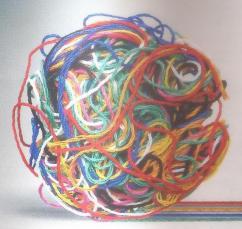
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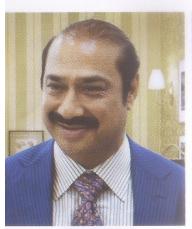
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Buyers' Perspective

## **Installing Material Tracking**



**Neeraj Kochhar** CMD, **Viraj Profiles** 

Tiraj manufactures and exports stainless steel long products. Products include wire rods, wires, flanges, fasteners, bright bars, and profiles to more than 90 countries across 6 continents. The core competency of Viraj 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 to meet customer-specific requirements. The company has recently commissioned a Material Tracking System across its plants. In addition to material tracking, this system also tracks production recording/ quality confirmation/invoice generation, and dispatch through the same system.

In 2014, we encountered some critical issues on the shop floor, which was deterrent to our vision of becoming the 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 the 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 their company.

Realizing the urgency of the situation, we pulled up our socks and dug deeper to find out the actual reason behind these problems. Soon a core team was formed from varied backgrounds inter alia production, quality, sales, and IT. After closely watching the whole situation for more than 3 months and after sifting and analyzing through heaps of data, it was identified that the root causes of the problem were several like Production Confirmation in SAP happening long after the actual production; the batch of Semi-Finished Goods was not traceable to the Raw Material batch and Finished Goods batch; human intervention throughout the process caused a lot of errors; and inventory data was not the same between the shop floor and the system.

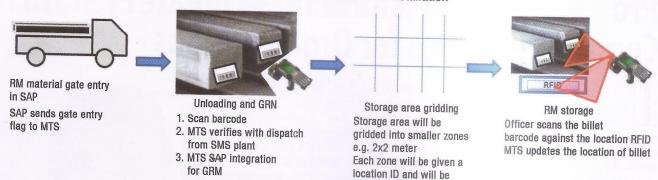
After doing root cause analysis, we understood that unless we equip our shop floor members to record the happenings during production/quality check/packing dispatch, etc., it would not be possible for us to capture the delay and avoid human errors. We therefore thought of a solution where we could eliminate manual reporting by shop floor members altogether. We planned to identify each product from Steel Melting Shop to different downstream plants like Fastener Wires/Bars with bar code stickers and RF ID. We also thought of using handheld devices for scanning the sticker and entering different data which are needed for SAP recording, and communicating to central servers over radio frequency network

Saying was easy but execution was nothing less than a night are. Our eight plants are spread over a geographical area of 10 km and the location of these plants is in a remote area of Maharashtra, where infrastructure is still not well developed and we deploy the people on our shop floors. Moreover, all these units are in different excise and, therefore, all material movements subject to successful creation of excise the subject to successful creation of excise the pass and right weight of the material considering these constraints it was definitely a challenging proposition. But we had made up our mind to take up the challenge head on.

### How the System Works and What It Comprises of

- Truck with raw material from 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 unlessing the material, the receipt officer scans the material and validates the data of material dispatched from plant 1.
- MTS then sends intimation to SAP for processing GRN (Goods Receipt Note).
- Post this, the SAP afficer confirms receipt of the material in SAP and GRN is sent to MTS.

### Flow of Raw Material After MTS Installation



- In some cases, wherein raw material is rejected, the code of the material is updated in MTS and as soon as the rejected material is brought on shop floor for use in production, MTS shows error.
- For this purpose, the entire storage area has been divided into small grids of 2 mtr×2 mtr and exact location of any material kept on the floor can be traced including its date of production, point of origin, its composition, etc.

Now at any given point of time, I can pin point raw material batch used by scanning the finished goods as also 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 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 and I would like to thank my team members who left no stone unturned to make this humongous job possible.

#### Key Benefits of MTS

- The production entries are done through bar code scanners and not in SAP GUI, so manual entries are eliminated, and thus the chances of wrong movement/ allocation of material are eliminated.
- Better visibility of the inventories amongst all plants leading to better production planning.
- We now know from which "Heat" which product is made and, therefore, resolution of customer complaints is better.
- The quality confirmation is being done through MTS, which ensures that the rejection/rework is clearly identified and

is not used anywhere across all plants in the production process.

grouted with a RFID

• 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.

Infrastructure requirements to complete the process. Important hardware like hand-held terminal (HHT) scanner, bar code printer, RF ID tags, and labels of different quality were sourced from different companies, whereas SAP custom development and interface design and solution development was done by our in-house IT team. This was a large project involving a large number of users and vendors but with some hidden uncertainties too. There were some days when the entire team was brainstorming 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. The company management also extended unconditional support to them by all means to make this vision a reality.

Cost benefits associated with the task. It is slightly pre-mature to state the cost benefits associated with MTS as of now. We have just completed the task in all major plants, but we still need to stabilize the system over a period of time to calculate the savings incurred and realization 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 centralized planning, product costing around the same.