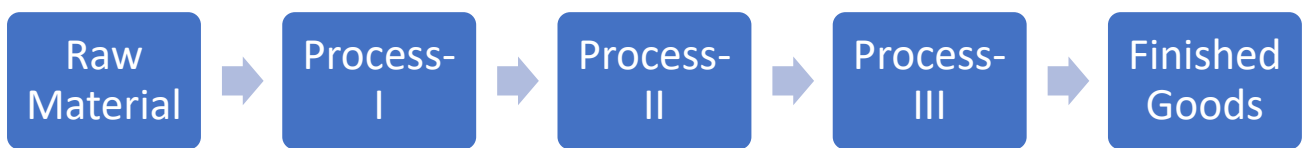


PROCESS COSTING

Process Costing is a method of costing used in industries where the material has to pass through two or more processes for being converted into a final product. It is defined as “a method of Cost Accounting whereby costs are charged to processes or operations and averaged over units produced”.

A separate account for each process is opened and all expenditure pertaining to a process is charged to that process account. Such type of costing method is useful in the manufacturing of products like steel, paper, medicines, soaps, chemicals, rubber, vegetable oil, paints, varnish etc. where the production process is continuous and the output of one process becomes the input of the following process till completion.



COSTING PROCEDURE IN PROCESS COSTING

The Cost of each process comprises the cost of:

- (i) Materials
- (ii) Employee Cost (Labour)
- (iii) Direct expenses, and
- (iv) Overheads of production.

Materials - Materials and supplies which are required for each process are drawn against Material Requisitions Notes from the stores. **Each process for which the materials are used, are debited with the cost of materials consumed** on the basis of the information received from the Cost Accounting department. The finished product of first process generally become the raw materials of second process; under such a situation the account of second process is debited with the cost of transfer from the first process and also with the cost of any additional material used in process.

Employee Cost (Labour) - Each **process account should be debited with the labour cost** or wages paid to labour for carrying out the processing activities. Sometimes the wages paid are apportioned over the different processes after selecting appropriate basis.

Direct expenses - Each **process account should be debited with direct expenses** like depreciation, repairs, maintenance, insurance etc. associated with it.

Production Overheads- Expenses like rent, power expenses, lighting bills, gas and water bills etc. are known as production overheads. These expenses cannot be allocated to a process. The suitable way out to recover them is to apportion them over different processes by using suitable basis. Usually, these expenses are estimated in advance and **the processes debited with these expenses on a pre- determined basis.**

Question-1.

From the following data, PREPARE process accounts indicating the cost of each process and the total cost. The total units that pass through each process were 240 for the period.

	Process-I (Rs.)	Process-II (Rs.)	Process-III(Rs.)
Materials	1,50,000	50,000	20,000
Labour	80,000	2,00,000	60,000
Other Expenses	26,000	72,000	25,000

Indirect expenses amounting to Rs. 85,000 may be apportioned on the basis of wages. There was no opening or closing stock.

Answer-1

Dr. Process-I Account Cr.

Particulars	Per unit (Rs.)	Total (Rs.)	Particulars	Per unit (Rs.)	Total (Rs.)
To Material	625	1,50,000	By Process-II A/C (Transfer to Process-II)	1150	2,76,000
To Labour	334	80,000			
To Other Expenses	108	26,000			
To Indirect Expenses	83	20,000			
	1150	2,76,000		1150	2,76,000

Dr. Process-II Account Cr.

Particulars	Per unit (Rs.)	Total (Rs.)	Particulars	Per unit (Rs.)	Total (Rs.)
To Process- I A/C	1150	2,76,000	By Process-III A/C (Transfer to Process-III)	2,700	6,48,000
To Material	208	50,000			
To Labour	834	2,00,000			
To Other Expenses	300	72,000			
To Indirect Expenses	208	50,000			
	2,700	6,48,000		2,700	6,48,000

Dr.

Process-III Account

Cr.

Particulars	Per unit (Rs.)	Total (Rs.)	Particulars	Per unit (Rs.)	Total (Rs.)
To Process-II A/C	2,700	6,48,000	By Finished Goods (Transferred)	3200	7,68,000
To Material	83	20,000			
To Labour	250	60,000			
To Other Expenses	104	25,000			
To Indirect Expenses	63	15,000			
	3200	7,68,000		3200	7,68,000

*Apportionment of Indirect expenses among Process-I, Process-II and Process-III Total Wages to processes (I + II +III) = Rs. 80,000 + Rs. 2,00,000 + Rs. 60,000 = Rs 3,40,000

Apportionment to:

Process- I = (Rs. 85,000 / Rs. 3,40,000)*Rs. 80,000 = Rs. 20,000

Process- II = (Rs. 85,000 / Rs. 3,40,000)*Rs. 2,00,000 = Rs. 50,000 and

Process- III = (Rs. 85,000 / Rs. 3,40,000)*Rs. 60,000 = Rs. 15,000

TREATMENT OF NORMAL, ABNORMAL LOSS AND ABNORMAL GAIN

10.3.1 Normal and abnormal loss:

Loss of material is inherent during processing operation. The loss of material under different processes arises due to reasons like evaporation or a change in the moisture content etc. Process loss is defined as the loss of material arising during the course of a processing operation and is equal to the difference between the input quantity of the material and its output.

There are two types of material losses viz. (i) Normal loss and (ii) Abnormal loss.

(1) Normal Process Loss: It is also known as normal wastage. It is defined as **the loss of material which is inherent in the nature** of work. Such a loss can be reasonably anticipated from the nature of the material, nature of operation, the experience and technical data. It is unavoidable because of nature of the material or the process. It also includes units withdrawn from the process for test or sampling.

Treatment in Cost Accounts: The cost of **normal process loss in practice is absorbed by good units produced** under the process. The amount realised by the sale of normal process loss units should be credited to the process account.

Question-1 (Normal loss with no realisable value)

A product passes through Process- I and Process- II. Materials issued to Process- I amounted to Rs. 40,000, Wages Rs. 30,000 and manufacturing overheads were ` 27,000. Normal loss anticipated was 5% of input. 4,750 units of output were produced and transferred-out from Process-I. There were no opening stocks. Input raw material issued to Process I were 5,000 units. Scrap has no realisable value.

You are required to PREPARE Process- I account, value of normal loss and units transferred to Process-II.

Answer:

Dr. Process-I Account Cr.

Particulars	Units	Total (Rs.)	Particulars	Units	Total (Rs.)
To Material	5,000	40,000	By Normal Loss	250	0
To Labour	-	30,000	By Process-II A/C (Transfer to Process-II)	4,750	97,000
To Overheads	-	27,000			
	5,000	97,000		5,000	97,000

Value of Normal loss = Scrap realisable value less cost to sale

Since, scraps do not realise any value, hence, value of normal loss is zero.

Value of units transferred to Process-II:

= (Total Cost-Realisable value of normal loss / Total input units - Normal loss units) * Units transferred

$$= (97,000 - 0 / 5,000 \text{ units} - 250 \text{ units}) * 4,750 \text{ Units} = 97,000$$

Question-2 (Normal loss with realisable value)

A product passes through Process- I and Process- II. Materials issued to Process- I amounted to Rs. 40,000, Wages Rs.30,000 and manufacturing overheads were Rs.27,000. Normal loss anticipated was 5% of input. 4,750 units of output were produced and transferred-out from Process-I. There were no opening stocks. Input raw material issued to Process I were 5,000 units. Scrap has realisable value of Rs. 2 per unit.

You are required to PREPARE Process- I account, value of normal loss and units transferred to Process-II.

Answer:

Dr. Process-I Account Cr.

Particulars	Units	Total (Rs.)	Particulars	Units	Total (Rs.)
To Material	5,000	40,000	By Normal Loss	250	500
To Labour	-	30,000	By Process-II A/C (Transfer to Process-II)	4,750	96,500
To Overheads	-	27,000			
	5,000	97,000		5,000	97,000

Value of Normal loss = Scrap realisable value less cost to sale

$$\text{Scrape realisable Value} = 250 \text{ units} \times \text{Rs. } 2 = \text{Rs. } 500$$

Value of units transferred to Process-II:

= (Total Cost-Realisable value of normal loss / Total input units - Normal loss units) * Units transferred

$$= (97,000 - 500 / 5,000 \text{ units} - 250 \text{ units}) * 4,750 \text{ Units} = 96,500$$

(2) Abnormal Process Loss: It is also known as abnormal wastage. It is defined as the **loss in excess of the pre-determined loss** (Normal process loss). This type of loss may occur due to the carelessness of workers, a bad plant design or operation, sabotage etc. Such a loss cannot obviously be estimated in advance. But it can be kept under control by taking suitable measures.

Treatment in Cost Accounts: The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arises. Cost of abnormal process loss is not treated as a part of the cost of the product. In fact, **the total cost of abnormal process loss is debited to costing profit and loss account.**

Question-3 (Abnormal loss with realisable value)

A product passes through Process- I and Process- II. Materials issued to Process- I amounted to Rs. 40,000, Wages Rs. 30,000 and manufacturing overheads were Rs. 27,000. Normal loss anticipated was 5% of input. 4,550 units of output were produced and transferred-out from Process-I. There were no opening stocks. Input raw material issued to Process I were 5,000 units. Scrap has realisable value of Rs. 2 per unit.

You are required to PREPARE Process- I account, value of normal loss, abnormal loss and units transferred to Process-II.

Answer:

Dr. Process-I Account Cr.

Particulars	Units	Total (Rs.)	Particulars	Units	Total (Rs.)
To Material	5,000	40,000	By Normal Loss	250	500
To Labour	-	30,000	By Abnormal Loss	200	4,063
To Overheads	-	27,000	By Process-II A/C (Transfer to Process-II)	4550	92,437
	5,000	97,000		5,000	97,000

Value of Normal loss = Scrap realisable value less cost to sale

Scrape realisable Value = 250 units x Rs. 2 = Rs. 500

Value of Abnormal loss:

= (Total Cost-Realisable value of normal loss / Total input units - Normal loss units) * Abnormal loss Units

= (97,000 – 500 / 5,000 units - 250 units)* 200 Units = 4,063

Value of units transferred to Process-II:

= (Total Cost-Realisable value of normal loss / Total input units - Normal loss units) * Units transferred

= (97,000 – 500 / 5,000 units - 250 units)* 4,550 Units = Rs. 92,437