

Managing Product And Process Records

Chuck Cimalore, CTO, Omnify

How important the need is for PLM in downstream processes?

It is well known that getting a product to market quickly is critical to a company's success. There are many steps involved in this process and manufacturers need to continuously find areas to improve upon in order to meet their product goals. One area that is often overlooked is product test and assembly.

Even automated test and assembly processes can take considerable time and effort to prepare, document, and describe all of the required steps and procedures.

Since many manufacturers rely on outsourced partners for test and assembly, inherent problems such as lack of access to product data, time zone/availability issues, and language barriers can often lead to delays in product release schedules.

Describing and documenting the procedures involved in a product's test and assembly process are often referred to as BOM Routing. BOM Routing allows the manufacturer to split a product Bill of Material (BOM) into a series of operations and sequences to describe how a particular assembly process/step is to be performed and which materials are consumed by each step. Some refer to such descriptions as recipes, since it draws many parallels to the culinary world.

For many manufacturers, routing information is created in Material Requirement Planning (MRP) systems while others will use custom applications or spreadsheets. Many of these legacy systems lack the ability to link the routing data to engineering information such as CAD drawings, behavioral parameters, and vendor specifications/datasheets.

This information is typically stored in a Product Lifecycle Management (PLM) system. Moreover, manufacturers have begun using graphical depictions (photos, images, and drawings) to further describe complex test and assembly procedures and assist with language barrier/translation issues.

The ability to view a picture of a particular procedure along with (or in lieu of) written instructions - a capability not commonly available in MRP/ERP systems - can help eliminate mistakes and ensure a higher level of quality.

Tying BOM Routing to the Product Record with PLM

PLM systems have traditionally focused on engineering and product data management processes. As PLM has evolved, and its functionality has grown to encompass more information management across an organization, there is an obvious fit for PLM to support downstream processes such as BOM Routing. PLM provides a central location to manage all of the information associated to a product,

Managing Product And Process Records

Published on Industrial Maintenance & Plant Operation (<http://www.impomag.com>)

automates processes, and provides tracking capabilities to easily capture and resolve issues. Because PLM manages information electronically, paper-based, error-prone processes can be eliminated.

Typically, the PLM system is where BOMs are created and revisions of the BOMs are managed. The natural evolution is to have the PLM system provide the BOM Routing functionality to define test and assembly operations and sequences in order to link these processes back to engineering data stored within the PLM system.

This can provide test and assembly personnel with the ability to easily view documents, drawings, and pictures directly from the PLM vault. Using PLM as the source for BOM Routing also offers the ability to validate all Engineering Change Orders (ECOs) and new BOM revisions with the routings/work instructions.

Synchronize BOM & Routing Information

Integration between PLM and ERP/MRP is still important to effectively manage routings because cost and timeline information is driven from ERP/MRP systems. Most companies with both PLM and ERP/MRP systems in place have established an integration process, which passes new and updated BOMs and revisions from PLM to ERP/MRP. Passing routing information is a simple extension of that integration and allows both systems to contain synchronized BOM and routing information.

Key Benefits of Managing BOM Routing with PLM technology:

- Link routing information directly to engineering data/product record.
- Provide graphical depictions for accurate assembly.
- Revision-based routing to maintain revision history.
- Automated Change/ECO process to verify/update routing information.
- Electronic workflow approval process.
- Dynamic BOM validation to identify inventory issues.
- Create Corrective Actions dynamically from routing operations.
- Eliminate paper print outs.

For more information visit www.omnifysoft.com [1].

Source URL (retrieved on 04/21/2015 - 10:07am):

<http://www.impomag.com/articles/2011/01/managing-product-and-process-records>

Links:

[1] <http://www.omnifysoft.com/>