

# Entrepreneur India

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## GOOD FUTURE PROSPECTS FOR TMT BARS

<b>Capacity:</b>	144000 MT/Annum
<b>Plant and machinery cost:</b>	332.00 Lakh
<b>Working Capital:</b>	0.00 Lakh
<b>Rate of return(ROR):</b>	42.00 %
<b>Break Even Point (BEP):</b>	76.00 %
<b>TCI:</b>	1949.00 Lakh
<b>Cost of Project:</b>	1949.00 Lakh

The advent of thermo mechanically treated (TMT) steel bars has heralded a new era of economy in the construction industry in India. Round plain steel ruled over this industry up to sixties while Tor steel took over the scene in seventies and maintained its supremacy till nineties. 1997 and 1998 has now seen an extensive use of TMT steel and corrosion resistance steel thereby ushering in greater economy and longer life for RCC structures. TMT bars are widely used in general purpose concrete reinforcement structures, bridges and flyovers, dams, thermal and hydel power plants, industrial structures, high-rise buildings, underground platforms in metro railway and rapid transport system. TMT Bars is an acronym for thermo-mechanical treatment. Thermo Mechanically Treated (TMT) bars are manufactured using the Quenching & Tempering (Q & T) technology. A TMT bar gets its strength properties from quenching and tempering. No mechanical treatment is involved in TMT Bars. In TMT bars, the carbon content can be restricted to 0.2% to attain weldability and at the same time no strength is lost on this account. The joints can be welded by ordinary electrodes and no extra precautions are required. Another advantage of TMT bars is their tough surface providing high yield strength and a soft core providing excellent ductility. Strength, weldability and ductility are such properties which declare TMT steel highly economical and safe for use. An additional advantage of TMT steel is that a twisting operation is included in Tor steel, which subjects the bars to torsional stresses making them less corrosion resistant while TMT bars are free of such stresses thus having superior corrosion resistance. The TMT process gives the bar superior strength and anti-corrosive properties. Controlled water-cooling prevents the formation of coarse carbides, which has been cited as the main cause for the corrosive nature of common bar. Due to very high elongation values and consistent properties throughout the length of bar, TMT rebars have excellent workability and bend ability. The soft ferrite pearlite core enables the bar to bear dynamic and seismic loading. TMT bars have high fatigue resistance to Dynamic/ Seismic loads due to its higher ductility quality. This makes them most suitable for use in earthquake prone areas and above all it is cost effective. The grades of TMT bars available are Fe-415, Fe - 500, & Fe - 550. The diameters of TMT bars manufactured are 8,10,12,16,20,25, 28 MM & the standard length is around 5.5 mtrs to 13 mtrs. Thus summing up, thermo mechanically treated steel is a new-generation-high-strength steel having superior properties such as weldability, strength, ductility and bend ability meeting highest quality standards at international level. The market for TMT bars is quite fragmented with a large number of small sized and regional players. The Indian iron and steel industry has come to occupy a dominant position in the socio-economic development of the country and it is certainly a matter of pride that India is the 7th largest crude steel-producing nation in the world. After having gone through the highs and lows of business cycles over time, today the Indian steel industry is on the threshold of a major change as it gears up to give substance to an expansion plan that is ambitious by any standard. Joining forces with the "Main Producers"™ are the "Secondary Producers"™ as well, whose emergence in the post-liberalized decade in the Indian steel scene had been initially modest but over the years, they have made a significant contribution to the growth of the domestic iron and steel industry, in terms of spread, capacity, production and commodity basket, necessitating thereby, a fresh look at the segment, traditionally labeled as the "Secondary"™ Producers, under the Indian context. Steel production in India got a momentum with the announcement of the Industrial Policy Resolution of 1956 when three SAIL plants were set up in the public sector in the late 1950s and the fourth in early 1970. These plants along with IISCO (now, a part of SAIL), VISL and TISCO (now Tata Steel Ltd) were the only integrated steel producers till the eighties. Vizag Steel plant/RINL came into production in the early nineties. The 70s saw the emergence of the Secondary sector "small scale steel producers who opted for the scrap-DRI based electric arc furnace/induction furnace routes" to meet primarily local demand. The semi finished ingots/billets produced by this segment, in turn led to the commissioning of a large number of re-rolling units to convert the semi finished steel into bars and rods, to be used mainly by the construction

industry. Moving over the Re-rolling segment, challenges include facing the market downs, specially prices and operational factors like high energy consumption. Prospect for future growth may be considered bright, given the pace and scale of infrastructure / construction activities. Such prospects are captured in the projections for the 11th Five Year Plan of the Government of India, which indicates that share of Secondary Producers in total crude steel production would rise from the present below-50% mark to 53% at the end-of the plan period, as the Secondary sector consolidates their position further. As the steel industry, including the foreign steel giants setting up steel plants in India, prepares to launch their dream projects, the future of steel in India is awaits a new chapter to be written a phase which would in all likelihood would witness the Secondary Steel sector further increase their dominance and criticality in the overall operations of the Indian iron and steel industry. After a sluggish growth in the last five years, capacity additions in the steel industry are expected to gain momentum. Progress of a large number of steel projects has gathered pace over the last 2-3 years and these are now scheduled to be commissioned by March 2013. If we were to pause for a moment to think about the growth of human civilization, we would find that the pace of social and economic growth has been closely linked to the proficiency with which people have been able to use of shape materials. Steel is one of the critical inputs required to sustain the growth of the economy. In fact it is the basic input for all kinds of economic activity. With the sustained growth of the Indian economy, there has also been a remarkable growth of the Steel Industry. The growth of infrastructures, roads and bridges, civil construction projects, and modern town ship complexes will ensure continued demand of TMT bars. There is a very good scope, market potential and demand for such products and new entrepreneurs should venture into such projects.

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Pre-feasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and or Equipment required, General Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes varies technology books, directory, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureau, consultants and consultancy firms as one of the input in their research.

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