

# RESUME

## Puneet Singh

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AN Innovation driven techno-commercial professional with 20 years of technical experience and market insight in mild steel long products Tmt bars/angles/channels . A professional who believes in the technology based interventions and finding asymmetries in markets for sustainable competitive advantage in the market place and a better RONW/ROCE as a result.

### Core Competencies:

- Expertise in identifying new market segments in **steel long products** especially TMT BARS which are nascent,uncluttered and have potential to deliver higher profit margins and sales growth.
- Possess rich technical knowledge of all process /product segments of mild steel long products rolling technology .Keen interest in technological /application support based selling for optimization of usage at end customer thereby giving more value and sustained customer relationships.
- Proficiency in assessing the interplay of steel long products technology, markets on financial results and Economic value added.
- Efficient communicator with excellent leadership, team building, organizational, motivational and project management skills.
- A result oriented individual adept in finding the routes for increased sales and margin expansion and as a result ROI of investments.
- Expertise and major interest areas are Value added product development in mild steel long products like TMT bars-Cut and Bend/Epoxy Coated/Splicing systems/Sectionals- based on market insights/innovative technologies which can generate superior return on investments.
- Expertise in cross border sourcing arrangements/technology transfer/manufacturing joint ventures.

### Academic Qualification

- B.TECH 1990

### Personal Particulars

- Date of Birth: 24 May.1969
- Languages: English, Hindi

### Career Profile

READYMADE STEELS INDIA Ltd. - (readymadesteel.com)  
GENERAL MANAGER MARKETING (2009- TILL DATE)

### Achievements:

- Instrumental in placing in the market the cut and bend TMT REBARS and REBARS COUPLERS /SPLICING SYSTEMS /THREADING OF REBARS -starting from identifying the potential customers/concept selling/value proposition optimization-in perception and realty both to end of sales cycle of payment realization.
- Played key role in development of technical application support team for troubleshooting pain areas of end users.

**Job Profile:**

- Responsible for sales and marketing of cut and bend TMT REBARS and REBARS COUPLERS /SPLICING SYSTEMS /THREADING OF REBARS .
- Monitor performance of the sales team and provide guidance and motivation for improvement of productivity leading to generation of greater business and revenue by identification of new niche segments which are under-served .
- Responsible for maintenance of good business relationship with existing customers to ensure steady flow of business and also generate new prospects with the aim of increasing business and revenue of the organization.
- Working capital management/optimization.

**SHRI RATHI STEELS Ltd. - Ghaziabad U.P([www.shrirathigroup.com](http://www.shrirathigroup.com))**  
**(a TMT BAR Re roller having two rolling mills of 1,20,000 MT each in New Delhi NCR)**  
**Deputy General Manager -business development/Senior Marketing manager (2003-2009)**

**Achievements:**

- Assisted in achieving maximum capacity utilization by placing in market entire production of mild steel QST STEEL BARS of 2,40,000 MT per annum .Shifted focus to Project Sales From Dealer Sales for better price realization and faster working capital rotation due to most of sales on advanced payment basis.A Five member team was able to achieve monthly sales volume of 6000-8000 MT in project sales.
- Initiated and coordinated the energy audit /carbon emission audit of both rolling mills in close cooperation with UNDP GEF PROJECT STEEL ([www.undpgefsteel.gov.in](http://www.undpgefsteel.gov.in)).
- Initiated,coordinated and implemented the reheating furnace-instrumentation/control/optimization system for reducing Furnace oil consumption from 42litres/mt to 28 litres/MT.
- Initiated,coordinated and implemented VFD in pumping circuit of Quenching process water loop thereby reducing any conversion cost component.
- Conducted a study on feasibility and technology evaluation of regenerative burners to assess the possibility of its implementation as one of the rolling mill was to shift to Natural gas fuel from Furnace oil.(Incidentally I would like to mention here that Tata Steel has implemented regenerative combustion burners systems based on flue gases of blast furnace recently in FY 2010-2011)
- Initiated the concept of cut to length selling of TMT BARS as a medium for better price realization of short length TMT bars generated in production.

**Job Profile:**

- Looking at the selective niches in the market which can be catered to by leveraging existing technology platform by product development for better profit margins and price realization.
- Responsible for seeking technologies for reducing cost of production for better profitability.

**Tehri steel Rolling Mills Ltd. - Muzaffarnagar U.P(1998-2003)**  
**(Tmt bars Mild steel angles/channels /girders)**  
Assistant Manager/Business Development Manager

**Achievements:**

**.Placing in market the production of 2,40,00 MT per annum by channel/distributor network and end users/fabricators/aplicators**

- Successful in maximum market penetration and business development.
- Major contributor in sales in north India.

**Job Profile:**

- Responsible for business development in the North part of India; monitoring of performance of the sales team to ensure growth in business volume through providing of proper guidance and motivation.
- Develop and implement sales strategies to counter competition and ensure maximum business growth.
- Generation and analysis of sales reports for future corrective actions with the aim of generating greater business volume leading to greater volume of revenue for the organization.

**Bharat Steel Rolling Mills Ltd Muzaffarnagar U.P((1990-1998)**

(TOR/Steel Bars/Angles)  
Sales Officer/Production Engineer

- Responsible for business development in the North part of India; monitoring of performance of the sales team to ensure growth in business volume through providing of proper guidance and motivation.
- Develop and implement sales strategies to counter competition and ensure maximum business growth.
- Generation and analysis of sales reports for future corrective actions with the aim of generating greater business volume leading to greater volume of revenue for the organization.

## TRENDS IN TMT BARS MARKET LANDSCAPE IN INDIA

- 1)TATA TISCON achieved best ever sales of 1.82 Million Tonnes in FY11 against previous best of 1.57 million Tonnes in FY 2010.
- 2)Due date performance (which measures delivery compliance ) improved from 87% to 91% in TATA TISCON in 2010-2011 and further to 93% in 2011-2012.
- 3)Production and supply of high UTS/YS ratio rebars for nuclear application to BARC.
- 4)TATA TISCON value added products in rebars sales increased from 6.8% to 9.6% like FE 500D.
- 5)Expansion of TMT of Cut and Bend operations from 2500 MT per annum to 6000MT per annum underway at Tata steel processing at Faridabad.This is emerging as a win win routeto dispose of short length bars at premium .
- 6)Tata Tiscon increased its share of business from project sales/enterprise accounts/key customers to 30% from previously existing 19% through innovative contracting and better availability of matter.
- 7)Tata Tiscon availability increased to more than 2000 dealers and due date performance inceased to 93% and better inventory management and logistics reduced channel stocks to 15 days.
- 8)Tata Tiscon launches pre made rings under brand Readybuild and plans to go with asset light strategy by installing modular cut and bend and ring formation plants at distributors premises to differentiate itselfs and offer unique value to customers.
- 9)TATA Tiscon ties up with Moments Splicing Ltd Malaysia to offer threading and coupling solutions to emerge as integrated steel reinforcement solution player.
- 10)Tata Tiscon develops FE600 grade by microalloying and plans to launch it soon to remain at the cutting edge and a step ahead with competition.
- 11)Tata Tiscon bar mill adopts in reheating furnace regenerative burner(HITAC combustion Chinese technology) which reduce fuel combustion by 30-40% to have a lowest cost base billet to bar conversion .
- 12)Tata Steel subsidiary at Singapore NATSTEEL installs a latest generation mesh welding line to further increase its value added bar sales to 70 percent.
- 13)A a convenience feature for ease of identification TATA tiscon began marking bar dia on every bar from current year.
- 14) Non microlloyed not TMT ,air cooled reinforcing bars developed by TATA TISCON for stirrup application for the first time.This product holds a lot of potential if properly marketed as number of European Technology based stirrups installations are increasing at rapid pace.
- 15)To perk up sales in sluggish rainy season TATA TISCON advertised 2 percent discount scheme in newspapers(Ghar Banao 2 percent discount pao)to create a sales pull from customer side.
- 16)JSW TMT PLUS launched in market with variants like FE 500D and TMT CRS (Corrosion Resistant Steel ).Indulging in price undercutting to gain market share.Present volumes of approx 20000MT per month.Most of the sales are to projects .Failed to make an impact at dealer level.
- 17)First person talk with Tmt steel bar benders gives the feedback that ductility of JSW TMT PLUS is better then TATA TISCON 500 probably due to adoption of Morgan accelerated quenching process vis a vis Tempcore process at Tata Tiscon ,yet Tata Tiscon commands a 1500-2000MT premium over JSW.
- 18)JSW Installs a wire tying compactor to bundle its TMT BARS and wire rods which consume inhouse wire against strapping purchased from vendors-a cost saving initiative.
- 19) JSW adopted a length optimization practice ,installed a software to calculate the length of entire rod and cut the lenth in a manner that reduce tail ends.
- 20)JSW achieved a prime yield of 98.5% against 94.94% in last year,reducing the cobble rate
- 21)JINDAL STEEL AND POWER LTD TMT BAR mill of capacity 1million tonnes at Patratu near Ranchi partly commissioned .Against the name plate capacity of 1 million Tonnes ,last year 1 lakh Tonnes of Tmt bars were sold in the market.
- 22)Monnet Ispat and Energy Ltd TMT bar mill likely to be commissioned in last quarter of 2012.

23) Monnet Ispat and Energy Ltd advertised in press/media/newspaper inviting expression of interest for distributorship/C and F agent for HR coils/Tmt Bars/Plates.

24) Arcelor Mittal channel partner in India importing FE 500D from Ukraine signed a bulk supply deal with DLF. Indulging in price undercutting to gain market share. Current volumes are more than 1 lakh tones per annum. Now also started importing mild steel structurals-angles and

25) JP ASSOCIATE LTD has imported there first Italian make SCHNELL TMT bar Cutting and bending machinery for there expressway project and building projects at Greater Noida..

26) G.TECH SPLICING TO EXPAND CAPACITY OF COLD FORGED COUPLER/SPLICING SYSTEM FOUR FOLD. SCOUTS FOR LAND IN OUTSKIRTS OF MUMBAI.

27) READYMADE STEEL INDIA LTD INKS A MOU WITH M/S. CABR CHINA TO SETTED UP COUPLERS MANUFACTURING PLANT AT MUMBAI.

28) WELSPUN STEEL AND POWER LTD PLANS TO SET UP A EPOLXY COATED BAR PLANT AT ANJAR (GUJARAT) TO END THE MONOPOLY OF PSL LTD WHICH IS DOING ANNUAL COATING ON APPROX 1 LAKH TONNES AT HEFT MARGINS.

29) PIEKKO FINALND PLANS INDIA ENTRY TO SELL COUPLERS/SPLICING SYSTEM FOR REBARS BESIDES OTHER PRE CAST COMPONENTS.

30) ARK METALS CHENNAI SETS UP A CUT AND BEND PLANT BY USA 'S KRB MACHINERY TECHNOLOGY.

31) SHREE OM STEELS LTD JALNA EXPANDS CUT AND BEND OF REBBAR TECHNOLOGY BY KRB MACHINERY TECHNOLOGY.

32) JAYPEE INDIA LTD KOLKATTA PLANS TO DEVELOP THREADING/OFFSETTING MACHINE FOR REBAR THREADING FOR SPLICING BY COUPLERS. IN TALKS WITH FIRM COMMITMENTS FROM OPERATES LIKE G.TECH SPLICING.

33) ELECTROSTEEL STEEL LTD ONE MILLION NEW TMT BAR/LONG PRODUCTS ROLLING MILL AT BOKARO TO START PRODUCTION IN NEAR FUTURE

34) DANIELY TO SET UP ROLLING MILL MACHINERY FABRICATION PLANT NEAR VISHAKAPATNAM.

35) STEELMARTINDIA.COM ARCILOR MITTAL DISTRIBUTOR IN INDIA PLANS A REBAR CUT AND BEND PLANT NEAR MUMBAI.

36) QUENCHING BOX INSTALLATIONS OF THERMEX BRAND MAKE CROSSES 150 AND 18 ARE UNDER INSTALLATIONS.

37) MONNET ISPAT BECAME THE PRIME SPONSER OF INDIAN BOXING TEAM. BUT HAND K ROLLING MILL ENGINEERS LTD (THERMAX QUENCHING BOX) ADVERTISED IN MEDIA THAT WE SAW THE FUTURE EARLIER AND SPONSERED INDIAN BOXING MEDAL WINNER AT OLYMPICS MARY KIM. EARLY AS FAR BACK AS 2006 .

38) ACTION ISPAT AND POWER LTD IN THE PROCESS ON INSTALLING A 4 LAKH TONNES PER ANNUM TMT BAR MILL AT JHARSUGUDA. TO BE COMMISIONED IN FIRST QUARTER OF 2013.

39) CURRENT HON. STEEL MINISTER GIVES THRUST TO INCREASE STEEL CONSUMPTION IN RURAL AREAS. SAIL TO SELL TMT BARS AT RS.500/- DISCOUNT PER MT IN RURAL AREAS. SAIL LAUNCHED RURAL DEALERSHIP SCHEME DURING FY 2011-2012. THE NUMBER OF SAIL DEALERS HAS RISEN TO TO 3138 (INCLUDING RURAL DEALERS) INCCREASE OF 517 OVER LAST YEAR.

40) SAIL GOES FOR DISTRIBUTIVE RE ROLLING MILLS MODEL ON CONVERSION AGENT BASIS /AND ALSO OWNING THE RE BAR MILL ASSETS BUT OUTSOURCING OPERATION AND MAINTENANCE TO OUTSIDE OPERATERS. STARTED 2 LAKH TONN BAR MILL AT KANGRA HIMACHAL PRADESH. ASSETS ARE READY OF 2 LAKH TONNES TMT BAR ROLLING MILL AT JAGDISHPUR NEAR LUCKNOW. PRODUCTION ABOUT TO START SOON. SAIL INKS TWO JOINT VENTURE AGRREMENT WITH SUPREME ALLOYS TO SET

UP TWO TMT BAR ROLLING MILLS OF 3 LAKH TONNES EACH NEAR LUCKNOW AT LAKIMPUR AND BARABANKI.

41)IN LOCAL MICROMARKETS SECONDARY STEEL SECTOR TMT BAR MILLS CONTINUES TO DOMINATE IN VOLUME BASIS DUE TO THERE PRICING/LOGISTICS ABILITY/CUSTOMER FRIENDLINESS AND FLEXIBILITY.

42)BRAND APPROVAL/REGISTRATION CONTINUES TO BE AN ISSUE AND ENTRY BARRIER IN GOVT CIVIL CONSTRUCTION WORKS/TENDERS AND LARGE INFRASTRUCTURE PROJECTS.IN THIS SAIL/TATA STEEL HAVE AND EDGE.

43)KAMDHENU STEEL LTD PIONEERED FRANCHISE MODEL IN TMT BAR MARKET BASED ON THERE PHILOSOPHYOWN THE MARKET-NOT NECESSARILY OWN THE ROLLING MILL.CURRENT ESTIMATES SHOW THAT THEY ARE SELLING MORE THAN 1.5 MILLION TONNES UNDER THIS MODEL ON PAN INDIA BASIS.TAKING CUE FROM THEM MANY NEW PLAYERS BASED ON FRANCHISE MODEL HAVE ENTERED THE MARKET LIKE FRIENDS ISPAT LTD AHMEDABAD/PRIME GOLD NEW DELHI/ATLAS TMT/LOHA ISPAT/SRMB LTD KOLKATTA.

44)SRMB LTD KOLKATTA launched a retail chain to sell there Tmt bars under the BRAND – SRMB-ROD AND BARS.

45)In New Delhi NCR secondary sector continue to dominate with RATHI brand virtually controlling half the market and price setter for secondary steel sector.Muzaffarnagar cluster TMT bar rolling mills also selling well in NCR because of there better commercial terms and competitive pricing.

46)Globally GERDAU in North and South America continues to acquire more TMT bar processing centres to become more customer friendly.

47)ONE STEEL of Australia continues to divest there rolling assets gradually to concentrate more on mining and mill internals business because of low returns in long products rolling business.

48)NUCOR continuously expands Harris Rebars operations to open more rebar cut and bend service centres.

49)Tata Tiscon(Attot Jood) launches TV commercial with positioning on ‘No Compromise’ on Quality.

50)Shree Vaishnav Alloys Ltd to commission a Wire rod/Bar at Wada (thane) in next few months.

51)M.G.Agarwal Foundaries(TMT bar manufacturer) Hyderabad orders Schnell Italy Machines to set a TMT Cut and Bar plant .

52)Sangam Steel(Mahalaxmi TMT) Wardha/Mumbai consistently wins major tenders of India Bulls Real Estate Ltd /Rustomjee etc specially in low diameters 8mm/10mm by taking advantage of its slit technology .

53) Kalika Steel Jalna to set up a Slit technology based Bar/Wire Rod mill.

54)Bhuwalka Steel coming out of Corporate debt restructuring Process to consolidate and start operations from its Wada/Thane Plant.

### 55) **Latin American imports of Chinese steel reach 1.2 million tons**

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57)Jindal Steel and Power Ltd after commissioning of its 1 million ton bar mill at Patratu decides JINDAL PANTHER as its bar brand name.Appoints 35 distributors on pan india basis as a part of its retail push.

58) Rashtriya Ispat Nigam Limited's has decided in a board meeting for a tie up a rolling mill of 0.75 million tonne being set up by a private entrepreneur near Lucknow at a cost of Rs.400 crore for which RINL has to supply billets and later buy the converted rods at a high price by bearing the freight cost.

59)

**Siemens VAI Metals Technologies has received an order from the Indian steel company BMM Ispat to supply a new merchant bar mill for its Hospet production location. The order volume ranges in the lower double-digit millions of euros. Commissioning of this rolling mill with an annual capacity of 850,000 metric tons of merchant bar steel products is scheduled for the end of 2013.**

BMM Ispat Ltd., the second largest steel company in the state of Karnataka, India has embarked upon capacity addition of 2MTPA to the existing facilities at Hospet. The iron ore used stems from the group company's own mines in the region. With the bar rolling mill, the company is expanding its production capacities for structural steels. The new plant is designed for the production of a wide range of end products. These include reinforcing steels, round bars, flat and square bars, angles and channel sections. Low and medium-carbon or low-alloy steel grades as well as spring and free cutting steel can be processed.

The project will be realized jointly by Siemens Metals Technologies Italy and Morgan Construction Company India Pvt. Ltd. (a Siemens VAI Business). The long product specialists from Siemens Metals Technologies Italy will be responsible for the plant design and the delivery of core components. Morgan Construction Co. and Siemens Ltd. India will manufacture parts of the mechanical equipment and will supply the electrical and automation technology.

Siemens is also responsible for supervising installation and commissioning and for training the customer's personnel.

For this bar mill, Siemens is supplying the complete mechanical and electrical equipment of the rolling line and the cooling zone as well as systems for bundling and tying up the bars produced. The rolling line will include a six-stand roughing mill in an H-V arrangement including the upstream equipment for loading and unloading the billet heating furnaces and also a six-stand intermediate and eight-stand finishing mill, both in an H-V-C arrangement. The stands of the intermediate and finishing mills will be equipped with quick-change fixtures, while after the finishing mill there will also be a quenching system. The finishing mill and the 102-meter-long cooling bed will be linked by two delivery systems. One of them will be a twin-channel high-speed system and will achieve speeds of up to 25 meters per second. The rolling mill will be supplemented by a finishing shop complete with machines for straightening, bundling, stacking and strapping the rolling stock. Diverse shear systems along the rolling line and in the cooling zone will round off the mechanical equipment. The scope of supply will also include the process automation (level 2), mechatronic components, the motor control center and also speed-controlled drive systems for the main and secondary drives including all motors.

60)

**Siemens developed Technology for secondary refining(dephosphorization/desulphurization for secondary steel sector production via induction furnace route substituting LRF**

Siemens delivers dephosphorization plant to steel producer in India.

- Plant fulfills new Indian specifications for sulfur and phosphorus content
- Specially developed for secondary steel production via induction furnace route
- Dephosphorization allows production of higher-quality grades
- First use of this compact plant type in the world

The Indian steel manufacturer Vandana Global Ltd. has ordered a treatment stand for dephosphorization of liquid steel from Siemens Metals Technologies. The plant ensures compliance with new specifications mandated by the Bureau of Indian Standards (BIS) with regard to the maximum permitted phosphorus and sulfur content. It was developed specially for small and medium steel producers who obtain liquid steel from scrap and sponge iron via the induction furnace route and is being put to use for the first time ever in the world at Vandana. The plant will enable the company to offer higher-grade structural steels in future. Commissioning is scheduled for the beginning of 2014.

In India, the amount of liquid steel smelted out of scrap in induction furnaces is more than 30 percent. It is produced mainly by small and medium enterprises that serve regional markets. Due to the varying quality of the raw material and the limitations of the production process, this liquid steel contains a large amount of phosphorus amounting to several tenths of a percent. This aggravates or prevents the production of high-

quality steel grades. This is why BIS has issued a specification according to which the combined content of sulfur and phosphorus in structural steels must not exceed 0.11 percent.

To assist steel producers in achieving this goal, Siemens has developed a compact and low-cost treatment stand for dephosphorization. For the Vandana steelworks in Raipur in the federal state of Chhattisgarh, Siemens is planning and delivering a plant for 15 tons of liquid steel, a ladle car including a tilting unit and various blowing lance units along with the associated secondary systems. With the aid of the dephosphorization stand, Vandana can both fulfill the BIS specifications and also produce steel grades with which higher prices can be achieved on the market.

The privately owned Vandana Global Ltd. company group has its headquarters in Raipur. Per year, Vandana produces more than two million tons of sponge iron, around one million tons of billets and a highly diverse range of steel products, mainly for the construction industry. Vandana is also active in power generation.

**THE KEY QUESTION: IF THIS TECHNOLOGY PROLIFERATES IN SECONDARY STEEL SECTOR AND PRODUCTS PARITY IS ACHIEVED IN CHEMICAL COMPOSITION OF PRIMARY AND SECONDARY STEEL SECTOR PRODUCED TMT BARS WILL THE PRICE DIFFERENTIAL BETWEEN PRIMARY AND SECONDARY SECTOR BARS WILL COME DOWN AND COMPETITIVE LANDSCAPE BECOMES MORE INTENSE.**

**61) TATA TISCON ACHIEVED SALES OF 2 MILLION TONNES IN 2012-2013. ACHIEVED SALES OF 1.17 MILLION TONNES THROUGH RAIL CHANNEL.**

**62) JSW STEEL STARTS WORK ON NEW BAR MILL OF 1.25 MILLION TONNES TO BE COMMISSIONED IN 2014/2015 EXPECTING GOOD DEMAND GROWTH PROSPECTS IN CONSTRUCTION AND INFRASTRUCTURE SECTOR.**

**63) WAVE STEELS LTD COMMISSIONED FIRST NORTH INDIA BASED MANUFACTURING FACILITY FOR TMT BARS HAVING A LADLE REFINING FURNACE TO CONTROL PHOSPHOROUS AND SULPHUR AND COMPETE WITH THE PRIMARY TMT BARS MANUFACTURERS.**

**64) JSPL LAUNCHES JINDAL PANTHER TMT STEEL BARS. ATTEMPTS TO PRICE THEM AT Rs.2000-Rs3000/- PER MT BELOW TATA TISCON.**

**65) ELECTROSTEEL STEEL LTD INVITES EXPRESSION OF INTEREST FOR DISTRIBUTORSHIP IN NORTH INDIA FOR THEIR NEW LAUNCH FE 500D FOR NORTH INDIA BY ADVERTISING IN NEWSPAPERS.**

**66) IN KOREA FE700 GRADE TMT BARS INTRODUCED FOR CONSTRUCTION SECTOR.**

**66)**

### **DANIELI inaugurates its most modern steel plant equipment manufacturing facility in India**

The Sri City Steel Plant Equipment Manufacturing Workshop of Danieli was inaugurated on 20th November 2013 by Hon'ble Chief Minister of Andhra Pradesh, Mr. Kiran Reddy in presence of a large number of dignitaries from steel industries in India, Bangladesh, Myanmar and neighbouring countries. This state-of-the-art workshop is located at Sri City Special Economic Zone (SEZ) in Chittoor district, Andhra Pradesh.

Sri City SEZ is strategically located at 55km from Chennai city and 80 km from Chennai International airport along the National Highway NH-5. This new facility will be one stop shop for steel manufacturing companies. This new workshop is a part of Danieli's strategies to strengthen its presence in steel making segment in India and neighbouring countries. To commemorate this special occasion Danieli organized a two-day event on 19th and 20th November at Sri City plant site. Along with meeting and discussions with company's officials and technology experts on this occasion, Danieli also showcased its latest technologies to its guests and visitors. The event discussed some key issues for competitive and sustainable Indian steel industry and displayed the following breakthrough technologies; etc.

- Competitive BOF technology from Danieli Linz
- Latest developments in Electrical Steel-Making
- Advanced rolling routes for cost effective hot rolled coils and plate production
- Latest development in cold rolling and strip finishing (annealing and coating)



- Advanced Continuous Casting technologies
- Bech mark for heavy bars, sections and rail mills
- Latest bar and wire rod mill technologies
- Cost effective solutions for extruded and forged products
- High Tech Cranes complementing Danieli products range

Built on a plot of land measuring 86 acres, the first phase of the workshop was completed with an approximate expenditure of Rs.700 Crores with a 8,700m<sup>2</sup> Fabrication Shop, Machine Shop 9,000m<sup>2</sup> and Assembly Shop of 17,000m<sup>2</sup> along with separate areas for Warehouse, Shipment, Quality Assurance. The total area for phase I is approximately is 55,000m<sup>2</sup>.

With this most modern workshop in Sri City, Danieli will be able to supply European quality manufacturing of steel plant equipment in India.

67)

## **JSW Dolvi repeats order on Danieli for Bar Mill Reheating Furnace and FCC Billet Caster**

JSW and Danieli signed a contract in October 2013 for a new five strand 1.5 mtpy Fast Cast Cube (FCC) technology billet caster with 1.4 mtpy bar mill and Reheating furnace for JSW Dolvi Works.

Danieli was selected by JSW once again to supply this state-of-the-art 1.4 mtpy FCC technology caster to diversify into long products.

This is the second order by JSW during 2013 after a similar plant with FCC Technology caster and bar mill ordered for their Torangallu works in January this year.

While the supplies of the equipment for the Torangallu plant of FCC caster and bar mill have just started, JSW has reposed its confidence on Danieli technology to make a repeat order for such high speed caster and bar mill which will be the second FCC technology caster in India after the first one in their Torangallu works.

The 1.4 mtpy Danieli Morgardshammer (DMH) bar mill will be designed for accepting hot and cold billets from the FCC billet caster.

This bar mill will use 165 mm square billets as input material to produce bars ranging from 8 mm to 40 mm diameters with slitting facility up to 20 mm bars on lateral lines and 25-40 mm on central line. Bundle weights will be 1.5 tonnes to 5 tonnes. At the entry site, it is equipped with Danieli Centro Combustion (DCC) walking beam type reheating furnace and will have fourteen H/V latest SHS Plus housingless stands, two eight stands fast finishing block, QTB/QTR process, sturdy cold shear, bar counting and bundling and tying equipments. Danieli's scope of supply also includes auxiliary equipments like lubrication and hydraulic systems.

This five strand caster will be equipped with Danieli's latest Fast Cast Technology (FCC) for casting grades of low carbon and medium carbon steels of Al and Si killed grades and Peritectic steel grades. It will be designed with a proof size of 165 square billets and but the caster will be able to cast billets of size ranging from 130 square to 200 square.

This most modern caster along with Danieli's Fast Cast Cube technology mould and oscillation assembly is provided with Rotolec EMS stirring equipment, highly efficient strand and spray cooling zones, five rolls (three driven and two idle), withdrawal and straightening units, roller tables, cross transfer mechanism, hot charging equipment, two sets of walking beam cooling beds and billet packs storage facility.

This most modern FCC caster and the rolling mill will operate on fully automatic mode with Level 2 Automation with related electrical and automation equipment from Danieli Automation.

## GROUND REALITY IN LONG STEEL PRODUCTS MARKETS IN INDIA

TMT STEEL BARS and long steel products market demand has a direct linkage with GDP growth rate since construction and infrastructure sector are bulk consumers TMT and structural steel. Conversely the movement in price level of TMT bar becomes indicator of the steel consumption in economy. Over the last 5 years of turbulence secondary sector has taken the maximum flak as new construction activity and CAPEX projects have been shelved by demand and credit strapped economy and the input material supply and price have been extremely volatile. If the rot in domestic iron ore mining has taken toll of availability and volatility of currency has deepened the cost uncertainty.

Meanwhile the primary steel mills had already opened war on the secondary sector by indulging in capacity expansion and new entrants like JSPL/MONNET/ELECTROSTEEL STEEL/BMM ISPAT etc . At the same time some other mills like SAIL went in for conversion agents to latch on the opportunity. While in secondary steel sector THERMAX process installations has crossed 170 in number of quality conscious mills. Traditionally the market had been dissected between secondary and primary mills between reality and project respectively. Market division was tacit but price driven with reality and household sector dependent on cheaper secondary products, whereas the quality conscious infrastructure projects were being catered by the primary mills. However the demarcation has become hazy over the last couple of years and so has the price differential. Slump in demand has made the producers fight for every inch of space. Demand from projects been sapped the major mills shifted focus to the retail segment. Concurrently the secondary mills suitably aligned themselves with stringent quality parameters in projects thereby coming neck to neck with majors. It would be exaggeration to call it role reversal but it was certainly eating into each other pie. The norm of price gap of about INR 5000-6000 per tonne between the secondary and primary product narrowed gradually. At the same time bogey of implementation of BIS norm gained strength and some suspected ulterior motive of major mills to vanquish secondary challenge once for all.

Even though the deadline for BIS norm has been extended several times it won't be long before it comes to stay tilting the balance in favor of major mills further. Major Mills have also adopted customization of products giving the buyers option of tailor made products viz Cut to Length, corrosion resistant, EQ grades etc. Doorstep delivery and collection of order with online order booking and delivery process are radical evolution in customer ease. With new capacities coming online the battle will become more acrimonious but round one has gone to primary manufacturers. Market share split between secondary and primary has become even with 50% each which was earlier skewed in favor of secondary mills 70:30. Current economic slowdown with the emerging challenges of its revival in the election year will throw up new challenges but the financial strength of companies will be tested to the hilt in liquidity hit market. Import threat in long product market was guarded even worst of times as India has a thriving secondary sector able to match cost competition

At the same time conventional thumb rules of conversion from semis(billets) to tmt bars (finish) and down the value chain have been re-calibrated as prices plummeted and margins squeezed and stand alone re rolling mills feeling the heat on margins. While China is now exporting long products to North and South America, flooding the south asia market may not be far away at surprising difficult to fathom price.

<u>AISI/SAE</u>	<u>WNR</u>	<u>JIS</u>	<u>TECHNICAL CHARACTERISTICS &amp; APPLICATIONS</u>
<b>AUSTENITIC STAINLESS STEELS</b>			
201/201M	-	-	Used for decorative items, baskets, racks, handles and utensils

204Cu	-	-	Used for fasteners, forging, machinery and bending applications
201Ni3	-	-	Used mainly for fasteners
202	-	-	Used for engineering, architectural and medium-temp. applications
304	1.4301	SUS304	18/8 steel for wide range of general applications.
304L	1.4306	SUS304L	Good resistance to intergranular corrosion.
316	1.4401	SUS316	18/10 steel with good resistance to corrosion and pitting
316L	1.4404	SUS316L	Good resistance to general, intergranular and pitting corrosion.
<b>FERRITIC AND MARTENSITIC STAINLESS STEELS</b>			
403	1.4024	SUS403	For structural parts of high hardness.
409	1.4512	SUS409	For high hardness applications
410	1.4006	SUS410	Used for pumps, petro chemicals and machinery parts
416	1.4005	SUS416	Free-cutting quality suitable for machined and threaded parts
420	1.4021	SUS420J1	Hardenable martensitic steel used mainly for shafts
420C	1.4034	SUS420J2	Used for severely stressed Shafts, Braking Systems, Knives, etc.
430 F	1.4104	SUS430F	Used for pump shafts
430	1.4016	SUS430	Non-hardenable for decorative trim.
431	1.4057	SUS431	Used for valves, pump shaft and bolts
<b>CARBON ALLOY STEELS</b>			
52100	100Cr6	SUJ2	Through hardening Carbon-Chrome Steel for bearings and wear-parts.

