



AF STAR
steel for a solid future

Trusted and high-quality
steel products, for
building a **stronger**
and a **safer nation**



ABOUT MS AGARWAL FOUNDRIES

For decades, MS Agarwal Foundries (MSAF) has been consistently pioneering the production of high-quality steel products that serve diverse customer needs. MSAF has built a distinct reputation for adopting benchmark, research-driven manufacturing practices, well-entrenched organizational values that ensure ideal practices, a purpose-driven performance and penchant to constantly evolve and excel. All these have transformed MSAF into a leading steel manufacturing company in the country that serves a multitude of business streams and organizations, from both public and private sectors

Founded in 2005 and headquartered in Hyderabad, MSAF continuously added strength to its efforts, and wings to its vision. Today, it operates state-of-the-art integrated steel plants at strategic location, one at Medak, Telangana state, near Hyderabad, while the second plant is located in Naidupeta, Nellore district in the state of Andhra Pradesh. Together, the plants manufacture virgin steel under the brand names, AF STAR & MS Life.

MSAF also operates a sophisticated material testing laboratory that ensures and certifies the quality of the products. It operates a DRI unit, Maruti Ispat & Energy Pvt. Ltd., in Mantralayam in Kurnool district, Andhra Pradesh, and an SMS unit with continuous billet casting, along with its sophisticated rolling mill.

MSAF is driven by a legion of enthusiastic and efficient performers whose commitment and efficiency power production, customer servicing, and business development.



Purpose

We exist to deliver Value to our Stakeholders in Building a Safe & Strong Nation and make the World a better place.

Vision

We shall be outstanding and trustworthy with our steel product quality and services in the market we serve.

Mission

We shall achieve 1.2 MTPA by 2026-27.

Values

- Customer Centricity
- Result Oriented
- Entrepreneurship
- Empathy
- Integrity
- Humility
- Sustainability



ABOUT AF STAR

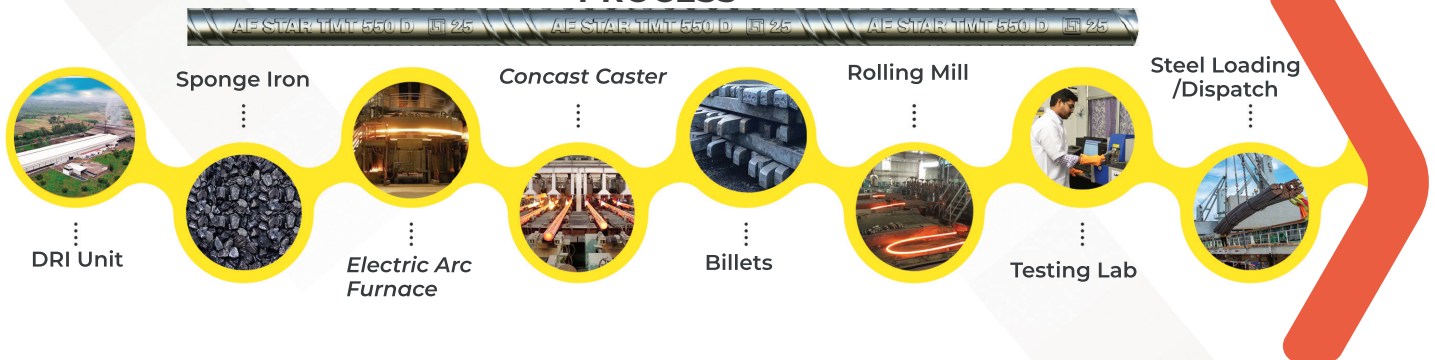
As one of the most favoured brands in the construction industry and a household name in South, MSAF now aspires to be a national brand, planning to acquire new plants across the country.

Having built significant skills in quality production, supported by central R&D team over the years, MSAF aims to reach 1.2 MTPA by FY 26-27 through its brand, AF STAR

AF STAR TMT is manufactured through iron ore-DRI billet caster route, having precise control over several parameters.



PROCESS



AS PER BIS STANDARD

CHEMISTRY

AF STAR TMT bars are made with proper control over carbon, phosphorous, sulphur and other alloying elements.

ROLLING

AF STAR TMT is rolled with close controls and proper temperature monitoring so as to give prominent rib pattern and surface finish

THERMO MECHANICAL TREATMENT

The Thermax quenching process is adopted after rolling with proper control on water pressure, Nozzle angle and rate of water flow. This helps in achieving the desired properties in AF STAR TMT

AF STAR PRODUCT FEATURES

 High bond strength	 Enhanced corrosion resistance	 High strength for critical project applications	 Superior Bendability	 Special Weldability	 Seismic resistance	 High Dimension tolerance
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APPLICATION

AF STAR TMT is the preferred choice among crucial business segments such as commercial and residential buildings, industrial and manufacturing and agricultural buildings. Its unmatched strength and durability ensure longevity and safety of critical infrastructure projects, making it a foremost choice for builders and engineers

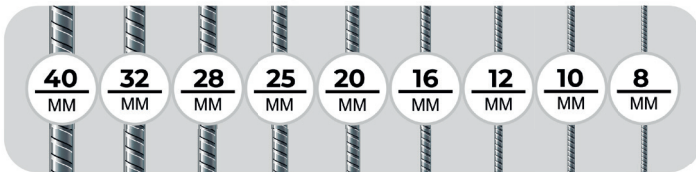
PRODUCT MIX

AF STAR has a series of inherent advantages like consistent quality, along with uniform grades, dimension and tolerances. The company received ISO and OHSAS certifications, as a testament

GRADES

AF STAR TMT Rebars come in grades 500D & 550D as per IS 1786 : 2018

AVAILABLE SIZES



PRODUCT PROPERTIES

Chemical Properties

Chemical properties	IS 1786 500D (max)	IS 1786 550D (max)	AF STAR® 500D*	AF Star® 550D*
Carbon (C)	0.25%	0.25%	0.22%	0.22%
Sulphur (S)	0.04%	0.04%	0.035%	0.035%
Phosphorous(P)	0.04%	0.04%	0.04%	0.04%
	0.075%	0.075%	0.07%	0.07%

Average% across heats

Physical Properties

Physical properties	IS 1786 500D Min	IS 1786 550D min	AF STAR® 500D*	AF Star® 550D*
Yield Stress (YS)- N/mm ²	500	550	520	570
Ultimate tensile strength (UTS)-N/mm ²	565	600	570	630
% Elongation	16	14.5	17	17

STAINLESS STEEL TMT REBARS

High-grade Stainless Steel Rebars ensuring superior yield, tensile strengths and perfection in appearance

STAINLESS STEEL REBARS FUTURE-PERFECT & INNOVATION-DRIVEN

For decades, MS Agarwal Foundries (MSAF) has been steadily pioneering the production of high-quality steel products, in a distinct range, through its flagship brand - AF Star. Rising high with the famed 550 D range of TMT Bars that have been structurally defining several infra projects of the nation, today our AF Star stainless steel Rebars are all set to redefine structural performance and corrosion resistance in harsher environments.

LATEST IN THE ARRAY

AF Star Stainless Steel TMT Rebars is the latest addition to the AF Star array that is unmatched in its tensile strength and perfection in appearance, ideally suited for critical industrial and construction applications. AF Star TMT Rebars are manufactured at our world-class production facilities that adhere to global standards and surpass international benchmarks on the production, safety and quality fronts.

Complementing the broad range that caters to the steel requirements of critical and complex infra projects across the country, AF Star SS TMT Rebars deliver the vital edge and exposure in the existing and newer markets.

AF STAR SS TMT REBARS - SNAPSHOT

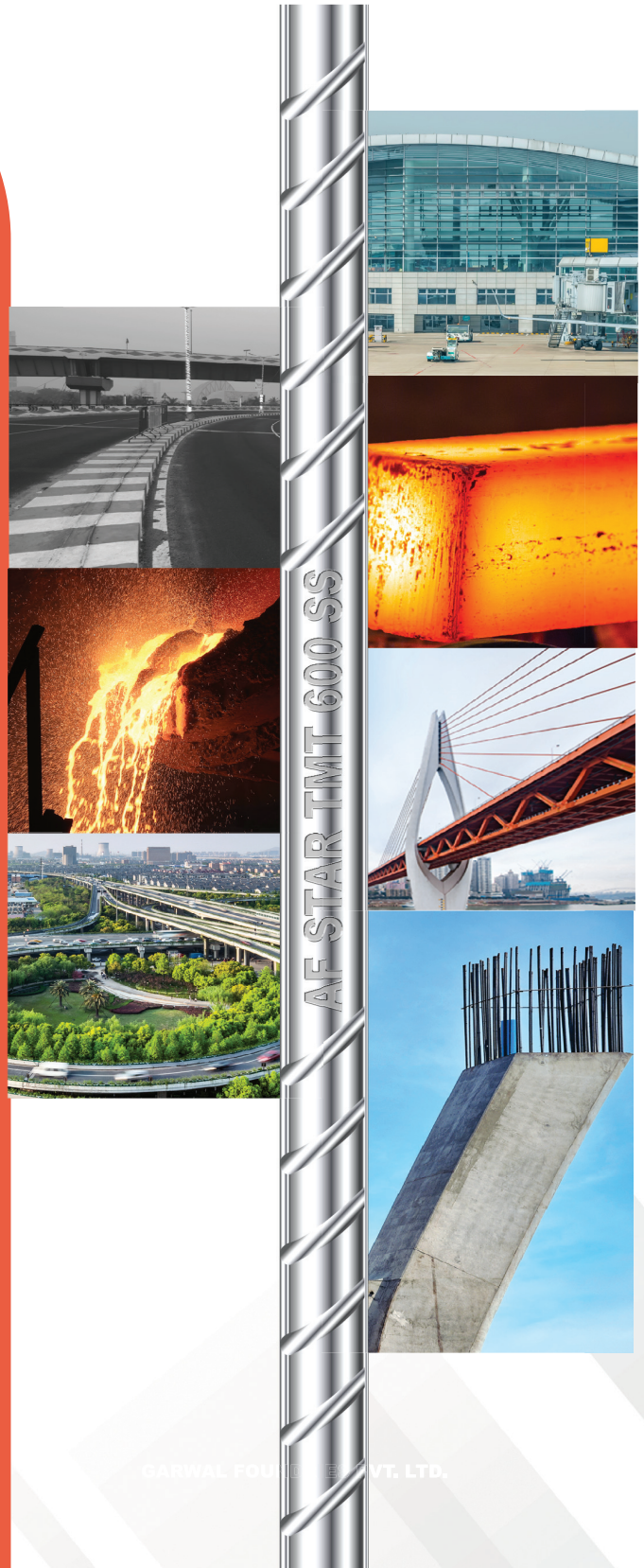
High-grade Stainless Steel Rebars ensuring superior yield, tensile strengths and perfection in appearance

Excellent durability, fire resistance and structural performance

Exceptional corrosion resistance in harsh marine environments, resisting chlorides and pitting corrosion Extended service life and reduced life cycle costs

Minimal maintenance costs and therefore less disruption of service for refurbishment or Replacement

- Easy to cut and bend, good weldability



MS AGARWAL FOUNDRIES (PVT.) LTD.

Strength and superiority to our comprehensive range of steel products

ADVANTAGES

PRODUCTS



SS 500

SS 550

SS 600

Excellent durability, fire resistance and structural performance

Exceptional corrosion resistance in harsh marine environments, resisting chlorides and pitting corrosion

Extended service life and reduced life cycle costs

Minimal maintenance costs and therefore less disruption of service for refurbishment or replacement

Easy to cut and bend, good weldability

AS PER BIS STANDARDS

CHEMISTRY

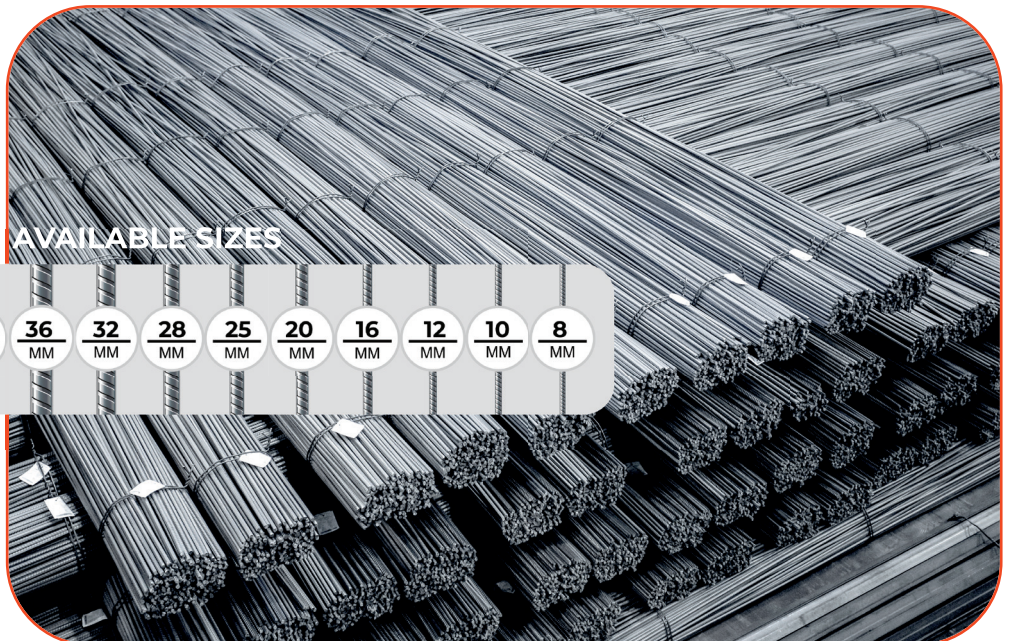
AF Star Stainless Steel TMT are made with proper control over carbon, phosphorous, sulphur and other alloying elements.

ROLLING

AF Star Stainless Steel is rolled with close controls and proper temperature monitoring so as to give prominent rib pattern and surface finish

THERMO MECHANICAL TREATMENT

The Thermax quenching process is adopted after rolling with proper control on water pressure, Nozzle angle and rate of water flow. This helps in achieving the desired properties in AF STAR TMT Rebars



AVAILABLE SIZES

40
MM

36
MM

32
MM

28
MM

25
MM

20
MM

16
MM

12
MM

10
MM

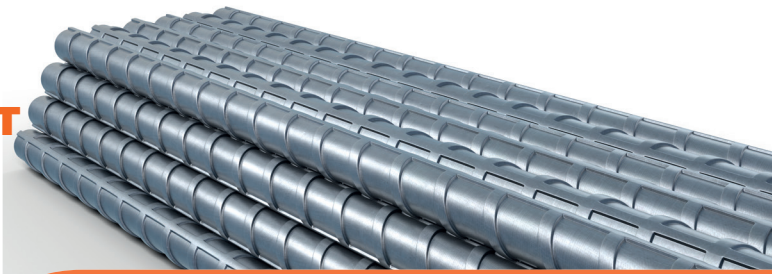
8
MM



FE 500D CORROSION RESISTANT STEEL TMT REBARS

Fe 500D Corrosion Resistant Steel TMT Rebars offering the structures an extra and special protection in preventing rusting.

The coating comes from materials such as zinc and polymer used as layers that protect steel from being exposed to moisture and other corrosive materials



BENEFITS AND FEATURES

- Known for superior strength, made using advanced technology, ideal for high load-bearing construction projects.
- Offers enhanced chemical resistance against elements like saltwater and harsh chemicals.
- Boasts of the highest degree of weldability for complex and custom construction projects

FE 550D EPOXY COATED TMT REBARS

Popular choice and highly sought after for corrosion resistance and enhanced durability. The epoxy coating acts as a protective barrier preventing damage from moisture and other corrosion agents. Extensively used by buildings of all categories, bridges, marine structures, quake-resistant structures, and rehabilitation structures.

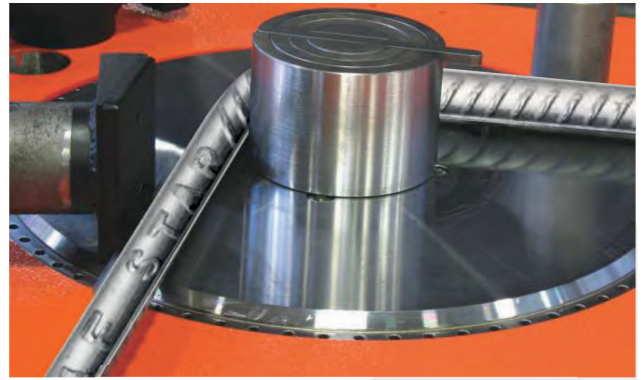
BENEFITS AND FEATURES

- Exceptional corrosion resistance, offering flawless protection against moisture, chemicals, and environmental factors.
- Significantly extends the lifespan of structures, reducing long-term maintenance costs.
- Improves structural integrity and load-bearing capacity in reinforced concrete structures.
- Consistently provides high tensile strength, fire resistance, and quake resistance



CUT AND BEND

Cut and Bend steel is produced by cutting and bending steel bars according to specific sizes and shapes as per project specifications. AF Star is one of the first steel companies in the country to introduce Cut and Bend TMT bars.

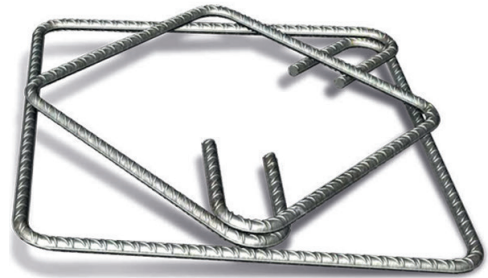


BENEFITS AND FEATURES

01

TIME AND MANPOWER EFFICIENCY

Cut and Bend TMT bars save time and labour by eliminating the need for on-site cutting and shaping. This accelerates construction progress, enhances project timelines, and reduces labour expenses



02

ENHANCED STRUCTURAL INTEGRITY

Cut and Bend TMT bars are manufactured with precision, ensuring accurate reinforcement placement in concrete structures. This results in improved structural integrity, reducing the risk of cracks, failures, and extending the construction's lifespan.

03

COST-EFFECTIVE

Cut and Bend TMT bars offer significant cost savings due to reduced labour, minimized wastage, and improved construction efficiency. Their long-term durability and low maintenance needs also contribute to cost-effectiveness.

04

STRUCTURAL DESIGN FLEXIBILITY

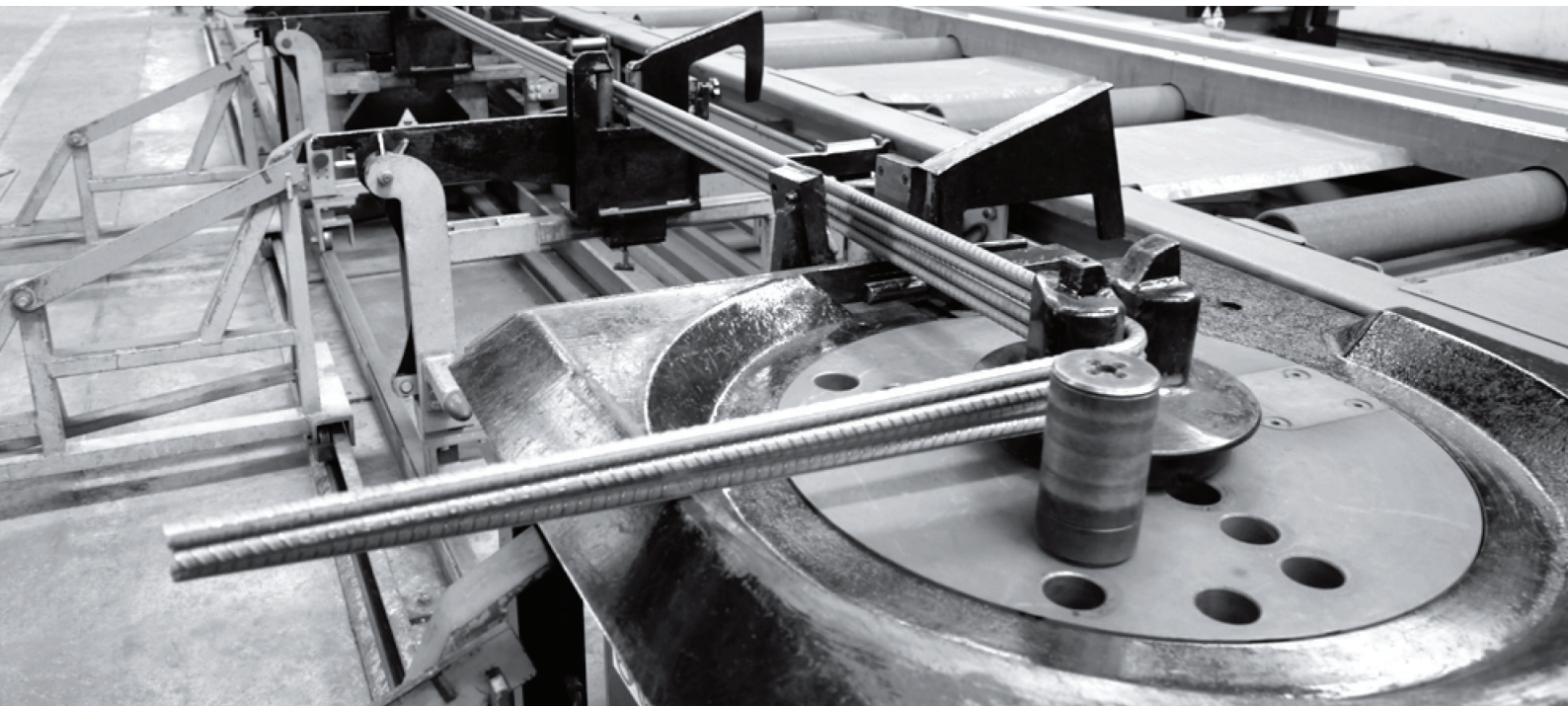
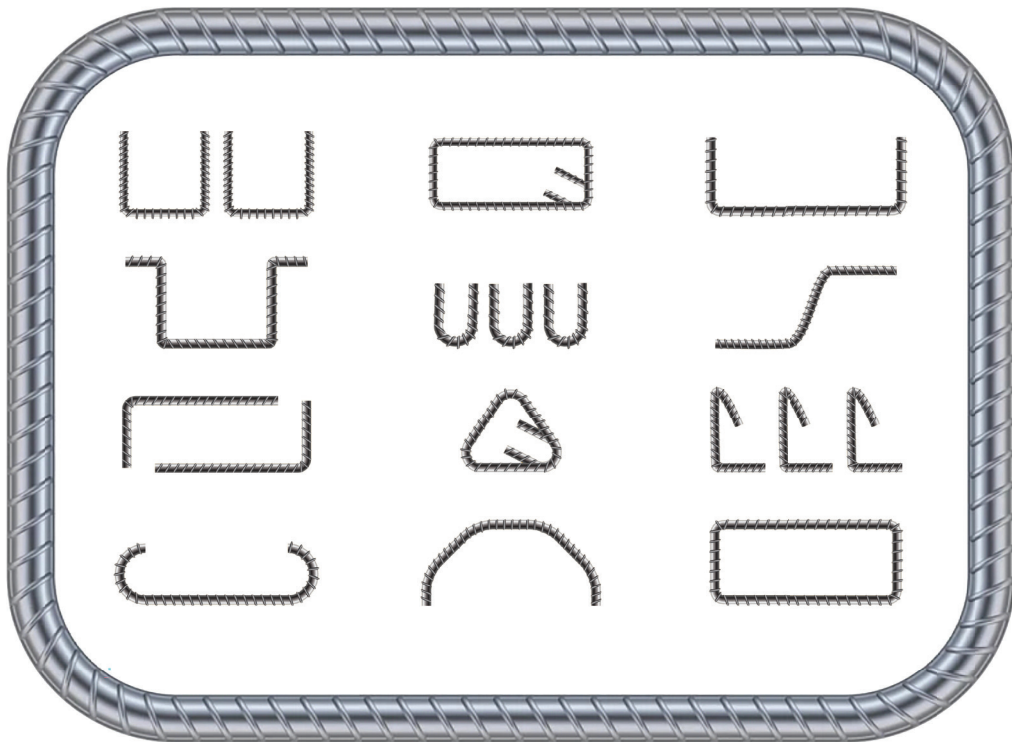
Cut and Bend TMT bars provide design flexibility, making it easier for engineers and architects to create complex and innovative structural designs

05

ZERO MATERIAL WASTE

Cut and Bend TMT bars are precisely shaped according to blueprint specifications, eliminating material wastage. This zero-waste approach not only reduces project costs but also promotes sustainable construction practices by minimizing material waste.

CUSTOMISED STEEL PRODUCTS



ELECTRIC ARC FURNACE (EAF)

The main physical principle of AF Star's Electric Arc Furnace is the transfer of energy from the electricity line to the furnace through heat radiation and conduction generated by an electric arc. This can be described as a furnace heating charged materials by the way of an electric arc.

A typical alternating current furnace has three electrodes. They may be lined with acid or basic refractories. Electrodes are round in section, and typically in segments with threaded couplings, so that as the electrodes wear, new segments can be added. The arc forms between the charged material and the electrode, the charge is heated both by current passing through the charge & by the radiant energy evolved by the arc. Electric arc furnaces may be categorized as direct arc and indirect arc. Both are suited for the melting of high melting point alloys such as steels.

The electrodes of direct arc furnace are automatically raised and lowered by a positioning system. The regulating system maintains approximately constant current and power input during the melting of the charge.

The furnace is built on a tilting platform so that the liquid steel can be poured into another vessel for transport. The operation of tilting the furnace to pour molten steel is called "tapping". Often modern furnaces have an eccentric bottom tap-hole (EBT) to reduce inclusion of nitrogen and slag in the liquid steel. It is filled with refractory sand, such as olivine, when it is closed off. Electric arc steelmaking is only economical where there is plentiful electricity.

Operational Advantages:

The primary benefit of this is the large reduction in specific energy (energy per unit weight) required to produce the steel.

Flexibility: Blast furnaces cannot vary their production by much and are never stopped, EAFs can be rapidly started and stopped, allowing the steel mill to vary production according to demand.

Although steelmaking arc furnaces generally use sponge iron steel as their primary feedstock, if hot metal from a blast furnace or direct-reduced iron is available economically, these can also be used as furnace feed.

Important:

Furnace temperatures can reach 3200°F (1760°C).

Capable of producing the full range of steel grades.

Not dependent on a particular type of charge (sponge, iron, pig iron, hot metal)

Melting process can be programmed and automated

The arc furnace can remove the toxic gases and the inclusions while deoxidizing and desulfurating.



COMPLETED PROJECTS

High Rise Buildings



CPWD

Water Treatment Infrastructures



Metros



MES (Military Engineering Services)

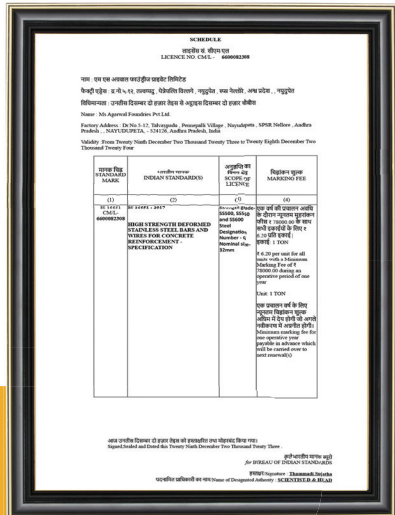


NHAI / MoRTH's



INDIAN RAILWAYS (RDSO)

NABL - ISO - BIS AND SRI LANKA STANDARDS CERTIFICATION



AF STAR TMT 550 D G 25

AF STAR TMT 550 D G 25

CORPORATE SOCIAL RESPONSIBILITY (CSR)

Our commitment to positive change is evident through a range of initiatives aimed at uplifting communities. We actively sponsor vocational courses for skill development, empowering individuals to acquire valuable skills for a brighter future. Clean water access is another priority, with our sponsorship of a 500 Litres per hour RO plant benefiting villagers, and we have plans to sponsor an additional RO plant in the current financial year.

In the realm of healthcare, we conduct quarterly medical camps, providing essential health services to the community. Furthermore, we are dedicated to nurturing young talent by sponsoring scholarships for bright students at the primary school level. These efforts reflect our dedication to creating a better and more prosperous community for all.



AF STAR FOOTPRINT



CUSTOMERS



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