



WEBINT Series on Cost Accounting Standards

Presentation on CAS 6: Material Cost

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Material and its classification

Material constitutes one of the important elements of production. Types of materials covered under CAS-6 are raw materials, process materials, additives, manufactured / bought out components, sub-assemblies, accessories, semi finished goods, consumable stores, spares and other indirect materials.

Materials are classified under a common designation on the basis of similarities of nature, attribute or relations, source of supply and the like.

- **According to nature** such as raw material, consumable stores, spares and the like.
- **In terms of relationship** as direct material and indirect material.

Materials and its classification

- On the basis of **source of supply** as indigenous materials / imported materials. Indigenous materials are manufactured within the country and imported materials are purchased from other countries.

For purpose of **identification and convenience**, each item of material is given a distinct name. Similar items are classified under sub-groups and number of such group is classified under the main or major groups.

For example, items of brass may be classified under sub-head 'non-ferrous metals' and under the main head 'metals'.

CAS – 6 Material Cost

Introduction

This standard deals with the principles and methods of classification, measurement and assignment of material cost, for determination of the Cost of product or service, and the presentation and disclosure in cost statements.

Material for the purpose of this standard includes raw materials, process materials, additives, manufactured / bought out components, sub-assemblies, accessories, semi finished goods, consumable stores, spares and other indirect materials.

Explanation

Raw material is a basic /main material used in the manufacture of product. For example sugar cane is the raw material for production of sugar. Cotton is the raw material for production of cotton yarn.

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Process materials/additives are materials used in the process of manufacture in addition to raw material. It varies from industry to industry. Process material for sugar industry is lime, sulphur; in cement industry pozzallana and gypsum are additive materials; and in paper industry clay/china clay is additive material.

Bought out component means a manufactured (industrial) product, which forms part of the finished product (for example fastener, fan belt and the like) and is fitted to the product without any further processing. In other words bought components are purchased items used in the assembly of main product. These items are developed by the supplier as per specifications of manufacturer. Bought out component when used in the main product are called “Original Equipment Supplies (O.E.S)”.

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Sub-assembly or aggregates means an assembly of various components with a distinct identity, and forms part of the finished product, for example engine, steering in an automobile.

Accessory may be either a component or sub-assembly, which is not essential for the basic functioning of the product, but supplied as an optional item (for example an air conditioner or music system in an automobile). In case of mining, earthmoving drilling equipment and other similar items of machinery, accessories are supplied with the basic equipment, depending upon the operating conditions in the field as standard equipment.

Consumable stores are items used in the maintenance of plant for example lubricant, cotton waste, paint and the like.

Spares are purchased items used for replacement of worn out part of machinery and the like.

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When material is acquired in exchange for other material or service supplied, the cost of material acquired is taken as cost of material supplied or services provided plus other applicable cost such as freight.

In paper industry where bagasse from sugar mill is obtained by the paper mill by supplying coal to the sugar mills, in the cost statement, the cost of coal supplied is included in the cost of bagasse procured.

All the above items are identifiable with a product and classified as direct material cost.

Other indirect materials are items of small value such as bolt, nut nails, and the like which cannot be directly identified economically with a product and are treated as indirect material.

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The Standard deals with the following issues.

- *Principle of Valuation of receipt of materials.*
- *Principle of Valuation of issue of materials.*
- *Assignment of material cost to cost objects.*

Objective

*The objective of this standard is to bring **uniformity and consistency** in the principles and methods of determining the material cost **with reasonable accuracy**.*

Scope

*This standard should be **applied to cost statements** which require classification, measurement, assignment, presentation and disclosure of material costs **including those requiring attestation**.*

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Important Definitions

Defectives: Materials, products or intermediate products that do not meet quality standards. This may **include reworks or rejects.**

Reworks: Defectives which can be brought up to the standards by **putting in additional resources.** Rework includes repairs, reconditioning and refurbishing.

Rejects: Defectives which cannot meet the quality standards even after putting in additional resources. Rejects may be disposed off as waste or sold for salvage value or recycled in the production process.

Intermediate Product: An intermediate product is a product that **requires further processing** before it is saleable.

Material Cost: The cost of material used for the **purpose of production of a product or rendering a service.**

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Scrap: Discarded material having no or insignificant value and which is usually either disposed off without further treatment (other than reclamation and handling) or reintroduced into the process in place of raw material.

Waste: Material lost during production or storage and discarded material which may or may not have any value.

Spoilage: Production that does not meet the quality requirements or specifications and cannot be rectified economically.

Production overheads: Indirect costs involved in the production of a product or in rendering service

The terms Production Overheads, Factory Overheads, Works Overheads and Manufacturing Overheads denote the same meaning and are used interchangeably.

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Principle of valuation of receipt of materials

*The material receipt should be **valued at purchase price including** duties and taxes, freight inwards, insurance, and other expenditure directly attributable to procurement (**net of** trade discounts, rebates, taxes and duties refundable or to be credited by the taxing authorities) that can be quantified with reasonable accuracy at the time of acquisition.*

The valuation of receipt of materials is to be based on the terms and conditions stated in the purchase order depending upon source of supply i.e. indigenous or imported.

***Finance costs** incurred in connection with the acquisition of materials shall not form part of material cost.*

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Principle of valuation of receipt of materials

Self manufactured materials shall be valued including direct material cost, direct employee cost, direct expenses, factory overheads, share of administrative overheads relating to production but excluding share of other administrative overheads, finance cost and marketing overheads. In case of captive consumption, the valuation shall be in accordance with Cost Accounting Standard 4.

Self manufactured materials include components assemblies and subassemblies, accessories and the like manufactured internally for making the final product. E.g. gear box assembly, steering system assemblies and the like are made separately and used in the final product assembly. Many products like TV, Switchgear, Computers and the like have innumerable small components either bought or self manufactured. Self manufactured material used in the assembly of main product are also classified as intermediate products.

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Principle of valuation of receipt of materials

Cost of self manufactured material is to be determined taking into account the cost of direct material, direct employee cost, direct expenses, share of factory overhead and share of administrative overheads relating to production. Overheads comprise of indirect materials, indirect employee costs and indirect expenses which are not directly identifiable or allocable to a cost object in an economically feasible way.

*Items such as spare parts, stand-by equipment and servicing equipment are **recognised as property, plant and equipment** when they meet the definition of property, plant and equipment and depreciated accordingly. Otherwise, such items **are classified as inventory** and recognised in cost as and when these are consumed.*

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Principle of valuation of receipt of materials

*Normal loss or spoilage of material prior to reaching the factory or at places where the services are provided **shall be absorbed in the cost of balance materials** net of amounts recoverable from suppliers, insurers, carriers or recoveries from disposal.*

Sometimes materials are lost in transit or spoiled. Treatment of such a loss will depend upon the terms and conditions of purchase order. If the purchase order does not specify any level of loss and supplier is responsible to supply good quantity, in such cases, the loss is to be borne by the supplier or the insurer as the case may be.

The normal loss is to be absorbed by the good units. Abnormal loss of material is charged to Profit and Loss Account and does not form part of the cost of material. In case of spoiled material if there is any significant realizable value, loss is to be accounted net of such value.

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Principle of valuation of receipt of materials

*Losses due to shrinkage or evaporation and gain due to elongation or absorption of moisture etc., before the material is received **shall be absorbed in material cost to the extent they are normal**, with corresponding adjustment in the quantity.*

An anticipated level for losses due to shrinkage / evaporation and gains due to elongation or absorption of moisture is to be predetermined. Unit price of material is reduced or inflated to cover the cost of the normal percentage of loss or gain.

If materials contain moisture which may evaporate during summer, thereby losing some weight or moisture may be absorbed during monsoon thereby gaining some weight. One of the methods of dealing with such material is to record the material as dry weight after deducting the moisture percentage which is considered normal. Loss in quantity due to excess moisture over the normal percentage will not form part of the material cost.

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Principle of valuation of receipt of materials

*The FOREX component of imported material cost **shall be converted at the rate on the date of the transaction.** Any subsequent change in the exchange rate till payment or otherwise shall not form part of the material cost.*

FOREX conversion has to be on the date of transaction. The cost and financial accounts will have the same basis for alignment. The date on which the property in goods passes is adopted as the date of transaction. The difference between the actual payment and the amount taken as material cost of goods received is taken to a separate account to show the exchange rate variations (not becoming part of material cost calculations.)

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Principle of valuation of receipt of materials

*Any demurrage or detention charges, or penalty levied by transport or other authorities **shall not form part of the cost of materials.***

Demurrage and penalties are levied by the Transporters /Custom Authorities for delay in clearance of wagon/vessel and the like.

For example:

- Demurrages levied by transporter for not removing goods,
- Penalties for keeping hazardous goods in unauthorized places in transit without proper safeguards.
- Penalties levied by Customs Authorities for delayed clearance.

Demurrage and penalties are abnormal cost and are not part of the material cost. It is charged to Profit & Loss Account.

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Principle of valuation of receipt of materials

Subsidy/Grant/Incentive and any such payment received/receivable with respect to any material shall be reduced from cost for ascertainment of the cost of the cost object to which such amounts are related.

Subsidy and grant received should be matched with the related cost for which these are intended to compensate. Subsidy received for any material is to be reduced from the material cost.

There can be some subsidy for using materials produced by a specific priority industry or energy saving device and the like. Such subsidy is to be adjusted from the material cost.

Incentives are sometimes recorded on the basis of receipt. In such a situation matching becomes difficult. It will be desirable that accounting entries relating to incentives are passed on accrual basis to reflect the true and fair position of the cost of the product in the cost statements.

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Principle of valuation of **issue of material**

Issues shall be valued using appropriate assumptions on cost flow.

For example First In First Out, Last In First Out, Weighted Average Rate. The method of valuation shall be followed on a consistent basis.

The FIFO formula assumes a cost flow that the items of materials that were purchased or produced first are issued first, while **LIFO assumes** the exactly opposite cost flow charging the current price to cost. Under **the weighted average cost formula**, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each fresh shipment is received.

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Principle of valuation of issue of material

*Where materials are accounted at standard cost, the **price variances related to materials shall be treated as part of material cost.***

In Standard Price Method price of issues is predetermined for a stated period taking into account all the factors affecting price such as anticipated market trends, transportation charges and normal quantity of purchase. Standard prices are determined for each material and material requisitions are valued at standard price irrespective of the actual purchase price. Any difference between the standard and actual prices of purchase results in material price variance which is to be treated as part of material cost.

When standard costing system is in vogue, there can be other variances relating to usage during the course of production which may be due to normal or abnormal reasons. Variances due to normal reasons should be treated as cost, while the variances due to abnormal / reasons are treated outside the cost of production.

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Principle of valuation of issue of material

Any abnormal cost shall be excluded from the material cost.

Abnormal cost is not considered in the cost of production and excluded from cost of material. The rationale of exclusion is that inclusion of such items in the cost will make the cost not comparable with a normal situation. For instance, the cost of material cannot be loaded with losses due to an earthquake which is an abnormal event. Similarly, loss of production due to major fire accident or a major shutdown due to sudden and long machine breakdown for days together for want of a special part may be treated as Abnormal Cost.

Material lost due to major fire accident, burglary, obsolescence, if significant, material and quantifiable shall not form part of cost of the production as not to distort the cost due to abnormal reasons. It is dealt with in the costing Profit and Loss Account.

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Principle of valuation of issue of material

Wherever, material costs include transportation costs, determination of costs of transportation shall be governed by CAS 5 on Cost Accounting Standard on Determination of Average (Equalized) Cost of Transportation.

Inward freight shall form the part of the cost of material. In case inward freight charges are indicated in the invoice, which is for more than one material, inward freight shall be allocated to different materials indicated in the invoice on reasonable and appropriate basis such as weight, volume, numbers and the like. If the material is carried by a special carrier, it will be assigned to the specific material transported.

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Principle of valuation of issue of material

*The material cost of normal scrap/ defectives which are rejects **shall be included in the material cost** of goods manufactured. The material cost of actual scrap / defectives, not exceeding the normal shall be adjusted in the material cost of good production. Material Cost of abnormal scrap /defectives **should not be included in material cost** but treated as loss after giving credit to the realisable value of such scrap / defectives.*

Scrap is unavoidable residue material arising in the process of manufacture, may have some value. Normal scrap generated during process of manufacture is to be treated as a part of material cost while cost of abnormal scrap will not form part of the material cost.

Defective /Spoiled material arises when the material does not meet the exact specification of the material required. Normal Defective/spoilage of material is to be absorbed by good production and abnormal spoilage is to be charged to Profit and Loss Account.

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Assignment of costs – Materials

*Material costs shall be directly traced to a cost object **to the extent it is economically feasible** and /or shall be assigned to the cost object on the basis of material quantity consumed or similar identifiable measure and valued as per the principles of valuation.*

Where the material costs are not directly traceable to the cost object, these may be assigned on a suitable basis like technical estimates.

Materials which are not directly traceable to cost object, are to be assigned on some rational basis consistently. Technical estimates help in arriving at such rational basis. E.g. Grease or lubricants used for maintenance work may be consumed by all the departments. It may be decided to take total consumption per month and divide the cost between all the user cost centers based on a technical estimate on a sample survey of usage during a selected period.

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Assignment of costs – Direct Expenses

*Where a material is processed or part manufactured by a third party according to specifications provided by the buyer, the processing/ manufacturing **charges payable to the third party shall be treated as part of the material cost.***

It relates to a production operation outsourced. The material undergoes change and enters the work in process stage or semi finished goods stage. A part of the production operation is outsourced. The outsourcing charges paid to third party is treated as part of material cost.

*Wherever part of the manufacturing operations / activity is subcontracted, the **subcontract charges related to materials shall be treated as direct expenses and assigned directly to the cost object.***

A part of the manufacturing operation is subcontracted. For example steel strip is sent to slitter for smaller size, slitting charges paid to subcontractor is to be treated as direct expenses and assigned directly to cost object.

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Assignment of costs – Indirect materials

*The cost of indirect materials shall be **assigned to the various Cost objects based on a suitable basis** such as actual usage or technical norms or a similar identifiable measure.*

The cost of indirect materials shall be directly assigned to the cost center where possible under suitable heads as may be economical to aggregate and report under heads like lubricants, tools, consumable stores spares and the like. All the costs under different heads for the cost centers accumulated shall be distributed to the production cost centers on a rational basis.

*The cost of materials like catalysts, dies, tools, moulds, patterns etc. which are relatable to production over a period of time **shall be amortized over the production units benefited by such cost.***

*The cost of indirect material with **life exceeding one year shall be included** in cost over the useful life of the material.*

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Presentation

Direct Materials shall be classified in the cost statement **under suitable heads.**

For example:

- a) Raw materials,
- b) Components,
- c) Semi finished goods and
- d) Sub-assemblies

Direct Materials shall be classified **as Purchased - indigenous, imported and self manufactured.**

Raw Material cost is to be indicated separately for indigenous and imported raw material consumed. This requirement of presentation by source wise also applies to other types of material viz. components, semi-finished and sub-assemblies. In process industry direct material is classified as raw material, additives / filler, process chemicals and dyes.

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Presentation

Indirect Materials shall be classified in the cost statement under suitable heads.

Indirect material consumed should be grouped under major heads like tools, stores and machinery spares, jigs and fixtures, consumable stores, and the like. These items are to be presented in the cost statement under the above broad groups, if they are significant.

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Disclosures

*Quantity and rates of major items of materials shall be disclosed. Major items are defined as those **who form 5% of cost of materials.***

Major items of raw materials indicating quantity and rates are to be disclosed in the cost statement which constitutes more than 5% of the total cost of materials. An item of cost is considered as major and significant if that item forms at least 5 % of the total cost of materials. Criteria of 5% of disclosure of material has been prescribed taking into account total items to be disclosed in the cost statement shall not exceed 20 items. For instance, imported direct materials is say 4 % of the total direct material cost, it is not material and significant to warrant a separate disclosure. Significant items should be classified and disclosed separately while the other items could be aggregated.

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Disclosures

The basis of valuation of materials shall be disclosed.

The standard provides various methods of valuation of issues of material such as FIFO/ LIFO/ Weighted Average. Method adopted for valuation of material cost shall be disclosed in the cost statement.

Any change in the cost accounting principles and methods applied for the determination of the material cost during the period covered by the cost statement which has a material effect on the cost of the material shall be disclosed. Where the effect of such change is not ascertainable wholly or partly, the fact shall be indicated.

The cost accounting principles and methods adopted for determining the material cost is to be followed consistently from one period to subsequent period. If there is any change in the cost accounting principles and methods during the period resulting in material effect on the cost, the same shall be disclosed indicating its impact in the cost statement.

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Disclosures

- *Any abnormal cost excluded from the material cost shall be disclosed.*
- *Any demurrage or detention charges, penalty levied by transport or other authorities excluded from the material cost shall be disclosed.*
- *Any Subsidy/Grant/Incentive or any such payment reduced from material cost shall be disclosed.*
- *Cost of Materials procured from related parties shall be disclosed*
- *Disclosures shall be made only where significant, material and quantifiable.*
- *Disclosures may be made in the body of the Cost statement or as a footnote or as a separate schedule.*

Thank You !!