

# Process Costing

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# Process Costing

- Process costing works with departments manufacturing homogenous products.
  - Milk,
  - Breakfast cereal,
  - Lunch meats,
  - Soups,
  - House paints,
- and many more items fit into this category of homogenous products.

# Process Costing

- Process costing moves products from one department to another.
- Departments may each apply their own overhead amounts based on their own drivers and rates.
- Departments do not necessarily transfer all of their values out.

# Process Costing

- This company has three departments – Mixing, Baking, and Packaging.
- It applies FOH / MOH in the Mixing Department based on direct labor hours.
- It applies FOH / MOH in the Baking Department based on machine hours.
- It applies FOH / MOH in the Packaging Department based on machine cycles.

# Process Costing

- The journal entries for the purchase of raw materials are typical and not shown here other than this example.

01/01/15	Raw Materials	475.00	
	Accounts Payable		475.00
To record the purchase of raw materials on account			

# Process Costing

- The journal entries for process costing move values into the Work-in-Process account.
- In these two journal entries we are moving raw materials and direct labor into the WIP account.

01/01/15	WIP - Mixing Department	250.00	
	Raw Materials		250.00
Transferred raw materials to WIP - Mixing Department			
01/02/15	WIP - Mixing Department	475.00	
	Wages Payable		475.00
To record direct labor to WIP - Mixing Department			

# Process Costing

- In this non-conventional journal entry we are creating the FOH / MOH account.
- I have text lines to explain each addition.

01/03/15	Manufacturing Overhead	1,075.00	
	Wages Payable		130.00
To record wages earned by indirect labor			
	Accumulated Depreciation - Equipment		745.00
To record depreciation on mfg. equipment			
	Raw Materials		75.00
To record raw materials used by maintenance			
	Prepaid Insurance		125.00
To record the expiration of insurance on factory assets			

# Process Costing

- FOH / MOH is addressed in greater detail elsewhere.
- Here it an example of the computation of the rate and applied amount for the Mixing Department in this example.

Computation of FOH / MOH rate and applied amount for WIP - Mixing Department	
Estimated total FOH / MOH costs for the fiscal period:	\$4,500.00
Estimated total number of direct labor hours for the fiscal period:	35.00
Calculated rate per direct labor hour:	\$128.57
Number of direct labor hours for this production run:	6.75
Direct labor hour driver rate:	\$128.57
Amount of FOH / MOH to be applied to this production run:	\$867.86



# Process Costing

- With this journal entry FOH / MOH is applied to the WIP account of the Mixing Department .
- This value is based solely on the driver and rate for the Mixing Department .

01/04/15	WIP - Mixing Department	867.86	
	Manufacturing Overhead		867.86
To record FOH / MOH on production			

# Process Costing

- The value of material transferred out to other departments parallels the logic of FOH / MOH.

Estimated total production costs for the fiscal period:	\$82,500.00
Estimated total number of production for the fiscal period:	76,250.00
Calculated value per production unit:	\$1.08
Number of units for this production run:	1,315.00
Calculated value per production unit:	\$1.08
Amount of production value transferred out:	\$1,422.79

# Process Costing

- With the computation of the value of materials to be transferred the journal entry looks like this.

01/05/15	WIP - Baking Department	1,422.79	
	WIP - Mixing Department		1,422.79
Transferred materials from WIP - Mixing Dept. to WIP - Baking Dept.			

# Process Costing

- As a result of these journal entries the WIP – Mixing Department account looks like this.

General Ledger Account					
WIP - Mixing Department				Balance:	170.07
Date:	Memo:	Amount:	Date:	Memo:	Amount:
01/01/15	Direct materials	250.00	01/04/15	Xfer to baking	1,422.79
01/02/15	Direct labor	475.00			
01/04/15	FOH / MOH	867.86			

# Process Costing

- There is no requirement to zeroize the general ledger account with each transfer of materials.
- The value of materials available to transfer out may be less than the value of material in the account.

# Process Costing

- As a receiving department, the Baking Department has several choices.
  - It can add other materials to the received materials,
  - It can remove (drill a hole?) from the materials received from other departments.
  - It may not add or remove any material, it may simply reform the received materials.
- It must add two items – Direct Labor and FOH / MOH.

# Process Costing

- With these journal entries the Baking Department is adding both materials and direct labor the received goods.

01/06/15	WIP - Baking Department	35.00	
	Raw Materials		35.00
Transferred raw materials to WIP - Baking Department			
01/07/15	WIP - Baking Department	225.00	
	Wages Payable		225.00
To record direct labor WIP - Baking Department			

# Process Costing

- Each department can compute its own overhead.
- Here is an example of FOH / MOH values for the Baking Department.

01/08/15	Manufacturing Overhead	230.00	
	Wages Payable		95.00
To record wages earned by indirect labor			
	Accumulated Depreciation - Equipment		55.00
To record depreciation on mfg. equipment			
	Raw Materials		15.00
To record raw materials used by maintenance			
	Prepaid Insurance		65.00
To record the expiration of insurance on factory assets			



# Process Costing

- Here is an example of the computation of the rate based on drivers and the application of FOH / MOH for the Baking Department.

Computation of FOH / MOH rate and applied amount for WIP - Baking Department			
Estimated total FOH / MOH costs for the fiscal period:		\$3,725.00	
Estimated total number of machine hours for the fiscal period:		28.00	
Calculated rate per machine hour:		\$133.04	
Number of machine hours for this production run:		1.75	
Machine hour driver rate:		\$133.04	
Amount of FOH / MOH to be applied to this production run:		\$232.81	
01/09/15	WIP - Baking Department	232.81	
	Manufacturing Overhead		232.81
To record FOH / MOH on production			

# Process Costing

- Using the same logic as FOH / MOH, here is the computation and the journal entry of the value transferred from Baking to Packaging.

Estimated total production costs for the fiscal period:		\$111,235.00
Estimated total number of production for the fiscal period:		76,025.00
Calculated value per production unit:		\$1.46
Number of units for this production run:		1,285.00
Calculated value per production unit:		\$1.46
Amount of production value transferred out:		\$1,880.13
01/10/15	WIP - Packaging Department	1,880.13
	WIP - Baking Department	1,880.13
Transferred materials from WIP -Baking Dept. to WIP - Packaging Dept.		

# Process Costing

- With these journal entries the Baking Department general ledger account looks like this.

General Ledger Account					
WIP - Baking Department			Balance:	40.47	
Date:	Memo:	Amount:	Date:	Memo:	Amount:
01/05/15	Xfer from mixing	1,422.79	01/10/15	Xfer to packaging	1,880.13
01/06/15	Direct materials	35.00			
01/07/15	Direct labor	230.00			
01/09/15	FOH / MOH	232.81			

# Process Costing

- The Packaging Department has the same requirements as other departments, it can add or remove materials, or it may not but simply change the material item such as reforming the material.
- The Packaging Department must add direct labor and FOH / MOH.

# Process Costing

- Here are example journal entries for the Packaging Department associated with direct materials and direct labor.

01/11/15	WIP - Packaging Department	385.00	
	Raw Materials		385.00
Transferred raw materials to WIP - Packaging Department			
01/12/15	WIP - Packaging Department	410.00	
	Wages Payable		410.00
To record direct labor to the Packaging Department			

# Process Costing

- FOH / MOH continues to follow its trend.
- The individual departments can build it and apply it by their own drivers and rates.
- Here are example journal entries for creating FOH / MOH.

01/13/15	Manufacturing Overhead	1,075.00	
	Wages Payable		130.00
To record wages earned by indirect labor			
	Accumulated Depreciation - Equipment		745.00
To record depreciation on mfg. equipment			
	Raw Materials		75.00
To record raw materials used by maintenance			
	Prepaid Insurance		125.00
To record the expiration of insurance on factory assets			

# Process Costing

- The computation and application of the overhead rate is done like this.

Computation of FOH / MOH rate and applied amount for WIP - Packaging Department	
Estimated total FOH / MOH costs for the fiscal period:	\$6,545.00
Estimated total number of machine cycles for the fiscal period:	65.00
Calculated rate per machine cycle:	\$100.69
Number of machine cycle for this production run:	6.85
Machine cycle driver rate:	\$100.69
Amount of FOH / MOH to be applied to this production run:	\$689.74

# Process Costing

- The journal entry to apply FOH / MOH looks like this.

01/14/15	WIP - Packaging Department	689.74	
	Manufacturing Overhead		689.74
To record FOH / MOH on production			



# Process Costing

- The cost of produced and transferred materials within the Packaging department follows the same concept as FOH / MOH.

Estimated total production costs for the fiscal period:		\$177,450.00
Estimated total number of production for the fiscal period:		75,950.00
Calculated value per production unit:		\$2.34
Number of units for this production run:		1,265.00
Calculated value per production unit:		\$2.34
Amount of production value transferred out:		\$2,955.55
01/15/15	Finished Goods	2,955.55
	WIP - Packaging Department	2,955.55
Transferred materials from WIP - Packaging Department to Finished Goods		

# Process Costing

- With the journal entries made, the general ledger account for WIP – Packaging Department looks like this.

General Ledger Account					
WIP - Packaging Department				Balance:	409.32
Date:	Memo:	Amount:	Date:	Memo:	Amount:
01/10/15	Xfer from baking	1,880.13	01/15/15	Xfer to FG	2,955.55
01/11/15	Direct materials	385.00			
01/12/15	Direct labor	410.00			
01/14/15	FOH / MOH	689.74			

# Process Costing

- As goods are sold the Cost of Goods Sold account is debited, a special expense account.
- The Finished Goods account is credited.
- Process costing and job order costing are basically the same process, adding direct materials and direct labor, applying FOH / MOH.

# Process Costing

The end.