HEXAGON
PPM

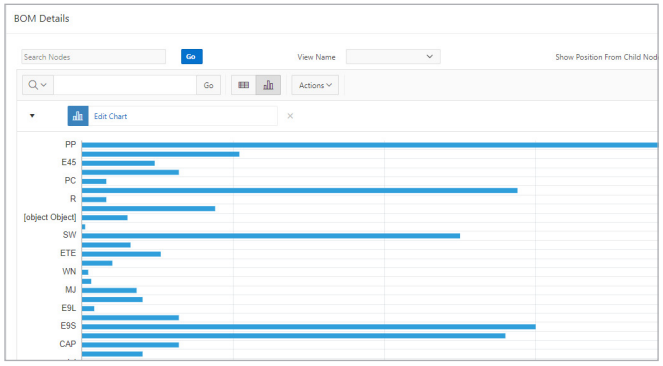
MATERIALS MANAGEMENT MADE EASY

CHANGE MANAGEMENT WITH BOM AND REQUISITIONING

A bill of materials (BOM) is a list of raw materials, components, assemblies, parts, etc., and its related quantities to produce a product. BOM alone is not enough to lead into quantification for Purchase Orders (PO). This requires Purchase Requisitions (PR) as well. Purchase Requisitions are generally created by engineering department, based on BOM to notify the purchasing department about the required material. The purchase requisition must go through several hands to ensure its accuracy as per project requirement.

BOM is subjected to many changes throughout the project lifecycle. These changes can be due to design modifications – increase or decrease in quantity, change of material, obsolete parts, etc. So, it is common to have more than one Engineering BOM for a product, as the design undergoes a series of revisions. Similarly, a PR can undergo changes before and after the corresponding PO is placed. Content of the PR may change because of change in material quantity, documentation attachments or material attribute information.

It is essential for a material management system to handle such changes in the BOM, PR, etc., during the project execution.



Improper management, like ordering excess material or ordering wrong material based on out-of-date BOM, may lead to the failure of projects and impact the project costs. These changes must be properly handled using an effective material management system.

A large amount of the overall project cost are spent on procurement. So, even small cost reductions can have a huge impact. The modern business environment has grown increasingly competitive and much hype has been placed on procurement management to achieve a competitive edge.

Procurement of materials represent a major expense in construction. So, reducing procurement costs presents important opportunities for reducing overall project expenditure. Therefore, material management is an important element in project planning and control. Poor materials management can result in large and unavoidable costs during construction. Having a material management system is not good enough to sustain in the competitive business. It needs to have proper change management practices in place to:

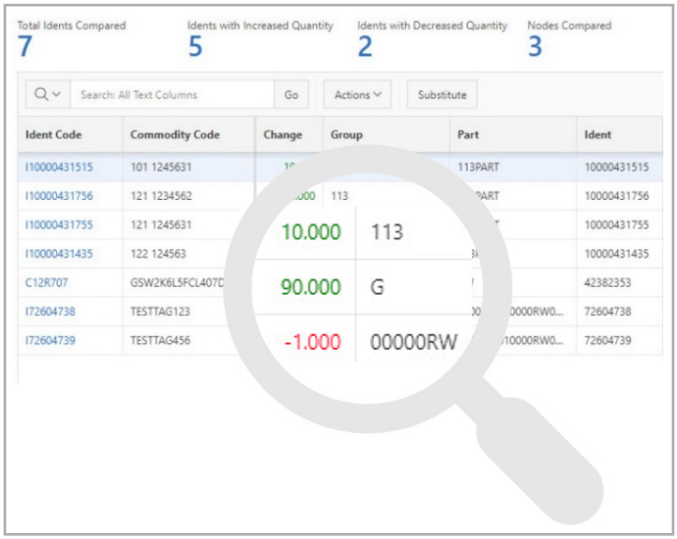
- Take care of different changes between the revisions of Bill of Material
- Handle the multiple supplements of the same Purchase Requisition
- Work in integrated environment where multiple Enterprise Resource Planning (ERP) systems are involved

Having a good material management system that handles changes in BOM via requisitions, and in this way turns dynamic engineering information into stable data usable for procurement department, is a competitive advantage.

How Smart Materials helps organizations effectively handle changes:

In large-scale projects, there is a need to design and engineer thousands of items. After the initial design phase is complete, procurement of the items follows. To mitigate risk of a traditional material management system and to increase effectiveness and accurate management of changes in large scale projects there is a huge challenge for any material management system to handle such changes during the subsequent phases of design. It is always suggestable to the organizations to move to an intelligent "Smart" and effective material management system such as Hexagon PPM's Intergraph Smart® Materials. Smart Materials provides features like maintaining different revisions of BOM and ability to track and visualize changes between revisions to indicate the change in quantity, material, etc.

Smart Materials offers automatic requisition creation jobs that creates requisitions based on the BOM. These requisition jobs take care of changes in BOM – quantities in the previous supplements of requisition, changes in the requisition attached documents, etc. Rule-driven mechanisms in the system allow planning for contingency, surplus quantity, shortage quantity, adding additional line items, etc., and automatically creates requisitions whenever the requisition creation job is executed.



Smart Materials provides options for engineering and procurement teams to stay up-to-date on the quantity changes. For example – the engineering team is aware of all changes in quantity of a Purchase Order to be considered for the next revision of a Purchase Requisition.

Smart Materials provides integration with other ERP systems. For example, if changes are happening in BOM/Purchase Requisition, SAP is automatically notified by Smart Materials. This ensures that all the material changes are tracked in the entire ecosystem of an organization.

ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.