



**AF STAR**  
steel for a solid future

# STAINLESS STEEL TMT REBARS

ELEVATING CORROSION RESISTANCE &  
DURABILITY TO A HIGHER LEVEL



## ABOUT MS AGARWAL FOUNDRIES

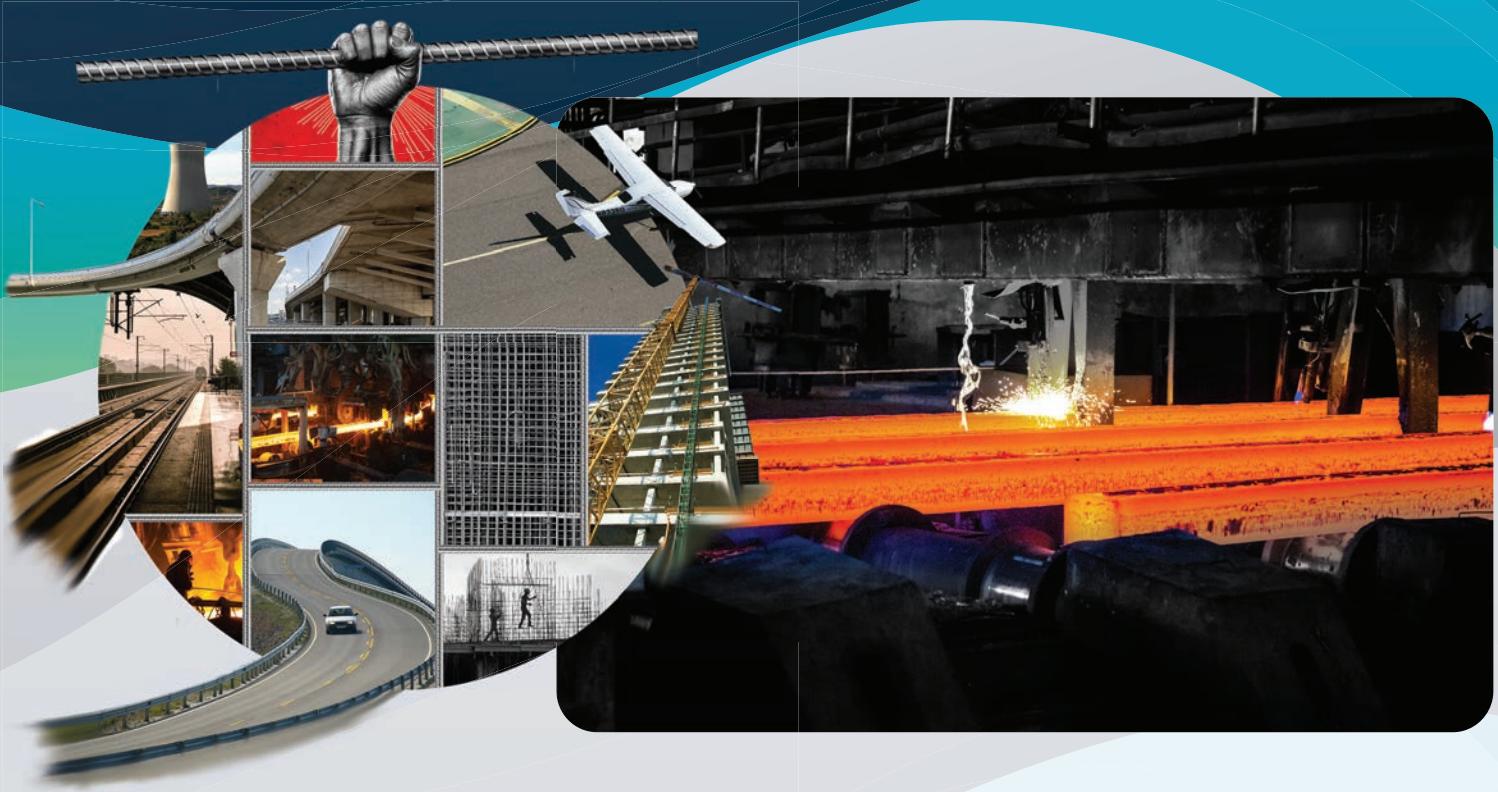
For decades, MS Agarwal Foundries (MSAF) has been consistently pioneering the production of high-quality steel products that serve diverse customer needs. MSAF has built a distinct reputation for adopting benchmark, research-driven manufacturing practices, well-entrenched organizational values that ensure 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 two strategic locations, 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.



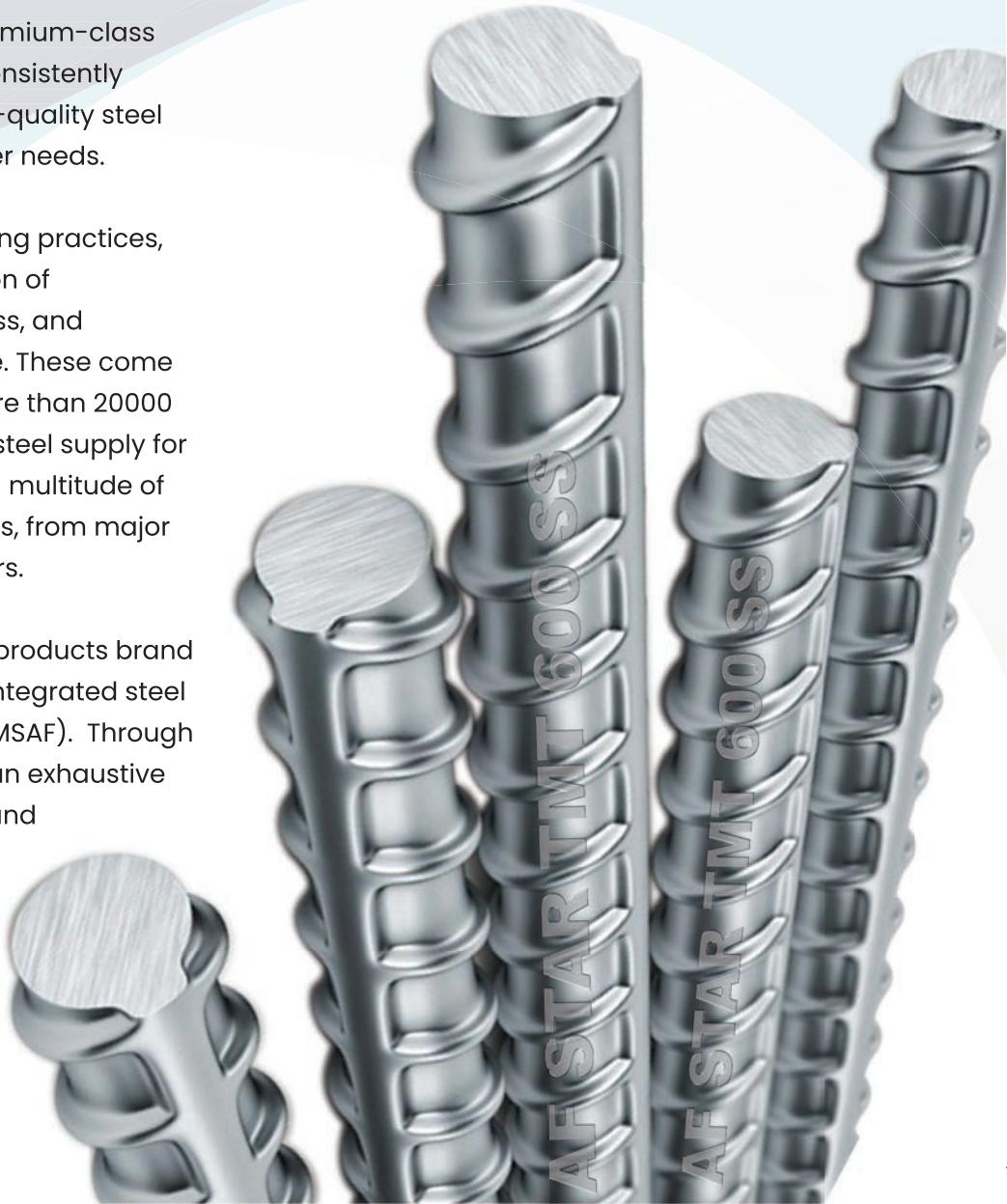


## ABOUT AF STAR

For over decades, AF STAR, the premium-class steel products brand, has been consistently pioneering the production of high-quality steel products, serving diverse customer needs.

Produced out of best manufacturing practices, AF STAR enjoys a distinct reputation of guaranteeing durability, robustness, and diversity across the product range. These come together successfully to serve more than 20000 customers, through partnering in steel supply for more than 5000 projects, across a multitude of business and construction streams, from major corporations to established dealers.

AF STAR is a premium-class steel products brand coming from Hyderabad-based integrated steel producer MS Agarwal Foundries (MSAF). Through flagship AF STAR, MSAF produces an exhaustive range, from TMT Re bars, rounds, and cut-and-bend products.





## 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

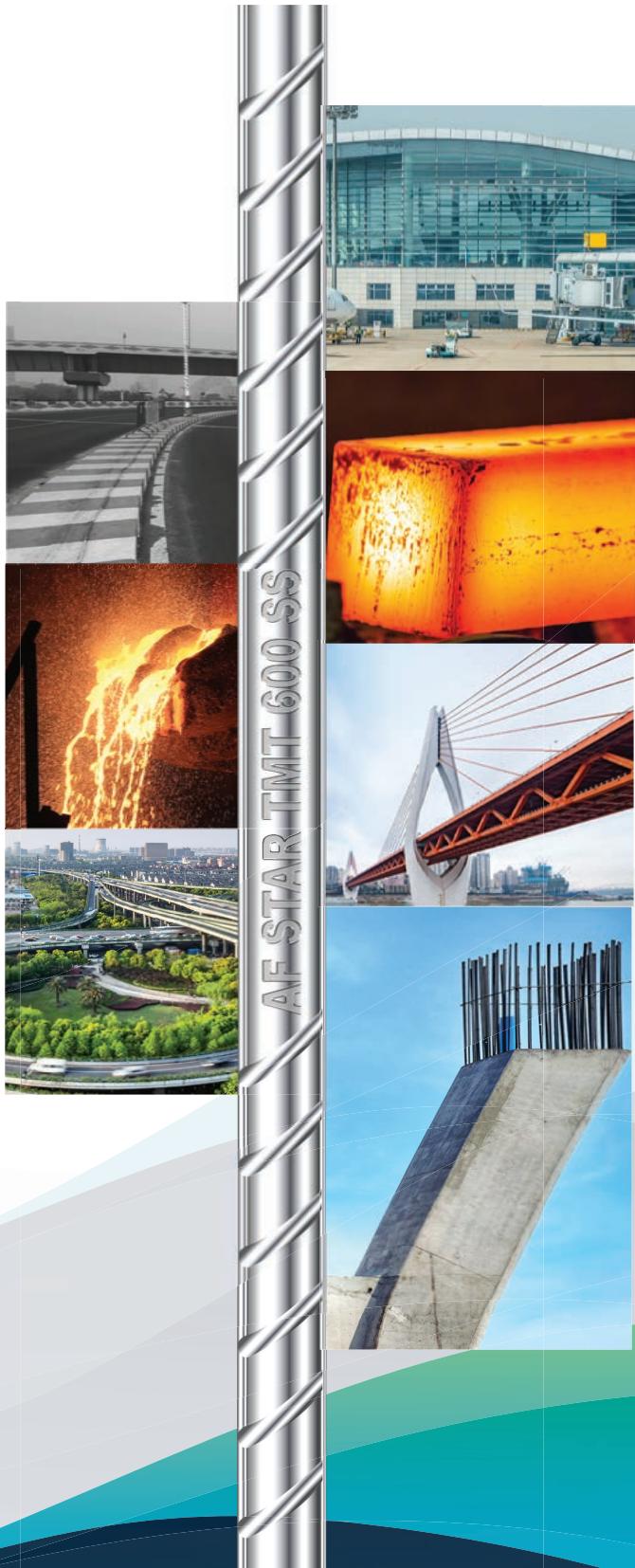
High-grade Stainless Steel Rebars ensuring superior yield, tensile strengths and perfection in appearance

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



**Strength and superiority to our comprehensive  
range of steel products**

## PRODUCTS



**SS 500  
SS 550  
SS 600**

## ADVANTAGES

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



AF STAR TMT 600 SS

## MECHANICAL PROPERTIES OF SS 410 L

Grade Types	0.2 percent proof stress, Min, N/mm <sup>2</sup>	Tensile strength Mpa
SS 500	500	565
SS 550	550	600
SS 600	600	660

## CHEMICAL COMPOSITION OF SS 410 L

Chemical	C	Ni	Mn	Si	P	S	Cu	Cr	N
Min%	-	0.0	-	-	-	-	-	11	-
Max%	0.03	0.60	1.0	1.0	0.040	0.030	-	13.50	-

## UNIT WEIGHT OF STEEL BARS

Nominal Diameter (mm)	Nominal Mass/M (kg/m)	Nominal Sectional Area (mm <sup>2</sup> )
8	0.389	50.3
10	0.608	78.5
12	0.876	113.1
16	1.555	201.1
20	2.430	314.2
25	3.797	490.9
32	6.222	804.2

## CHEMICAL COMPOSITION (CAST ANALYSIS), PERCENT BY MASS (CLAUSE 4.3.1)

As per : BIS - 16651:2017

Steel Designation Number	International Standard Designation	C Max	Si Max	Mn Max	S Max	Cr Min/Max	Ni Min/Max	Mo Min/Max	P Max	Cu Min/Max	N Min/Max
G Ferritic	410L	0.03	1.0	1.0	0.030	11.00/13.50	0.0/0.60	-	0.040	-	-

# NABL AND ISO CERTIFICATIONS

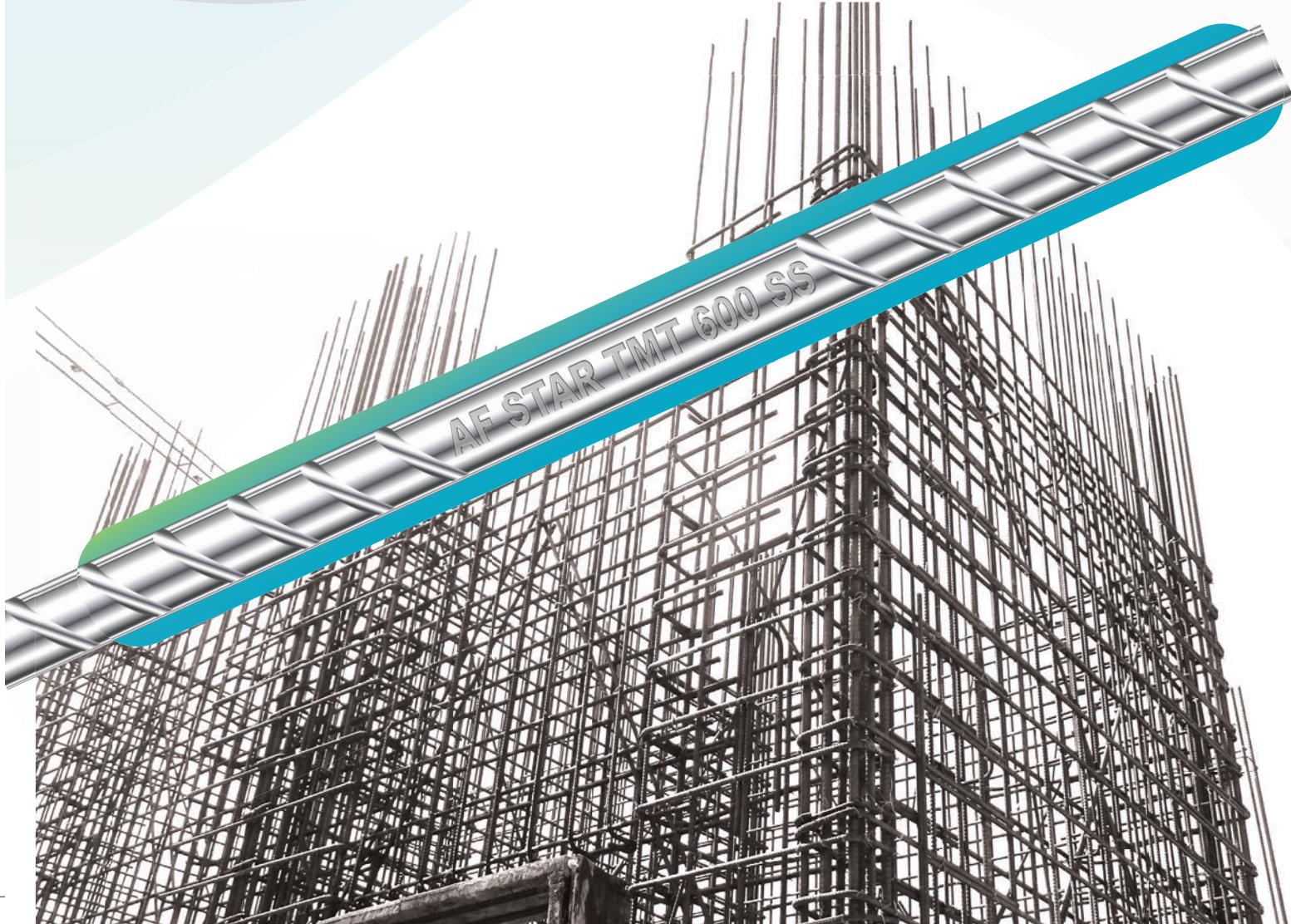


आज उनकी संदर्भ पर ये दस्तावेज़ को हस्ताक्षरित रखा गया है।  
Signed Sealed and Dated this Twenty Ninth December Two Thousand Twenty Three.

प्रधानमंत्री का नाम/Name of Designated Authority : SCIENTIST-D & HEAD

प्रतिरक्षा वाले का नाम/Name of Designated Authority : SCIENTIST-D & HEAD

# BIS CERTIFICATION **16651 : 2017**

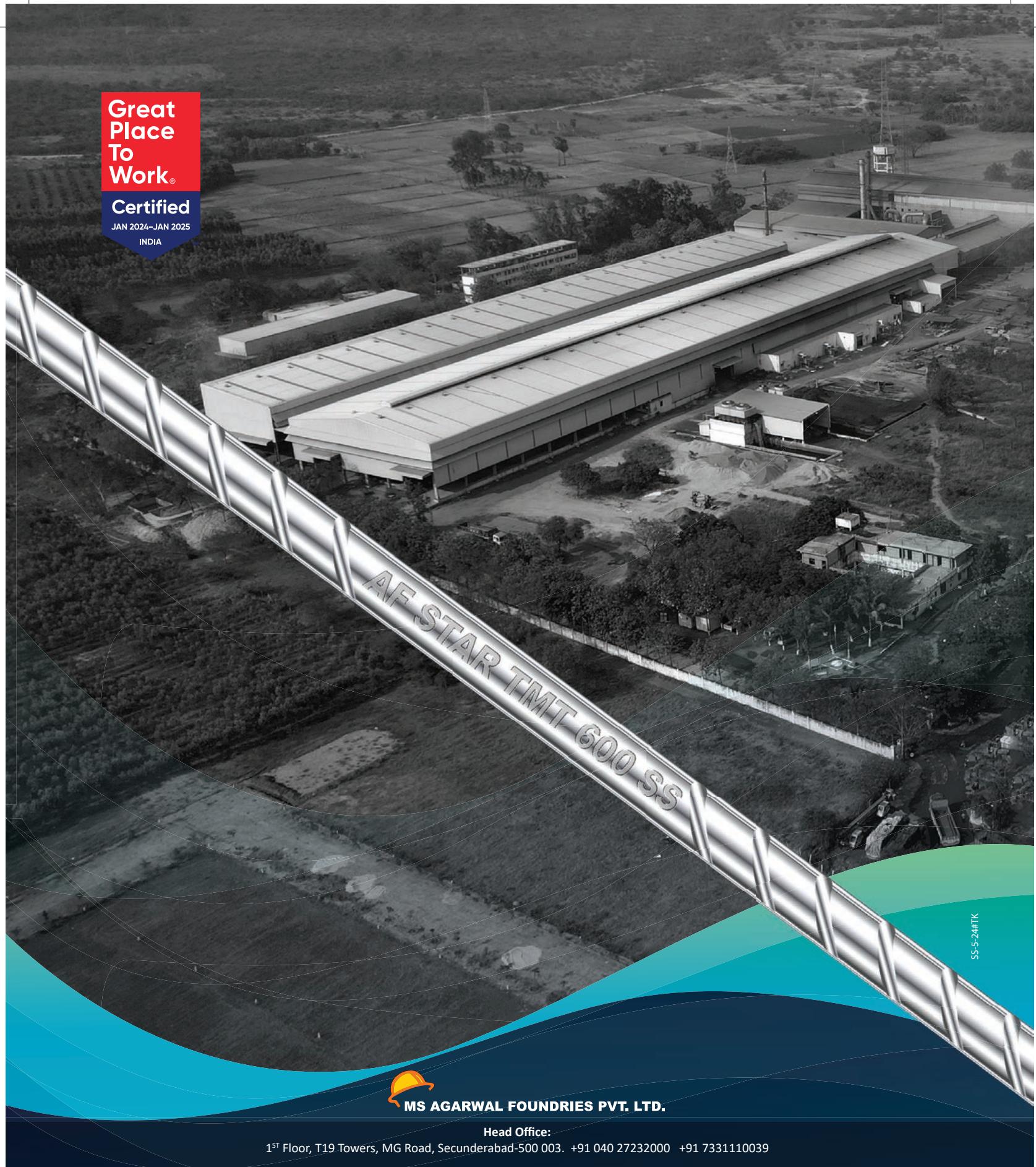


**Great  
Place  
To  
Work.**

**Certified**

JAN 2024-JAN 2025

INDIA



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