SAP S/4HANA IS Mill Solutions:

The Way Forward

EXECUTIVE SUMMARY

SAP S/4HANA IS Mill solution provides a comprehensive and flexible functionality that caters to the needs of mill product companies. Until now, IS Mill solution was an add-on that had to be activated separately. With the advent of SAP S/4HANA, the solution is readily integrated into the product and is offered as a standard functionality.

Business Challenges in the Mill Industry

- Huge variation of product attributes leading to complex SKU management
- Less visibility & control over day-to-day Mill operations
- Highly specific & customized customer requirements
- Rising operating and material costs along with reducing margins
- Demand uncertainty & variability
- Non-standardization of processes across global locations

S/4HANA IS Mill solution adds sector-specific functionality to satisfy the complex requirements of mill industries such as Metal, Wood, Paper, Textiles, Construction materials and Cable sectors. To cater to the specific requirements of these industry segments, S/4HANA IS Mill solution features processes and functions that cover the entire supply chain cycle.

The objective of this paper is to outline the existing processes in SAP IS Mill solution and elaborate on the improvements and benefits accrued by implementing SAP S/4HANA IS Mill solution. S/4HANA IS Mill solution provides functionalities such as class and characteristics with variant configuration, Mill order combination, Mill cut process, Original batch concept, Fast data entry, etc. which are discussed in detail in subsequent sections.

INTRODUCTION

Why SAP S/4HANA?

SAP S/4HANA is the next generation business suite designed to help you run simple in the digital economy. It is new generation of an ERP solution, running in real time, integrating predictive analytics and mobile. SAP S/4HANA is built to bring instant value across lines of business and industries and is deployable in the cloud or on premise.

Why S/4HANA IS Mill Solution?

S/4HANA IS Mill solution provides an opportunity for mill product companies to achieve greater customer satisfaction through streamlined supply chain management, flexible delivery options and greater control over asset utilization and maintenance. Considering the complexities involved in mill product industries, SAP introduced S/4HANA IS Mill solution to;

- Automate processes from purchase to delivery
- Streamline manufacturing and maintenance
- Simplify and enhance customer experience
- Streamline sourcing
- Enable faster decision making by providing real time information access

SAP S/4HANA Key Benefits for Mill Product Industries
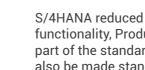
DIMP as a standard solution

The SAP Mill Industry Solution for Discrete Industries is called DIMP (Discrete Industry Mill Products). DIMP was an add-on and not a standard feature. S/4HANA IS Mill solution provides value addition to the already existing functionality by making DIMP as a standard feature

Reduction in volume of material master data

Adoption of class and characteristics functionality helps customers address each and every attribute of material master with valid combinations resulting in considerable decrease in the volume of material master data

Manufacturing planning functionality

S/4HANA reduced the dependency on APO by making Manufacturing planning functionality, Production Planning and GATP (Global Available-to-Promise) part of the standard product. Potentially, the other functionalities of APO could also be made standard in the near future

Improved customer experience

The new material requirements planning (MRP) in S/4HANA comes with significant speed improvements. The speed improvements along with the new smart business cockpits provide an improved customer experience. A user can run MRP as and when a requirement arises

Mill order combination

Standard SAP supports normal production process where a single production order produces a single output. SAP IS Mill solution supports single production process where multiple outputs can be produced catering to multiple MTO and MTS requirements. This feature of IS Mill enables combined order execution of multiple outputs and is called Mill order combination

INDUSTRY SOLUTIONS WITH S/4HANA IS Mill

S/4HANA IS Mill provides specific solutions catering to the needs and challenges of the mill industries. It is imperative and useful for an organization to understand these features before implementing an IS Mill solution. A detailed analysis of these solutions and their associated benefits are discussed further.

Integration and Optimization

S/4HANA IS Mill solution has integrated enterprise wide core business processes from order creation to planning and execution resulting in faster response to demand fluctuations, increased efficiency (Slitting optimization & DCS integration) and optimized inventory

Integrated Analytics

SAP S/4HANA comes pre-loaded with Embedded Analytics that enables users to perform analytics on transactional data to gain insights in real time (ex: Demand planning)

Mobility

SAP S/4HANA includes SAP Fiori UX, which provides a personalized, responsive and role based user experience across devices. SAP Fiori apps enable employees to easily access essential business processes across devices for faster decision making

Installation Options

SAP provides customers a choice of deployment options for S/4HANA – On premise, Cloud or Hybrid - depending on the customer's requirement

Class and Characteristics

Business Background

- Materials used in mill industries often have a large number of characteristics and variants, which increases the volume of the material master data

- The materials in the segments listed above are predominantly area-based (e.g. paper, textiles, plastic film) and length-based (e.g. cables, piping) which makes the production planning difficult

Solution

- Materials with the same kind of characteristics but different characteristic values are grouped together

- A configurable material represents all the materials in a group and is assigned to variant class and batch class

- These classes contain all the characteristics that are necessary to describe the materials in a particular group

- These materials are subject to configuration (assignment of precise values) during planning and execution

Combined Production Order Processing

Business Background

- Need to combine multiple customer orders and stock orders to maximize utilization and minimize wastage (processes like slitting, cut to length)

- Cost apportion should be based on utilization of input product on a fair share basis

Solution

- Common operation sequences across different orders can be combined into one production order

- A Combination can be for selected operations or an entire order

- Operations to be combined should have the same base unit of measure

- The steps involved are Selection, Combination and Scheduling

- Combined order costing is based on the utilization of input product

Fast Data Entry in Production Order, Purchase Order and Sales Order

Business Background

- Easy and fast entry of characteristics is required along the supply chain

- A material to be manufactured might have similar characteristics to the material from which it is manufactured

Solution

- Characteristics and item data can be entered in a single line under item overview. This eliminates the need of toggling between multiple screens

- Characteristic propagation from components (input) to produced items (output)

Mill Cut Process

Business Background

- Single batch (such as a Jumbo coil) needs to be split or cut into multiple batches
- Inheritance of batch characteristics is required after splitting material in output batches
- These do not have complex production order management and cost allocation needs

Solution

- In a mill cut process, a single batch can be split into multiple batches
- In a single step, input as well as output batches can be posted
- Batch characteristic inheritance is possible
- Quantity balancing is enabled through scrap accounting to cost center/ scrap materials/ inventory difference

Original Batch

Business Background

- Need to track product origin
- Need to simplify characteristics entry during goods receipt
- Central batch status control is required for batches of the same origin

Solution

- Original batch master record can be created
- Inheritance of the original batch through the production levels is possible
- Characteristics of the original batch are defaulted during goods receipt
- Change in status of the original batch leads to change in status of the related stock-keeping batches
- Option to display an original batch in "batch where use list" and "Batch information cockpit" is available

Batch Information Cockpit

Business Background

- Need one T code for complete information of stock batches

Solution

- Batch selection criteria are available for batch information cockpit like materials, classification data, stock data and self-expiration date
- Display Alternative UOM
- BADI for display object with reference to batches – inspection lot, deliveries, Handling Unit and storage bins

Purchase Information Record

Business Background

- A material has to be purchased with specific attributes (ex: multiple dimensions, packing) and quality
- Material orders by vendor often have the same specific attributes

Solution

- Define characteristics per material/vendor in purchase information records
- You can pass on characteristic values form purchasing information record to item of purchase requisition and purchase orders

Single Unit Batch

Business Background

- Individual management of materials (Jumbo/Coils) is treated as one unit in all business processes
- Materials are managed in batches where one unit for each batch exists ex: KG / ROLL

Solution

- Batches can be defined as a single unit, controlled by material master definition i.e. batch specific UOM
- Batch characteristics contain information about the value of one piece
- Material batches can be moved as a whole unit during goods movement

Sales Order Amendment

Business Background

- Customer specifications for dimensional product often vary several times before final delivery due to changes in the requirement
- Production personnel need to review the requested changes prior to the final confirmation from the customer

Solution

- The IS Mill solution provides an option to send the planner change version of the sales order
- The planner change version can be used to make changes in the configuration and the saved version can be sent to the person in the production via workflow
- Production person can review if the changes and the data in the original sales order is updated

Customer Information Records

Business Background

- Customer frequently orders similar materials with same characteristic values

Solution

- Transfer characteristic values of the customer-material information record to the configuration of a sales document item
- Results in reduced data entry and lesser chance of mistakes

Non Ferrous (NF) Metals Pricing

Business Background

- Non Ferrous metals are often traded on metal exchanges in various parts of the world where prices fluctuate daily. It is necessary to determine the effect of the price variation in the cost of the finished product

Solution

- IS Mill Non Ferrous pricing supports various rate determinations for NF metals traded on stock/metal exchanges using the condition technique
- The NF metal key identifies a specific NF metal, and the base quantity is assigned to a specific NF metal key
- NF metal rate can be maintained at different levels for different periods
- Rate determination involves the use of modules, routines and key
- Pricing is initiated for document items within the NF metal price determination process

CONCLUSION

SAP S/4HANA IS Mill solution enables organizations to integrate commercial, manufacturing, and financial processes to provide greater visibility into operations, manufacturing and customers. It also addresses the industry specific functionalities like combined orders, mill cut process, original batch, fast data entry, etc. which leads to process improvements with reduced effort and cost. Among the 20+ industry solutions that SAP offers, IS Mill solution has the highest installed base which is more than 50% of all IS solutions deployed worldwide. Higher customer adoption rates are a proof of the immense benefits that an IS Mill solution offers. The fact that IS Mill solutions are now offered as a standard part of S/4HANA opens up the possibility for a much greater adoption across various mill industries.

ABOUT THE AUTHOR

Mohan Madaiah is the Senior SAP Logistics Consultant at ITC Infotech with 20+ years of industry experience, of which 10 years have been in SAP Consulting. At SAP, he contributed in various roles, as a Business Analyst, Senior SAP PP Consultant, Integration Lead, and Functional Consultant in India as well as abroad. In addition to specializing in SAP PP & QM, he has expertise in IS MILL implementation with variant configurations. His cross-functional skills in various SAP modules bring in enormous value to his delivery capability.

About ITC Infotech

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