JD Edwards EnterpriseOne Manufacturing – Lean Execution

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Global competition, pressure to increase margins with downward price pressures, and higher material and labor costs require you to maximize productivity across your plants. Lean principles define tools and processes that help manufacturers operate their plants more efficiently with less waste and increased flexibility. With JD Edwards EnterpriseOne Lean Execution, you simplify your data entry by recording completions, issuing material, and reporting labor.

KEY FEATURES

- End item and related subassemblies completed through a single user request
- Multilevel super backflush includes material and labor reporting for all levels of components
- Tracks variances through standard costing
- "Pull" production versus "push" production
- Integrated mixed-mode flow manufacturing
- No work order required
- Define demand based on item number or sales order
- Plan production based on item number or sales order
- Ease of ECO adaption on production line
- Integration with JD Edwards EnterpriseOne Demand Flow Manufacturing (DFM)

The Issue: Eliminating Waste on Your Shop Floor

Your goal is to make your shop floor more productive to meet growing and diverse customer demand by implementing lean practices. Your solution starts with elimination of multiple data entry but you still need to know how much material is issued, how labor is reported, and details about end items completed.

The Solution: Lean Execution Tied to a Multilevel Backflush Engine

JD Edwards EnterpriseOne Lean Execution provides a simple user interface to a multilevel backflush engine. This software module provides end item and related sub-assemblies completion through a single user request. It eliminates maintenance burden (waste) associated with work orders because there are no work orders—you set up a pull environment based on customer demand.

Implementing Lean Principles Without Disrupting Your Plant

When you implement lean practices, you often want to start slow because you cannot disrupt your entire plant. JD Edwards EnterpriseOne Manufacturing lets you run your plant per your requirements because JD Edwards EnterpriseOne supports mixed-mode manufacturing. This lets you implement lean practices one manufacturing line or even one feeder line at a time.

You might also want your manufacturing software to plan lower level demand or use work orders for subassemblies. With JD Edwards EnterpriseOne Lean Execution's multilevel backflush capability, you determine the backflush level that is needed to run your manufacturing floor efficiently.

Planning Your Daily Production Line Using Lean Execution

The JD Edwards EnterpriseOne Lean Execution module includes a daily planning tool that:

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- Material and labor reporting for all levels of components with multilevel backflushing
- Based on "pull" production and not "push" production
- Native to JD Edwards EnterpriseOne Manufacturing Management modules

- Adds sales order demand or finished goods order demand to your plan
- Sets the quantity needed and the lot or location for each line of demand

After setting these parameters, you start your line for the day. When your line is running and the product is produced, your line operator records the quantity of each item when completed, whether you finish items one at a time or in batch quantity. JD Edwards EnterpriseOne then backflushes all material and labor for completion through lower level subassemblies.

Demand Flow Manufacturing Integrated with Your ERP System

Do you want to design your line using industry standards? JD Edwards EnterpriseOne Lean Execution is seamlessly integrated with JD Edwards EnterpriseOne Demand Flow Manufacturing—the only enterprise software that delivers pull-based flow manufacturing solutions developed with industry thought leader DemandPoint (formerly JCIT International—the organization that literally wrote the book on flow manufacturing). With JD Edwards EnterpriseOne Demand Flow Manufacturing:

- Drive demand on the shop floor from sales orders.
- Define daily production plans and sequences by loading demand from sales orders per recommended start dates.
- Recommended start dates are calculated based on shipment preparation times, total product cycle time,
- Automatically load all demand recommended for build each day (or other designated time period) or select individual orders ad hoc.
- Spread the load over multiple dates when production quantities are displayed on your planning screen.
- Generate a build sequence based on:
  - Full quantities for each order
  - Minimum or maximum quantities that flow down the line together, or quantity you define per your capacity
- Manipulate for order priorities and product characteristics as needed. Four different user-defined codes (UDC) help refine production sequencing.

Record completions against your DFM plan using JD Edwards EnterpriseOne Lean Execution. Item completions are seamlessly integrated with the DFM daily plan. It performs all backflush functionality and updates the DFM plan with completed quantities.

Ad Hoc Completions

If you do not need a production plan or you use another tool to generate your production plan, you still report what was completed with ad hoc completions in JD Edwards EnterpriseOne Lean Execution. This interface uses the same backflush engine to let the operator enter quantities of end items that are completed on the line without using a production plan.

Exploding BOMs and Routings with the Backflush Engine

Whether you are completing to a DFM daily plan, a shop floor daily plan, or recording completions using ad hoc completions, you use the JD Edwards EnterpriseOne backflush engine. The backflush engine explodes BOMs and routings to the level you

define and record material issued, labor used, and end items completed. It also performs standard costing processing for all levels. You then review all transactions recorded for each level individually and cancel transactions in case of input error. The backflush engine enables you to define the level and the timing of explosions.

Consider these three scenarios:

- Small BOMs and routings changing daily

  Run item completions to perform the multilevel explosion for each completion.

- Large BOMs and routings remain steady over time but require too much processing time for each completion to explode

  Multilevel explosion of the BOM and routing can be created in advance and each completion uses the pre-generated information.

- ECO introduced to the line

  Flag the item that is using the new BOM. When that item is completed, run item completions to explode your BOM to create your new production data. All sequential completions then use the new information.

Solution Integration

This module is designed to be integrated with the following JD Edwards EnterpriseOne products and suites across your operations using common tools and a Pure Internet Architecture:

- JD Edwards EnterpriseOne Manufacturing
  - Demand Flow Manufacturing
  - Manufacturing—PDM
  - Quality Management
- JD Edwards EnterpriseOne Financial Management
- JD Edwards EnterpriseOne Order Management
- JD Edwards EnterpriseOne Supply Chain Execution (Logistics)
- JD Edwards EnterpriseOne Supply Management (Procurement)

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