Manufacturing Cost Control

Eight (8) cost elements can be maintained using either a standard cost method or moving average cost method. The method is set at the ‘division level’ which means that in a multi-division installation, a company could have ‘standard costs’ in one division and ‘moving average costs’ in another division. Another item of note is that in a standard cost system these costs are maintained at an item level and in an moving average cost system these costs are ‘averaged’ at an item-project level.

Cost Elements

Up to eight cost elements can be tracked in inventory, work in process and finished goods. These cost elements are as follows:

1. Material Cost - This is the purchased cost. In a standard cost environment, this is set as the standard material unit cost on the cost master file. In an average cost situation, this is a rolling moving average whereby the purchase receipt’s purchase price will be ‘averaged’ with the inventory’s current material cost.

2. Material Overhead Cost - This is the material burden which is calculated using a ‘Material Overhead Rate’ designated at the division level and applied to the material cost (or subcontract material cost) at the time of purchase order receipt. This rate is used in either a standard or moving average cost environment.

3. Direct Labor Cost - In a moving average cost environment, this is the labor cost associated with the hours charged multiplied by a labor grade rate associated with the employee that is booking the labor at a work order operation. In a standard cost environment, this is derived in a ‘standard cost’ calculation accumulating all of the item’s routing operations’ hour standards multiplied by a standard rate for the labor grade expected to perform the operation.

4. Direct Labor Overhead Cost - There is a Direct Labor Overhead Rate associated with each Department and the Department is noted on each operation of the routing where appropriate. In an moving average cost environment, actual machine hours are extended by the Machine Overhead Rate providing this Machine Overhead Cost. In a standard cost environment, when calculating the cost standard using the standard routing, this same rate is applied to the standard machine hours at each operation.

5. Fringe Labor Overhead Cost - Similar to a Direct Labor Overhead Rate associated with each Department there is also a Fringe Labor Overhead Rate. Given the rising cost of Fringe (medical and taxes for example) it is often desirable to separate this cost out from Direct Labor Overhead. This is calculated in the same manner as the Direct Labor Overhead.

6. Machine Overhead Cost - There is a Machine Overhead Rate associated with each machine and the machine can be specified on each operation of the routing where appropriate. In an moving average cost environment, actual machine hours are extended by the Machine Overhead Rate providing this Machine Overhead Cost. In a standard cost environment, when calculating the cost standard using the standard routing, this same rate is applied to the standard machine hours at each operation.

7. Subcontract Material Cost - This is the value added cost of the vendor for their manufacturing/assembly work associated with a subcontract purchase order. In a standard cost environment, this is set as the standard subcontract material unit cost on the cost master file. In an average cost situation, this is a rolling moving average whereby the purchase receipt’s purchase price will be ‘averaged’ with the inventory’s current subcontract material cost.

8. Subcontract Labor Cost - This is the value added cost of the vendor for their manufacturing/assembly work associated with an ‘outside operation’ of a work order. In a standard cost environment, this is set as the standard subcontract labor unit cost on the cost master file. In an average cost situation, this is a rolling moving average whereby the purchase receipt’s purchase price will be ‘averaged’ with the work orders’ subcontract labor cost.
Cost Rollups and Standards Revaluation in a Standard Cost Environment

Standard costs for purchased and subcontract items are maintained by the user on the item standard cost master file. The standard costs for labor and overhead are calculated by Rootstock using the bill of materials and routing for each item using the cost rollup process.

Variance Calculations in a Standard Cost Environment

In a standard cost environment, the costs on the item (or item-project) master files are maintained at standard. Standard cost variance calculations are done as follows on the following transactions:

• Purchase Receipt - The difference between the purchase order price and the standard material cost (or subcontract material cost) will be calculated (and extended by the quantity) and will debit/credit a PPV (purchase price variance) account.

• Work Order Close - The sum of actual component material charges (as determined at work order issuance) and the sum of all labor and associated overhead, machine overhead, and subcontract labor at actual are maintained on the work order. At work order close the difference between the work order receipts and scrap – at standard are compared to these moving average costs and there will be a debit/credit to a Work Order Variance WIP account as appropriate.

• Standards Redefinition - Whenever an item standard is redefined, all stock inventory and all WIP (work order) inventory is revalued at the new standard and a 'standards variance recalculation' account is appropriately debited/credited.

Rootstock’s Manufacturing Accounts

Rootstock Manufacturing Cost Control maintains its own chart of manufacturing accounts which are then individually mapped to the General Ledger account. This permits the user to capture costs at one level of detail in manufacturing (e.g. multiple variance accounts), and then post these accounts to the same General Ledger account. The format of the costs to be posted to General Ledger is in the cumulative cost format and the eight cost components (whether in a standard or moving average cost environment) are 'unitized' as one cost for General Ledger purposes.
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