallurgists. The raw materials used are made from virgin iron ore through a chain of processes to obtain steel with the lowest level of impurities which is then cast into billets. These cast billets are hot rolled in fully automated rolling mills equipped with computer-controlled process monitoring devices to ensure uniform properties in each rebar. This is done in three successive stages namely:

Turbo Quenching: The hot-rolled bars are rapidly quenched by a special water-gush spray system. This hardens the surface of the bar to a depth optimised for each section through formation of martensitic rim while the core remains hot and austenitic.

Self-tempering: When the bars are released from the quenching box, the core remains hot compared to the surface, allowing heat to flow from the core to the surface, causing tempering of the outer martensitic layer into a structure called 'Tempered Martensite'. The core still remains austenitic at this stage.

Atmospheric Cooling: This takes place on the automatic cooling bed where the austenitic core is transformed into a ductile ferrite-pearlite structure. Thus, the final structure consists of an optimum combination of a strong outer layer (tempered martensite) with a ductile core (ferrite-pearlite). This gives Beekay Turbo TMT bars their unique combination of higher strength and ductility.

ABOUT 550MAX

WHY BEEKAY TURBO TMT 550MAX IS SUPERIOR TO OTHERS IN THE MARKET

- Like the spinal cord plays a vital role in the human body, in the same way, Beekay Turbo TMT reinforcement bars play an important role in strengthening the foundation of every construction.
- At Beekay Turbo TMT, the Research and Development team continuously works for increasing the bond strength of the rebar using innovative technologies. The Research and Development team's key focus is on innovation. The team has recently introduced a scientific rib design that gives almost double the BIS requirements.
- Beekay Turbo TMT is offering:
 - ▶ YS – Plus
 - ▶ UTS/YS ratio – Plus
 - ▶ % Elongation – Plus
- The bond strength of Beekay Turbo 550MAX TMT bars packs a potential 'plus' in terms of endurance assuring advantages to our clients, that are MAX.



MAX PROPERTIES

550MAX Properties	Unit	Beekay Turbo (Typical)	BIS IS: 1786
Carbon	%	0.30 max	0.30 max
Sulphur	%	0.050 max	0.055 max
Phosphorus	%	0.050 max	0.050 max
Sulphur+Phosphorus	%	0.095 max	0.100 max
Yield Stress (YS)	N/mm2	570 min	550 min
Ultimate Tensile Strength (UTS)	N/mm2	625 min	585 min
UTS/YS	Ratio	1.10 min	1.06 min
Elongation	%	13 min	10 min

MAX ADVANTAGES

INDUSTRY PRESENCE AND EXPERIENCE

The company has a vast experience in manufacturing more than 2 million tons of TMT bars. Beekay, which already has a major industry presence in Southern India, will cater to the needs of the customers in the entire southern region as well as portions of Western, Central and Eastern India from its newest TMT unit at Parwada, Visakhapatnam.

THE BEEKAY TRUST

Beekay Turbo TMT bars combine the best of strength and ductility and have an unparalleled quality consistency. They are available through our distribution and dealer networks with the promise of correct weight at the point of purchase.

TOLERANCE

	Specific Wt.	BIS Standard	Market Standard	Beekay Turbo TMT Bars
Size	Gm/m	Tolerance Gm/m %	Tolerance Gm/m %	Tolerance Gm/m %
8	395	367 to 423 ±7	387 to 410 +4 to -2	371 to 383 -3 to -6
10	617	574 to 660 ±7	605 to 642 +4 to -2	580 to 598 -3 to -6
12	888	844 to 932 ±5	870 to 924 +4 to -2	852 to 861 -3 to -4
16	1580	1501 to 1659 ±5	1548 to 1643 +4 to -2	1517 to 1533 -3 to -4
20	2470	2396 to 2544 ±3	2445 to 2519 +2 to -1	2408 to 2421 -2 to -2.5
25	3850	3735 to 3965 ±3	3812 to 3927 +2 to -1	3754 to 3773 -2 to -2.5

MAX QUALITY



Beekay Turbo TMT 550MAX bars are the right choice for all kinds of concrete reinforcement structures, bridges and flyovers, dams, thermal power plants, industrial structures, high-rise buildings and other superstructures that require heavy load-bearing capacity.

QUALITY CONTROL

The TQM (Total Quality Management) module being maintained at our unit includes monitoring and recording of all vital parameters of reheating furnace, rolling, quenching and cooling through computer-controlled processes and ensures uniform quality and safety standards.





MAX ATTRIBUTES

MAX BOND

550MAX has interlocking rib patterns, greater rib-depth and closer rib-spacing that are in strict adherence to BIS prescribed norms for deformation and surface characteristics. This results in increased bonding capability with concrete because of the extra projected surface area present on the bars to bond with cement.

MAX STRENGTH

550MAX undergoes a German technology PLC controlled online thermo-mechanical treatment which ensures consistency in mechanical properties throughout the length of the bar which allows us to maintain the yield stress values higher than 550 N/mm² and tensile strength values higher than 585 N/mm² which results in higher compressive bond strength.

MAX DUCTILITY

550MAX offers higher elongation value of 13% compared to 10% of BIS value, thus offering 30% more ductility and increasing the construction safety even more.

EARTHQUAKE RESISTANT

550MAX bars have high fatigue resistance to seismic loads because of high ductility which results in seismic-resistant rebars and protection against earthquakes.

CORROSION RESISTANT

There is no residual stress in 550MAX which gives them superior corrosion-resistant characteristics.

MAX VALUE ADDITIONS

PACKAGING

Each Beekay Turbo TMT bar is made in a fixed length of 12 metres to ensure standard consumption which reduces the overall wastage. The bars are supplied section-wise in convenient pre-packed and tagged bundles with a fixed number of pieces per bundle which helps dealers and end consumers with easy handling of the bundle.

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TURBO TMT
SOLID BHAROSA
550MAX®
INTER LOCKING



WORKS

BEEKAY STEEL INDUSTRIES LIMITED

Unit: Beekay Structural Steels (TMT Bar Division)

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