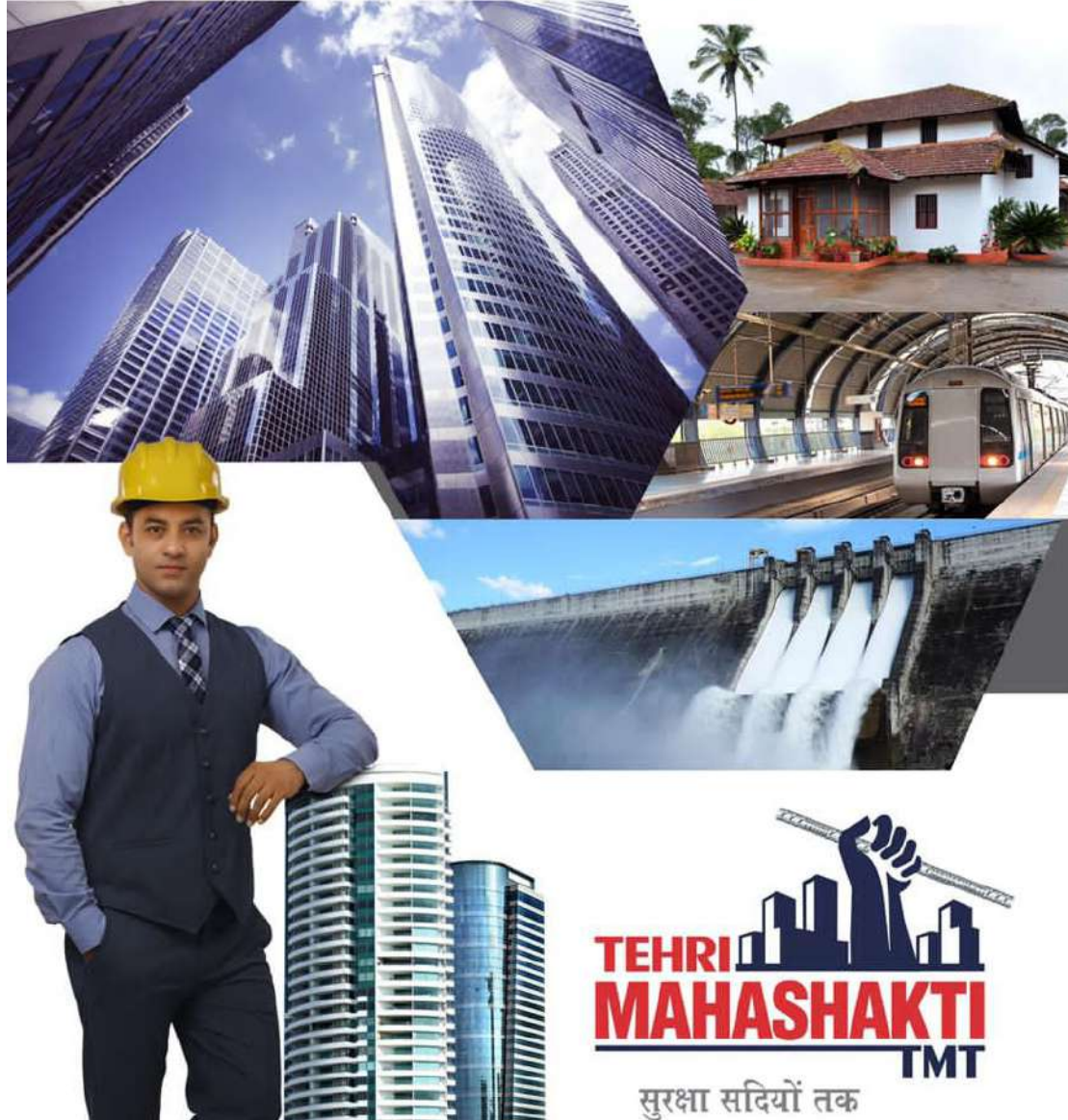


# इंडिया की रग रग में



  
**TEHRI**  
**MAHASHAKTI**  
**TMT**

सुरक्षा सदियों तक

## OUR VISION AND ETHOS



Tehri Steel and Casting Limited aims to transform the steel industry in India through their commitment towards innovation, technology and quality. Moving in sync with the ever-changing world, the group adopts a fluid and future ready approach towards change, yet stands firmly grounded on the principles of honesty and ethical business. Immense value is placed on every strategy, plan and their execution to stay ahead in the business of steelmaking.

The company knows that in this dynamic business world, even small policy changes and competition behaviour can influence sales, purchase, production, and the import and export. Thus, it is always ready with swift and effective action plans to mitigate the effect of any such change. And this is possible only because the supremely able leadership and a hard-working management team.

Tehri Steel and Casting Limited is moving steadily towards realizing its dream of becoming the top national brand in the business of steel to provide the consumers with the best quality steel at the best value pricing.



## OUR INDUSTRY



### Best Melting Furnace and TMT Plant Suppliers and Technology

Today, any brand is as good as its quality. Any compromise in quality means early exit from the market and permanent dissolution of the brand. And to produce best quality steel, three things matter the most:

- The raw material which is being used
- Precision and technology of the plant and machinery
- Skilled and trained man power

At Tehri Steel and Casting Limited, all the above parameters are paid immense attention to produce superlative quality of steel. Even during the days of low competition, when people were not so aware about the quality, our commitment to produce quality steel never wavered. And it is the principle which we still live by.



### Melting Units and Concast Plant For Billet

To ensure excellent quality of raw material, Tehri Iron and Steel has the best melting facility in world. It houses 12 mt<sup>2</sup>, 8"1, induction furnaces with high speed double stand billet caster from Electro Therm India in order to produce all the raw material for making TMT in house and to reduce dependence on outside billets. This high-end technology is paramount in controlling the quality of the billets as it is only during the melting process that the chemical composition of the billets can be controlled. Any error at this stage will adversely affect the quality of the final TMT sariya produced as the composition cannot be changed at any later stage. Thus, it is crucial to produce these billets in house under full control and not procure any from outside.

# OUR JOURNEY

Literally translating into 'running through the core of India', **India Ki Rag Rag Mein** is the most fitting way to describe what Tehri Iron & Steel Casting stands for. By lending its steel to homes, factories, flyovers, offices, stadiums and sport circuits and thus, to the overall infrastructure of the country, the brand has become a pillar of strength for the development of India.



In 1968, Late Shree Harbans Lal Ji laid the foundation of a steel plant in Muzaffarnagar called Bharat Steel Rolling Mill, which has now transformed into what is known as Tehri Iron and Steel Casting Limited. A true visionary, he foresaw that India is growing and the need for steel in the country will rise with the new development and thus, the powerhouse brand came into existence.

Tehri Steel and Casting Limited, although a front running steel company today, had a humble beginning. The company started as a mini steel plant with a capacity of only 10 tonnes per day, which in those days was still considered quite a volume. However, after the grand success of the rolling mill unit, the group decided to further expand and make value additions like the arc furnace which was set up in 1971. This strategic move was a brilliant example of the brand's single-minded commitment to produce quality steel as all the raw material for the rolling plant was then generated in-house and the reliance on material sourced from outside was reduced to zero. Another milestone in the journey of this already growing brand was the launch of induction furnace. Tehri Steel was the first in Northern India to install this latest technology and thus, became the first steel plant to have the distinction of having both, an induction surface and a rolling mill, during that era.



But great companies know that future lies in technology and innovation. While new India was taking form on one end, visionary Shree Harbans Lal Ji was leaving no stone unturned to stay ahead in the development game. In 1984, to further expand his business and meet the ever-increasing demand of the fabricators, he added another steel plant for the manufacturing of girders channels, I-irons and angles.

In 1989, the group saw addition of a remarkable landmark in their journey, only this time it was under the dynamic leadership of Shree Satish Chand Goel. A latest automatic steel plant was added in Rishikesh, Northern India and soon after the plant came into production, the market of CTD bars (commonly known as Saria in India) changed forever. The plant became the leading CTD bar manufacturer in Northern India and due to its advanced technological system, the sarias produced were of superior quality compared to any other in the market. And thus, came into existence the first ever branded saria in India. In 1991, with addition of induction furnaces in Rishikesh, Tehri Steel and Casting Limited became one of the biggest groups of steel as far as tonnage and the number of plants in Northern India were concerned.



Yet, that is just the beginning of the long road ahead as the company is firm on its way forward and is continuously striving to implement new innovative ideas. A stellar example of this is the extension of the company to meet the requirements of today's steel market through addition of a new state-of-the-art steel plant. The ultra-modern steel plant is based on cutting edge technology for extreme precision and high-quality production. As testaments to its commitment to produce world class steel, three highly sophisticated induction furnaces and a concast plant for manufacturing billets are also added in order to have better control over the quality of billets and zero dependency on billets procured from outside. Today, Tehri Steel and Casting Limited has a structure plant, a TMT plant and a steel melting plant which, in turn, houses furnaces and the concast plant.



# QUALITY CONTROL



Quality is paramount at Tehri Steel and Casting Limited. Which is why to ensure the best quality TMT, we have skilled technicians, advanced machinery and top-notch systems in place.

## Tests for TMT

There are separate tests to check both chemical and physical structure of the saria. Where chemical tests help check chemical composition, physical tests, on the other hand, are for checking the physical properties. Immense importance is placed on these tests.

## Chemical Test

To have accuracy of chemical properties of Tehri MHA Shakti TMT, the plant comprises of one of the most advanced machines called Spectrometer which has been imported directly from the Spectrolab Company of Germany.



## Physical Test

Greater control over physical properties comes from one of the best machines available in India that is purchased directly from FIE. Fully automated, this machine helps conduct various tests with increased precision like tensile test, bend test, re-bend test, and stress test of TMT sariya.

But at Tehri TMT and Steel Casting Limited, skilled manpower is as important as high-tech equipment and both go hand in hand to achieve the desired result. A good example is that in order to have best physical properties, samples are drawn every half an hour and if any variation or deviation is recorded, instant action is taken. It is after such rigorous processes, that the best quality TMT is delivered.



# TMT TECHNOLOGY



In Steelmaking, success is directly proportional the efficiency of your machines. To ensure superior and unmatched quality of TMT, the rolling mill and other related machinery has been procured from one of the best suppliers in India and it has all latest equipment to ensure the best quality of TMT.

## Fully Automatic Plant

One of the reasons why Tehri Iron and Steel has become synonymous with quality is that the brand uses a highly advanced and fully automated processes in manufacturing. With zero to little manual intervention in the production line, the chances of human error are reduced to nil and therefore, the final product is of superior quality.



## CNC Rib Cutting Machine

A fully computerized machine has been installed to manufacture ISI grade TMT bars. This machine helps in making ribs with increased precision and accurate design with equal distance and depth for a proper grip.

## Stamping Machine

Branding is key to the success of a brand. To have the name of the brand on TMT, an automatic name stamping machine has been installed so that brand name is clearly visible.



## Quenching Boxes

Quenching Boxes are designed on the principles of Turbo Quench, Germany. These high-performance boxes ensure proper water quenching of the TMT, which in turn allows to maintain a proper grain structure in all the three layers - transition ring, ferrite pearlite core, and martensitic case. They are essential to produce TMT of international standard and quality.





**TEHRI**  
**MAHASHAKTI**  
**TMT**

सुरक्षा सदियों तक

Industrial Estate,  
Meerut Road, Near ITI,  
Muzaffarnagar - 251 003 (U.P.)  
e-mail: [info@tehristeel.com](mailto:info@tehristeel.com),  
[sales@tehristeel.com](mailto:sales@tehristeel.com)  
website: [www.tehristeel.com](http://www.tehristeel.com)



# CERTIFICATES

# CLIENTS



DGS&D

ह. र. क. क.  
HSCC

UPRNN

UP State Bridge Corporation Ltd

UP State Bridge Corporation Ltd



RD ESTATES LIMITED

SCC BUILDERS

JAYTEE GREENS SPORTS CITY

NIRALA INDIA

fusion homes

UTKAL FORTUNE GROUP

AMRAPALI

primrose

SHRI GROUP

AJNARA

ANTRIKSH

G AURS

rg group

ashiana

Alpha V CORP

supertech

sikka

vedantam

STELLAR

cloud9

EXOTICA

VICTORPHONE



and many more...

# OUR PRODUCTS

Phenomenal growth and constant endeavour to innovate has helped Tehri Iron & Steel Casting Limited to diversify its product portfolio over the years. The group now offers an extended and wider range of products and solutions in the market.



Require Product list with  
Specification



# TECHNICAL SPECIFICATIONS



## Mechanical Properties as per ISI

Property	Percent maximum					
	Fe-415	Fe-415 D	Fe-500	Fe-500 D	Fe-550	Fe-550 D
(i) 0.2 percent proof stress, yield stress, Min, N/mm <sup>2</sup>	415.0	415.0	500.0	500.0	550.0	550.0
(ii) TS/YS ratio <sup>1</sup> , N/mm <sup>2</sup>	≥ 1.10, but TS, not less than 485.0 N/mm <sup>2</sup>	≥ 1.12, but TS, not less than 500.0 N/mm <sup>2</sup>	≥ 1.08, but TS, not less than 545.0 N/mm <sup>2</sup>	≥ 1.10, but TS, not less than 565.0 N/mm <sup>2</sup>	≥ 1.06, but TS, not less than 585.0 N/mm <sup>2</sup>	≥ 1.08, but TS, not less than 600.0 N/mm <sup>2</sup>
(iii) Elongation, Percent, Min, on gauge length 5.65 √A, where A is the cross-sectional area of the test piece.	14.5	18.0	12.0	16.0	10.0	14.5
(iv) Total elongation at maximum force, percent, Min of gauge length 5.65 √A, where A is the cross-sectional area of the test piece (see 3.9 <sup>2</sup> )	-	5	-	5	-	5

<sup>1</sup> Test whenever specified by the purchaser

## Chemical Composition as per ISI

Constituent	Percent maximum					
	Fe-415	Fe-415-D	Fe-500	Fe-500 D	Fe-550	Fe-550 D
Carbon	0.30	0.25	0.30	0.25	0.30	0.25
Sulphur	0.060	0.045	0.055	0.040	0.055	0.040
Phosphorus	0.060	0.045	0.055	0.040	0.050	0.040
Sulphur & Phosphorus	0.110	0.085	0.105	0.075	0.100	0.075

NOTES: For guaranteed weldability, the Carbon Equivalent, CE using the formula

$$CE = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$$

Shall not be more than 0.53 percent, when microalloys / low alloys are used. When microalloys / low alloys are not used, carbon equivalent using the formula

$$CE = C + \frac{Mn}{6}$$

Shall not be more than 0.42 percent. Reinforcement bars / wires with carbon equivalent above 0.42 percent should, however be welded with precaution. Use of low hydrogen basic coated electrodes with matching strength bars / wires is recommended.

## Mandrel Diameter for bend test as per ISI

Nominal Size (mm)	Mandrel Diameter for Different Grades					
	Fe-415	Fe-415 D	Fe-500	Fe-500 D	Fe-550	Fe-550 D
Up to and including 20	30	20	40	30	50	40
Over 20	40	30	50	40	60	50

Where D is the nominal size of the test piece, in mm

## The diameter of the mandrel shall be as given below as per ISI

Sl. No.	Nominal Size of Specimen	Maximum Dia of Mandrel for Fe-415 and Fe-500	Maximum Dia of Mandrel for Fe-415 D, Fe-415 S, Fe-500 D and Fe-500 S	Maximum Dia of Mandrel for Fe-550 and Fe-600	Maximum Dia of Mandrel for Fe-550 D
1	2	3	4	5	6
i)	Up to and including 10mm	50	40	70	60
ii)	Over 10mm	70	60	80	70

## Tolerance and Nominal Mass as per ISI

Nominal Size	Tolerance on the Nominal Mass, Percent		Individual Sample for Coils only <sup>1</sup>
	Batch	Individual Sample <sup>2</sup>	
Up to and including 10	± 7	- 8	± 8
Over 10 up to and including 16	± 5	- 6	± 6
Over 16	± 3	- 4	± 4

(1) For individual sample plus tolerance is not specified, A single sample taken from a batch as individual sample.

(2) For coils batch tolerance is not specified.

## Nominal Cross-Sectional Area & Mass as per ISI

Nominal Size mm	Cross - Sectional Area mm <sup>2</sup>	Mass kg. per Meter	No of pieces/bundle
8	50.3	0.395	19
10	78.6	0.617	13
12	113.1	0.888	9
16	201.2	1.58	5
20	314.3	2.47	3
25	491.1	3.85	1
28	615.8	4.830	1
32	804.6	6.310	1
36	1081.30	7.990	1
40	1257.20	9.850	1

