

# 2

## AS 2 = VALUATION OF INVENTORIES

### SYNOPSIS

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Students are suggested to read this standards after getting basic understanding of Costing for better understanding

### Introduction

- At the year end every entity needs to measure the closing balance of Inventory which comprises of raw material, work-in-progress, finished goods and miscellaneous items.
- The cost of closing inventory is a **part of costs incurred in the current accounting period** that is **carried over** to next accounting period.
- These items are going to be sold in the next financial year and will be recorded as consumption in the next year. This will ensure the matching concept i.e. where the revenue is recorded there the related expenses also should be recorded; Likewise, the cost of opening inventory is a part of costs incurred in the previous accounting period that is brought forward to current accounting period;
- The valuation of inventory is crucial because of its direct impact in measuring profit/loss for an accounting period. Higher the value of closing inventory lower is the cost of goods sold and hence higher is the profit and *vice versa*;

## 1. Objective

- Determination of the carrying amount of inventories in Financial Statements (FSs). This includes determination of cost of inventory and any amount to be written off to bring it to Net Realisable Value (NRV).
- This Standard is very important as it impacts both P&L as well as Balance sheet i.e. if closing stock is overvalued/undervalued, it impacts CY profits as well as asset value in the Balance sheet.

## 2. Scope

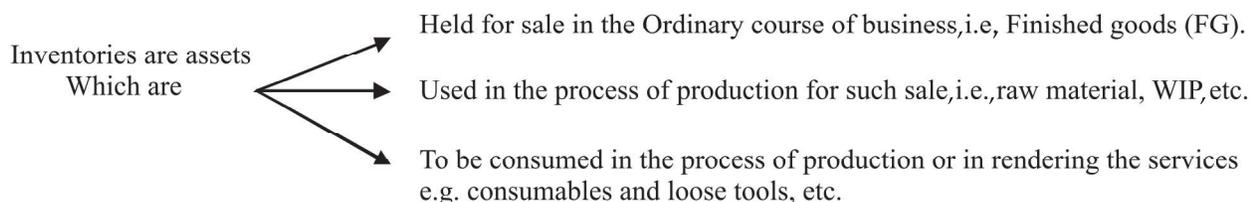
This standard is NOT applicable for the following inventories: (Reasons are given in Brackets)

- Work-in-progress (WIP) arising under **construction contracts**; (Covered by AS-7)
- WIP of service providers; (Covered by AS-9)
- If the entity holds shares, debentures and other **financial instruments as stock-in-trade**; (Covered by AS-13)
- Inventories of livestock, agricultural and forest products, mineral oils, ores and gases to the extent that they are measured at NRV in accordance with well-established practices in those industries. (NO Accounting standard exists; Well established policies in the Industry are followed).

*The point (d) is an option to the entity and if it chooses to carry inventory at cost, the standard measurement rules apply, i.e., measuring at lower of cost and NRV.*

## 3. Definitions

Now let us understand the key terms used in the standard. (Read the definitions carefully to understand the standard better).



Inventory is an asset.

### Concept Capsule 1

X Ltd., manufactures soaps. It requires oil, which is bought in tins and at the end of the Financial Year (FY) the company has one lakh empty tins and containers. The entity sells the empty tins @ ₹2 each. So the worth of tins held by the company is ₹ 2 lakh (₹2 × 1 lakh tins) which is a material amount for the entity. The accountant of the company wants to disclose (classify) the empty tins under the heading Inventory. Do you agree with this? Give your answer with reasons.

### Suggested Answer

*(Before you answer read the inventory definition once again.)*

As per AS-2 – Inventory is an asset, which is held for sale or used in the process of production or to be consumed in such process.

Containers & empty tins do NOT satisfy the definition of “Inventories” as these are not held for sale in the ordinary course of business and these are NOT used or consumed in the process of production. Hence classification of empty tins under Inventory is NOT correct. But these will satisfy the definition of an ASSET, hence recognize the asset at its NRV and present it under either current assets or non-current assets depending on the expected realisation time.

**Concept Capsule 2**

A Ltd. is into real estate industry. It purchases lands, develops them and sells them in small plots. The accountant of the company has grouped the cost of land and cost of development under fixed assets. Do you agree with this accounting treatment? Answer with reasons.

**Suggested Answer**

As per AS-2, Inventory is an asset which is held for sale in the ordinary course of business. Since land is being held by the company for sale in the ordinary course of business, it becomes an inventory to the company and therefore it should be classified as inventory under the head CURRENT ASSETS.

(For information - As per AS-10 – Fixed asset is an asset held to produce or provide services but not held for sale in the ordinary course of business; Refer AS-10 for further discussion on Fixed assets)

**Concept Capsule 3**

Whether spare parts, servicing & standby equipments are inventory?

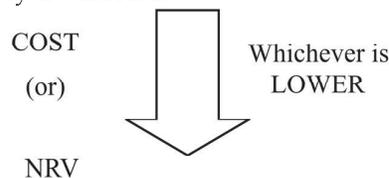
**Suggested Answer**

Spare parts, servicing and standby equipments which satisfy the definition of Property, Plant and Equipment (PPE – Fixed asset) as per AS-10 will be accounted in accordance with AS-10.

If these do not satisfy PPE definition as per AS-10, it will be treated as “inventory” as per AS-2 and valued accordingly as per this standard.

#### 4. Measurement of Inventories

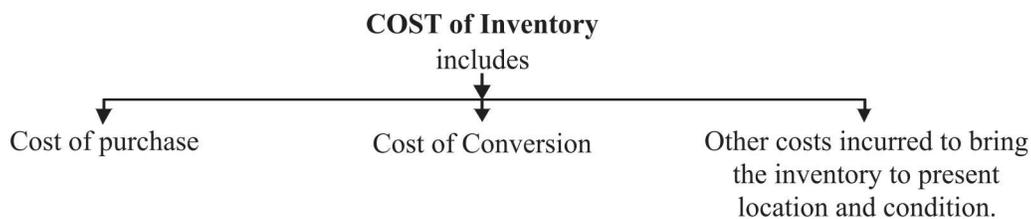
As you are very well aware of that Inventory is valued at



#### Why Cost or Net Realisable Value (NRV) whichever is lower?

- The principle of prudence demands that no profit should be anticipated while all foreseeable losses should be recognised.
- Thus, if NRV of inventory is less than inventory cost, inventory is valued at net realisable value to reduce the reported profit in anticipation of loss.
- On the other hand, if NRV of inventory is more than inventory cost, the anticipated profit is ignored and the inventory is valued at cost.
- In short, inventory is valued at lower of cost and NRV.

Let us try to understand what is Cost? Which items are included/excluded in cost of inventory? and Methods of valuation of inventory?



We should understand each element of cost separately;

## 5. Cost of Purchase

Cost of purchase includes all costs incurred directly related to the purchase of the material. The following items are directly related to the purchase of material.

|   | ₹           |
|---|-------------|
| Purchase price i.e. Basic price of material   | XXX         |
| <b>Add</b>  |             |
| NON-refundable taxes & duties (e.g. Customs duty)                                     | XXX         |
| Carrying Cost e.g. inward freight cost  | XXX         |
| Transport Insurance cost  | XXX         |
| Brokerage/commission charges paid to buy material                                     | XXX         |
| All other costs incurred directly related to acquisition and bringing it to warehouse | XXX         |
| <b>Less</b>   |             |
| Trade discounts   | (XXX)       |
| Quantity discounts  | (XXX)       |
| Duty drawbacks & other similar items  | (XXX)       |
| <b>Cost of purchase</b>   | <b>XXXX</b> |

Whichever

### Concept Capsule 4

Company ABC Ltd., purchases a product from X Ltd., at ₹10 each. As per the agreement, supplier gives a quantity discount of 10% when ABC Ltd. purchases 1,00,000 items in a year.

- Can ABC Ltd reduce the discount amount from its purchases?
- When should ABC Ltd. reduce discount amount from cost of purchase?

### Suggested Answer

As per AS 2, trade discounts, rebates, duty drawbacks and other similar items are deductible in determining the costs of purchase.

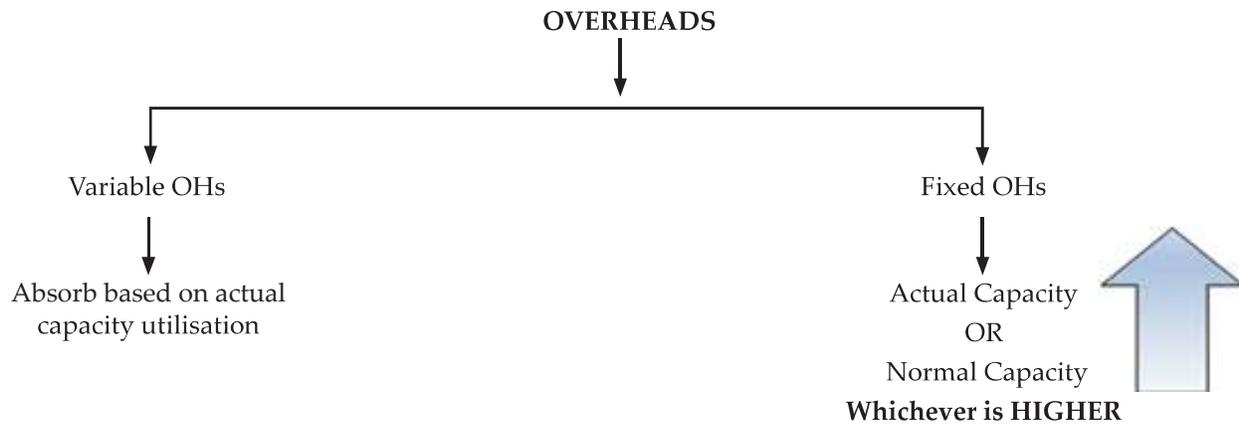
- Quantity discount is directly related to purchases hence it should be deducted from the cost of purchase.
- Discount is an income to the entity. Income should be recognised when it satisfies the following conditions:
  - Receipt of discount should be probable; and
  - It should be measured reliably.

As receipt of discount is probable when the entity purchases 1 lakh items, it should be deducted from the cost of purchase when it meets the target of 1,00,000 items.

## 6. Cost of Conversion

- This includes the costs incurred to convert the raw materials into finished goods. For example, major costs like Labour, Factory rent, fuel costs, power expenses (factory overheads) and other items.
- We can refer COST ACCOUNTING STANDARD 4 (CAS-4) for further clarity.
- The overheads should be absorbed in the following manner:
  - Factory overheads can be divided into two types based on its nature i.e. variable overheads and fixed OH.
  - As you know – **Variable expenses** – which vary (change) along with the volume of production;
  - **Fixed expenses** – which do not vary with volume of production.

Absorption of overheads (to determine cost p. u.) should be done as described in the following manner:

**Q: What is Normal capacity?**

Normal Capacity is the number of units of production on an average over a period after considering loss of capacity under normal circumstances. (Normal capacity = Total capacity Less planned maintenance)

**Q: What is Actual capacity?**

Actual capacity is actual production of goods.

When actual production is almost equal or lower than normal capacity – we can consider actual production = normal production.

**Q: Why should we take Normal capacity when actual production is less than Normal capacity?**

This can be understood better through the following example:

**Example**

For a product, raw material value per unit is ₹25, direct labour ₹10 per unit and Fixed OHs ₹2,00,000 per annum. The Actual production is 4,000 goods but normal capacity is 5,000 goods. No opening stock. Closing stock is 1,000 goods at the end of the year.

Let us determine the value of inventory (1,000 units) in both the ways, i.e., by allocating Fixed OH based on normal capacity and Actual capacity. First let us find out per unit cost and with that we can value the cost of 1,000 units.

| Particulars              | Basis                      | Goods | Per Unit      | Basis  | Goods | Per Unit      |
|--------------------------|----------------------------|-------|---------------|--------|-------|---------------|
| Raw Material p.u.        | Actual                     |       | 25            | Actual |       | 25            |
| Direct labour p.u.       | Actual                     |       | 10            | Actual |       | 10            |
| Fixed overheads p.u.     | Normal                     | 5,000 | 40            | Actual | 4,000 | 50            |
|                          | <b>Total cost per unit</b> |       | <b>75</b>     |        |       | <b>85</b>     |
| Closing Stock (in goods) |                            |       | 1,000         |        |       | 1,000         |
| Closing Stock value in ₹ |                            |       | <b>75,000</b> |        |       | <b>85,000</b> |

Observe the closing stock valuation. On observation, you can notice that, the closing stock value based on allocation of Normal capacity is low and actual capacity is High. The production is low may be because of idle time or due to inefficiency, etc. When there is inefficiency or idle time, the closing stock value is high and when closing stock value is high, automatically profit is also increased. It means your inefficiency is becoming an asset to you. How is it correct? Think once.

Hence it is reasonable to allocate the Fixed OHs based on the Normal capacity when it is higher than Actual capacity.

**Concept capsule 5**

Normal production volume of Rama Ltd. is 1,00,000 units. Estimated fixed overheads are ₹5,00,000. Calculate fixed overhead per unit to be absorbed when actual production is (i) 1,00,000 units; (ii) 80,000 units; (iii) 1,20,000 units and find out unabsorbed amount to be transferred to P&L in all the situations?

**Suggested answer****Case 1: When actual production is 1,00,000 units**

When actual production is equal to normal capacity, fixed overheads should be absorbed by 1,00,000 units, i.e., fixed overheads recovery rate =  $5,00,000/1,00,000 = ₹5$  per unit.

Overheads absorbed = actual capacity × per unit rate =  $1,00,000 \times 5 = ₹5,00,000$ ;

Actual overheads incurred = ₹5,00,000; So unabsorbed amount = Nil

**Case 2: When actual production is 80,000 units**

When actual production is less than normal capacity, fixed overheads should be absorbed by using normal capacity (i.e. 1,00,000 units), i.e., fixed overheads recovery rate =  $5,00,000/1,00,000 = ₹5$  per unit.

Overheads absorbed = actual capacity × per unit rate =  $80,000 \times 5 = ₹4,00,000$ ;

Actual overheads incurred = ₹5,00,000; So unabsorbed amount = ₹1,00,000

**Case 3: When actual production is 1,20,000 units**

When actual production is more than normal capacity, fixed overheads should be absorbed by using actual capacity (i.e. 1,20,000 units), i.e., fixed overheads recovery rate =  $5,00,000/1,20,000 = ₹4.17$  per unit. Overheads absorbed = actual capacity × per unit rate =  $1,20,000 \times 4.17 = ₹5,00,000$ ;

Actual overheads incurred = ₹5,00,000; So unabsorbed amount = Nil

The following are examples of factory cost and these should be absorbed in the calculation of per unit cost:

- (i) Consumable stores and spares;
- (ii) Depreciation of plant and machinery, factory building, etc.
- (iii) Lease rent of production assets;
- (iv) Repair and maintenance of plant and machinery, factory building, etc.
- (v) Indirect employees' cost connected with production activities;
- (vi) Drawing and Designing department cost;
- (vii) Insurance of plant and machinery, factory building, stock of RM & WIP, etc.
- (viii) Amortized cost of jigs, fixtures, tooling, etc.
- (ix) Service department cost such as Tool Room, Engineering & Maintenance, etc.

## 7. Other costs

All other costs incurred to bring the inventory to the present location and condition.

Examples:

- Quality control cost – quality control employee cost and other costs of that dept;
- Development cost incurred for the development and improvement of the process or product; i.e., Amortisation expense of Intangible assets is part of inventory cost;
- Administration OHs **in relation to** production activities; (General administration OHs should NOT be included);
- Packaging cost – primary package cost should be included (but Secondary package material should not be part of cost of inventory), etc.

*The following costs should be excluded from "COST"*

1. Abnormal waste of Raw material, labour or other production costs; (**Reason:** Inefficiency cannot increase the product value hence it should NOT be a part of COST)
2. Storage costs; (If Storage is necessary for next step of process of production – Include);
3. General administration OHs; (**Reason:** General administration costs are NOT necessary to bring the inventory to its present location and condition)
4. Selling & Distribution Costs; (**Reason:** Same as above)

5. Interest & Financial charges in general (But if inventory satisfies the definition of Qualifying asset as per AS-16 – It will be included);

**Note:** This unallocated expenditure should be transferred to P&L a/c in the period in which it is incurred.

#### **Concept capsule 6**

Venus Trading Company purchases cars from several countries and sells them to Asian countries. During the current year, this company has incurred following expenses:

1. Trade discounts on purchase
2. Handling costs relating to imports
3. Salaries of accounting department
4. Sales commission paid to sales agents
5. After sales warranty costs
6. Import duties
7. Costs of purchases (based on supplier's invoices)
8. Freight expense
9. Insurance of purchases
10. Brokerage commission paid to indenting agents

Evaluate which costs are allowed by AS-2 for inclusion in the cost of inventory in the books of Venus.

#### **Suggested answer**

Items number 1, 2, 6, 7, 8, 9, 10 are allowed by AS-2 for the calculation of cost of inventories.

Salaries of accounts department, sales commission, and after sale warranty costs are not considered to be the cost of inventory therefore, they are not allowed by AS-2 for inclusion in cost of inventory and are expensed off in the profit and loss account.

#### **Concept capsule 7**

In a production process, normal waste is 5% of input. 5,000 MT of input were put in process resulting in a wastage of 300 MT. Cost per MT of input is ₹1,000. The entire quantity of waste is on stock at the year end. Assume there is NO realizable value to stock. The accountant wants to know how this wastage is to be treated in the books. Explain in the context of AS-2 (Revised) the treatment of normal loss and abnormal loss and also find out the amount of abnormal loss, if any.

#### **Answer**

As per AS-2, Abnormal amount of waste materials, labour or other production costs are excluded from cost of inventories and such costs are recognised as expenses in the period in which they are incurred.

In this case, normal waste is 250 MT (5,000 MT × 5%) and Actual waste is 300 MT; hence abnormal waste is 50 MT (300 MT – 250 MT).

The cost of normal waste 250 MT will be included in determining the cost of inventories (finished goods) at the year end.

The cost of abnormal waste amounting to ₹52,632 (50 MT × ₹1,052.63) will be charged to P&L statement. Cost per unit =  $5,000 \times 1,000 / 4,750 = 1,052.63$

#### **Concept capsule 8**

The company X Ltd. has to pay for delay in cotton clearing charges. The company up to 31.3.20X1 has included such charges in the valuation of closing stock. This being in the nature of interest, X Ltd. decided to exclude such charges from closing stock for the year 20X1-X2. This would result in decrease in profit by ₹ 5 lakhs. Comment.

#### **Suggested answer**

As per AS-2, interest and other borrowing costs are usually considered as **not relating to bringing the inventories to their present location and condition** and are therefore, usually **not included** in the cost of inventories.

However, X Ltd. was in practice to charge the cost for delay in cotton clearing in the closing stock. As X Ltd. decided to change this valuation procedure of closing stock, this treatment **will be considered as a change in accounting policy** and such fact to be disclosed as per AS-1. Therefore, any change in amount mentioned in financial statement, which will affect the financial position of the company should be disclosed properly as per AS-1, AS-2 and AS-5.

Also, a note should be given in the annual accounts that, had the company followed earlier system of valuation of closing stock, the profit before tax would have been higher by ₹ 5 lakhs.

## 8. Allocation of costs in special situations

### Joint Products

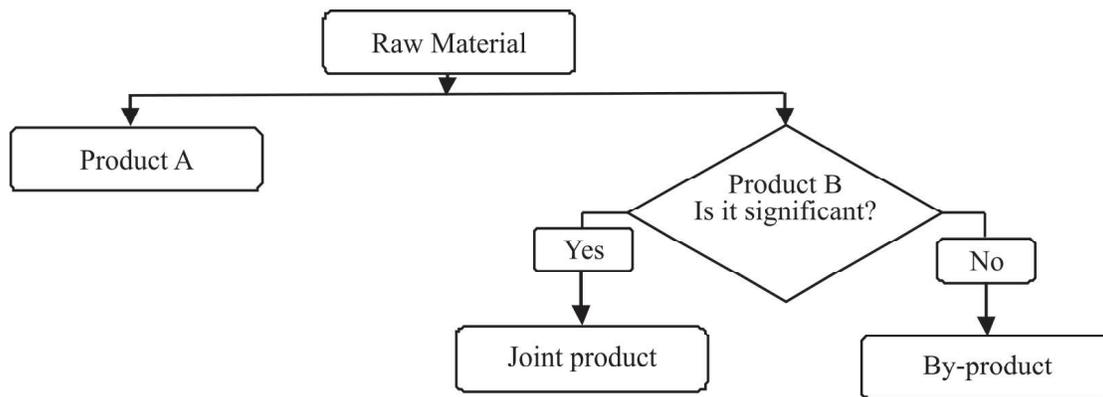
Two or more outputs generated simultaneously, by a single manufacturing process using common input, and being *substantially equal* in value.

*Example:* (1) Butter, cheese, and cream from milk, (2) Fuel oil, gasoline, and kerosene from crude oil.

### By product

It is a secondary or incidental product in the process of manufacture and generally it has *insignificant value*.

*Example:* In manufacture of Sugar – Sugar is main product and molasses is by-product.



## 9. Allocation of cost in case of Joint products

*In this case, the joint costs (common costs) are allocated between the products on a rational and consistent basis.*

*Basis of allocation:* May be

- On the **sales value** of each product when the products become; **separately identifiable** (i.e., sale value at split point);
- If sale value at split off point is not available, consider the sale value **after** completion of production **less** cost of respective further processing costs;
- If further processing costs are insignificant, consider sale value after completion of production;

Let us understand the allocation of joint product costs by using the following example: