

**SYNOPSIS**

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**This chapter class discussion is shared in my You tube channel  
<https://youtu.be/iqQCcZdnzj8>**

**1. Objective**

- ✦ Determination of the carrying amount of inventories in Financial Statements (FSs). This includes determination of the cost of inventory and any amount to be written off to bring it to Net Realisable Value (NRV);
- ✦ It provides guidance on cost formulas that are used to assign costs to inventories;
- ✦ This standard is very important as valuation of inventory 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)

- (a) Financial instruments (*If any contract satisfies financial asset or financial liability definition – it should be dealt by Ind AS 32 and Ind AS 109, even if it is meant for sale in the ordinary course of business*);
- (b) Biological assets (*i.e. living animals or plants*) related to agricultural activity and agricultural produce at the point of harvest (*dealt Ind AS 41 - Agriculture*);

This standard does not apply to the **measurement** (only) of:

- (a) Inventories **held by producers** of agricultural and forest products, agricultural produce after harvest, and minerals and mineral products, to the extent that they are measured at net realisable value (NRV) in accordance with well-established practices in those industries. When such inventories are measured at NRV, changes in that value are recognised in profit or loss in the period of the change. (*Dealt as per industry practices*) (Refer Note 1 below)
- (b) Inventories **held by commodity broker-traders** who **measure** their inventories at **fair value less costs to sell**. Any change in value of inventory from period to period will be recognised in profit or loss in the period of change. (Refer Note 2 below)

### Note 1:

If inventory is recognised at NRV, the profit or loss on those are recognised in the year even though it is not yet been sold. This is permitted only when agricultural crops have been harvested or minerals have been extracted (*i.e. ready for sale*) **and sale is assured under a forward contract or a government guarantee**, or when an active market exists and there is a negligible risk of failure to sell.

### Note 2:

This is an option given to the broker-trader to value inventory at fair value *less* cost to sell. If they value their stock like that, they need not follow this standard. They are middle men in the business and their profit is fluctuation in price or brokers' margin.

*I know – after reading this one question comes to your mind i.e. how NRV is different from fair value less costs. Go through the next paragraph carefully to understand.*

#### **NRV need not be equal to fair value less selling costs**

NRV refers to the net amount expected to realise from the sale of inventory in the ordinary course of business. Fair value reflects the price at which it can be sold in the market in general on the measuring date. The former is an entity-specific value; the latter is not. NRV for inventories may not be equal to fair value less costs to sell.

An entity holds mineral inventories. It could sell the stock on the open market for ₹ 1,000 per ton after selling costs. The entity is currently in a forward contract to sell the stock at ₹ 1,200 per ton. In this situation, fair value less selling costs is ₹ 1,000 per ton, but net realizable value is ₹ 1,200 per ton.

#### **Can NRV and fair value less costs to sell differ between producer and a broker trader entity?**

A producer in India holds agricultural produce that it can sell locally for ₹ 100 per ton **or** to a broker in Brazil for ₹ 500 per ton. The broker can sell the produce in Brazil market at ₹ 800 per ton. In this situation, to the extent that the producer will sell to the broker, both the fair value and the NRV for the producer is ₹ 500 per ton. For the broker, the fair value and the NRV is ₹ 800 per ton. In this situation, the values are different as between the producer and the broker, because the producer does not have access to the market in Brazil and must sell either on the local market or to the broker.

Under the above situations these inventories are excluded from the scope of this Standard.

### Concept Capsule 1

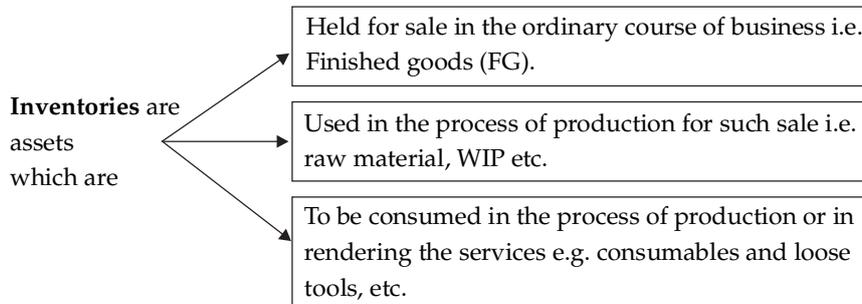
Nagarjuna Ltd. is a wholesaler in Agro products. The company has valued closing stock of agricultural products at NRV as agricultural products are SCOPED OUT from Ind AS 2. Do you agree?

### Suggested Answer

Ind AS 2 is NOT applicable to PRODUCERS' of agricultural and forest products, mineral products, etc. In the given situation, Nagarjuna Ltd. is a whole seller of agro products; it means the entity is trading. Hence the above exclusion is NOT applicable to this entity. As the exclusion is not applicable to the entity it should follow Ind AS 2 i.e. value inventory at lower of Cost or NRV. Hence the contention of the entity is NOT correct.

## 3. Definitions

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



### Concept Capsule 2

X Ltd., manufactures soaps. It requires oil, which is bought in tins and at the end of the Financial Year (FY) the company has 1 lakh empty tins and containers. The entity sells the empty tins at ₹ 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 as Inventory. Do you agree with this? Give your answer with reasons.

### Suggested Answer

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

As per Ind 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 the entity should recognize the asset at its NRV and present it either under current assets or noncurrent assets depending on the expected realisation time.

### Concept Capsule 3

A Ltd. is engaged mainly in purchase and sale of wines, it decides to acquire 20 constructed flats and renovate and let them on lease. During the year end company had let out 9 flats and 11 remained vacant. Due to appreciation in value of flats A Ltd. sold 11 Flats with huge profit margins. Management disclosed the sale and purchase transaction as sale of goods and the profit on such sale is recorded as direct income and treated Lease income as indirect Income. Whether the accounting treatment is correct?

**Suggested Answer**

As per Ind AS 2, Inventories are assets intended for sale in the ordinary course of business, whereas per Ind AS 16, Fixed asset is an asset held for producing goods or providing services but not held for sale in the ordinary course of business.

In the given case, A Ltd's intention of acquisition of flats is to use the flats to generate lease income and are **not held for sale** in the ordinary course of business. Hence these flats should be classified as investment property (*Investment in the nature of land or building*) rather than inventory (*applicable standard is Ind AS 40 – Investment property*). Therefore the profit from sale of flats (investment property) should be classified as indirect income and it requires separate disclosure based on its nature & materiality. Therefore management accounting treatment is not in accordance with Standard.

**Concept Capsule 4**

Radha Ltd. is engaged in the business of refining & transportation of crude oil through pipelines. The length of pipeline is 50 kms and it should be filled initially with 50 lakh Lts of oil. (Say, the entity wants to transport 10,000 Lts of oil from one end to another, if it fills with 10,000 Lts in the empty pipeline, it will be in the pipe line only and it cannot reach the other end. Hence the entity should fill the oil at the beginning to start transportation and the stock in the pipeline is a permanent stock which cannot be sold). Can the entity treat the stock of crude oil in pipelines as Inventory?

**Suggested Answer**

As per Ind AS 2, Inventory is an asset, which is held for sale in the ordinary course of business or used in the process of production for such sale.

The crude oil in the pipeline is held for sale. The oil in the pipeline is always replenished by way of fresh additions. The oil initially filled is not going to stay in pipeline permanently. Hence it is concluded that the oil in pipeline at the end of FY is held for sale in the ordinary course of business and it should be treated as Inventory as per Ind AS 2.

The oil is NOT held to produce or provide services in the ordinary course of business; hence it cannot be accounted as Property, Plant and Equipment (*Fixed asset*) under Ind AS 16. (*Please read the definition of PPE as per Ind AS 16*)

**Concept Capsule 5**

Whether spare parts, servicing & standby equipments are inventory?

**Suggested Answer**

Spare parts, servicing and standby equipments which satisfies the definition of Property, Plant and Equipment as per Ind AS 16 will be recognised as PPE and accounted accordingly as per that Standard.

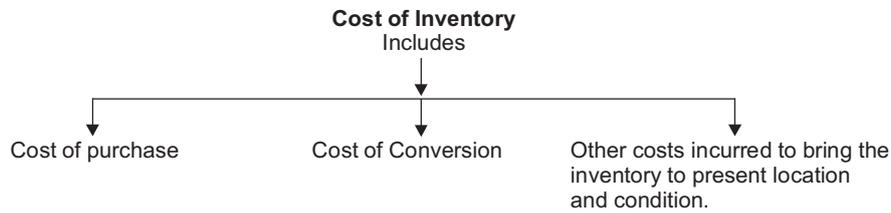
If these do not satisfy PPE definition as per Ind AS 16, it will be treated as "inventory" as per Ind AS 2 and valued at the lower of Cost or NRV.

**4. Measurement of Inventories**

Inventory is valued at



Let us try to understand what is Cost? Which items are included/excluded from the 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 the costs incurred to purchase the material. The following items are directly related to the purchase of material:-

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

**Note:**

The suppliers may offer an early settlement discount (Cash discount) for payment within specified days and the entity may intend to achieve this. Still this should not be deducted from cost of purchase.

**Concept Capsule 6**

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 100,000 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 Ind 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 100,000 items.

## 6. Cost of Conversion

This includes the costs incurred to convert the raw materials into finished goods like labour, factory rent, fuel costs, power expenses, factory maintenance (factory overheads) and other items.

We can refer to Cost Accounting Standard 4 (CAS 4) for further clarity.

The overheads (OH) should be absorbed or loaded on inventory in the following manner:–

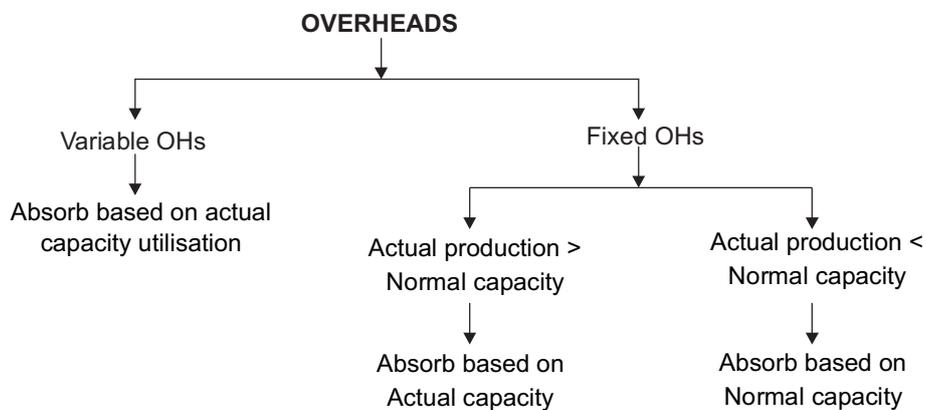
Factory overheads can be divided into two types based on its nature i.e. variable and fixed overheads.

As you know –

Variable expenses – Which vary 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?**

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

It is computed based on the productive capacity achieved over a period of time. Say average production of three preceding financial years, where there is **no** abnormal production took place.

**Q: What is Actual capacity?**

**Answer:** Actual capacity is actual production of goods over a period.

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

**Answer:** This can be understood better with the following example:—

### Example

For a product, raw material cost per unit is ₹ 25, direct labour ₹ 10 per unit and Fixed Ohs ₹ 2,00,000 per annum. The actual production is 4,000 units but normal capacity is 5,000 units. No opening stock. Closing stock is 1,000 units 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                      | Units | Per Unit      | Basis                      | Units | Per Unit      |
|--------------------------|----------------------------|-------|---------------|----------------------------|-------|---------------|
| Raw Material put.        | 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>Total cost per unit</b> |       | <b>85</b>     |
| Closing Stock (in units) |                            |       | 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 lower when compared to actual capacity based allocation. Lower production may be because of idle time, labour strikes, inefficiencies etc. When there is inefficiency or idle time, the closing stock value is high and because of higher closing stock value, gross profit will also be increased. It means the entity's inefficiency is becoming an asset to the entity and raising the profit. Does it make any sense? 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 7

(CA Final-May 2018)

Rama Ltd. normal production volume 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 of OHs to be transferred to P&L in all the situations?

#### Suggested answer

##### (i) 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

##### (ii) 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 and this unallocated overheads should be charged to P&L in the period in which it is incurred.

##### (iii) 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 few examples of factory overheads:—

- Consumable stores and spares;
- Depreciation of plant and machinery, factory building, etc.;
- Amortisation of right-of-use asset used in production process;

- (d) Lease rent of production assets;
- (e) Repair and maintenance of plant and machinery, factory building. etc.;
- (f) Indirect employees cost connected with production activities;
- (g) Drawing and Designing department cost;
- (h) Insurance of plant and machinery, factory building, stock of RM & WIP etc.;
- (i) Amortized cost of jigs, fixtures, tooling etc.;
- (j) 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 department;
- ✦ R&D cost incurred for the development and improvement of the process or product;
- ✦ Administration OHs in relation to production activities (General admin OHs should NOT be included);
- ✦ Packaging cost – primary and secondary package cost should be included, etc.

### The following costs should be EXCLUDED from “COST”

1. Abnormal wastage 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 a part of process of production, such storage cost should be included in the cost. E.g. Storage cost incurred in production of wine, pickles, etc.);
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, borrowing costs are not related to bring the inventory to its present location and condition. If inventory satisfies the definition of “Qualifying asset” as per Ind AS 23 – It should be included).

### Note

The Excluded expenditure should be transferred to P&L a/c in the period in which it is incurred.

#### Concept capsule 8

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 Ind 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 Ind 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 Ind AS 2 for inclusion in cost of inventory and are expensed off in the profit and loss account.

**Concept capsule 9**

“The company deals in purchase and sale of timber and has included notional interest charges (calculated on the paid-up share capital and free reserves) in the value of stock of timber as at the Balance Sheet date as part of cost of holding the timber.” Being the auditor of the company, how would you deal with the situation?

**Suggested Answer**

As per Ind AS 2, any expenditure is included in the cost of inventory when it is incurred to bring the inventory to the present location and condition.

Notional interest charges on paid up capital and free reserves are NOT being incurred to bring the inventory to present location and condition. Hence considering the notional interest in valuation of inventory is NOT fair and is not in conformity with Ind AS 2 or GAAP.

As an auditor, the valuation of inventory should be qualified considering the materiality, etc.

**Concept capsule 10**

In a production process, normal wastage 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 left as stock at the year end. If waste has **no** realizable value, what is the cost per unit?

**Suggested Answer**

As per Ind 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 11 (Deferred credit terms)**

A dealer has purchased 1,000 cars costing ₹ 2,80,000 each on deferred payment basis as ₹ 25,000 per month per car to be paid in 12 equal instalments.

At year end 31st March 20X1, twenty cars were in stock. What would be the cost of goods sold, finance cost and inventory carrying amount?

**Suggested Answer**

|                                      |          |
|--------------------------------------|----------|
|                                      | ₹        |
| Deferred payment price (25,000 × 12) | 3,00,000 |
| Less: Cash price                     | 2,80,000 |
| Interest expense                     | 20,000   |