

## Cost and Managerial Accounting

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HW 1 E2-28, P2-44, P2-46, P2-56

Chapter 1 &amp; 2 reading: 100% complete

**E2-28****1) Prepare a schedule of cost of goods manufactured**

## Direct material:

|   |                |           |
|---|----------------|-----------|
| Raw-material inventory                      | \$70,000       |           |
| Add: Purchase of raw material               | <u>380,000</u> |           |
| Raw material available for use              | 450,000        |           |
| Deduct: raw-material inventory, December 31 | 90,000         |           |
| Raw material used                           |                | \$360,000 |

|              |           |
|--------------|-----------|
| Direct labor | \$540,000 |
|--------------|-----------|

## Manufacturing overhead:

|                                     |               |                |
|-------------------------------------|---------------|----------------|
| Indirect material                   | 23,000        |                |
| Indirect labor                      | 35,000        |                |
| Depreciation on plant and equipment | 132,000       |                |
| Utilities                           | 30,000        |                |
| Other                               | <u>40,000</u> |                |
| Total manufacturing overhead        |               | <u>260,000</u> |

|  |                           |
|--|---------------------------|
| Total manufacturing costs                      | \$1,160,000               |
| Add: work-in-process inventory, January 1      | <u>210,000</u>            |
| Subtotal                                       | 1,370,000                 |
| Deduct: work-in-process inventory, December 31 | <u>240,000</u>            |
| <b>Cost of goods manufactured</b>              | <b><u>\$1,130,000</u></b> |

## 2) Prepare a schedule of cost of goods sold

|                                       |                    |
|---------------------------------------|--------------------|
| Finished-goods inventory, January 1   | \$ 190,000         |
| Add: Costs of goods manufactured      | <u>1,130,000</u>   |
| Cost of goods available for sale      | \$1,320,000        |
| Finished-goods inventory, December 31 | <u>200,000</u>     |
| Cost of goods sold                    | <u>\$1,120,000</u> |

## 3) Prepare an income statement

|                                     |                   |
|-------------------------------------|-------------------|
| Sales revenue                       | \$ 1,950,000      |
| Less: cost of goods sold*           | <u>1,120,000</u>  |
| Gross margin                        | 830,000           |
| Selling and administrative expenses | <u>190,000</u>    |
| income before taxes                 | 640,000           |
| income tax expense                  | <u>224,000</u>    |
| net income                          | <u>\$ 416,000</u> |

P2-44

### 1) Manufacturing overhead:

|  |                                |
|--|--------------------------------|
| Indirect labor   | 230,000                        |
| building depreciation (11%)                                    | 200,000 (50,000)               |
| [other selling and administrative expenses] → income statement | <del>420,000</del>             |
| other factory costs:   | 700,000                        |
|  | <del>1,550,000</del> 1,080,000 |
|  | -0.5                           |

### 2) Cost of goods manufactured

Direct material:

|   |                |                                  |
|---|----------------|----------------------------------|
| Raw-material inventory, January 1 <sup>st</sup>           | \$ 33,000      | * depreciation                   |
| Add: purchase of raw material                             | <u>400,000</u> | 209,000                          |
| Raw-material available for use                            | \$ 433,000     | 75% 생산활동에 이용<br>∴ MOH 150,000    |
| Deduct: raw-material inventory, December 31 <sup>st</sup> | <u>38,000</u>  | 25% S&A 에 이용<br>∴ S&A exp 50,000 |

|  |                            |
|--|----------------------------|
| Raw-material used                              | 395,000                    |
| Direct labor                                   | 525,000                    |
| Manufacturing overhead:                        | <u>1,550,000</u> 1,080,000 |
| Total manufacturing costs                      | \$ 2,470,000 2,000,000     |
| Add: work-in-process inventory, January 1      | 85,000                     |
| Subtotal                                       | \$ 2,555,000               |
| Deduct: work-in-process inventory, December 31 | <u>135,000</u>             |
| Cost of goods manufactured                     | \$ 2,420,000<br>1,950,000  |

### 3) Cost of goods sold

|                                       |                           |
|---------------------------------------|---------------------------|
| Finished-goods inventory, January 1   | \$ 220,000                |
| Add: cost of goods manufactured       | <u>2,420,000</u>          |
| Cost of goods available for sale      | 2,640,000                 |
| Finished-goods inventory, December 31 | 191,200                   |
| Cost of goods sold                    | \$ 2,448,800<br>1,978,800 |

### 4) Determine the net income for 20x1, assuming a 40% income tax rate

|                                     |                             |
|-------------------------------------|-----------------------------|
| Sales revenue                       | \$ 3,250,000                |
| Less: Cost of goods sold            | <u>2,448,800</u> 1,978,800  |
| Gross margin                        | 801,200 1,271,200           |
| Selling and administrative expenses | <u>270,000</u> 740,000      |
| Income before taxes                 | 531,201 531,200             |
| Income tax expense                  | 212,480.4                   |
| Net income                          | 318,720.6<br><u>318,720</u> |

-0.5 ~~5~~ Determine the number of completed units manufactured during the year

$$1375 - 1195 = 180$$

$$\text{Ending F.G Inv.} = \text{Beginning F.G Inv.} + x - \text{Sales unit}$$

$$1195 = 1375 + x - 10000$$

$$\therefore x = \boxed{9820}$$

**P2-46**

Fixed costs : ~~2920000~~ 1,200,000

Variable cost : 210

Finished Goods Inventory unit X Average cost of production

$$= \frac{VC+FC}{210} = \boxed{1,040,000}$$

1. Determine the cost of the December 31 finished-goods inventory

$$(210 * 24,000 + 2930000) / 24,000 * 4000 = 1,328,333.333 \quad \$1,040,000$$

2. Compute Scranton Refrigeration's net income for the current year ended December 31

$$(20,000 * 370 - 1,328,333.333) * 0.6 = 3,643,000 \quad 288,000$$

3. What will be the effect on

- a. the direct labor cost does not change.
- b. The fixed manufacturing overhead cost does not change
- c. The fixed selling and administrative cost does not change
- d. The average unit cost of production increases, since we are paying the same amount of fixed cost while producing less.

**P2-56**

- 1) Out of pocket cost a
- 2) Differential cost
- 3) Opportunity cost b
- 4) Marginal cost
- 5) Average cost
- 6) Marginal cost
- 7) Sunk cost

Income Statement

Sales Rev (Sales unit X unit price)  
COGS (Sales unit X unit cost)

Gross Margin  
(S&A exp.)

Income before taxes

tax (40%)

Net income

288,000