

Activity-Based-Costing

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Activity-Based-Costing

- Activity-based-costing is:
 - 1) fun,
 - 2) probably the most effective method of allocating indirect costs,
 - 3) simple unless you try to think too much into it, and
 - 4) probably the most accurate method of applying FOH / MOH.

Activity-Based-Costing

- Activity-Based-Costing says something like this:
 - 1) You think you are going to spend \$100 on moving materials in the fiscal period,
 - 2) You think you are going to have 5 material movements in the fiscal period,
 - 3) Therefore you should “charge” production ($\$100 \div 5$) \$20 for each material movement.

Activity-Based-Costing

- You can have numerous cost basis items for drivers should as:
 - Material movements,
 - Machinery setups,
 - Quality assurance checks,
 - Indirect labor hours, and
 - Machine hours.

Activity-Based-Costing

- Our company has three indirect costs that they want to allocate through FOH / MOH.
- Machine hours,
- Material movements, and
- Quality assurance inspections.

Activity-Based-Costing

- For machine hours our company expects to incur \$75,485 in operating costs during the expected 469 machine hours.
- Therefore each hour of machine time that a production effort uses will be “charged” with:
- $\$75,485 \div 469 \text{ machine hours} = \160.95 rounded off to two decimals.

Estimated cost of operating machinery:	\$75,485.00
Machine hours expected:	469.00
Estimated cost per machine hour:	\$160.95

Activity-Based-Costing

- When the Painting Department has a production effort of 7.5 hours, as previously calculated, the journal entry that applies it looks like this.

01/01/15	WIP - Painting Department	1,207.12	
	Manufacturing Overhead		1,207.12
Applied 7.5 hours of ABC FOH / MOH to WIP in Painting Department			

Activity-Based-Costing

- Our company expects to incur \$84,250 in material movement costs with 375 material movements.
- Under Activity-Based-Costing, the cost of each material movement will be charged at \$224.67.

Estimated cost of material movements:	\$84,250.00
Material movements expected:	375.00
Estimated cost per material movement:	\$224.67

Activity-Based-Costing

- When the Assembly Department has 22 material movements they will be “charged” ($\$224.67 \times 22$ material movements) \$4,942.67 rounded off to two decimal places.

01/02/15	WIP - Assembly Department	4,942.67	
	Manufacturing Overhead		4,942.67
Applied costing for 22 material movements to the Assembly Department			

Activity-Based-Costing

- Our company expects to incur the costs of \$27,485 accomplishing 85 material inspections.
- Therefore the Production Department will be charged ($\$27,485 \div 85$ inspections) \$323.35 for each inspection conducted.

Estimated cost of quality assurance inspections:	\$27,485.00
Quality assurance inspections expected:	85.00
Estimated cost per quality assurance inspection:	\$323.35

Activity-Based-Costing

- When production requires 25 inspections they will be “charged” ($\$323.35 \times 25$ inspections) \$8,083.82.
- The journal entry would look like this.

01/03/15	WIP - Production Department	8,083.82	
	Manufacturing Overhead		8,083.82
Applied ABC FOH / MOH to Production Department for 25 inspections			

Activity-Based-Costing

- One of the keys to Activity-Based Costing is that the FOH / MOH account has values inserted into it with standard journal entries such as this one.

01/08/15	Manufacturing Overhead	1,275.00	
	Wages Payable		1,275.00
To record wages earned by indirect labor			

Activity-Based-Costing

- Different departments may have different rates for the same activity title.
- The keys are:
 - Estimate the costs incurred by each activity that will have costs allocated,
 - Estimate the number of driver activities,
 - Compute the estimated driver rate, and
 - Allocate FOH / MOH costs.

Activity-Based-Costing

- Each department is most likely going to have numerous drivers and their associated rates for production efforts.
- Our company's Assembly Department requires:
- \$160.95 per machine hours \times 10 machine hours = \$1,609.49,
- \$224.67 per material movements \times 4 material movements = \$898.67, and
- \$323.35 per QA inspection \times 2 inspections = \$646.71, totaling \$3,154.86 in FOH / MOH

Activity-Based-Costing

- The journal entry for this multiple FOH / MOH driver allocation or application would look like this.

01/08/15	WIP - Assembly Department	3,154.86	
	Manufacturing Overhead		3,154.86
To record ABC FOH / MOH values			

Activity-Based-Costing

- Activity-Based-Costing is:
 - Find out the estimated cost of an activity,
 - Find out the estimated number of those specific activities,
 - Determine the driver rate,
 - Apply the driver rate per activity.

Activity-Based-Costing

The end.