

WIRE BULLETIN

India's Quarterly Bulletin Dedicated to the Wire and Cable Industry

Themes for 2018

Now entering into its 10th year of publication, Wire Bulletin reaches out to subscribers across India in print form and to readers in the US, UK, Europe, Southeast Asia, Bangladesh, the UAE, Saudi Arabia and other countries through its digital edition. It has been a preferred media partner at all the leading trade exhibitions in the wire and cable industry.

For the year 2018, there will be special themes for the issues of January, April, July and October as follows:

Issue	Editorial Focus
Jan 2018	Elecrama 2018 India
Apr 2018	Wire 2018 Germany
Jul 2018	Fasteners Shanghai China
Oct 2018	Wire & Cable 2018 India

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NEWS BITES

- Hyundai Steel Company and SMS Concast successfully commissioned the revamped continuous casting machine in Pohang, South Korea. This startup was achieved after a revamp time of merely 1.5 months. With a casting radius of 10 metres, the six-strand continuous casting machine produces roughly 1 million tons per year. The steel grades range from carbon to automotive steel and are cast in different bloom and beam blank sections.
- After the successful commissioning of the new meltshop and caster supplied by SMS Group in 2012, El Marakby Steel, based in Cairo, has awarded SMS the order to supply a new rolling mill for bar and wire rod. The new mini-mill will be designed for the production of straight rebars and wire rod coils and will enable El Marakby to expand its product portfolio and meet the increased demand of both rebars and wire rod coils in Egypt. The mill will be designed to produce at a capacity of 4,00,000 tons per year, taking advantage of the hot connection with the existing caster.

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Leoni expands cable manufacturing facility in Pune

Leoni, a leading European provider of cables and cable systems to the automotive sector and other industries, has enhanced its location in Chakan, near Pune, India. The company inaugurated an electron beam accelerator on September 6, 2017, which allows providing high-performance cables to customers from various industries such as railway and solar. "I am confident that this major investment will contribute to the growth of our business in India. Thanks to the new technology, we are now able to provide superior solutions for the country's rising needs with regard to the initiative 'Make in India'," said Bruno Fankhauser, member of Leoni AG's Board of Directors with responsibility for the wire and cable solutions division.

Leoni has invested more than Euro10 million into the expansion of its Chakan location. Now, the combined production area has increased to more than 20,000 square metres and a capacity to manufacture 80,000 kilometres per year of electron beam cross-linked cables, which ensure a higher degree of safety, superior performance and greater efficiency. In the e-beam process, Leoni treats its cables



(L-R) Florian Hettich, SVP-Business Industrial Solutions, Leoni AG; G K Pillai, MD and CEO, Walchandnagar Industries; Vinay Kumar, MD, Greenko; Pushpendra Singh, MD, Leoni India; and Jerry Cummins, SVP-Projects, Leoni AG.

with extremely accelerated electrons, thus cross-linking their chemical structure. As a consequence, the cables obtain the properties of comparatively more expensive, usually more difficult to process high-performance products. The e-beam process makes cables, for example, more dimensionally stable when subjected to heat, more resistant to chemicals, solvents and temperature fluctuation as well as harder and more resistant to abrasion.

Pushpendra Singh, managing director of Leoni Cable Solutions India (P) Ltd. said, "This is the next phase of our evolution in India. We began to develop this market in 2010 with an engineering office and a manufacturing facility for automotive wiring systems. Since the opening of the Chakan cable plant in 2013, we also have a strong foundation in the country with regard to special cables for dynamic industries.IWB

Mexichem announces investment in India



Mexichem's compounds business has announced the construction of a completely new thermoplastic compounding plant at Goa in India, designed to produce 'specialty thermoplastic compounds' (including locally customised products) – with a strong focus on the wire and cable industry. The new plant is expected to be operational by early to mid-2018. In Phase I, the plant is designed to manufacture 12 - 15 kt of plastic compounds every year. This site will cater to customers not only in the Indian sub-continent, but also in the Middle East and ASEAN countries.

Sameer Bharadwaj, president of the Mexichem Compounds Business, said, "The new plant at Goa will produce specialty

thermoplastic compounds based on both PVC and non-PVC polymers, with a strong focus on flame retardant compounds (specialty PVC-FR and LSZH/HFFR) for the wire and cable industry. In addition to our complete range of existing wire and cable compounds, the site will be geared to meet the specific local needs of our customers in this region. The on-site fully equipped R&D department, which will work on product development projects to support local customers, will have access to all global technologies and will work in close coordination with our global technology teams."IWB

SMS completes modernisation of Vizag Steel converter shop

The start-up of the third converter at Visakhapatnam Steel Plant (Vizag Steel) in India marked the successful completion by SMS Group of the modernisation of Converter Shop No. 1. The modernisation will help to increase annual steel production from 3.0 to 3.5 million tons while achieving highly effective environmental protection. "With SMS we have a reliable partner by our side and this is especially important when handling highly complex modernisation projects. We are fully satisfied with the performance of the converters upgraded by them," said Ponnappalli Madhusudan, Chairman and Managing Director, Vizag Steel Plant.



The third converter was started in May 2017, 18 days before the target deadline. Meanwhile, two converters had been in full operation throughout the duration of the modernisation project. Both the main and ancillary facilities of Shop No. 1 have been equipped with X-Pact® electrical and automation systems. The scope of supply of SMS comprised the engineering and manufacture of core components for three new 150-ton converter vessels. The vessels are equipped with the SMS-developed maintenance-free lamella-type suspension system, bottom stirring equipment for combined blowing, oxygen lance systems, as well as converter tilt drives manufactured in the SMS workshop.IWB

Continuus-Properzi plans for more FRHC copper rod in 2018



Continuus-Properzi recently announced that two new plants, capable of recovering 100% scrap with a copper content of ≥ 96%, will start the production of fire-refined high-conductivity (FRHC) rod in early 2018. An 80 ton per day refining furnace for annual production of 24,000 tons is being installed at TLMZ LLC in the region of Tolyatti, Russia to feed one new Properzi CCR line (11 tph). The second refining furnace, making use of a recent and patented design with charging door on the top and an automatic conveyor belt for loading the scrap into the furnace, will begin operation at Gil Rod Shomal Co. in Rasht, Iran.

Foreseen production is around 30,000 tpy of 8 mm (FRHC) copper rod by a Properzi system already successfully working with cathodes (to make ETP rod)

at 12.5 tph. Copper rod from 100% scrap can fulfill a large majority of total tonnage required by the market as it can be drawn down to 0.25 mm wires and even smaller. The FRHC rod was recently standardised by ASTM B4-15a as C11025. Continuus-Properzi has been a pioneer and promoter of continuously cast and rolled copper rod over the past 50 years. As of today the company has sold almost 60 CCR lines; about half of these plants can produce FRHC or a combination of ETP and FRHC rod.IWB

CASE STUDY

Tracking Material Movement to Improve Production

Viraj Profiles Ltd. has installed a material tracking system to track material movement on real time basis.

One of the largest manufacturers and exporters of stainless steel long products in the world with a turnover of USD 1.5 billion, India-based Viraj Profiles Limited has been exporting products like wire rods, wires, flanges, fasteners, bright bars and profiles to more than 90 countries across six continents. The core competency of the company lies in its integrated manufacturing facilities where finished goods from one plant are treated as raw material for another plant and so on. It is this strong vertically integrated process which enables Viraj Profiles to meet customer-specific requirements. The company has recently commissioned a material tracking system (MTS) across its plants, claimed to be the first of its kind in India. In addition to material tracking, this system also tracks production recording/quality confirmation /invoice generation and dispatch.

Elaborating about the system, Neeraj Kochhar, CMD, Viraj Profiles, says, "In 2014 we encountered some critical issues on the shop floor, which was a deterrent to our vision of becoming a global leader in stainless steel long products. Back then, the manufacturing process was mostly controlled using SAP but couple of years down the lane the company started facing some of issues like delay in updating the movement of raw material from one plant to another, lack of correct data about real time availability of raw material in the plant, information about the raw material being used in the shop floor, etc. These issues seemed small but their impact on

the production loss was something which no one would like to see in his company. Realising the urgency of the situation, the management decided to pull up their socks and dig deeper to find out the actual reason behind these problems.

"Soon a core team was formed comprising senior officials from varied backgrounds inter alia production, quality, sales and IT. After closely watching the whole situation for more than three months and after sifting and analyzing through heaps of data, it was identified that the root causes of the problem were several, including production confirmation in SAP happening long after the actual production and the batch of semi-finished goods not traceable to the raw material and finished goods batch even as human intervention throughout the process caused a lot of errors while the inventory data was not the same between the shop floor and system.



Neeraj Kochhar, CMD



This is what prompted us to install a proper system."

Elaborating, Suman Basu, CIO, Viraj Profiles, and head of the core team says, "After conducting this root cause analysis, we understood that unless we equip our shop floor members to record the happenings during production/quality check/packing dispatch, it will not be possible for us to capture the delay and avoid human errors. We therefore thought of a solution where we could eliminate manual reporting by shop floor members altogether. We planned to identify each product from the steel melting shop to different downstream plants like fasteners/wires/bars with bar code stickers and RF ID. We also thought of using handheld devices for scanning the stickers and entering different data which are needed for SAP recording and communicating to the central servers over a radio frequency network."

Saying was easy but execution was nothing less than a nightmare. Basu also mentions about the challenges faced in this journey, "Our eight plants are spread over a geographical area of 10 km and the location of these plants is in remote areas of Maharashtra where infrastructure is still not well developed. We deploy 6,000+ people on our shop floors. Moreover, all these units are in different excise zones and therefore all material movement is subject to successful creation of the excise duty gate pass and the right weight of the material. Considering these constraints, this was definitely a challenging proposition. But we had made up our mind to take up the challenge head on."

The flow of raw material after MTS installation:

- Truck with raw material plant 1 enters plant 2 after the entry is done in MTS.
- MTS sends the details to SAP and SAP updates the status as "material reached at plant 2".
- Upon unloading the material, the receipt officer scans the material and validates the data against the data of material dispatched from plant 1.
- MTS then sends intimation to SAP for processing GRN (Goods Receipt Note).
- Post this the SAP officer confirms receipt of the material in SAP and GRN is sent to MTS.
- In some cases where the raw material is rejected, the code of the material is updated in MTS and as soon as the rejected material is brought on the shop floor for use in production, MTS shows an error.
- For this purpose the entire storage area has been divided into small grids of 2 square metres and the exact location of any material kept on the floor can be traced including its date of production, point of origin, its composition, etc.

Talking about the advantages of installing MTS, Kochhar states, "Now at any given point of time I can pinpoint the raw material batch used by scanning the

finished goods. I can find out the origin date and composition of the raw material. Moreover, MTS has also helped us a lot in planning our production process as per the availability of the material. In the past couple of months since its installation we have received less complaints of production loss or wrong dispatch of material from one plant to another. So to us MTS has proved to be a boon."

Some of the key benefits of the MTS that the company has witnessed are:

- The production entries are done through bar code scanners and not in SAP GUI; therefore, manual entries are eliminated and thus the chances of wrong movement/allocation of material are eliminated.
- Better visibility of the inventories amongst all plants is leading to better production planning.
- It is now known from which 'heat' which product is made and therefore resolution of customer complaints is better.
- Quality confirmation is being done through MTS, which ensures that the rejection/rework is clearly identified and not used anywhere across all plants in the production process.
- Confusion between departments regarding stock is a thing of the past as all the details are available online on real time basis and all the departments know about the availability of their material and at what stage of production the material is.

Talking about the infrastructure requirements to complete the process, Basu adds, "Important hardware like handheld terminal (HHT scanner), bar code printer, RF ID tags, and labels of different quality were sourced from different companies. The SAP custom development and interface design and solution development was done by our in-house IT team." This was a huge project involving a large number of users and vendors but with some hidden uncertainties too." There were some days when the entire team would brainstorm about various roadblocks in executing the project and the limitations which were staring right into their faces but one thing which was common amongst all was the will to succeed.

As for the cost benefits associated with the task, Kochhar says, "It is slightly premature to state the cost benefits associated with MTS as of now. We have just completed the task in all major plants but still we need to stabilize the system over a period of time to calculate the savings incurred and realisation of ROI, and we hope to report further as it progresses." Although the project was conceived for simple material tracking, today it has become a major supply chain management exercise and the company is now developing centralised planning and product costing around the same.

For more information, e-mail: corpcomm@viraj.com.IWB

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