



Panchakanya

STEEL

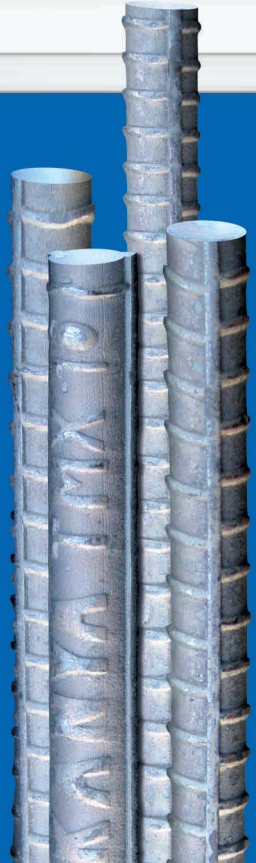


CHARACTERISTICS

- ▶ High Yield / Tensile Strength
- ▶ High Ductility / Elongation
- ▶ Better Weldability
- ▶ Better Bendability
- ▶ Better Bondability
- ▶ Saving 10% in Steel Consumption
- ▶ Accuracy in Dimension and Weight



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THERMEX
TMT
Steel Bar
Fe-500

kl/roM

k-rsGf kmfd]58 gkndf ; jkyd gkfn uOf:t/ kdOf lrG NS kfgp]Psdq 58 xf]. gkndf; a}eGf klxf TMT 58 p]kfbg ug[k-rsGf TMT 58 gknsf] 58 hutdf Ps ; kl/lrt gfd xf]. uOf:t/ Joj:yfkg kOfnIsf]nflu nfb8 /lhi6/ Sjfn6LP; /G ; yfab ISO 9001:2008 kft ug{ ; km k-rsGf :6In -kf_ ln= Psdq pBft] xf].

3/ tkf0sf]; /If xf] To; df ; Denf lsg < gkfn h:tf]eslk ; jhgzn Ifsf nflu clt pkofnL k-rsGf a9L zlQzfnL lskfotL/ e/kbf]58 xf].

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Fe-500 u\$dfMknAw ; f0hx? *, !), !@, !^, @, @% @*, #@ Pd=Pd=-8f0ld6/_ . dfucg! f/ !\$, !*, @@ / \$) Pd=Pd=-8f0ld6/_ sf TMT kmfd]58xç klg pknAw u/fpg ; lsg\$.

T.M.T TECHNOLOGY, THE PROCESS:

Steel billets are heated in a reheating furnace and rolled through a sequence of rolling stands, which progressively reduce the billet to a final size and shape of the reinforcing bar. At this stage, the online Thermex process begins, and the bar is subjected to heat treatment in three successive stages.

Quenching:

The first stage of quenching begins when the hot rolled bars leaves the final mill stand and is passed through Thermex water cooling system. When the bar comes in contact with jet velocity of water, the surface temperature of the bar reduces from 1000°C to 300°C in fraction of a second. This converts the surface layer of the bar to a hardened structure called 'Martensite' while the core remains austenitic.

Self Tempering:

The second stage begins when the bar leaves the quenching box with a temperature gradient through its cross section, with the temperature of the core being higher than that of the surface. In this stage heat flows from the core to the surface, resulting in the tempering of the surface, giving a structure called 'Tempered Martensite'. The core is still austenitic.

Atmospheric Cooling:

The third stage is on the cooling bed, where the austenitic core is transformed to a ductile ferrite-pearlite core. Thus the grain structure consists of a combination of tough outer layer of tempered martensite and a ductile core of ferrite-pearlite.



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