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Kamachi Industries Limited

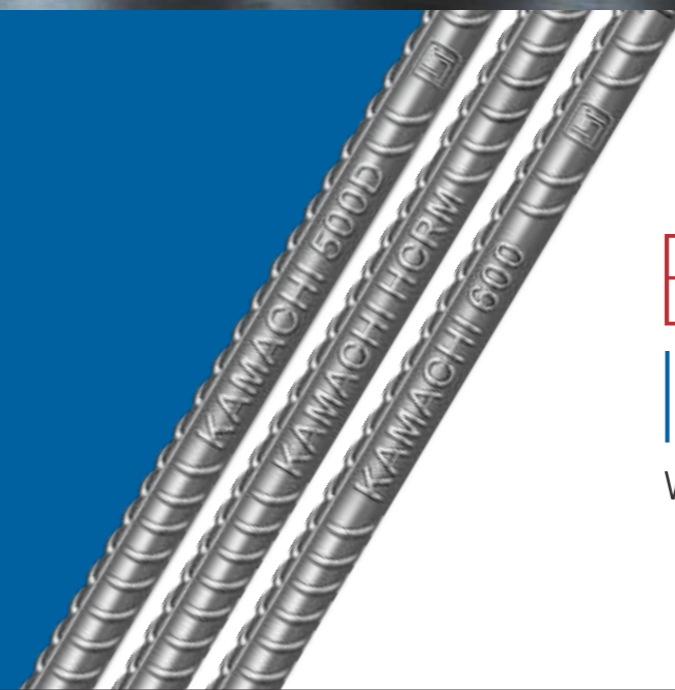
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Backbone of Infrastructure

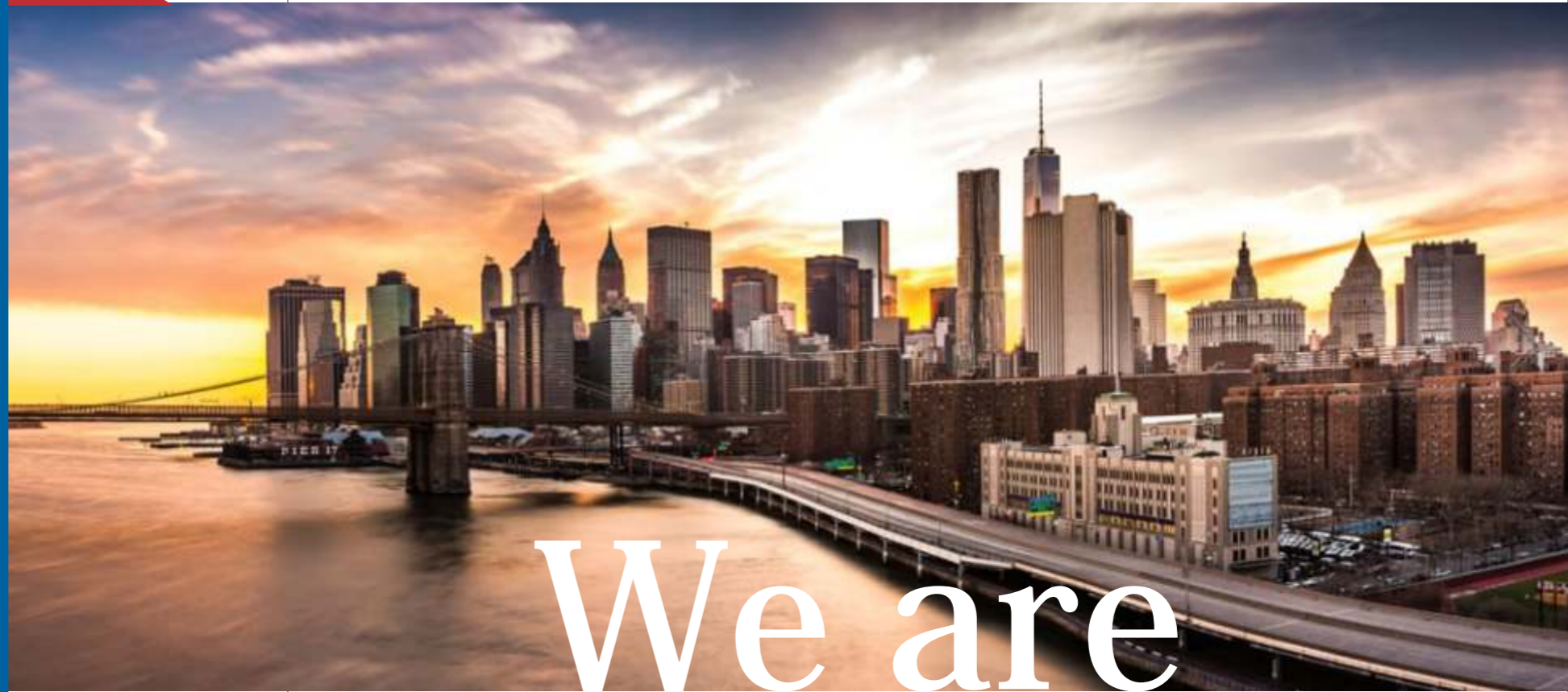
World Class Premium TMT BARS



We are leading partners
in changing the face of
Indian infrastructure.

When every bar of steel we
produce is of the highest quality,
is it any wonder the structures
created are spectacularly long lasting?

Trusted by



We are proud that we are

- © Pioneers in TMT Bar technology
- © South India's Most Awarded TMT Brand
- © South India's fastest growing TMT brand
- © One among India's Largest TMT bar producers
- © A company with the largest consumer base in over 6 states
- © The only steel company to receive TN Govt. Safety Award
- © One of the Leading Primary Steel Producers
- © Trusted by leading houses such as:
TATA, ADANI, L&T, WIPRO, GODREJ and many more

Exceeding, Surpassing,
Benchmark- Just some of the
words associated with
our quality standards.

DOUBLE GERMAN TECHNOLOGY

100 % Automatic German Rolling Mill
Latest German Thermex OST technology

ACTUAL PHOTO OF KAMACHI TMT PLANT



We craft our TMT Bars with great care and precision in South India's first and largest fully dedicated, fully-integrated TMT Rebar plant spread over 250 acres. We are the only brand in South India with 0.5 million tons capacity dedicated to TMT Bars.

Our whole process of TMT bar manufacture is housed in a single compound ensuring continuous process for unmatched quality. The most advanced technology from Germany and sophisticated machinery are employed in the manufacture of the bars. Our patented Slit Technology, which requires the highest quality raw materials, allows the production of 3 bars at a time. The technology enables us to manufacture batches of 500 bars of 8mm ensuring best consistency in quality. This consistency is impossible to match by other technologies which allow manufacture of only 100 bar batches. The rolling is carried out in an elevated floor level to eliminate dust, thus ensuring impeccable surface quality. The bars are cooled naturally and finally packaged. The entire process from feeding raw material to packaging is automated.

State of the art Robotic Tamper proof testing equipments ensure we deliver what we promise.

BLOOM The heart of high quality steel bars.

The finest raw material is processed to form Blooms, which is the source of high quality TMT bars. Bloom of sizes, 12mtr 160x160 sq. cm., is used only by Primary Steel Manufacturers. This results in better quality steel compared to secondary manufacturers using 6mtr billet of 100 x 100 sq. cm.,

While the average billet size is 16 sq. inches and weigh 500 kg. Kamachi blooms are of 40 sq. inches size and weighs 2500 kg.

Bloom makes better steel than billets because:

- ⊙ Bloom is 5 times heavier than billets*
- ⊙ Bloom is 500% more consistent
- ⊙ Bloom has better grain structure
- ⊙ Slower heat loss of blooms ensures higher uniform quality across the bar



Our Steel is **UNIQUE**

Because we have what very few have:



Most Advanced International Technology



Machines from Germany and USA



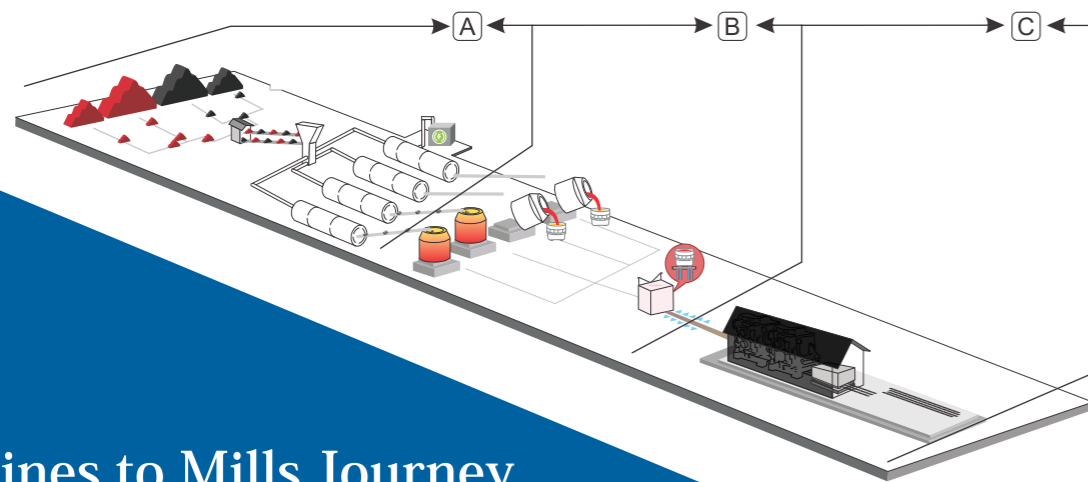
Fully Automated Process



In-depth Testing and Tracking



Single factory production No outsourcing



Mines to Mills Journey

The journey of iron ore from processing to sponge iron production takes place in-house. Our dynamic process that transforms virgin iron ore to world's finest TMT Rebars involves:

A Raw Material Processing

Virgin and high grade DRI (Direct Reduced Iron) is procured, processed and cast in blooms in the largest facility in the state.



Consistent Raw Material quality. Largest in State.



Iron ore processing. Largest in state.



Highest grade raw material

B Advanced Blooms Manufacturing

The best steel refining process employs induction, liquid refining furnaces and world class bloom casters.



Industrious Induction + Liquid refining Furnaces



Steel refining at its best



PLC controlled Bloom casters

C Creation of TMT Bars

100% German Automatic Rolling Mill and German Thermex QST Technology roll out highest quality TMT bars.



100% German Automatic Rolling Mill



German Thermex QST technology



Refined World-Class TMT Bars

Quality & Finish

Robotic Notching machines provide perfect Rib Dia, Thickness and Height Notch to the bars, which are then tested by tamper proof Setmagan and Sepctro machines and given batch codes for traceability.



Perfect Rib Dia, Thickness, Height notched through Robotic Notching machines



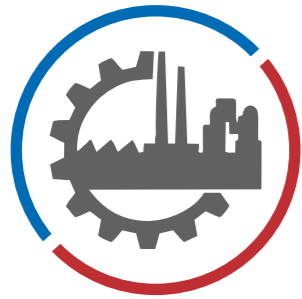
Tamper proof Setmagan, Spectro + physical testing lab



Batch Coding & Traceability for every bar

The transformation from virgin iron ore to strong, safe, consistent and ductile TMT Rebars is complete.

Why we are Unique



State-of-the-art Technology

Electric induction and liquid refining furnace melts highest grade DRI to form highly durable Blooms. World-Class German technology ensures exceptional steel core formation. The production process combined with Vertical-Horizontal stand mill technology ensures fully automated, uniformly shaped TMT Rebars.



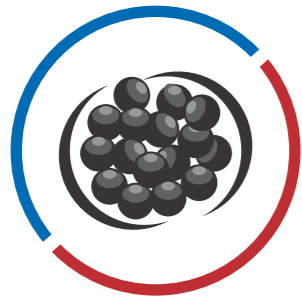
Extraordinary Consistency, Exceptional Steel

Simultaneous production of three 8mm bars with advanced slit technology that enables high consistency. This is made possible by exclusive usage of premium quality blooms and double German technology.



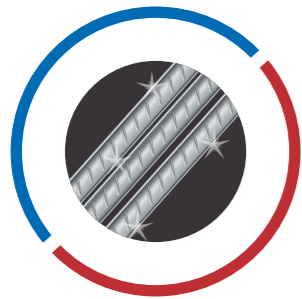
In-depth Testing and Tracking

Fully-automated monitoring systems certify the quality of every bar. Furthermore, each one of them can be backtracked to the specific heat and quality of the original high-grade blooms.



First Rate Raw Material, Finest quality Steel






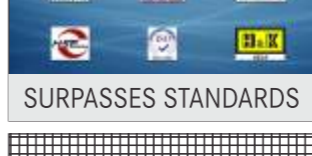

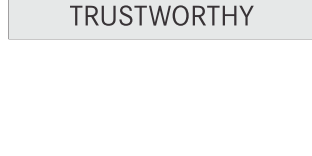
Our blooms are made from high grade DRI (Direct Reduced Iron) resulting in pure steel that speaks for itself. These blooms are best both in terms of Chemical properties and dimensions.



Remarkable Surface Finish

Modernized cooling-bed at 5m elevation grants even cooling and the Online Pressurized descaler together produce a polished surface across the entire length of every bar.

How Kamachi TMT Rebars are superior

KAMACHI TMT		YOU GET
 IRON ORE	Uses virgin iron ore and deploys state-of-the-art steel making and refining process	Highly clean & homogenous steel quality
 DRI-EIF-LRF-CCM	Steel is made using DRI - EIF - LRF CCM route	A highly controlled steel chemistry with very low levels of sulphur & phosphorus
 UNIQUE POSITION	Only brand in South India with 0.5 million tons capacity like main steel plants.	Prime quality at secondary market prices
 UNIFORM RIB PATTERN	Provides precise and uniform parallel rib pattern engraved through computer controlled Robot notch making machines	Excellent bond strength with concrete
 EARTHQUAKE RESISTANT	Exceeds UTS/YS (Ultimate Tensile strength to yield strength) ratio and high percentage elongation	Superior earthquake resistant qualities due to high capability of absorbing energy
 SURPASSES STANDARDS	Higher than minimum specified level of Bureau of Indian Standard(BIS)	More value for money
 UNIFORM PRICES	Has predefined and transparent pricing	Fixed and uniform rates
 TRUSTWORTHY	Is a Renowned & Award winning Brand	World Class Quality

TMT bars range

Fe500



Minimum 10% higher strength than BIS standards and 15% more economical than ordinary TMT bars. Has excellent elongation, bend and re-bend properties and superior weldability

Chemical Properties

Carbon % max	0.25
Sulphur % max	0.050
Phosphorus % max	0.050

Mechanical Properties

Yield stress	525
Ultimate Tensile Stress	600

Fe500D



Low levels of Sulphur and Phosphorus impurities afford extra ductility and better ability to withstand the tremendous shock loads produced during earthquakes. Kamachi Fe500D bars are trusted by leading industrial houses.

Chemical Properties

Carbon % max	0.25
Sulphur % max	0.035
Phosphorus % max	0.040

Mechanical Properties

Yield stress	525
Ultimate Tensile Stress	600

HCRM



Sea water, acidity in the air or salinity in the ground water causes corrosion weakening RCC structures. Kamachi Fe500D HCRM, with corrosion resistant elements Copper(Cu) and Chromium(Cr) present uniformly from the core to the surface, fights corrosion, maintains structural strength over time prolonging the life of RCC structures.

The price difference is Rs.3000/- compared to normal Fe500. This onetime cost translates into just Rs 200/- per year increase as against phenomenal savings enabled by avoiding foundation re-strengthening and annual maintenance costs required for normal Fe500 structures starting as early as 15 years after completion.

Furthermore, our HCRM has a higher percentage of corrosion resistant elements and is more economical than other leading brands. So we deliver better quality at a lesser rate.

Chemical Properties

Chromium	0.30% min
Copper	0.20% min
Total Corrosion Resistant Elements	0.50% min

Mechanical Properties

Yield stress	525
Ultimate Tensile Stress	600

Fe600



Fe600 is a pioneering introduction by Kamachi. A steel strength of 600 MPa, 20% increase in load bearing capacity and up to 4% lower steel consumption makes our Fe600 the most economical TMT bars for new age high-rises. Better ductility due to extremely low sulphur and phosphorus content makes it strong enough to withstand heavy winds and jerk loads during earthquakes.

Priced at HCRM rates, Fe600 bars offer considerable saving due to less steel consumption. So, maximum value for money.

Chemical Properties

Carbon % max	0.25
Sulphur % max	0.035
Phosphorus % max	0.040

Mechanical Properties

Yield stress	630
Ultimate Tensile Stress	670



Chemical & Mechanical Properties of TMT rebars

REBAR GRADE (%)	BIS 500	Kamachi 500 Typical Values	BIS FE 500D	Kamachi 500D Typical Values	Kamachi FE 500D HCRM Typical Values	BIS FE 600	Kamachi FE 600 Typical Values
Carbon	0.30	0.25	0.25	0.20-0.25	0.15	0.30	0.25
Silicon		0.15-0.25		0.15-0.25	0.35		0.15-0.25
Manganese		0.55		0.90-1.00	0.80 - 1.00		0.95-1.05
Sulphur (MAX)	0.055	0.050	0.040	0.035	0.040	0.040	0.035
Phosphorus (MAX)	0.055	0.050	0.040	0.040	0.090	0.040	0.040
Sulphur + Phosphorus (MAX)	0.105	0.100	0.075	0.070	0.130	0.075	0.075
Carbon Equivalent (CE) MAX	0.42	0.32-0.38	0.42	0.31-0.36	0.53	0.42	0.42
Copper					0.20 - 0.30		
Chromium					0.40 - 0.50		
Yield Stress (N/mm ²) MIN	500	525	500	525	525	600	630
Elongation (MIN)	12	16	16	18	18	10	11
Ultimate Tensile Strength (N/mm ²) MIN	545	600	565	600	600	660	670
UTS/YS Ratio	1.08	1.1	1.10	1.15	1.15	1.06	1.06

Size range

Kamachi TMT Rebars are available in the following sizes as per: 1786-2008 for Concrete Reinforcement

Dia (mm)	Minimum Weight (kg/mtr)	Nominal Weight (kg/mtr)	Maximum Weight (kg/mtr)	length Per Rod (mtr)	Typical Weight Per Rod (kg)
8	0.367	0.395	0.423	12	4.740
10	0.574	0.617	0.660	12	7.404
12	0.844	0.888	0.932	12	10.656
16	1.449	1.578	1.657	12	18.936
20	2.392	2.466	2.540	12	29.592
25	3.738	3.854	3.970	12	46.248
32	6.121	6.310	6.499	12	75.720
36	7.750	7.990	8.230	12	95.88
40*	9.564	9.860	10.155	12	118.32

The rebars are delivered in standard length of 12mtr bundles ensuring ease in transportation. 56mm can be manufactured for specific heavy orders.

* Available upon prior agreement before ordering
 ** Mentioned values observed typical of 90%

Readymade Money Savers



Readymade Steel – Quality, Reliability, Speed and Efficiency.

The application of technology to any process achieves accurate control on all required parameters. Processing steel at the job site is hard, disorganized and less productive. The emerging trend is to shift steel processing to service centers, which offer a controlled environment. Readymade steel processed at our factory saves money through reduction of time and manpower. Readymade steel accelerates construction time and helps construction firms tide over scarcity of skilled labour, stringent timelines and quality standards while adhering to health and safety guidelines.



ADVANTAGES OF READYMADE STEEL

Time Saving

Elimination of onsite labour with delivery of customized readymade steel coordinated to construction requirements saves processing time.

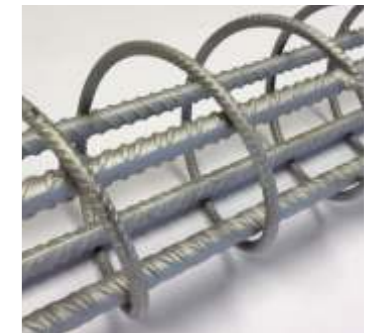


Zero Wastage

There is no wastage of steel as there is no onsite processing. The customer only pays of the actual steel used, blueprint weight, saving on waste, processing and freight.

Avoid Theft

Material is ordered and delivered as per need eliminating the need for storage. There is no loss due to theft of stored steel.



Robot Technology

Advanced robotic technology is used in the processing of steel. This helps achieve accurate control over all required parameters for superior quality.

Precision Bending Avoids Re-bending

The steel bars are bent using the latest technology in a controlled factory environment. This achieves absolute accuracy.

Any Shape/ Any Design



Mechanized processing enables us to customize shapes and designs as per requirement. This provides absolute freedom of design.



Available in all shapes
 Available Sizes 8 to 36 mm





Our Other Products

Chemical & Mechanical Properties

MS Round Bar GRADE E-250A	ISI Values	Kamachi Typical Values
Carbon (max)	0.23	0.20
Silicon (max)	0.40	0.30
Manganese (max)	1.5	0.8
Sulphur (max)	0.045	0.04
Phosphorus (max)	0.045	0.04
Aluminium (max)	0.01	0.01
Nitrogen (max)	0.012	0.009
Carbon Equivalent (CE)	0.42	0.35
Yield Stress (N/mm ²) MIN	240	300
Elongation (MIN)	23	32
Tensile Strength (N/mm ²) min	410	503
Method of Deoxidation	Semi Killed/ Killed	Killed

Chemical & Mechanical Properties

MS Square Bar GRADE E-250A	ISI Values	Kamachi Typical Values
Carbon (max)	0.23	0.20
Silicon (max)	0.40	0.30
Manganese (max)	1.5	0.8
Sulphur (max)	0.045	0.04
Phosphorus (max)	0.045	0.04
Aluminium (max)	0.01	0.01
Nitrogen (max)	0.012	0.009
Carbon Equivalent (CE)	0.42	0.35
Yield Stress (N/mm ²) MIN	240	300
Elongation (MIN)	23	32
Tensile Strength (N/mm ²) min	410	503
Method of Deoxidation	Semi Killed/ Killed	Killed

Awards and Recognitions



INDIAN POWER BRAND



INDIA'S NO.1 BRAND



INDIA'S MOST PROMISING
BRAND 2015



WORLD'S
GREATEST BRANDS



SAFETY AWARD



INDIA'S MOST PROMISING
BRAND 2017

Certified By



IS 2830:2012



IS 1786:2008



IS 2062:2011