

Manufacturing Accounting Additional Notes

Overview

This document provides additional notes for those responsible for executing the manufacturing accounting function.

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/>.

Definitions

Unaccounted For Units – Fields that hold the data created by the four work order transactions (Material Issue, Hours, Completions, and Outside Operations) that are used to create the Non-Posted Journal Entries.

Non-Posted Journal Entries – When running the WIP JE or Completions JE, the system looks for unaccounted for units and creates the required journal entries using the Distribution and Manufacturing Automatic Accounting Instructions (DMAAI) tables. The Clear WIP JE program looks for a variance between the actual cost that was accumulated on a work order and compares it to the completed cost at the time the work order was completed. Even though these values are the same, they may be different at times. The system tries to update the cost of the item completed to inventory but if the item has been moved, the cost will go to a variance account.

Cost Components – The cost of an item is the sum of the cost components. The system keeps track of the following components at CSI:

Cost Comp	Description
A1	Material Cost
A2	Material Scrap Cost
B1	Direct Labor (Hours x Direct Labor Rate from WC)
B2	Setup Labor (Hours x Setup Labor Rate from WC)
B3	Machine Run (Hours x Machine Rate from WC)
C2	Machine Fixed Overhead (Hours x Machine Fixed O/H Rate from WC)
C4	Labor Fixed Overhead (Hours x Labor Fixed O/H Rate from WC)
D1	Outside Operation Cost (Price of Purchase Order at the time of Receipt.)

Actual Cost – The system keeps track of the cost of a work order during the time it is being worked on. The values of each cost component can be seen on the Production Cost Inquiry as the Non-Posted Journal Entries get created.

Completed Cost – The cost of the finished good item at the time the work order is completed. This should always be equal to the actual cost at that moment. The value of each cost component can be seen on the Production Cost Inquires after the Completions JE has been executed.

Cost Accounting – The branch of accounting that deals with tracking, recording, and analyzing costs associated with products being sold by an organization, especially manufacturing companies.

Material Cost - The cost of the direct raw materials or sub-assemblies used to make a finished good. Indirect materials (like glue, tape, or screws are usually of small amount and cost) are part on overhead not material cost.

Direct Labor Cost – The cost associated with a worker who physically works on a specific work order. Usually salary plus benefits expressed as an hourly rate. Direct Labor does not include breaks, setup, or clean-up time. Direct Labor does not include salaries for managers, clerks, or supervisors which are included in overhead.

Setup Labor Cost – Usually the number of hours needed to setup a machine times the setup labor rate.

Outside Operation Cost – The system provides a method that allows work orders to generate attached purchase orders. When these purchase orders are received, the amount that represents the cost of a service performed by someone outside of CSI, is applied to the work order as an outside operation cost and gets added to the total cost of the finished good.

Overhead Costs – All shop expenses other than Material, Direct Labor, Setup, or Outside Operations. Expressed as an hourly rate per direct labor hours. This is calculated by taking the average overhead expenses on a shop and dividing it by the average direct labor hours.

Absorption – The cost accounting concept that states that the shop expenses are being absorbed into inventory. This is similar to capitalizing an asset. By comparing a shop's absorption to their overhead and direct labor expenses, one can determine whether or not the overhead rate needs to be adjusted and thus also changing the cost of future finished goods. The Absorption Report will show the Direct Labor and Overhead of a shop at the top and all the expenses associated with direct labor and overhead at the bottom. The difference between these two should be zero. An adjustment should be made to Cost of Good Sold in each period to bring this value to zero. A favorable variance will cause the Cost of Good Sold to go down and an unfavorable variance will cause it to go up.

 The Direct Labor is included in the Absorption Report with the Overhead because the Salary Expenses for the workers contain both Direct and Overhead (or Indirect) Labor.

ANALYSIS PROCESS

One of the purposes of cost accounting is to be able to analyze cost. There are two tools used to analyze cost, the Absorption Report and the Production Cost Inquiry.

Absorption Report

The Absorption Report can be used to determine if the Overhead Rates are too high or too low. Normally a shop will get a mix of favorable and unfavorable variances which one hopes will net out to near zero. If any of the following occurs, and adjustment to the Overhead Rate is needed.

1. Shop Always Unfavorable or Nets to Unfavorable – The Overhead Rate is too low
2. Shop Always Favorable or Nets to Favorable – The Overhead Rate is too high.

One must always take into consideration certain factors that could also influence the overhead rate such as expansion of shop, more workers, more clerks, and more work orders. These all imply that you should raise the overhead rate. On the other hand, less work for a shop or fewer workers implies the overhead rate should be reduced.

Production Cost Inquiry

The Production Cost Inquiry will display the costs associated with a work order. The Actual Cost buckets are populated as the work order is being work on and transactions are processed. The Completed Cost buckets are populated when the work order has been completed and the WIP JE or Completions JE is executed. The screen shows the costs associated with both the Components and the Parent (finished good). This screen can be used to go back and analyze the cost of a work order or monitor a current work order to see how its total cost is coming along.

The screenshot shows the 'Production Cost Inquiry - Production Cost Inquiry' window. It includes a menu bar (Find, Close, Form, View, Tools) and tabs for Selection Criteria, Display, and Columns. The Selection Criteria section contains the following fields:

- Order Number: 5196 (WO) FRAME, STUDENT DESK, FLAT
- Quantity: 2.0000 (EA) EACH
- Quantity Shipped: 2.0000
- Inventory Number: 42521-R-CP-706 (FRAME, STUDENT DESK, FLAT)

Below the criteria is a 'Records 1 - 5' section with a 'Customize Grid' button. The grid displays the following data:

Cost Type	Cost Type Description	Work Center	Work Center Description	Actual Amount	Completed Amount	Variance Amount
<input checked="" type="radio"/> A1	MATERIAL			59.0100	59.0100	
<input type="radio"/> A2	SCRAP					
<input type="radio"/> B1	DIRECT LABOR			4.5600	4.5600	
<input type="radio"/> C4	LABOR FIXED OVEF			50.9400	50.9400	
			TOTAL	114.5100	114.5100	

Parent Display for a completed work order

Production Cost Inquiry - Production Cost Inquiry

Find Close Form View Tools

Selection Criteria **Display** Columns

Parent
 Component
 CoBy

Display Columns

Amounts
 Units
 Variance

Completed Total

Include Scrap
 Don't Include Scrap

Records 1 - 11 Customize Grid

	Inventory Number	Item Number Description	Actual Amount	Completed Amount	Variance Amount	Short Item No
<input checked="" type="radio"/>	57066-S-ST-536	STEEL ROD, 3/16"	13.2000		13.2000	5199
		SUBTOTAL	13.2000		13.2000	
<input type="radio"/>	57072-700461	STEEL SHEET, 11 GA	1.2900		1.2900	5203
		SUBTOTAL	1.2900		1.2900	
<input type="radio"/>	57090-395807	STEEL TUBING, RND, 3/4X16	15.3500		15.3500	5203
		SUBTOTAL	15.3500		15.3500	
<input type="radio"/>	57090-395955	STEEL TUBING, RND, 1X16 G	26.1400		26.1400	5203
		SUBTOTAL	26.1400		26.1400	
<input type="radio"/>	57090-397407	STEEL TUBING SQ 1X16GA	3.0300		3.0300	5203

Component Display

 The total on the Component Display equals the A1 on the Parent Display