Manufacturing Accounting Overview

Overview

The purpose of Manufacturing Accounting in an average cost environment is to collect costs reported against a work order, store these costs in WIP, and then update the cost in inventory on the finished goods when a work order is completed.

NIS Policies

The tasks in this documentation provide end users with the tools to enter data and collect data in NIS. It is the responsibility of the agencies to comply with State Statutes, Federal Rules and Regulations, and State policies. For further information concerning State Statutes and policies, please refer to both internal agency resources and the Department of Administrative Services website: http://www.das.state.ne.us/.

Navigation

Definitions

Attaching a Work Order – Using the Work Order Generation program to attach BOM's and Routings from Product Data Management (PDM) module. Also create purchase orders for outside operations if indicated on the routings.

Back-Flush – A process that relieves the inventory for items on a work order parts list at the time the work order is completed. The parts list must have an issue code of 'B' on the items to be back-flushed. Creates an IM Transaction.

Bill of Material (BOM) – A list of information in the Product Data Management module regarding the children that goes into one parent item. The BOM can be copied to a work order parts list during work order generation.

Child Items or Children – the items that are on a work order parts list used to make a parent item.

Discrete Manufacturing – A production process where a single item is created by several items.

Work Order Material Issues – Manually relieving inventory to a work order. Creates an IM transaction.

Outside Operations – A setup in the Routings that allow for a purchase order to be generated for an operation or service that is performed by a vendor. This could include things such as paining, powder coating, plating, etc. The system will create a dummy item the first time this is needed in the format *PARENT**OP*xx* where the *PARENT* = the parent item on the routing and the *xx* = the operation sequence that requires the outside process. The cost of the purchase order gets charged to the work order

Parent Item – the item on a work order that is being produced. Also called Finished Good or Sub-Assembly

Parts List – See Work Order Parts List

Pre-Flush – A process that relieves inventory for items on a work order parts list at the time the work order is generated or released. The parts list must have an issue code of 'P' on the items to be pre-flushed. Creates an IM Transaction

Product Data Management (PDM) – The NIS module where bills of materials and routers are stored.

Releasing a work order – Using the Work Order Generation program to print the shop packet and Pre-Flush material if indicated.

Routings – A list of information in the Product Data Management on how to make one parent item including standard hours. The Routing can be copied to the work order routing instructions during work order generation.

Routing Instructions – See Work Order Routing Instructions

Shop Floor Management – The module in NIS used to create and transact work orders.

Shop Packet – The work orders printed document with header, parts list, and routing instructions.

Work Order – In a discrete environment, this is the document the shop uses to produce an item (called the Patent Item or Finished Good). It is composed of a header, a parts list, and routing instructions.

Work Order Generation – The R31410 program that can:

1. Copy the BOM to the work order parts list.

2. Copy the Routings to the work order routing instructions.

3. Print the Shop Packet

4. Pre-Flush Material, per setup.

5. Create Outside Operations purchase order.

Sometimes 1, 2 and 5 are done first (called attaching the work order) and steps 3 & 4 are performed at a later time (called releasing a work order).

Work Order Header – This is the beginning point for all work orders. It contains the parent item, how many, the branch / plant where it will be built, and when the work order will be started and finished.

Work Order Parts List – this is attached to a work order header and lists information regarding the children used to make the parent item on the work order.

Work Order Routing Instructions – this is attached to a work order header and lists the information regarding how to make the product and how much time it should take (standard hours).

Generate Manufacturing Accounting JE Programs

There are two programs which create the un-posted batches for manufacturing accounting: Manufacturing Accounting Journal Entries (R31802A) and Variance Journal Entries (R31804).

The Manufacturing Accounting Journal Entries (R31802A) program usually comes in two versions: WIP Journal Entries (ran on open work orders, status is not changed) and Completions Journal Entries (ran on completed work orders at status 95). The Completions Journal Entries further has two versions: a Proof

Mode and a Final Mode.   The Proof Mode will give you a report on what the journal entries would be without creating the un-posted batch and it moves the status to 96. The Final Mode version creates the un-posted batch and moves the status to 97.

NOTE: You can bypass the Proof Mode and run in Final Mode. This will create the un-posted batch and move the work order from 95 to 97 skipping 96.

The Variance Journal Entries (R31804) usually has two versions: a Proof Mode and a Final Mode. In the event that the WIP fields have any value left (which should be rare) this file will clear WIP, add it to inventory, and create a new average cost for the finished good. The Proof Mode version will give you a report on what the journal entries would be without creating an un-posted batch and it moves the status of the work order to 98. Final Mode will create the un-posted batch and move the status of the work order to 99.

PROGRAM	VERSION	WO STS
Mfg Acct'g Journal Entries (R31802A)	WIP Journal Entries	No Change
	Completions Journal Entries - Proof	Move to 96
	Completions Journal Entries - Final	Move to 97
Variance Journal Entries (R31804)	Variance Journal Entries - Proof	Move to 98
	Variance Journal Entries - Final	Move to 99

It appears that the system **will not** let you move an item (IT transfer or transfer order) until you have completed manufacturing accounting.

A '0' (zero) batch type is created for all Manufacturing Accounting entries.

DOCUMENT TYPES

All transactions in JD Edwards are associated with a two letter document type. See WO Transaction for more information on Manufacturing Accounting Document Types.

WO TRANSACTIONS

The following is a table of work order transactions and their documents types:

TRANSACTION	DOC TYPE	DESCRIPTION
Issue raw materials to a work order	IM	Work Order Material Issue Pre-Flush Back-Flush Super Back-flush
Enter & update hours to a work order	IH	Work Order Labor/OH

Complete a work order to stock	IC	Work Order Completion
Scrap finished good on a work order	IS	Work Order Scrap
Process a WIP variance	IC	Work Order Variance

IM and IC document types create a record in the Item Ledger (Cardex) and adjust the on-hand balance immediately to properly update inventory.

An IS record is created in the Item Ledger (Cardex) for information only and has no effect on inventory. This properly distributes the cost among the units completed and units scrap as so not to over-cost an item.

When the un-posted batches get created, the IM, IC, and IS document type records will be updated with the batch number.

In an Average Cost environment, an IB or Cost Change transaction may occur whenever the unit cost needs to be adjusted, at work order completion or if there is a WIP variance. In addition to the cost changing, the IB record is inserted in the Item Ledger (Cardex) with a dollar effect only and 'N' batch type (Inventory) is created.

WORK ORDER TRANSACTIONS

When the following transactions are processed, here is was the system does:

Manual Issue:

Manual issue raw material to a work order (Work Order Inventory Issue P31113):

✎ For items with an Issue Code of 'I' on the work order parts list only.
1. Adds IM records to the Item Ledger (Cardex)
2. Updates the Primary Quantity On Hand in the Item Balance file. (Detailed Item Availability Inquiry)
3. Updates the Unaccounted For Units and the Quantity Issued on the Parts List. (NOTE: Unaccounted For Units are not displayed on any screens.)

Pre-Flush Components:

Pre-flush raw materials to a work order (Pre-flush version R31410):

✎ On the items with an Issue Code of 'P' on the work order parts list only.
1. Does the same as manual issue but defaults the Quantity Issued with the Quantity Required.

Manually Enter Hours:

Manually enter hours against a work order: (Hours and Quantities P311221)
1. Adds records to the Hours and Quantities file with the Processed Flag set to no.

Update Hours:

Update hours entered against a work order (Hours and Quantities Update R31422):

1. Updates the Unaccounted For Units and the Actual Hours in the Work Order Routing file
2. Updates the Processed Flag in the Hours and Quantities file with a yes.

Standard Work Order Completion:

Complete a work order to stock – Standard (Work Order Completions without Backflush P31114):

1. Adds IC record to the Item Ledger (Cardex)
2. Creates new location and a new lot number in Item Location file and Lot Master.
3. Adds a cost record to the Item Cost file.
4. Updates the Unaccounted For Units and Quantity Completed in the Work Order file.

Work Order Completion with Back-flush:

Complete a work order to stock – Back-flush (Work Order Completions with Backflush P31114)

For items with an issue code of 'B' on the work order parts list.

1. Does the same as manual issue but defaults the Quantity Issued with the Quantity Required automatically.
2. Does the same as Standard Work Order Completion.

Work Order Completion with Super Back-flush:

Complete a work order to stock – Super Back-Flush (Super Backflush)

For items with an issue code of 'U' in the work order parts list with the matching operation with a pay point of 'B' (both labor and material),'L' (labor only), or 'M' (material only) in the work order routing instrictions.

1. Does the same as back-flush if the pay point code is a 'B' or 'M'
2. Does the same as manually enter hours if the pay point is a 'B' or and 'L'. The Actual Hours are defaulted with the Standard Hours in the Work Order Routing Instructions automatically.
3. Does the same as the Standard Work Order Completions.

MANUFACTURING ACCOUNTING PROCESSING

During a work day, work order transactions will be entered by the shops. With IM and IC transactions, the system stores the values in fields called Unaccounted For Units on the parts list and the work order files respectively.

Run Hours and Quantities Update

For entered IH transactions, you need to run the Hours and Quantity Update (R31422). This program copies the entered hours to the Unaccounted For Units in the WO Router and marks the records in the Hours and Quantity table as processed.

Run WIP Journal Entries

Run the WIP Journal Entries (R31802A) on all work orders with a status of less than 95. This program will:

1. Creates a '0' batch type
2. Creates two records for each transaction (IM, IC, IH, or IS), debit and credit (NOTE: Processing option is set to detail journal entry)
3. Creates actual cost entries in the Production Cost Table.
4. Clears the Unaccounted For Units.
5. For IM's: Updates the IM records in the Item Ledger (Cardex) with the batch number
6. For any IC's: Updates the IC record to Item Ledger (Cardex) with the batch number.
7. Adds records to the Work Order Cross Reference File (NOTE: The document number in the Item Ledger (Cardex) is always the work order number. The document number in the account ledger is different. This Work Order Cross Reference table links the records together).

Run Completions Journal Entries – Proof (Optional)

Run the Completions Journal Entries – Proof (R31802A) on work orders at status 95 only. This program will give you a report of what journal entries will be created when ran in Final Mode. This will move the status of the work order from 95 to 96.

Run Completions Journal Entries – Final

Run the Completions Journal Entries – Final (R31802A) on work orders that are at 95 or 96. This program will:

1. Everything listed in WIP Journal Entries above
2. Move the status of the Work Order to 97.

Run Manufacturing Journal Entries Variance – Proof (Optional)

Run the Manufacturing Journal Entries Variances – Proof (R31804) on work orders that are at status 97. This program will give you a report of what journal entries will be created when ran in Final Mode. This will move the status of the work order from 97 to 98.

Run Manufacturing Journal Entries – Final

Run the Manufacturing Journal Entries Variance – Final (R31804) on work orders that are at status 97 or 98. This program will:

1. Determine from the Production Cost Table if there is a difference between the Actual and Completed amounts.
2. If 1 is true, creates an IC transaction to correct WIP and Inventory.
3. Moves Work Order status to 99.