

### Case Study 06: Zeltronic company – Traditional cost systems

Established in 1994, Zeltronic Corporation is a thriving electronic product manufacturer that has experienced rapid growth over the past decade. Within one of its factories, it produces two intermediate products, PIA and PIB, utilizing a computer-directed production system in the manufacturing center. This system relies on two primary materials, X and Y, in addition to other components. These intermediate products are then transferred to the assembly center, where they are further processed to manufacture two final products, A and B, following the addition of another component.

The corporation follows a Just-in-Time production system, emphasizing efficiency and minimizing inventory. Here are specific details about three key activities within the factory:

#### Manufacturing Center:

| <i>Item</i>            | <i>PIA</i>        |                | <i>PIB</i>        |                |
|------------------------|-------------------|----------------|-------------------|----------------|
|                        | <b>Q Per Unit</b> | <b>Amounts</b> | <b>Q Per Unit</b> | <b>Amounts</b> |
| Raw Material x         | 0.25 kg           | 60 Da/KG       | 0.40KG            | 60Da/KG        |
| Raw Material Y         | 1 kg              | 88Da/KG        | 0.5KG             | 88Da/KG        |
| Component PO           | 1                 | 25 Da          | –                 | –              |
| Component PL           | –                 | –              | 1                 | 65Da           |
| Direct labor           | 0.01H             | 75Da/H         | 0.005             | 75Da/H         |
| Other Direct expcenses | –                 | 15 Da/ PIA     | –                 | 20 Da/ PIB     |
| Manufacturing Center   | 0.15Unit          | ?              | 0.2 Unit          | ?              |

#### Installation Center:

| <i>Item</i>            | <i>A</i>          |                | <i>B</i>          |                |
|------------------------|-------------------|----------------|-------------------|----------------|
|                        | <b>Q Per Unit</b> | <b>Amounts</b> | <b>Q Per Unit</b> | <b>Amounts</b> |
| PIA                    | 1                 | ?              | –                 | –              |
| PIB                    | –                 | –              | 1                 | ?              |
| Component PT           | 1                 | 125Da          | 2                 | 125Da/unit     |
| Direct labor           | 0.25H             | 80Da           | 0.3H              | 80D/unit       |
| Other Direct expcenses | –                 | 50Da           | –                 | 60Da           |
| Installation Center    | 0.25Unit          | ?              | 0.3Unit           | ?              |

After the manufacturing process is completed, the finished products are transferred to the distribution department where their quality is monitored before being shipped to the customer. The price of product A is 490Da and the price of product B is 815 Da. During the cycle, 20,000 units of A and 15,000 units of B were produced and sold.

**Appendix 1: Table of Indirect Burdens for the Relevant Cycle**

| Center         | Overheads | Nature of the work unit               |
|----------------|-----------|---------------------------------------|
| Supply         | 900000Da  | Value of supplies (materials, pieces) |
| Manufacturing  | 1200000Da | Machine working hours                 |
| Installation   | 2500000Da | Direct working hours                  |
| distribution   | 350000Da  | Production cost of finished products  |
| Administration | 800000Da  | Production cost of finished products  |

**Appendix 2: Purchases for the period**

| <i>Item</i> | <i>Quantity</i> | <i>Unit Price</i> |
|-------------|-----------------|-------------------|
| <b>X</b>    | 11000KG         | 60Da/KG           |
| <b>Y</b>    | 27500KG         | 88Da/KG           |
| <b>PO</b>   | 20000Unit       | 25Da/ Unit        |
| <b>PL</b>   | 15000Unit       | 65Da/ Unit        |
| <b>PT</b>   | 50000Unit       | 125Da/ Unit       |

**Required:**

1. Utilizing the analysis centers approach (French method), compute both the production cost and the total cost of products, along with the overall outcome for each type.
2. Assuming the enterprise employs the single overhead rate method for indirect expenses (American method) across all sectors, distributing these expenses to the final products based on production quantity, determine the production cost and the final cost for products A and B, as well as the cumulative outcome for each type.
3. Contrast the outcomes of the two methods and draw conclusions.

Dr FERZIZI