

TOPIC

The concept of Normal and Abnormal Loss

Normal loss = Absorb by good units \Rightarrow
 eg:- Cost of Production ₹ 100000 \div
 No. of units 10000 units \div
 Normal loss @ 2% \div

It will increase Cost Per unit

\Rightarrow if No Normal loss (Cost Per unit)
 $\Rightarrow \frac{100000}{10000} = \boxed{\text{₹ } 10}$ ✓

\Rightarrow Now Normal loss @ 2% (Cost Per unit) \div
 $\Rightarrow \frac{100000}{10000 - 2\%} = \boxed{\text{₹ } 10.21}$ ✓

* Impact: Cost P.U. increases by ₹ 0.21
 (10.21 - 10)
 10000 - 2% = $\boxed{9800}$

Abnormal loss \downarrow

Transfer to Costing P/L A/c \downarrow DR

eg:- What if in same eg. Actual Production is 9500 units
 Find Abnormal loss?

Abnormal (units) loss = 10000 - 2% - 9500 = $\boxed{300}$

Abnormal loss value = $\boxed{300 \times 10.21}$
 = $\boxed{3063}$ ✓

Transfer to Costing P/L \downarrow DR

Joint Product

By-Product

CRUDE OIL
↓

Joint Production and Joint Costs

=

Split-Off Point -----

Main Products

Relatively High Value

Petrol
Diesel

By-Products

Relatively Low Value

Damar

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BATCH COSTING

"Production lot size"

lot size to minimise cost per batch

सूत्र (Formula):- $EQB = \sqrt{\frac{2DS}{C}}$

$$\Rightarrow \sqrt{\frac{2 \times 20000 \times 100}{4}}$$

$$\Rightarrow 1000 \text{ units}$$

Where

D = Annual Demand $\Rightarrow 20000$ ✓

S = Setting-up Cost per Batch $\Rightarrow ₹100$ ✓

C = Carrying Cost per unit per annum $\Rightarrow ₹4$ ✓

EBQ = Economic Batch Qty

↳ min. cost of Batch Production

✓ SERVICE COSTING \Rightarrow operating costing \Rightarrow eg:- Hotel, Transport, Bank, Insurance

$$\hookrightarrow \frac{\text{Total cost of Service}}{\text{No. of Services}} = \frac{50,00,000}{100,000} = ₹50 \text{ Per Service Per Person}$$

✓ multiple costing \Rightarrow Assembling business \Rightarrow Bicycle, Electronics

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Unit -5 Standard Costing

⇒ Technique = Cost Control
 ⇒ Method = Records of Cost

Types

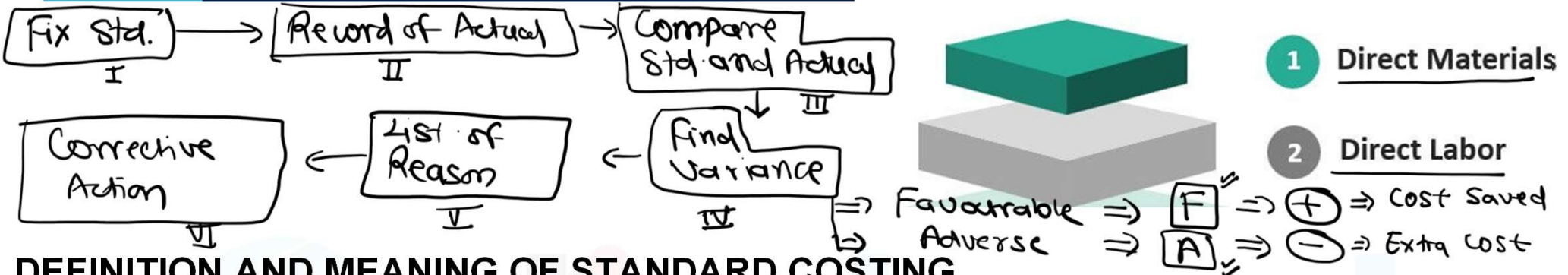
Basic Standard (long term)
 min. level of Performance
 eg:- 2000 units

Ideal Standard
 Best Possible Performance
 if everything is in favour
 eg:- 15000 units

Currently Attainable Standard
 "Performance based on Available resources"
 Possible Performance
 ⇒ eg:- 10,000 units

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Standard Cost



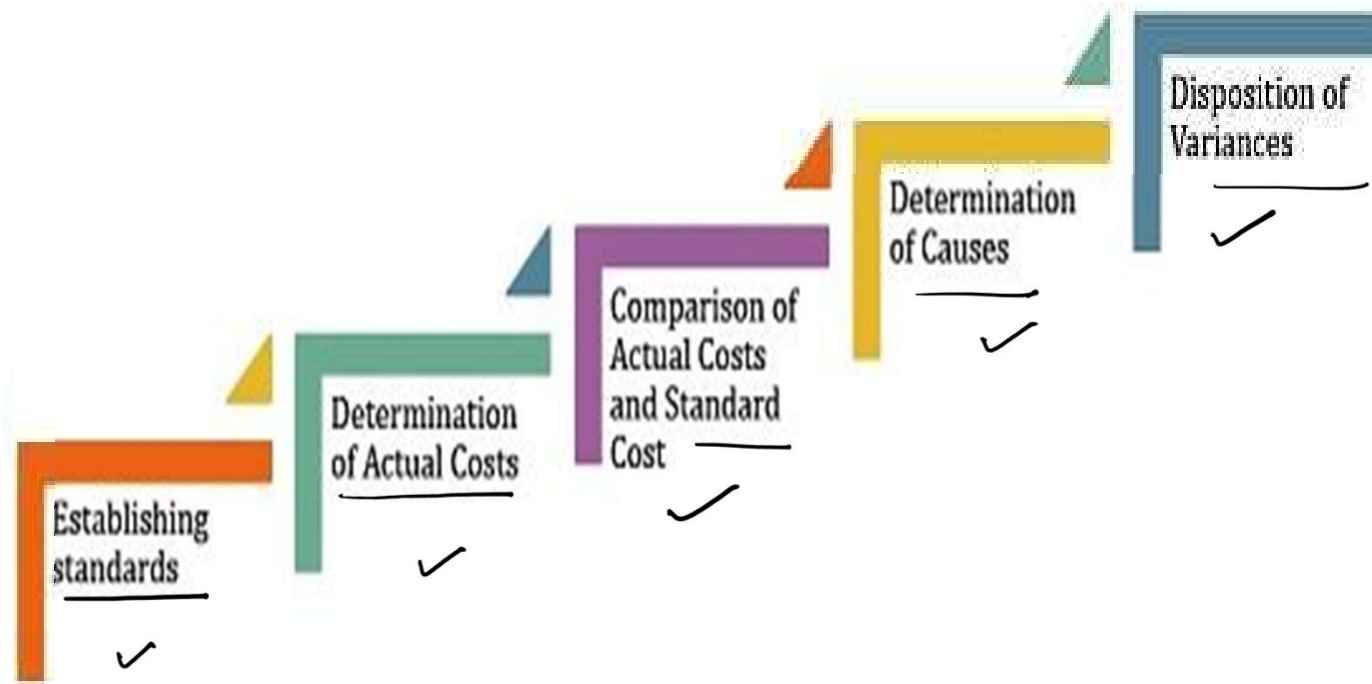
DEFINITION AND MEANING OF STANDARD COSTING

Standard cost of a product or service refers to the costs expected to be incurred to produce a goods or provide a service under anticipated conditions, keeping in view the prevailing market conditions

APPLICATIONS OF STANDARD COSTING

- The management uses it for planning. ✓
- The production, sales and profit budgets are prepared based on the standard costs.

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VARIOUS TYPES OF STANDARDS

Basic Standards ✓✓

These are the standard which are established for use over a long period of time.

Ideal Standards ✓✓

These standards take into account the perfect performance.

Currently Attainable Standards ✓✓

If frequent changes take place in production methods, price levels, labour conditions and other relevant factors of production, it is advisable to make necessary adjustments in the cost standard also to make it more realistic.

COMPONENTS OF A STANDARD COSTING SYSTEM

MATERIAL VARIANCES $\Rightarrow \frac{\text{Cost}}{=} = \frac{\text{Price}}{=} + \frac{\text{Usage}}{=}$

✓ Material Cost Variance

$$\underline{(SQ \times SP) - (AQ \times AP)} \Rightarrow (1000 \times 40) - (1050 \times 38) = 100 \text{ [F]}$$

↑
Material Price Variance

$$\underline{(SP - AP) \times AQ} \Rightarrow (40 - 38) 1050 = 2100 \text{ [F]}$$

+

Material Usage Variance

$$\underline{(SQ - AQ) \times SP} \Rightarrow (1000 - 1050) \times 40 = 2000 \text{ [A]}$$

eg:- Standard Quantity = 1000 SQ ✓
 Standard Price = ₹40 SP ✓
 Actual Quantity = 1050 AQ ✓
 Actual Price = ₹38 AP ✓

$$\begin{matrix} Q = H \\ P = R \end{matrix}$$

LABOUR VARIANCES

Cost = Rate + Efficiency

Labour Cost Variance	$\frac{(SH \times SR) - (AH \times AR)}{(\cancel{AH} \times \cancel{AR}) + (\cancel{SH} \times SR)} \Rightarrow (100 \times 500) - (120 \times 430) = \underline{1600} \text{ (A)}$
Labour Rate Variance	$\frac{(SR - AR) AH}{(\cancel{AH} \times \cancel{SR}) + \cancel{AH}} \Rightarrow (500 - 430) \times 120 = \underline{8400} \text{ (F)}$
Labour Efficiency Variance	$\frac{(SH - AH) SR}{(\cancel{AH} - \cancel{SH}) \times \cancel{SR}} \Rightarrow (100 - 120) \times 500 = \underline{10000} \text{ (A)}$

\therefore Standard Hours = 100 SH
 Standard Rate = 500 P/hr. SR
 Actual Hrs = 120 AH
 Actual Rate = 430 P/hr. AR

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ACCOUNTING TREATMENT OF VARIANCES

1. Transfer to costing profit and loss account \Rightarrow Abnormal Variance = $\begin{cases} \text{Fav.} = \text{Costing PIL} = \text{CR.} \\ \text{Adverse} = \text{Costing PIL} = \text{DR.} \end{cases}$
 2. Allocation of variances to finished stock, work-in-progress and cost of sales account
 - \rightarrow if Normal Variance then Good units will Absorb Normal Variance and due to this Cost Per unit will increase
- Eg: Std. Product 1000 units
 Std. Cost £ 10.000
 Normal loss Q 2.1.
 Actual Production is 950 units
Treat Normal loss and Abnormal loss
- \Rightarrow Computation of Abnormal loss unit $\Rightarrow 1000 - 2.1 = 980 - 950 = 30 \text{ units} \Rightarrow \text{Abnorm. loss}$
- $\Rightarrow 30 \text{ units} \times 10.20 = \underline{\underline{£ 306}} \Rightarrow \text{Costing PIL Ar} \Rightarrow \text{DR.}$
- \Rightarrow if No loss (Cost - P.U.) $\Rightarrow \frac{10,000}{1000} = \underline{\underline{£ 10 \text{ P.U.}}}$
- \Rightarrow if Normal loss (Cost P.U.) $\Rightarrow \frac{10,000}{1000 - 2.1 = 980 \text{ units (Good units)}} = \underline{\underline{£ 10.20 \text{ P.U.}}}$

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Cost of Producing
↑ 1 Additional unit

$$MC = TC_n - TC_{n-1} \Rightarrow 20000_{(100)} - 19850_{(99)} \Rightarrow \text{Cost 100th units} = ₹ 150$$

$$MC = \frac{\Delta TC}{\Delta Q_p} \Rightarrow \text{eg: } \frac{TC}{Q_p} \quad \begin{array}{cc} 2023 & 2024 \\ 50000 & 60000 \\ 10000 & 14000 \end{array} \quad \frac{\Delta 10000}{\Delta 4000} \Rightarrow \frac{10,000}{4000} = ₹ 2.5$$

Marginal Cost

Unit -6 Marginal Costing

Features:

1. Technique of cost used for cost control and record keeping
2. Provides information to top management for decision making
3. It considers only Variable cost as part of Product cost
4. It considers Fixed cost as Period cost
5. Used for comparison

Part of
Management
Accounting

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Factors of Marginal Costing

⇒ Cost-volume Profit Analysis

Profit-Volume Ratio

PIV Ratio

Formula

$$\frac{\text{Contribution}}{\text{Sales}} \times 100$$

Use

⇒ Profitability ✓

⇒ Comparison

Break-even Point

"No Profit-No loss"

Formula

Units ✓

$$\frac{\text{Fixed Cost}}{\text{Cont. P.V.}}$$

Amount

$$\frac{\text{Fixed Cost}}{\text{PIV Ratio}}$$

Use

- ⇒ Loan Approval ⇒ low BEP
- ⇒ min. level of Performance
- ⇒ Possibility of Profits
- ⇒ Incentive Plan for team
- ⇒ Comparison
- ⇒ outsourced

Margin of Safety

"Sales Above BEP"

Formula

%

$$\frac{\text{Sales} - \text{BEP}}{\text{Sales}} \times 100$$

Amount

$$\frac{\text{Profit}}{\text{PIV Ratio}}$$

Use

- ⇒ Additional Profit
- ⇒ Comparison

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eg:- DAS Ltd looking into Cost Component of a Product and found following info:
Sales ₹ 50,00,000 VC @ 60% Fixed cost ₹ 10,00,000 No. of units sold 100000.
 Find: ① PIU Ratio ② BEP (Units, ₹), ③ MOS (% , Value)

Sol.

Income Statement	
Sales	50,00,000 ✓
- VC @ 60% (30,00,000)	✓
Contribution	20,00,000 ✓
- Fixed cost (10,00,000)	✓
Profit	10,00,000 ✓

* Cont. Per Unit:

$$\frac{\text{C}}{\text{No. Unit}} = \frac{20,00,000}{100,000} = \underline{\underline{₹ 20}}$$

① PIU Ratio = $\frac{\text{Cont.}}{\text{Sales}} \times 100 = \frac{20\%}{50\%} \times 100 = \underline{\underline{40\%}}$

② BEP:
 $\Rightarrow \text{Units} = \frac{\text{FC}}{\text{Cont. PU.}} = \frac{10,00,000}{20} = \underline{\underline{50,000 \text{ units}}}$
 $\Rightarrow ₹ = \frac{\text{FC}}{\text{PIU Ratio}} = \frac{10,00,000}{40\%} = \underline{\underline{₹ 25,00,000}}$

③ MOS:
 $\Rightarrow \% = \frac{\text{S} - \text{BEP}}{\text{S}} \times 100 = \frac{50\% - 25\%}{50\%} \times 100 = \underline{\underline{50\%}}$
 $\Rightarrow \text{Value} = \frac{\text{Profit}}{\text{PIU Ratio}} = \frac{10,00,000}{40\%} = \underline{\underline{₹ 25,00,000}}$

BEP Chart

