Chapter 21: Process Costing

DO IT! 1 Compare Job Order and Process Cost Systems

Indicate whether each of the following statements is true or false.

1. A law firm is likely to use process costing for major lawsuits.
2. A manufacturer of paintballs is likely to use process costing.
3. Both job order and process costing determine product costs at the end of a period of time, rather than when a product is completed.
4. Process costing does not keep track of manufacturing overhead.

Solution


Related exercise material: E21-1 and DO IT 21-1.

DO IT! 2 Manufacturing Costs in Process Costing

Ruth Company manufactures ZEBO through two processes: blending and bottling. In June, raw materials used were Blending $18,000 and Bottling $4,000. Factory labor costs were Blending $12,000 and Bottling $5,000. Manufacturing overhead costs were Blending $6,000 and Bottling $2,500. The company transfers units completed at a cost of $19,000 in the Blending Department to the Bottling Department. The Bottling Department transfers units completed at a cost of $11,000 to Finished Goods. Journalize the assignment of these costs to the two processes and the transfer of units as appropriate.

Solution

The entries are:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in Process—Blending</td>
<td>$18,000</td>
</tr>
<tr>
<td>Work in Process—Bottling</td>
<td>$4,000</td>
</tr>
<tr>
<td>Raw Materials Inventory</td>
<td>$22,000</td>
</tr>
<tr>
<td>Factory Labor</td>
<td>$17,000</td>
</tr>
<tr>
<td>Manufacturing Overhead</td>
<td>$8,500</td>
</tr>
<tr>
<td>Work in Process—Bottling</td>
<td>$19,000</td>
</tr>
<tr>
<td>Finished Goods Inventory</td>
<td>$11,000</td>
</tr>
</tbody>
</table>

Action Plan

✔ In process cost accounting, keep separate work in process accounts for each process.
✔ When the costs are assigned to production, debit the separate work in process accounts.
✔ Transfer cost of completed units to the next process or to Finished Goods.

The Fabricating Department for Outdoor Essentials has the following production and cost data for the current month.

<table>
<thead>
<tr>
<th></th>
<th>Beginning Work in Process</th>
<th>Units Transferred Out</th>
<th>Ending Work in Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–0–</td>
<td>15,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Materials are entered at the beginning of the process. The ending work in process units are 30% complete as to conversion costs. Compute the equivalent units of production for (a) materials and (b) conversion costs.

(a) Since materials are entered at the beginning of the process, the equivalent units of ending work in process are 10,000. Thus, 15,000 units + 10,000 units = 25,000 equivalent units of production for materials.

(b) Since ending work in process is only 30% complete as to conversion costs, the equivalent units of ending work in process are 3,000 (10,000 units × 30%). Thus, 15,000 units + 3,000 units = 18,000 equivalent units of production for conversion costs.

In March, Rodayo Manufacturing had the following unit production costs: materials $6 and conversion costs $9. On March 1, it had no work in process. During March, Rodayo transferred out 12,000 units. As of March 31, 800 units that were 25% complete as to conversion costs and 100% complete as to materials were in ending work in process. Assign the costs to the units transferred out and in process.

The assignment of costs is as follows.

- Transferred out (12,000 × $15) = $180,000
- Work in process, March 31:
  - Materials (800 × $6) = $4,800
  - Conversion costs (200* × $9) = 1,800
- Total costs = $186,600
- *800 × 25%

Indicate whether each of the following statements is true or false.

1. Continuous process manufacturing often results in a reduction of inventory.
2. Companies that use just-in-time processing complete and store finished goods all the time to meet rush orders from customers.
3. A major benefit of just-in-time processing is production cost savings from the improved flow of goods through the processes.
4. An ABC system is similar to traditional costing systems in accounting for manufacturing costs but differs in regard to period costs.
5. The primary benefit of ABC is more accurate and meaningful costs.
6. In recent years, the amount of direct labor used in many industries has greatly increased and total overhead costs have significantly decreased.

**Solution**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

**Action Plan**

- JIT manufacturing is dedicated to having the right amounts of materials, parts, or products just as they are needed.
- ABC focuses on the activities performed in producing a product. It recognizes that to have accurate and meaningful cost data, more than one basis of allocating costs to products is needed.

Related exercise material: **BE21-10 and DO IT! 21-5.**
Indicate whether each of the following statements is true or false.

1. Many hospitals use job order costing for small, routine medical procedures.
2. A manufacturer of computer flash drives would use a job order cost system.
3. A process cost system uses multiple work in process accounts.
4. A process cost system keeps track of costs on job cost sheets.

Kopa Company manufactures CH-21 through two processes: mixing and packaging. In July, the following costs were incurred.

<table>
<thead>
<tr>
<th></th>
<th>Mixing</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials used</td>
<td>$10,000</td>
<td>$28,000</td>
</tr>
<tr>
<td>Factory labor costs</td>
<td>$8,000</td>
<td>$36,000</td>
</tr>
<tr>
<td>Manufacturing overhead costs</td>
<td>$12,000</td>
<td>$54,000</td>
</tr>
</tbody>
</table>

Units completed at a cost of $21,000 in the Mixing Department are transferred to the Packaging Department. Units completed at a cost of $106,000 in the Packaging Department are transferred to Finished Goods. Journalize the assignment of these costs to the two processes and the transfer of units as appropriate.

The Assembly Department for Right pens has the following production data for the current month.

<table>
<thead>
<tr>
<th></th>
<th>Beginning Work in Process</th>
<th>Units Transferred Out</th>
<th>Ending Work in Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>–0–</td>
<td>20,000</td>
<td></td>
<td>10,000</td>
</tr>
</tbody>
</table>

Materials are entered at the beginning of the process. The ending work in process units are 70% complete as to conversion costs. Compute the equivalent units of production for (a) materials and (b) conversion costs.

In March, Kelly Company had the following unit production costs: materials $10 and conversion costs $8. On March 1, it had no work in process. During March, Kelly transferred out 22,000 units. As of March 31, 4,000 units that were 40% complete as to conversion costs and 100% complete as to materials were in ending work in process.

(a) Compute the total units to be accounted for.
(b) Compute the equivalent units of production.
(c) Prepare a cost reconciliation schedule, including the costs of materials transferred out and the costs of materials in process.

Indicate whether each of the following statements is true or false.

1. Just-in-time processing is also known as just-in-case processing.
2. Companies that use just-in-time processing complete finished goods just in time to be sold.
3. A major benefit of just-in-time processing is enhanced product quality.
4. An ABC system is similar to conventional costing systems in accounting for period costs but differs in regard to manufacturing costs.
5. The primary benefit of ABC is significant reduction or elimination of manufacturing inventories.
6. In recent years, the amount of direct labor used in many industries has greatly decreased and total overhead costs have significantly increased.
CONTINUING PROBLEMS

CURRENT DESIGNS

CD21 At the beginning of April, Current Designs had 30 kayaks in process in the Fabrication Department. Rick Thrune, the production manager, estimated that about 80% of the materials costs had been added to these boats, which were about 50% complete with respect to the conversion costs. The cost of this inventory had been calculated to be $8,400 in materials and $9,000 in conversion costs.

During April, 72 boats were started. At the end of the month, the 35 kayaks in the ending inventory had 20% of the materials and 40% of the conversion costs already added to them.

A review of the accounting records for April showed that materials with a cost of $17,500 had been requisitioned by the Fabrication Department and that the conversion costs for the month were $39,600.

Instructions
Complete a production cost report for April 2017 for the Fabrication Department using the weighted-average method.

WATERWAYS

(Note: This is a continuation of the Waterways problem from Chapters 19–20.)

WP21 Because most of the parts for its irrigation systems are standard, Waterways handles the majority of its manufacturing as a process cost system. There are multiple process departments. Three of these departments are the Molding, Cutting, and Welding Departments. All items eventually end up in the Packaging Department, which prepares items for sale in kits or individually. This problem asks you to help Waterways calculate equivalent units and prepare a production cost report.

Go to the book’s companion website, at www.wiley.com/college/weygandt, to see the completion of this problem.