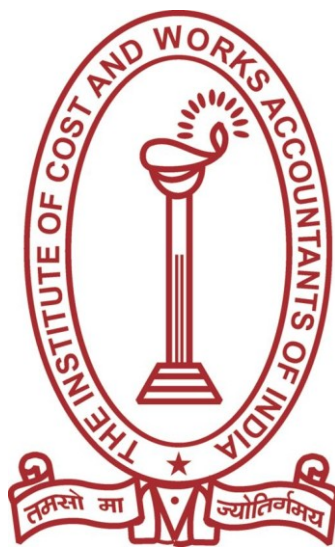


--Exposure Draft--

Generally Accepted

Cost Accounting Principles (GACAP)

Document



Issued by

THE INSTITUTE OF COST AND WORKS ACCOUNTANTS OF INDIA

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Chapter 1

Introduction

The compilation of Generally Accepted Cost Accounting Principles (GACAP) is unique. There have been compilations of financial accounting principles such as Paul Grady's work. ("Inventory of generally accepted accounting principles", American Institute of Certified Public Accountants, New York, 1961). While cost data is being used by various stakeholders, the focus has been more on management use. The absence of institutionalization of external cost reporting might explain this lacuna in theory. The Cost Accounting Standards issued by the Cost Accounting Standards Board in the United States is the nearest to such compilation but this is in the context of Defence Contract Costing.

The formalization of Cost Accounting Principles in use in India started acquiring a more cohesive form in the regime of administered prices ushered in the 1950 through the work of Tariff commission mandated to fix tariffs and prices in a variety of industries. The movement acquired further fillip through the work of other statutory price-fixing authorities including the Bureau of Industrial Costs and Prices, Ministry of Finance, (Cost Accounts Branch). Since the price enquiries by these bodies covered a wide range of industries, industry specific practices started unifying into a common body of cost accounting principles.

The introduction of the industry-wise Cost Accounting Record Rules further strengthened the evolution of a uniform body of cost accounting principles. Even though intended to prescribe the Cost Accounting records to be maintained by various industries, the Rules carried nuggets of Cost Accounting principles in the body of the Rules and in footnotes to format of cost statements prescribed. When some of these got repeated in the Rules prescribed for different industries, it helped towards the evolution of a generally accepted set of cost accounting principles. Thus the Rules contained directions on valuation of purchased materials (all direct costs up to the works), the treatment of major repairs (to be prorated over the period benefited by such repairs), the costing of transfers of raw materials from own farms (sugar cane at government controlled price) and the like. This is not to deny that the Rules framed from time to time did have contradictions for example the valuation of sugarcane from own farm to be valued at market price and valuation of wood from own forest to be valued at cost) but the Cost Accounting Record Rules did play a major part in unifying cost accounting principles as applied to various industries.

Similarly the regulatory agencies in charge of individual industries, particularly the Fertilizer Industry Co-ordination Committee, the Drug Price Control Authority, the Central Electricity



Regulatory Commission, Telecom Regulatory Authority of India- all played a role in evolving a more consistent set of cost accounting principles.

The Cost Audit Report Rules as amended from time to time did not lay down any cost accounting principles as such but by requiring disclosure of principles and methods used, it focused attention on them. The amendment of the Rules in 2001 prescribing a single proforma for cost reporting for all industries was a landmark event. It ushered in “General Purpose Cost Statement”, which is unique in the global practice of cost accounting.

The requirement for determination of cost of production of manufactured goods used for captive consumption further focussed attention on the subject of GACAP. According to the Central Excise Valuation (Determination of Price of Excisable Goods) Rules, 2000, the assessable value of goods used for captive consumption is 110% of cost of production of such goods, or as may be prescribed by the Government from time to time. The cost accounting principles for determination of cost of production were also well established. Their codification and standardization in a single document viz. Cost Accounting Standard 4 (CAS 4) issued on January 3, 2003 became a landmark event. The standard contains a format for reporting the cost of production of products manufactured. The Certificate at the end of the format carried a reference to the basis being “Generally Accepted Cost Accounting Principles and Practices”. Thus was born the phrase forming the title of this document.

The Expert Group constituted by the Ministry of Corporate Affairs under the Chairmanship of Mr. B.B. Goyal acknowledged the existence of an uncodified set of generally accepted cost accounting principles in use in Indian industries and by the practicing cost accountants for attestation of Cost Statements. The Expert Group suggested that the principles be codified to provide a formal basis for the practice of Cost Accounting. The Expert Group also recommended review of alternate treatment of items in cost accounting thus eliminating needless diversities in practice leading to the development of cost accounting standards.

The Ministry of Corporate Affairs decided to implement the recommendations of the Expert Group and notified the Companies (Cost Accounting Records) Rules, 2011 on June 3, 2011. These Rules introduced a common set of record rules for industries other than regulated industries specified in the Rules, in place of industry specific rules in vogue earlier. The Rules require every company to which the rules apply, including all units and branches thereof to keep cost records in respect of each of its products and activities on regular basis. The cost records are to be maintained in accordance with the generally accepted cost accounting principles and cost accounting standards



issued by the Institute of Cost and Works Accountants of India (ICWAI) to the extent these are found to be relevant and applicable. The variations, if any, are to be clearly indicated and explained.

The present effort of codifying the GACAP and presenting them in a single volume is the culmination of all the above developments in the practice of cost accounting in India.

Whereas Cost Accounting Standard 4 (CAS 4) issued in 2003 focused attention on GACAP, The Companies (Cost Accounting Records) Rules, 2011 which require maintenance of cost records according to Cost Accounting Standards and GACAP gave the mandate for a compilation of GACAP. Moreover, the supersession of the erstwhile industry-wise detailed Rules providing guidance on cost accounting principles and practices to be followed by the companies further necessitated the issuance of this document.



Chapter 2

Objectives

The objectives of this document are;

1. to codify the GACAP as applied in the Indian industry;
2. to narrow down diversities in cost accounting practices facilitating the process of development of cost accounting standards;
3. to provide a reference source to industry and practitioners in preparation and attestation of Cost Statements, where specific cost accounting standards are yet to be issued;
4. to provide a reference source to all the stakeholders in the understanding and interpreting the cost statement;
5. to provide a base for monitoring the evolution of new concepts and practices in cost accounting and to codify them as and when they become generally accepted;



Chapter 3

Scope

The scope is to codify the cost accounting principles presently being followed by business entities and others in India in preparing and presenting cost information – more particularly the General Purpose Cost Statements covered by Cost Audit. It also covers the widely used practices which implement these principles.

It draws on the Cost Accounting Record Rules which inter alia also lay down some principles, the Guidance Notes issued by the ICWAI, the Cost Accounting Standards 1-5 issued by ICWAI during 2001-2005 which have been applied in practice for some years now, Cost Accounting Standards 6-12 which have been on the Standards book for a period ranging upto three years and which have been mandated for application for more than a year now and the observed practices of Indian Corporate in preparing Cost Statements for audit purposes and by business entities and others.



Chapter 4

Nature of Content and Format

1. This document titled Generally Accepted Cost Accounting Principles (GACAP) contains a summary of the Cost accounting principles currently followed by business entities in India in preparing and presenting cost information in the context of general purpose cost statements for statutory reporting and covered by Cost Audit.
2. It explicitly incorporates the principles already contained in the Cost Accounting Standards 1-13 issued by the Cost Accounting Standards Board (CASB) in India without necessarily repeating them.
3. In areas not covered by the standards, it reflects the cost accounting principles found in the Cost Accounting Record Rules prescribed for the 44 industries in the past.
4. Where somewhat conflicting principles have been laid down by the CARR in different industries, it will attempt to harmonize the principles so as to evolve a generally acceptable framework. Where use of alternate principles are sanctioned by the Rules or where alternate principles are applied in practice in the absence of explicit guidance in Rules, the alternates will be mentioned with an indication of the preferred practice.
5. Because the Rules were framed at different points of time spread over many years, it is likely that the principles contained in the Rules and the practice based on them do not reflect current concepts. In such cases, the document reflects the current concepts.
6. It also reflects the Cost Accounting Principles contained in the Guidance Notes and other publications issued by ICWAI from time to time.
7. Cost Accounting principles which are gathering wide spread acceptance in Indian Companies for management reporting even though not adopted for statutory cost reporting (for example, Activity Based Costing) are mentioned with suitable caveats regarding their lack of applicability for general purpose cost statements for statutory reporting, where applicable.
8. The document stipulates the main principles in **bold letters** followed by explanation in normal type.



Chapter 5

Conceptual Frame Work

There is a need for a conceptual frame work that underlies the GACAP detailed in the succeeding sections. The conceptual frame work, as the name suggests, is a frame work and not a superset of cost accounting principles. It does not attempt to lay down a principle for any particular costing issue or to amplify the GACAP. The frame work helps to understand the GACAP that follow, in the appropriate perspective and guides in modifying them or developing new principles;

- **Focus on drivers of value**

Costing is necessary for an informed understanding of the organizational drivers of cost, revenue, profits and value. Costing has to fulfil this role both in a historical and in a forward looking context.

- **Cost for a purpose**

Over a long time it has been recognized that there is a cost concept relevant for a purpose. Thus external reporting requires historical and full absorption costing while performance evaluation requires attention directing and diagnostic information and planning and decision making requires analytical and predictive information. It is therefore not possible for the same set of cost data to fit all purposes, thereby resulting in a wide range of cost concepts from which preparers and users of cost information choose a concept relevant to the purpose.

- **Reality driven**

Cost models must reflect the entity's business model, its operational processes, its strategy, its organizational structure and its competitive environment. Organizational processes and activities drive the costs and these are in turn influenced by other factors mentioned above.

- **Materiality and cost effectiveness**

The selection of the methods of implementing the costing principles should have regard to the issues of materiality and cost effectiveness. Materiality of cost information is to be judged from the perspective of the user of that information. The degree of detail and accuracy required are governed by the perspective of materiality. From the preparers' viewpoint there is the need to balance the cost of maintaining a cost accounting system with corresponding benefits. This is the reason why in a number of places, while dealing with methods of implementing cost accounting principles, the expression "economically feasible way" is used in this document.



- **Comparability and consistency**

Cost information should be prepared and presented in a way which provides for comparability over time and consistency. The methods used for preparing and presenting cost information should be changed only where for valid reasons such as those required by law, compliance with new cost accounting standards or on the ground that it would result in a more appropriate presentation of cost information.

- **Transparency and auditability**

Since cost information is used generally by various stakeholders like management, regulators and Government with a business outlook, there is a need for transparency regarding the definitions used and sources of data. It should be possible for those who wish to review such cost information to follow an audit trail. Auditability of cost information is a prerequisite to the effective use of such information.



Chapter 6

Definitions

See Glossary in the Appendix I at page 29.



Chapter 7

Principles applicable to Elements of Cost

The following sections deal with GACAP applicable to individual elements of cost.

Before proceeding with element-wise principles, it is useful to summarise the principles applicable to all elements of cost.

- 1. When an element of cost is accounted at standard cost, variances due to normal reasons are treated as a part of the element-wise cost. Variances due to abnormal reasons will not form part of the cost.**
- 2. Any Subsidy / Grant / Incentive and any such payment received / receivable with respect to the input cost is reduced from cost for ascertainment of the cost of the cost object to which such amount pertains.**
- 3. Any abnormal cost where it is material and quantifiable will not form part of the cost.**
- 4. Penalties, damages paid to statutory authorities or other third parties will not form part of the cost.**
- 5. Costs reported under various elements of cost will not include imputed costs.**
- 6. Finance costs incurred in connection with acquisition of resources such as materials, utilities and the like will not form part of the cost of such resources.**
- 7. Any credits or recoveries from employees or suppliers or other parties towards costs incurred by the entity for a resource will be netted against such costs.**
- 8. Except otherwise stated, the measurement of costs for cost accounting purposes will follow the same principles as set out in Generally Accepted Accounting Principles, applicable to the concerned entity.**



Material Cost

- 1. Material Cost usually includes all costs required to bring the materials to the present condition and location.**

In case of manufacturing units, the location means the factory gate / works. In case of service organisation, the location means the place from which the services are rendered or activities are carried out.

- 2. Material receipt is 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 (CAS 6-5.1.1).**

The test that the expenditure must be capable of being quantified with reasonable accuracy at the time of acquisition is significant. For large volume small value purchases, it is usual to take freight or other costs at a predetermined percentage of purchase prices and recognise any difference as expense for the period when actual costs are booked as expenses of the period. For small value items of purchase, it is usual even to treat all freight on such purchases as overheads.

- 3. Procurement costs are not generally included in material cost. However, those costs which can be directly identified with a material are included in the material cost.**

Purchase Department overheads are not generally included in material cost. But the procurement expenses in the form of Expenses at Collection Centres in the paper industry such as Salaries & Wages, Stores, Repairs & Maintenance, Other expenses, Share of Forest Development expenses, if any, are included as part of the cost of wood. Similarly the overheads of cane collection centres are included in the cost of sugar cane procured by a Sugar Mill.

- 4. Development expenses incurred in respect of materials procured is included in the cost of material to the extent that the material procured is the result of such developments.**

For example, the Forest Development Expenses incurred by a paper mill is included in the cost of wood on an equitable basis. It is usual to relate the development expenses to the area under development and charge a share to the quantity of wood received during the period as a proportion of expected yield. It is less preferable to charge the Forest Development Expenses as period cost and charge the whole of it to the quantity of wood procured during the period.

- 5. Where a material is acquired in exchange for other material or services supplied, the cost of material acquired is taken as the cost of material supplied or services provided plus other applicable costs such as freight.**



In the Paper industry where bagasse from the Sugar mills 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.

6. **Normal loss or spoilage of material prior to reaching the factory or at places where the services are provided is absorbed in the cost of balance of materials net of amounts recoverable from suppliers, insurers, carriers or recoveries from disposal (CAS 6-5.1.5).**
7. **Losses due to shrinkage or evaporation and gain due to elongation or absorption of moisture etc., before the material is received is absorbed in material cost to the extent they are normal, with corresponding adjustment in the quantity (CAS 6-5.1.6).**
8. **Where the material procured represents an agricultural produce from own sources, the same is valued at market price or cost where it can be determined with reasonable accuracy.**

The cane supplied from own farm to a Sugar Mill is charged at state advisory price / control rate and profit / loss on farm taken to profit & loss account directly. This is permitted by the Cost Accounting Record Rules for Sugar Industry. Such a treatment is advised where the correct determination of cost of the production of items procured from own farm, is fraught with difficulty. Costing of agricultural produce in many cases has not reached a level of maturity that the cost of an item produced by an agricultural process can be used in a General Purpose Cost Statement subject to attest function. The use of a fair market value is indicated in such cases.

However in the Paper industry, where bamboo wood is grown in forests owned or taken on lease by the company and collection is made by departmental operations or by contract, detailed records are generally maintained in a suitable form so as to enable computation of the cost of such bamboo or wood. In such cases, cost is taken as the basis of valuation of material.

9. **The forex component of imported material cost is converted at the rate on the date of the transaction. Any subsequent change in the exchange rate till payment or otherwise will not form part of the material cost (CAS 6-5.1.7).**
10. **Self Manufactured Materials (and Self manufactured components and sub assemblies) are valued at cost including Direct Material cost, Direct Employee cost, Factory overheads and share of administrative overheads relating to production. Share of other administrative overheads, finance cost and marketing overheads are excluded (CAS 6-5.1.3 and 6.5.3).**
11. **Material cost of normal scrap/defectives, which are rejects, is included in the material cost of goods manufactured. This cost not exceeding the normal is adjusted in the material cost of goods production. Material cost of abnormal scarp/defectives should not be included in**



the material cost, but treated as loss after giving credit to the realizable value of such scrap/defectives (CAS 6-5.4)

12. **Issues of materials are valued using appropriate assumptions on cost flow (CAS 6-5.2.1).**
Examples are FIFO, LIFO, and Weighted Average rate.
13. **Material Costs are assigned to cost objects on the basis of material quantity consumed where traceable and where not traceable on technical norms or estimates. (CAS 6-2.1, 6-2.2 and 6-3.1).**
14. **When 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 is treated as part of the material cost (CAS 6-2.1).**
15. **When the part of the manufacturing operations/activity is subcontracted, the subcontract charges related to materials is treated as direct expenses and assigned directly to the cost object (CAS 6-2.2).**
16. **Cost of materials like catalysts, dies, tools, patterns etc, which are relatable to production over a period of time, is amortized over the production units benefited by such cost. Cost of materials with life exceeding one year is included in the cost over the useful life of the material (CAS 6-3.2).**
17. **Where the cost of materials is written off or written down in the financial books as per the accounting policy, followed by the entity, such write off or write down amount is not treated as cost.**

It is usual for the companies to write off or write down the cost of non-moving / slow-moving items, say items which have not moved for three years or more.

18. **When the material referred to in paragraph 17 above, is subsequently issued, the issue is valued at the original cost in cost accounting records and the difference between the original cost and the carrying amount is presented in the reconciliation statement, wherever, economically feasible.**

When it is not economically feasible to apply the above principle, the issue is valued at the carrying amount in the cost accounting records.



Employee Cost

1. **Employee cost or Labour cost is ascertained taking into account the gross pay including all allowances payable along with the cost to the employer of all benefits (CAS 7-5.1).**
2. **Bonus, whether payable as a Statutory minimum or on a sharing of surplus and Ex gratia payable in lieu of or in addition to Bonus is treated as part of the employee cost (CAS 7-5.2).**
3. In some industries the following alternate treatments are also followed pursuant to the requirements of the Cost Accounting Records Rules prescribed for those industries;
 - a. Treat the statutory minimum bonus as cost and the balance is treated as a non-cost item.
 - b. Treat the entire bonus as a component of cost of sales.
4. **Remuneration payable to Managerial Personnel including Executive Directors on the Board and other officers of a corporate body under a statute is considered as part of the Employee Cost of the year under reference whether the whole or part of the remuneration is computed as a percentage of profits (CAS 7-5.3).**

Remuneration of Non Executive Directors will not be considered as part of Employee cost but treated as part of administrative overheads.
5. **Performance Incentives must be accumulated over the entire production and not recognised after the threshold limit for earning the incentive is reached.**
6. **Separation costs related to voluntary retirement, retrenchment, termination etc. should be amortized over the period benefiting from such costs (CAS 7-5.4).**
7. **Amount payable to employees during the lay off period or for the strike period or during suspension, is a loss and consequently is not included in cost.**
8. **Cost of employee share options is treated as part of employee cost.**

It is becoming common for employees to be compensated on the basis of share options. The GAAP generally requires that the compensations should be measured at the fair value of the stock options at the grant date. Often it is difficult to determine such costs at individual employee level and hence the cost of employee share option is usually treated as overhead.
9. **Gratuity, pension and other superannuation benefits, measured using actuarial valuation method or any other methods, are part of Employee Cost.**
10. **Amortized separation costs related to voluntary retirement, retrenchment, and termination etc. for the period is treated as indirect cost and assigned to the cost objects. Unamortized amount relating to discontinued operations should not be treated as employee cost. (CAS 7-6.4).**



- 11. Recruitment costs, Training costs and other such costs is treated as overheads and dealt with accordingly. (CAS 7-6.5).**
- 12. Overtime premium and idle time cost should be assigned directly to a cost object or treated as overheads depending on the economic feasibility and the specific circumstance requiring such overtime or idle time (CAS 7-6.6 and 7-6.7).**
- 13. Where the employee service is directly traceable to a Cost object, such cost is assigned on the basis of time consumed. (CAS 7-6.1).**
- 14. When employee costs are not directly traceable to a Cost object, they are assigned on a suitable basis like estimates of time based on time study (CAS 7-6.2).**



Direct Expenses

- 1. The identification of Direct Expenses is based on traceability in an economically feasible manner (CAS 10-5.1).**

Many expenses in real life may be capable of identified as Direct Expenses but often they are grouped as overheads because it is not economically feasible to trace them to cost objects.
- 2. Similarly if an item of the expense does not meet the test of materiality, it can be treated as part of overheads. (CAS 10-5.3).**
- 3. Expenses incurred for the use of bought out resources are determined at invoice or agreed price including duties and taxes, and other expenditure directly attributable thereto net of trade discounts, rebates, taxes and duties refundable or to be credited. (CAS 10-5.2.1).**
- 4. Other Direct Expenses other than those referred above are determined on the basis of amount incurred in connection therewith. (CAS 10-5.2.2).**
- 5. Expenses paid or incurred in lump sum or which is in the nature of 'one time' payment, is amortized on the basis of the estimated output or benefit to be derived from such expenses. (CAS 10-5.1).**
- 6. Direct Expenses are by definition directly traceable to cost objects and hence no special principles are involved for them to be assigned to cost object (CAS 10-6.1).**



Utilities

1. **The cost of utilities purchased is measured at cost of purchase including duties and taxes, transportation cost, insurance and other expenditure directly attributable to procurement (net of trade discounts, rebates, taxes and duties refundable or to be credited (CAS 8-5.2).**
This is subject to the usual condition that it can be quantified with reasonable accuracy at the time of acquisition.
2. **The cost of generated utilities includes direct materials, direct labour, direct expenses such as and a share of the factory overheads (CAS 8-5.3.1).**
Example of Direct materials for utilities is fuel used in generation of power and for Direct Expenses, electricity tax for generation.
3. **Cost of Utilities generated for the purpose of inter unit transfers is arrived as Cost of self generated utilities with Distribution cost added (CAS 8-5.3.2).**
4. **A Cost of utilities generated for Intercompany transfer is arrived as Cost of self generated utilities plus Distribution cost plus Share of administrative overheads. (CAS 8-5.3.3).**
5. **Cost of utilities generated for sale to outside parties is arrived as Cost of self generated utilities plus Distribution cost plus Share of administrative overheads plus marketing overheads. (CAS 8-5.3.4).**
6. **The Cost of Utilities includes Cost of distribution of such utilities (CAS 8-5.3.4).**
7. **Cost of production and distribution of utilities is determined based on the normal or actual capacity whichever is higher and unabsorbed cost, if any, is treated as abnormal cost (CAS 8-5.9).**
8. **Cost of stand by utility includes the committed costs of maintaining such utility (CAS 8-5.9).**
9. **While assigning cost of utilities, traceability to a cost object in an economically feasible manner is the guiding principle (CAS 8-6.1).**
Accurate recording of utilities consumed by various users' calls for significant investment in measuring instruments and manpower for recording and analysis of such metered data. The benefit from such expenditure needs to be justified.
10. **The most appropriate basis for distribution of cost of a utility to the departments consuming services is to be derived from usage parameters (CAS 8-6.3).**



Repairs and Maintenance Cost

- 1. The cost of Repairs and Maintenance is the aggregate of direct and indirect cost relating to repairs and maintenance activity (CAS 12-5.1).**
- 2. Cost of in-house repair and maintenance activity will include cost of materials, consumable stores, spares, manpower, equipment usage, utilities and other resources used in the activity (CAS 12-5.2).**
- 3. Cost of repair and maintenance activity carried out by outside contractors inside the entity will include the charges payable to the contractor apart from the above in-house cost (CAS 12-5.3).**
- 4. Cost of repair and maintenance activity carried out by contractors at his premises is determined at invoice or agreed price including duties and taxes and other expenditure directly attributable net of discounts (other than cash discount), taxes and duties refundable or to be credited. It will also include the cost of other resources provided to the contractors (CAS 12-5.4).**
- 5. Each type of repairs and maintenance is treated as a distinct activity, if material and identifiable (CAS 12-5.6.1).**
- 6. The cost is measured for each major asset category separately (CAS 12-5.6.2).**
- 7. Cost of spares replaced which do not enhance the future economic benefits of the existing asset beyond its previously assessed standard of performance is included under Repairs and Maintenance cost (CAS 12-5.7).**
- 8. Where a high value spare is replaced, and the replaced spare is reconditioned and such spare is expected to result in future economic benefits, it is taken into stock. Such a spare is valued at an amount that measures its service potential in relation to a new spare, the amount of which will not exceed the cost of reconditioning the spare. The difference between the total of the cost of the new spare and the reconditioning cost and the value of the reconditioned spare should be treated as Repairs and Maintenance cost (CAS 12-5.8).**
- 9. Cost of major overhaul is amortized on a rational basis (CAS 12-5.9).**
Major overhaul is the periodic (generally more than one year) repair work carried out to substantially restore the asset to the intended working condition.
- 10. Repairs and Maintenance costs is traced to a cost object to the extent economically feasible (CAS 12-6.1).**
- 11. Where it is not directly traceable, it is assigned based on either of the principles of Cause and Effect or Benefits received (CAS 12-6.2).**



Production Overheads

1. Overheads comprise of indirect material cost, indirect employee cost and indirect expenses. They are termed indirect because they are not directly identifiable or allocable to the ultimate cost object, usually a product or service, in an economically feasible way.
2. **Production Overheads are indirect costs involved in the production process or in rendering services.** Production overheads include **administration cost relating to production, factory, works or manufacturing.** Production related expenses incurred at corporate office e.g. design office expenses, materials management and industrial relations will also be covered by the term. (CAS-13-4.9)
3. The terms Production Overheads, Factory Overheads, Works Overheads and Manufacturing Overheads denote the same meaning and are used interchangeably. (CAS-13-4.2)
4. Since overheads cannot be economically traced to products and services, they are assigned to them on some equitable basis.
5. **While assigning overheads, traceability to a cost object in an economically feasible manner shall be the guiding principle. The cost which can be traced directly to a cost object shall be directly assigned.** (CAS-3(R-1) 6.1)
6. **Assignment of overheads to the cost objects shall be based on either of the following two principles;**
 - i) **Cause and Effect - Cause is the process or operation or activity and effect is the incurrence of cost.**
 - ii) **Benefits received – overheads are to be apportioned to the various cost objects in proportion to the benefits received by them.** (CAS-3(R-1) 6.2)
7. **Secondary assignment of overheads may be done by following either Reciprocal basis or Non-Reciprocal Basis. While reciprocal basis considers the exchange of service among the service departments, non-reciprocal basis considers only one directional service flow from a service cost centre to other production cost(s).** (CAS-3(R-1) 6.3.2)
8. **It is not a good practice to allocate overheads to Cost centres/ cost objects on the basis of “what the traffic will bear”- that is by size of the user.**
9. **There is a distinct preference for allocating overheads on the basis of “cause and effect” analysis. What or who causes the costs to be incurred is a more rational criterion to charge costs rather than size or benefits received.**
10. **In case of facilities created on a standby or ready to serve basis, the cost shall be assigned on the basis of expected benefits instead of actual.**
11. Production overheads are usually accumulated under production cost centres to facilitate absorption by products or services.



- 12. These costs are absorbed by the products on the basis of resources used by the product at the production centre.
- 13. The overheads assigned to the production cost centres are charged to products/ services through an overhead absorption rate for each cost centre.

Common bases for assignment of Production overheads to Cost Objects are:

<i>Bases of denominator</i>	<i>Applicability</i>
<i>Unit of Production</i>	<i>When single product is produced or various products are similar in specifications.</i>
<i>Material Cost</i>	<i>Where the overheads are mostly related to material</i>
<i>Direct employee cost</i>	<i>When conversion process is labour intensive and wage rates are substantially uniform</i>
<i>Direct employee hour</i>	<i>When conversion process is labour intensive</i>
<i>Machine Hour or Vessel Occupancy or Reaction Hour or Crushing Hour etc</i>	<i>When production mainly depends on performance of the base</i>

A preferred approach for assignment of overheads to cost objects is to use multiple drivers instead of a single driver such as machine hour, where feasible. (CAS-3(R-1) 6.4)

- 14. A preferred approach to assignment of overheads is the assigning of cost of resources to activities and assigning the cost of activities to Cost Objects through use of cost drivers, wherever feasible. (CAS-3(R-1) 6.5)
- 15. Also there are service cost centres through which the product does not pass through but which provide a support function to the production cost centres.
- 16. Where the cost of services rendered by a service cost centre is not directly traceable to a cost object, it shall be assigned on the most appropriate basis. (CAS 13-6.2)
- 17. The most appropriate basis of distribution of cost of a service cost centre to the cost centres consuming services is to be derived from logical parameters which could be related to the usage of the service rendered. The parameter shall be equitable, reasonable and consistent. (CAS 13-6.3)
- 18. Charging overheads on the basis of “benefits received” by the various users is preferred. This requires some measure of benefit to be developed.
- 19. Sometimes capacity in a service department is created in anticipation of demand for services. It is appropriate to allocate such capacity costs on the basis of “capacity to serve” rather than actual usage of services.



Ultimately all overheads must be charged to products of services. Hence the total production overheads of Production Cost Centres are applied to products passing through them using a suitable absorption base.

- 20. Before the final step of absorption, production overheads of production cost centres have to be segregated between fixed overheads and variable overheads. The fixed overheads are absorbed by products based on normal capacity or actual capacity utilization whichever is higher. Variable overheads are absorbed by products based on actual capacity utilization. This treatment is in line with Accounting Standard 2 as well.**
- 21. Normal capacity is defined in Cost Accounting Standard 2 as the production achieved or achievable on an average over a period or season under normal circumstances taking into account the loss of capacity resulting from planned maintenance. It is practical capacity minus the loss of productive capacity due to external factors (CAS 2-4.4).**
- 22. Under absorbed fixed overheads are carried to Costing Profit & Loss Account or Reconciliation with financial accounts.**



Depreciation

1. Depreciation, though part of overheads, generally appears as a separate line item in the cost statements instead of being grouped under overheads. This is because of its size in the technology driven business of today and its unique characteristic of being non-cash cost.
2. Amortization of intangible assets tends to be grouped with depreciation because intangible assets themselves are grouped with Fixed Assets in the presentation under Schedule VII of the Companies Act 1956.
3. The measurement of depreciation in Cost accounts tends to mirror the practices in financial accounts.
4. However the treatment of depreciation in Cost Accounts must address the following issues:
 - Depreciation not calculated on period of use basis.
 - Depreciation on idle assets
 - 100% of depreciation on certain class of assets
 - Write-off of small value assets
 - Depreciation on fully depreciated assets
 - Depreciation on revalued assets
5. Sometimes depreciation in books is not calculated on period of use for example 50% of annual depreciation is taken for an asset put into use for a day. **Cost accounts will always use the depreciation computed on period of use basis and take the balance to costing P & L or reconciliation with financial accounts.**
6. Even where 100% of the depreciation is allowed in the first year for tax purposes, companies are required to use regular rates of depreciation for accounting purposes. Even where an entity uses 100% depreciation rates in books of accounts, **depreciation based on estimated life is used for costing purposes with the difference taken to costing Profit & Loss or Reconciliation with Financial Accounts.**
7. **Where small value items are written off fully at the time of purchase in financial accounts, the same is generally adopted for cost accounts.**
8. **In the case of old plants, there is the special case for fully depreciated assets which however continue in regular service. Some entities continue to provide a notional depreciation on such assets for costing purposes, with the amount being shown in reconciliation with financial accounts.**
9. Depreciation on the amount by which the asset is written up on Revaluation is charged to Revaluation Reserve in financial books. **Some entities compute the depreciation on the revalued figure for costing purposes as reflecting the true cost of depreciation.**



10. **It goes without saying that the cumulative depreciation charged in the Cost Accounts against any individual item of fixed asset will not exceed the original cost of the asset.**
11. The assignment of depreciation to various cost centres should not pose a problem so long as detailed Fixed Asset records are maintained by the Company. However there are some common items of fixed assets between cost centres e.g. yard piping carrying products from one process to another, common storage tanks and the like. **Depreciation on common assets are apportioned to individual cost centre on some suitable basis e.g. yard piping is assigned to the cost centre receiving the material.**



Administrative Overheads

1. **Administrative overheads are the aggregate cost of resources consumed in activities relating to general management and administration of an organization. (CAS 11-5.1).**

The principles of measurement of Material cost, Employee costs, Utilities, Repairs and Maintenance and Depreciation found in the respective standards will apply if included in administrative overheads.

2. **In case of leased assets, if it is an operating lease – the entire rentals will be treated as a part of administrative overheads, while in case of a financial lease – the finance cost portion will be segregated and treated as a part of finance costs (CAS 11-5.2).**

3. **The cost of software (developed in house, purchased, licensed or customized), including up-gradation should be amortized over its useful life. (CAS 11-5.3).**

When hardware requires up-gradation along with the software, it is recommended to use compatible estimated lives for the two sets of cost.

4. **The cost of the administrative services procured from outside is determined at invoice or agreed price including duties and taxes, and other expenditure directly attributable net of discounts (other than cash discount), taxes and duties refundable or to be credited. (CAS 11-5.4). The assignment of administrative overheads to cost objects is based on either of the principles of Cause and Effect or Benefits received, if it is not directly traceable (CAS 11-6.2).**

The cost of shared services is best assigned to user activities on the basis of actual usage, infrastructure costs on the basis of readiness to serve and general management costs on a rational basis. For e.g.: Number of employees, turnover, investment size etc.

5. Since most administrative costs are fixed in nature, it is preferable to charge them to users on “readiness to serve” basis such as installed capacity, budgeted sales etc., rather than actual production or actual sales. Even the drivers mentioned in (9) above can be on the basis of expected driver qualities rather than actual.



Selling and Distribution Overheads

- 1. Selling costs are best recorded or assigned to marketing segments first before being assigned to product. Thus selling costs must first be identified to markets, distribution channels, territories, salesman etc., before being assigned to orders and to products.**
- 2. Selling costs of a marketing segment are assigned to customer orders relating to the segment and then to products based on sales quantity or value.**

It facilitates customer profitability analysis when the order becomes the focal point of reference in cost accounting.
- 3. The acceptable bases for assigning common transport costs to products are:**
 - a. Weight**
 - b. Volume of goods**
 - c. Tonne km**
 - d. Units / equivalent units**
 - e. Value of goods**
- 4. The transportation costs assigned to products are charged to units based on some measure which factors in the distance e.g. tonne km.**



Interest and Finance Charges

- 1. Interest and Finance Charges have come to be included in cost of sales though not in cost of production. Such costs are also assigned to products before arriving at margins by product.**
- 2. For the purpose of assignment, Interest charges are grouped under**
 - interest on long term funds**
 - interest on working capital funds**
- 3. The former is assigned to product lines based on fixed capital investment (including fixed assets and mould and dies) in such product lines. A portion of the interest is also charged to outside investments, if they exist, and excluded from cost of sales. For this purpose, it is usual to develop an average cost of long term funds and apply it to fixed capital investment in each product line.**
- 4. It is not the accepted practice to charge imputed interest on owners' funds in cost accounting.**



Sales

1. Cost of sales statements lead right up to margin and hence sales also have to be handled in Cost Accounting.
2. **Since costing is always by product, cost accounting requires product wise analysis of sales.** This is usually produced by other modules of the enterprise system.
3. What is critical is the value of sales produced by such analysis. Often sales analysis produce invoiced value of sales. **What is required for cost accounting is net value of sales net of trade discounts, returns, allowances, volume discounts, special discounts based on market conditions etc.,**
4. Many of these deductions from sales are handled through credit notes which also must be processed through the sales analysis to arrive at product wise break up.
5. **Some of these deductions from sales may be available only in total and hence may have to be allocated to products on a suitable basis, say, sales value.**
6. It is not unusual for businesses to focus on net realization from sales ex-factory gate. This means that freight (both primary and secondary) transit insurance, loading and unloading charges, handling charges and the like are deducted from net sales as arrived at in 3 above to arrive at net sales realization ex-factory gate. This also entails freight and other transport costs not being shown under the head Distribution costs. So long as these costs are shown separately as deductions from net sales value, the practice is acceptable.
7. Some Cost Accounting Record Rules require gross sales to be shown in addition to net sales in cost statement. This requires that excise duty, sales tax (VAT) etc is added to net sales to arrive at gross sales by product.



Joint Costs

1. **Joint Costs are** the costs of a production process that yields multiple products simultaneously, for example, in the refining of Petroleum which yields Petrol, Kerosene, Diesel, Naphta, Grease, Tar and several other products or the distillation of coal, which yields coke, natural gas, and other products.
2. The costs of the common process are the joint costs
3. **Joint costs are allocated**
 - (a) **Based on a measure of the number of units, weight, or volume of the joint products, or**
 - (b) **Based on the values attributed to the joint products.**
4. By-product is a special case of Joint Product where one or more of the joint product has minor value compared to others.
5. **Such by-products are generally valued at their value at the split-off point with such value being credited to the costs of the main product. The split-off point value is arrived at on the basis of the ultimate realizable value of the by-product less the post split-off costs.**



Common Costs

1. A common cost is the cost of operating a common facility, activity or service or that is shared by two or more cost objects.
2. The common cost is generally lower than the stand-alone individual cost to each cost object was the facility not shared.
3. **Common costs are therefore allocated to each cost object based on the individual costs of the cost object.**



Chapter 8

Presentation and Disclosure

Generally the presentation requirements of cost information for statutory purposes are laid down in the respective rules. Similarly the requirements of reporting for regulatory purposes are laid down by the regulatory agencies. Managements stipulate the presentation formats for managerial purposes. It is therefore not considered necessary to lay down any model statements or formats in this document.

However it is considered appropriate to stress certain disclosure practices which are generally applicable.

1. Cost Statements must contain besides total cost, unit cost per unit of output.
2. Output quantities with unit of measure must appear in the Cost Statements.
3. Input costs are best broken up as quantity and rate.
4. The basis of valuation of inputs must be stated.
5. The basis of distribution of costs to cost objects or cost centres must be disclosed.
6. Costs incurred in foreign currency must be stated separately.
7. Any costs excluded must be disclosed.
8. Any credits or recoveries netted against cost must be disclosed separately.
9. Transactions with related parties must be highlighted or disclosed separately.
10. Changes in the costing principles and methods applied must be disclosed with the effect.



Chapter 9

Conclusion

This document contains a discussion of the generally accepted cost accounting principles in the context of today and the times gone by. It must be understood that cost accounting principles and methods of applying them are in a constant of flux influenced by fresh thinking by experts, regulatory influences, parallel developments in financial accounting standards and the like. Professional accountants will be well advised to use this document as a guide and not as a set of rules.



Glossary

Abnormal cost: *An unusual or atypical cost whose occurrence is usually irregular and unexpected and / or due to some abnormal situation of the production or operation.*

Abnormal idle Capacity: *is the difference between practical capacity and normal capacity or actual capacity utilization whichever is higher.*

Abnormal Idle time: *An unusual or atypical employee idle time occurrence of which is usually irregular and unexpected or due to some abnormal situations.*

E.g. Idle time due to a strike, lockout or an accident

Absorption of overheads: *Absorption of overheads is charging of overheads to Cost Objects by means of appropriate absorption rate.*

Overhead Absorption Rate = Overheads of the Cost object / Quantum of base.

Actual Capacity Utilization: *is the volume of production achieved in relation to installed capacity.*

Administrative Overheads: *Cost of all activities relating to general management and administration of an organisation.*

Administrative overheads shall exclude production overheads, marketing overheads and finance cost. Production overheads includes administration cost relating to production, factory, works or manufacturing.

Allocation of overheads: *Allocation of overheads is assigning a whole item of cost directly to a cost centre.*

An item of expense which can be directly related to a cost centre is to be allocated to the cost centre. For example, depreciation of a particular machine should be allocated to a particular cost centre if the machine is directly attached to the cost centre.

Apportionment of overhead: *Apportionment of overhead is distribution of overheads to more than one cost centre on some equitable basis.*

When the indirect costs are common to different cost centres, these are to be apportioned to the cost centres on an equitable basis. For example, the expenditure on general repair and maintenance pertaining to a department can be allocated to that department but has to be apportioned to various machines (Cost Centres) in the department. If the department is involved in the production of a single product, the whole repair & maintenance of the department may be allocated to the product.



Captive Consumption: *Captive Consumption means the consumption of goods manufactured by one division or unit and consumed by another division or unit of the same organization or related undertaking for manufacturing another product(s).*

Cartage: *is the expenses incurred for movement of goods covering short distance for further transportation for delivery to customer or storage.*

Collection of Overheads: *Collection of overheads means the pooling of indirect items of expenses from books of account and supportive/ corroborative records in logical groups having regards to their nature and purpose.*

Overheads are collected on the basis of pre-planned groupings, called cost pools. Homogeneity of the cost components in respect of their behaviour and character is to be considered in developing the cost pool. Variable and fixed overheads should be collected in separate cost pools under a cost centre. A great degree of homogeneity in the cost pools are to be maintained to make the apportionment of overheads more rational and scientific. A cost pool for maintenance expenses will help in apportioning them to different cost centres which use the maintenance service.

Committed Cost: *The cost of maintaining stand-by utilities shall be the committed cost.*

Cost: *is a measurement, in monetary terms, of the amount of resources used for the purpose of production of goods or rendering services.*

Manufacturing of goods or rendering services involves consumption of resources. Cost is measured by the sacrifice made in terms of resources or price paid to acquire goods and services. The type of cost is often referred in the costing system depends on the purpose for which cost is incurred. For example material cost is the price of materials acquired for manufacturing a product.

Cost Centre: *Any unit of Cost Accounting selected with a view to accumulating all cost under that unit. The unit may be a product, a service, division, department, section, a group of plant and machinery, a group of employees or a combination of several units. This may also be a budget centre.*

Cost Centre or Cost Object is the logical sub-unit for collection of cost. Cost Centre may be of two types – personal and impersonal cost centres. Personal cost centre consists of a person or a group of persons. Cost centres which are not personal cost centres are impersonal cost centres. Again Cost centres may be divided into broad types i.e. Production Cost Centres and Service Cost Centres. Production Cost Centres are those which are engaged in production like Machine shop, Welding shop, Assembly shop etc. Service Cost centres are for rendering service to production cost centre like Power house, Maintenance, Stores, Purchase office etc.



Cost Object: *This includes a product, service, cost centre, activity, sub-activity, project, contract, customer or distribution channel or any other unit in relation to which costs are finally ascertained.*

Cost of Production: *Cost of production shall consist of Material Consumed, Direct Wages and Salaries, Direct Expenses, Works Overheads, Quality Control cost, Research and Development Cost, Packing cost, Administrative Overheads relating to production.*

To arrive at cost of production of goods dispatched for captive consumption, adjustment for Stock of work-in-Process, finished goods, recoveries for sales of scrap, wastage etc shall be made.

Cost of Transportation: *comprises of the cost of freight, cartage, transit insurance and cost of operating fleet and other incidental charges whether incurred internally or paid to an outside agency for transportation of goods but does not include detention and demurrage charges.*

Explanation:

Cost of transportation is classified as inward transportation cost and outward transportation Cost.

Cost unit: *is a form of measurement of volume of production or service. This unit is generally adopted on the basis of convenience and practice in the industry concerned.*

Defectives: *Packing materials that do not meet quality standards. This may include reworks or rejects.*

Depot: *are the bounded premises / place managed internally or by an agent, including consignment agent and C & F agent, franchisee for storing of materials / goods for further dispatch including the premises of Consignment Agent and C&F Agent for the purpose.*

Depot includes warehouses, go-downs, storage yards, stock yards etc.

Direct Expenses: *Expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost.*

Examples of Direct Expenses are royalties charged on production, job charges, hire charges for use of specific equipment for a specific job, cost of special designs or drawings for a job, software services specifically required for a job, travelling Expenses for a specific job.

Direct Employee Cost: *The cost of employees which can be attributed to a cost object in an economically feasible way.*

Direct Material Cost: *The cost of material which can be attributed to a cost object in an economically feasible way.*



Distribution Overheads: *Distribution overheads, also known as Distribution Cost, are the costs incurred in handling a product from the time it is ready for despatch until it reaches the ultimate consumer.*

For example:

- Secondary packing
- Transportation cost
- Warehousing cost
- Cost of delivering the products to customers etc.
- Clearing and forwarding charges
- Cost of mending or replacing packing materials at distribution point.

Employee cost: *The aggregate of all kinds of consideration paid, payable and provisions made for future payments for the services rendered by employees of an enterprise (including temporary, part time and contract employees). Consideration includes wages, salary, contractual payments and benefits, as applicable or any payment made on behalf of employee. This is also known as Labour Cost.*

Explanation:

- 1 Contract employees include employees directly engaged by the employer on contract basis but does not include employees of any contractor engaged in the organisation.
- 2 Compensation paid to employees for the past period on account of any dispute / court orders shall not form part of Employee Cost.
- 3 Short provisions of prior period made up in current period shall not form part of the employee cost in the current period.

Employee cost includes payment made in cash or kind.

For example:

- **Employee cost**
 - Salaries, wages, allowances and bonus / incentives.
 - Contribution to provident and other funds.
 - Employee welfare
 - Other benefits
- **Employee cost – Future benefits**
 - Gratuity.
 - Leave encashment.
 - Other retirement/separation benefits.
 - VRS/ other deferred Employee cost.
 - Other future benefits
- **Benefits generally include**
 - Paid holidays.



- Leave with pay.
- Statutory provisions for insurance against accident or health scheme.
- Statutory provisions for workman's compensation.
- Medical benefits to the Employees and dependents.
- Free or subsidised food.
- Free or subsidised housing.
- Free or subsidised education to children.
- Free or subsidised canteen, crèches and recreational facilities.
- Free or subsidised conveyance.
- Leave travel concession.
- Any other free or subsidised facility.
- Cost of Employees' stock option.

Equalized Freight *means average freight.*

Equalized Transportation Cost *means average transportation cost incurred during a specified period.*

Excess Capacity Utilization *is the difference between installed capacity and the actual capacity utilization when actual capacity utilization is more than installed capacity.*

Finance Costs: *Costs incurred by an enterprise in connection with the borrowing of funds.* This will include interest and commitment charges on bank borrowings, other short term and long term borrowings, amortisation of discounts or premium related to borrowings, amortisation of ancillary cost incurred in connection with the arrangements of borrowings, finance charges in respect of finance leases, other similar arrangements and exchange differences arising from foreign currency borrowings to the extent they are regarded as an adjustment to the interest costs. The terms Finance costs and Borrowing costs are used interchangeably.

Fixed Cost: *is the cost which does not vary with the change in the volume of activity in the short run. These costs are not affected by temporary fluctuation in activity of an enterprise. These are also known as period costs.*

Freight: *is the charge paid or payable to an outside agency for transporting materials/ goods from one place to another place.*

Idle Capacity: *is the difference between installed capacity and the actual capacity utilization when actual capacity utilization is less than installed capacity.*



Idle time: *The difference between the time for which the employees are paid and the employees' time booked against the cost object.*

The time for which the employees are paid includes holidays, paid leave and other allowable time offs such as lunch, tea breaks.

Imputed Costs: *Hypothetical or notional costs, not involving cash outlay, computed for any purpose.*

Indirect Employee Cost: *The cost which cannot be directly attributed to a particular cost object.*

Indirect Materials: *Materials, the costs of which cannot be directly attributed to a particular cost object.*

Installed Capacity: *is the maximum productive capacity according to the manufacturers' specification of machines / equipments. Installed capacity of the unit / plant is determined after taking into account imbalances in different machines / equipment in the various departments / production cost centres in the unit / plant and number of working shifts.*

Inward Transportation cost: *is the transportation expenses incurred in connection with materials /goods received at factory or place of use or sale/removal.*

Licensed Capacity: *is the production capacity of the plant for which license has been issued by an appropriate authority.*

Marketing overheads: *Marketing Overheads are also known as Selling and Distribution Overheads.*

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

Normal capacity: *Normal Capacity is the production achieved or achievable on an average over a number of periods or seasons under normal circumstances taking into account the loss of capacity resulting from planned maintenance.*

Outward Transportation Cost: *is the transportation expenses incurred in connection with the sale or delivery of materials or goods from factory or depot or any other place from where goods are sold /removed*



Overheads: *Overheads comprise of indirect materials, indirect employee costs and indirect expenses which are not directly identifiable or allocable to a cost object.*

Overtime Premium: *Overtime is the time spent beyond the normal working hours which is usually paid at a higher rate than the normal time rate. The extra amount beyond the normal wages and salaries paid is called overtime premium.*

Packing Materials: *Materials used to hold, identify, describe, store, protect, display, transport, promote and make the product marketable and communicate with the consumer.*

Packing Material Cost: *The cost of material of any nature used for the purpose of packing of a product.*

Packing Material Development Cost: *Cost of evaluation of packing material such as pilot test, field test, consumer research, feedback, and final evaluation cost.*

Practical or Achievable Capacity: *is the maximum productive capacity of a plant reduced by the predictable and unavoidable factors of interruption pertaining to internal causes.*

Thus, practical capacity is the installed capacity minus the inevitable interruptions due to time lost for preventive maintenance, repairs, set ups, normal delays, weekly off-days and holidays etc. Practical capacity does not consider the external factors causing reduction in production e.g. lack of orders.

Primary Packing Material: *Packing material which is essential to hold the product and bring it to a condition in which it can be used by or sold to a customer.*

For example:

- Pharmaceutical industry: Insertions related to product, Foils for strips of tablets/capsules, vials.
- Industrial gases: Cylinders / bottles used for filling the gaseous products
- Confectionary Industry: Butter paper and wrappers.

Production Overheads: *Indirect costs involved in the production process or in rendering service.*

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

Rejects: *Defectives which cannot meet the quality standards even after putting in additional resource*



Rejects may be disposed off as waste or sold for salvage value or recycled in the production process.

Repairs and maintenance cost: *Cost of all activities which have the objective of maintaining or restoring an asset in or to a state in which it can perform its required function at intended capacity and efficiency.*

Repairs and Maintenance activities for the purpose of this standard include routine or preventive maintenance, planned (predictive or corrective) maintenance and breakdown maintenance. The repair or overhaul of an asset which results in restoration of the asset to intended condition would also be a part of Repairs and Maintenance activity. Major overhaul is a periodic (generally more than one year) repair work carried out to substantially restore the asset to intended working condition.

Research & Development Cost: *is the cost for undertaking research to improve quality of a present product or improve process of manufacture, develop a new product, market research etc and commercialization thereof.*

Research Cost comprises the cost of development of new product and manufacturing process; improvement of existing products, process and equipment; finding new uses for known products; solving technical problem arising in manufacture and application of products etc. Development cost includes the cost incurred for commercialization / implementation of research findings.

Reusable Packing Material: *Packing materials that are used more than once to pack the product.*

Reworks: *Defectives which can be brought up to the standards by putting in additional resources.*

Rework includes repairs, reconditioning and refurbishing.

Scrap: *Discarded material having some value in few cases and which is usually either disposed of without further treatment (other than reclamation and handling) or reintroduced into the production process in place of raw material.*

Secondary Packing Material: *Packing material that enables to store, transport, inform the customer, promote and otherwise make the product marketable.*

For example:

- Pharmaceutical industry: Cartons used for holding strips of tablets and card board boxes used for holding cartons.
- Textile industry: Card board boxes used for holding cones on which yarn is woven.



- Confectionary Industry: Jars for holding wrapped chocolates, Cartons containing packs of biscuits.

Selling Overheads: *Selling Overheads, also known as Selling Costs, are the expenses related to sale of products and include all Indirect Expenses in sales management for the organization.*

Semi Variable Costs: *contain both fixed and variable elements. They are partly affected by fluctuation in the level of activity.*

Service Cost Centre: *The cost centre which primarily provides auxiliary services across the enterprise.*

The cost centre which provides services to Production, Operation or other Service Cost Centre but not directly engaged in manufacturing process or operation is a service cost centre. A service cost centre renders services to other cost centres / other units and in some cases to outside parties.

Examples of service cost centres are engineering, workshop, research & development, quality control, quality assurance, designing, laboratory, welfare services, safety, transport, Component, Tool stores, Pollution Control, Computer Cell, dispensary, school, crèche, township, Security etc.

Administrative Overheads include cost of administrative Service Cost Centre.

Spoilage: *Production that does not meet with dimensional or quality standards in such a way that it cannot be rectified economically and is sold for a disposal value. Net Spoilage is the difference between costs accumulated up to the point of rejection and the salvage value.*

Standard Cost: *A predetermined cost of resource inputs for the cost object computed with reference to set of technical specifications and efficient operating conditions.*

Standard costs are used as scale of reference to compare the actual costs with the standard cost with a view to determine the variances, if any, and analyse the causes of variances and take proper measure to control them. Standard costs are also used for estimation.

Stand-by service: *Any facility created to safeguard against the failure of the main source of service.*

Stand-by utilities: *Any utility created to safeguard against the failure of the main source of inputs.*

Transit Insurance Cost: *is the amount of premium to be paid to cover the risk of loss /damage to the goods in transit.*



Utilities: *Significant inputs such as power, steam, water, compressed air and the like which are used for manufacturing process but do not form part of the final product.*

Variable Cost: *is the cost of elements which tends to directly vary with the volume of activity. Variable cost has two parts – (a) Variable direct cost; and (b) Variable indirect costs. Variable indirect costs are termed as variable overhead.*

Waste: *Material loss during production or storage due to various factors such as evaporation, chemical reaction, contamination, unrecoverable residue, shrinkage, etc., and discarded material which may or may not have value.*



APPLICATION GUIDANCE

Material Cost

1. Under the erstwhile Cost Accounting Record Rules, the Cost of purchased materials is reckoned inclusive of all “direct charges up to works”. The term “works” can be taken to mean any place of operations.
2. The direct charges include in the case of indigenous materials, the invoice cost, freight, transit insurance, loading and unloading charges. In the case of imported materials, they include FOB value, overseas freight, insurance, customs duty, clearing charges, inland freight etc.
3. Demurrage or detention charges at port or by carrier or penalty levied by them are not treated as cost, being abnormal cost.
4. Penalties levied by tax authorities such as customs, excise sales tax authorities on consignments of goods are not treated as cost.
5. Taxes for which the buyer gets credit like Vat, cenvat, countervailing import duty are excluded from Cost.
6. Purchase tax is sometimes levied by State Governments on inputs with or without relief against tax payable on sale Such tax is to be taken as part of cost except to the extent it is allowed to be offset against tax on sale.
7. Octroi levied by local authorities on inputs entering the local limits must be added to cost. If subsequently the goods are taken out of local limits, the amounts can be retrenched from cost.
8. The levy of additional tax for non compliance with filing declaration forms e.g. ‘C’ or ‘D’ forms under central sales tax is treated differently with the additional tax being treated as part of cost if known at the time of recording the transaction.
9. Cost is net of trade discount. Cash discount is generally treated as a financial income and not netted against cost. But there may be circumstances in a transaction which suggest that the cash discount is not a prompt payment discount but a price discount offered in the garb of a cash discount.
10. Cost is to be taken net of Volume discounts to the extent these can be anticipated. Where there is uncertainty regarding the eligibility or the quantum, these may be netted against consumption as when they become confirmed.
11. Bank charges for negotiation of documents in connection with a purchase transaction are generally treated as finance costs and not included in material cost. This is based on the premise that sale documents are negotiated through bank to avoid credit risks or to avail bank finance. Hence Bank charges on bills negotiated through bank on collection or



- acceptance basis are often added to material cost but are best excluded from material cost. Interest when charged by the supplier for the whole or part of the credit period extended is generally treated as a finance charge. This is so even if the interest appears on the face of the invoice.
12. Imports of materials from certain countries are often available with extended periods of credit with zero or concessional rate of interest. Whether the cost of material must be taken less an implicit interest for the elongated period of credit must be regarded as unsettled.
 13. Exchange losses or gains incurred after the purchase transaction is completed is not treated as material cost but is to be treated as finance cost.
 14. In some industries, the material purchased is the output of mining or quarrying operations from owned mines or quarries. For example, limestone which is a key raw material is obtained by a cement mill from its own mines. The cost of material mines is determined by taking into account royalty to government, cost of explosives used, and mining costs. The question of principle that arises is the treatment of mines development costs which occur regularly over the years. The cost of mines development is treated as cost of mining the output of the current year but there is much in favour of spreading the development costs over the period over based on a development to run-of-the mines ratio.
 15. The cost of materials obtained in returnable containers where there is a credit on return is taken net of the credit. Where rent is payable for the period for which the container is retained, such rent is treated as overheads.
 16. The rate to be adopted for a material in cost accounting is generally taken after adjusting material losses- in transit, in storage or other losses. This is however permissible only if the losses are normal. Transit losses can be reflected in the rate by deducting such losses from the billed quantity provided such losses are incidental to transport. The percentage of such normal losses can be quite high for some materials e.g. coal.
 17. Apart from physical loss, there can be losses due to evaporation or shrinkage. They are also treated in the same way.
 18. An abnormal loss in transit e.g. loss due to accident cannot be reflected in the rate. It will be treated as a loss and taken to Profit or Loss net of recoveries from insurance, or carrier.
 19. Storage losses are also treated similarly provided they are incidental to storage and the period of storage is normal in the given case.
 20. On a slightly different footing are moisture losses in transit or storage. Since most technical calculations are based on dry weight, it is advisable to account for materials which absorb moisture on a dry weight basis grossing up the rate. Dry weight can be air-dry or bone dry. In the case wood used in paper industry, given that wood contains some moisture, the rate



- for wood is accounted on the basis of Air Dry weight which may be obtained after deducting standard or average moisture contents of such wood. Alternatively it can be accounted on bone-dry weight after deducting the entire moisture on actual basis.
21. Similar adjustments are called for when consumption quantities of materials in cost accounting are to be aligned with technical calculations which adjust physical quantities for strength, purity or other factors. In these cases also, the rates are grossed up to reflect quantity restatements.
 22. Exchange losses or gains incurred after the purchase transaction is completed is not treated as material cost but is to be treated as finance cost.
 23. Sometimes, materials are sent outside for pre-processing before it is used in the production process e.g. cotton for ginning / cleaning, steel rods for blanking etc. Charges paid to outsiders for pre-processing are added to material cost.
 24. If the same operations are performed in-house, it is usual to treat them as production cost and not as part of material cost.
 25. Material is often held for long periods for seasoning, maturing etc. The storage and interest cost for such storage is treated as part of material cost.
 26. Some materials may require special storage facilities e.g. prawns in freezers. A cost of such special storage is often treated as part of material costs.
 27. Materials may undergo discolouration, deterioration in quality or outline the shelf-life. Losses for such reasons are not treated as part of material cost.
 28. Amount of recovery from disposable containers in which material is received is best treated as miscellaneous income and not reduced from material cost.
 29. The treatment in the case of returnable containers where credit is obtained from the supplier on a regular basis can be different. Such credit is generally reduced from material cost. Where the container cost is not included in the price charged but a charge is made for non-return or late return, such charge is treated as abnormal cost and excluded from cost.
 30. When material is supplied in returnable containers and a rent is charged for such container based on the period of use, the cost is treated as overheads.
 31. Material is often held in storage under special conditions e.g. LSHS at higher than ambient temperature to prevent solidifying, the associated costs are not treated as part of material costs but as part of production costs.
 32. The costs of operating and maintaining pipe lines for moving materials from storage to production are not treated as part of material costs but as part of production costs. So also the pumping charges for liquids. The feeding charge for materials to equipment at an elevated level is also treated as production costs.



Employee Costs

1. Employee Cost or Labour cost includes all remuneration paid to employees of the company including allowances, benefits or any payment made in behalf of employees.
2. Employee cost includes remuneration paid or payable and provisions made for future payments.
3. For cost accounting purposes, employee cost includes amounts paid to temporary, part time and casual or contract employees including benefits extended to them.
4. Bonus has been described by courts as “deferred wage” and customary payments by way of bonus have come to acquire the characteristic of mandatory payment. There is little reason to deny such payments the status of cost.
5. Ex-gratia payments are after often paid along with statutory bonus. These may take the form of
 - a. Amount paid as a rate higher than the rate arrived at as per Payment of Bonus Act calculations.
 - b. Extending full rate of bonus to those to whom the maximum bonus under the Payment of Bonus Act will apply- presently limited to Rs.8500/- per month by way of Basic + DA.
 - c. Extending the bonus to employees not covered under the Payment of Bonus Act – presently Rs.10000/- per month or more by way of Basic + DA.
 - d. These payments which are in the nature of goodwill payment by managements and are in no way related to the amount of allocable surplus are generally treated as part of employee cost.
6. Bonus under the Payment of Bonus Act must be distinguished from performance incentives which are generally related to output and not profits. These may take the form of incentives at
 - Individual employee level – based on his or her performance.
 - Group of employees level – based on performance of a group of employees or team
 - Unit level – where the incentives are paid on the basis of performance of the factory or other unit.

Incentives at all three levels may be based on performance covering the production of more than one product; then an assignment issue arises. It is generally accepted that the incentives have to be prorated over all the products on the production of which the



- incentive is earned, not merely to the products produced after the threshold limit for earning the incentive is reached.
7. There has been generally a reluctance to treat incentives based on sales as cost of production, even though it is paid to production employees. The basis for calculating the incentive or the timing of payment should not determine the treatment of such incentive. The fact that such payment is computed on sales value of production or is payable only on sales of the product cannot change the character of an incentive – if it was originally conceived as an incentive for higher production.
 8. Some will argue that managerial personnel are owners of the business and hence the payment to them must be regarded as return to owners. Others will argue that the remuneration to managerial personnel is as executive directors, manager etc and hence must be regarded as cost. The latter view gets higher credence with greater professionalization of management and whole-time Directors with no or little shareholding in the company drawing managerial remuneration which includes a commission as a % of profits.
 9. In the case of sole proprietorships, salary paid to owner and in the case of a partnership fixed salary paid to a working partner must qualify as cost.
 10. It is customary for senior management to be extended perquisites in the form of free housing, free car, services of waterman / gardener, free telephone, leave travel concession for self and family.
 11. The Income-Tax rules provide for the valuation of these perquisites. But these cannot in anyway enter into cost calculations. Employee cost includes the cost to company of extending these benefits. The cost to company (CTC) calculations made at the time of appointment or later is a good guide on what should enter into employee cost. The fact that some portion of the perquisites is disallowed in the assessment of the employee as being personal in nature can not influence the treatment in cost accounts.
 12. There are group benefits extended to employees such as Group Personal Accident Insurance, Group Medical Insurance Scheme etc., it is difficult to relate such costs to individual employees and therefore to cost centres or objects. These can only be allocated to cost centres or cost objects on the basis of no. of employees or employee cost of each cost centre or cost object.
 13. Employee welfare expenses similarly represent a motley of benefits including canteen facilities, recreation facilities, gifts to individual employees on birthdays / marriage, dispensary facilities etc., These are legitimately treated as part of employee cost and allocated to cost centres or cost objects on the basis of no. of employees or employee cost of each centre or cost object.



14. Post-employment benefit schemes can take any two forms
 - a. Fixed contribution to a fund by the employer with varying benefits to employees.
 - b. Variable contribution to a fund by the employer to assure given benefit to the employees.
 - c. The fixed contribution plans involves a defined cost per employee and can be readily assigned to cost centres or objects. The contribution under variable contribution plans are generally determined on an actuarial valuation The treatment of such benefits in Cost Accounts will be on the same basis as in financial accounts which is governed by AS15 in India.
 - d. The allocation of the cost of such employee benefits to cost centres / Cost objects will be on the basis of no. of employees or employee cost.
15. Voluntary retirement plan costs have been treated in varying ways in India. Cost Accounting Standard 1 excludes them from cost. It is interesting to note that some Cost Accounting Records recommend the inclusion of such payment in employee cost with proration over the years benefited by such payment. This appears to be the preferred treatment though it may not be generally accepted in practice today.
16. It is usual for employee cost, particularly direct employee cost, to be converted to hourly rates for ease of assignment to jobs or products. Such hourly rate may reflect only payroll costs i.e. only basic + Dearness allowance + allowances or be comprehensive and include all benefits. The ultimate is for the rate to reflect the Cost to Company (CTC). Where the rate excludes some elements of employee cost, these will be treated as overheads and absorbed in cost.
17. Hourly rates are arrived at using the available hours as the divisor. Normal health breaks or rest allowances are excluded from available hours. It is important to note that any time like rest time which gets included in job times cannot be excluded from available hours.
18. It is not unusual for regular costing to proceed on the basis of standard hourly rates based on budgeted employee cost and budgeted hours and for the variances in labour rates to be treated as overheads or taken to costing P&L or reconciliation.
19. Labour cost falls into two categories.
 - Direct Employee cost
 - Indirect Employee cost
20. Early stages of technology witnessed a major role for the workmen in the manufacturing process with output being controlled mainly by the workmen's efforts. Hence elaborate systems were built to log workmen's time an individual jobs or products and operations and employee cost was assigned on the basis of seven time booking.



21. As technology grew, the importance of machines in production grew with decreasing nexus between workmen's efforts and production. Work men were assigned to more than one machine producing more than one product with his role being reduced to attending to controls.
22. Where technology is at an early stage, it is still common for direct employee cost to be assigned to products and operations on the basis of time booked. This is typical of engineering shops with conventional machines such as lathes, drilling machines, milling machines etc., and simple processing shops.
23. Where sophisticated technology is deployed such as computer numerically controlled machines are employed, it is usual for employee cost to be absorbed in products as part of a comprehensive machine hour rate.
24. Where a gang of workmen or a team of employees are assigned to a job, it is usual to assign direct employee cost on the basis of gang hours or time logged by the team.
25. The wheel turns a full circle when assembly operations are controlled in the main by robots and one or two work men control the whole assembly line only to attend to disruptions. Direct employee cost even the entire cost including equipment cost – in such cases is assigned on the time honoured direct labour hour basis.
26. In a balanced production live in a lean manufacturing set-up where workmen stand in fixed location, the belt carrying the work moves at fixed speed and work men are expected to complete their operations within the allotted time, it is usual to charge employee cost as well as equipment cost on the basis of "Cycle time" rather than labour hours.
27. Overtime which is based on single rate poses no special issues in costing. But where overtime is compensated at double or triple rate, the overtime premium is handled in one of the following ways.
 - Where the overtime working is caused by a "rush order" of the customer or other special requirement of a job, the premium is assigned to the job or product.
 - In all other cases, it is usual to treat the premium as overheads and absorb the same as part of overheads.
28. Idle time of direct workmen is generally logged separately. Normal idle time is absorbed in product cost as part of overheads and abnormal idle time is taken to costing profit and loss or reconciliation.
29. Where direct workmen are expected to carry out maintenance on the machines attended by them, it is usual to log such time separately against maintenance work orders and treat the same as Repairs and Maintenance Cost.



30. Booking of time spent on jobs or products is relevant in job or batch operations but loses its relevance in continuous process industries where direct employee cost is treated as part of processing cost.
31. Changing direct employee cost on the basis of standard time is prevalent. In such cases, the efficiency variance is isolated and absorbed in product cost except where it is abnormal, where it is taken to costing P&L or reconciliation.



Direct Expenses

1. Direct expenses are those relating to manufacture of a product or rendering a service, which can be readily identified or linked with cost objects other than Direct Material and Direct Employee cost.
2. Examples are:
 - a. Royalties charged on production,
 - b. job charges,
 - c. hire charges for use of specific equipment for a specific job,
 - d. cost of special designs or drawings for a job,
 - e. software services specifically required for a job,
 - f. Travelling Expenses for a specific job.
3. The need for direct expenses to be amortised arises when for example Royalty or Technical know-how fees, or drawing designing fees, are paid for which the benefit accrues in the future period. In such case, the production / service volumes are estimated for the effective period and based on volume achieved during the current period, the charge for amortisation is determined.



Cost of Utilities

1. Utilities are a special class of service cost centres which generally produce a measurable output which are used as inputs in the process of manufacture of products and services but do not form of the products. Examples are power, steam, water (treated, dematerialized etc.,) compressed air and the like.
2. Utilities are generally meant for captive consumption even though it is not unusual for part of the output to be sold to a nearby plant of the same entity or another entity.
3. Utilities are also purchased by an entity from an outside source usually a public utility (e.g. power from an electricity authority) or steam from neighbouring plant.
4. It is also not usual for utilities produced to have more than one use – steam generated being used both to drive turbines to generate electricity (high pressure steam) and also for heating purposes in the process (low pressure steam) giving rise to interesting issues in costing.
5. Sometimes a utility is held to safeguard against the failure of the main source of input of the utility e.g. stand-by generators held against failure of power supply from the grid.
6. Administrative overheads are generally not allocated to captively used utilities. Where the utilities are largely meant for transfer to other units or sale to outside parties such as sale of generated power to the official grid, administrative overheads may also be allocated to the utilities.
7. Since the cost of utilities is significant in many entities and there is a measurable output, it is usual to do the costing of utilities with the same rigour as in the case of products and services. The Cost Accounting Record Rules generally require the preparation of separate cost statements for each major utility such as power, steam and the like. The Cost Accounting Standard 8 on Cost of utilities requires each type of utility to be treated as a separate cost object.
8. Costs of distributing the utilities e.g. power through distribution lines including transformers, motor control centres and the like are treated differently based on end use. Costs of distribution of utilities for captive use are often captured in a separate service cost centre and treated as a service cost centre. Cost of utilities used for inter unit transfer often include the proportionate cost of distribution.
9. Costs of utilities meant for sale to outside parties will include marketing costs if the generated utility is mainly meant for sale but this takes the context out of captive generation and consumption of utilities in the manufacture of products and rendering of services



10. Where part of the utility generated is used within the utility e.g. electricity used within the power house, such consumption is generally netted against the output and only the output meant for other users is costed. This has got the effect of grossing up the unit cost for the costs of internal consumption of utilities.
11. Output of utilities is generally distinguished in terms of quality. In the case of water, water generated from bore wells or pumped from a nearby river is identified as raw water, with the output of a water treatment plant identified as treated water, the output from a cooling tower as cooling water and the output from a chilling plant as chilled water. Similarly steam produced is classified as low pressure, medium pressure or high pressure or into bands of pressure rating.
12. Costs of generation of various types of water involve progressively additional costs while costs of steam generation have to be allocated to steam at different pressures based on some measure of work for e.g. British thermal units (BTUs)
13. The use of by-products from the manufacturing process as fuel in utilities e.g. bagasse as fuel in the boiler calls for special treatment. These by-products are evaluated on the basis of their calorific value in relation to the principal fuel used by the entity e.g. coal. If the by-product is the only fuel used by the entity, it is evaluated on the basis of its calorific value in relation to alternate fuels that can be used by the entity. In other cases, the market value of such by-product e.g. price of bagasse in open market sales can be used for valuing the by-product.
14. Sometimes, waste material recovered from input materials may be used as fuels in the utilities e.g. pith from bagasse or bark from wood used as raw material in a paper mill.
15. The methods of assignment of costs of generated utilities to the consuming centres vary considerably depending on the system of measurement of usage e.g. metering, instrumentation system and the like used in the entity. It may be safely said that it may be uneconomic to meter the consumption of utilities to the last unit. Some technical estimates may have to be used. The problem is complicated because distribution lines are not always laid out in such a way that measuring instruments can be installed at each distribution point. It is not uncommon to tap power from a nearby line carrying power to another consuming centre or to divert steam from a nearby pipe carrying steam to another consuming centre. These problems get accentuated as the plant advances in years when new requirements of utilities are met in an adhoc way such that the original drawings of distribution lines are no longer representative.
16. Wherever meters are installed, utility costs are assigned on the basis of actual usage as metered.



17. Alternatively, utility costs are assigned on the basis of ratings of consuming equipment weighted by a usage factor e.g. in the case of power, based on HP rating of equipment multiplied by number of hours in use. As a last resort, technical estimates based on process specifications of power or steam consumed are used to develop the bases for allocation.
18. Distribution losses or unaccounted consumption of utilities are netted against the generated quantity before assignment to consuming cost centres so as to reflect such cost in grossed- up unit rates.
19. Any abnormal losses like venting of large quantities of high pressure steam to avoid an accident will of course be costed separately and treated as loss in the costing Profit & Loss or the Reconciliation with financial accounts.



Repairs and Maintenance Cost

1. Repairs and Maintenance cost is the cost of all activities required to restore the asset to a condition to perform its function at intended capacity and efficiency.
2. Repairs and Maintenance cost includes cost of;
 - a. repair materials
 - b. spares
 - c. consumable stores
 - d. manpower
 - e. utilities
 - f. repair equipment costs
 - g. allocated costs from other service cost centres.
3. Repairs and Maintenance can be classified into
 - a. Preventive maintenance
 - b. Planned maintenance
 - c. Breakdown maintenance
4. Preventive maintenance costs are generally booked through standing orders which are in essence continuing work orders, all issues of material time of maintenance crew and other resources used are booked against the standing orders.
5. Alternatively Preventive Maintenance schedules carry a standard bill of materials and standard usage of maintenance crew time and other resources and these are blown up based on no. of jobs completed. Actual usage of materials, time and other resources are recorded in detail and allocated to various preventive maintenance jobs based on standard usage.
6. Planned maintenance jobs are jobs like Annual shutdowns, periodic overhaul etc. These carry a standard bill of materials to be used for the maintenance jobs, parts to be replaced during the planned maintenance, no and skill category of maintenance crew required, heavy maintenance equipment like cranes to be used and other resources. Actual of these resources is booked against the planned maintenance jobs.
7. Break down maintenance jobs are triggered by a Fault Report which generates a work order with a number. All issues of materials, time of crew and other resources are booked against these work orders to provide cost of individual maintenance jobs.
8. In a computerized environment, robust systems are in place to open and close work orders for all types of maintenance jobs with authorizations and sign offs, standard bills of materials type and no of persons and other resources required with automatic generation



- of issue requisitions and requests for personnel and equipment. Costs of closed work orders are transferred to relevant accounts in the books of accounts.
9. In a non-computerized environment, there is often a tendency to keep the paperwork to a minimum while ensuring accurate costing. In such an environment, work orders are opened only for large maintenance jobs. The threshold limit is fixed in terms of time taken for the maintenance job to be completed (or shut down time) the cost of materials requisitioned, the no of crew involved, special equipment required or a combination of these. Costs are booked by work orders for the major repairs and for others, costs are booked by cost centres or equipment no.
 10. it is also usual to treat the maintenance crew as a fixed resources and not attempt to book their time against maintenance jobs. The allocations to cost centres are based on the principle of “readiness to serve” with the estimate of demand from various cost centres prepared at the time of manpower planning acting as the base for allocation of manpower costs.
 11. Maintenance jobs often require the use of heavy equipment such as cranes; hoists etc. The costs of this maintenance equipment are accumulated by equipment no. these are charged to maintenance jobs based on recorded usage in hours or to cost centres based on estimated usage prepared at the time of planning the capital expenditure on these items of equipment.
 12. Many large production facilities have a captive workshop where parts are turned, machined or otherwise repaired. These workshops also produce some spare parts. Often, the workshop is treated similar to production cost centres with job orders being opened for production jobs and work orders for repair jobs. The costs of the workshop which comprises costs of materials, labour, equipment and other resources are assigned to jobs and work orders based on some suitable basis such as labour hours.
 13. It is true that maintenance jobs are increasingly being outsourced. Maintenance Labour is almost completely outsourced with only a small crew of specialized craftsman retained on the company’s rolls.
 14. The outsourcing may be of the entire job or may take the form of a contract for supply of labour. In the former case, bill for completed jobs are generally available and lead to accurate costing of labour for such jobs. When outsourcing takes the form of a contract for supply of labour, no time recording by jobs is generally available and only deployment by department or cost centre is available.
 15. With increasing sophistication of technology, maintenance of specialized equipment is entrusted on a turnkey basis to the vendor of the equipment or other specialized maintenance outfits. This may involve costs of travel of technicians besides bill for services



from the agency rendering the services. It is usual to accumulate all costs of such maintenance jobs and treat them appropriately as outlined later.

16. It is usual to have Annual Maintenance Contracts for specialized equipment particularly electronic equipment subject to sudden failures. These take the form of only servicing or servicing with parts (comprehensive). The AMCs specify the number of routine servicing calls that will be made in a year. Where a single machine is covered by an AMC, costing becomes simple. But where a fleet of machines are covered by a single AMC, allocation of costs to cost centres can be made on the basis of number of machines in each cost centre. Where the machine in various cost centres require different levels of service or vary in cost, a suitable allocation base has to be evolved based on such differences.
17. It has been customary in the past to treat major repair jobs differently with their cost being spread over the periods benefiting from such expenditure. Increasingly in financial accounts, such expenditure is charged to the Profit and Loss Account of the period, driven largely by tax deductibility considerations. However in Cost Accounts, these major repair job costs were prorated over the years, with the difference appearing in Reconciliation statements of the respective years. This treatment was required in the past by the Cost Accounting Record Rules for most industries. With Accounting Standard 26 on Intangible Assets coming into force, creating referred Revenue Expenditure assets is not favoured. There is however a strong case for continuing the earlier treatment since cost accounting is governed by a different set of principles.



Production Overheads

1. The continued use of the term 'overheads' is unfortunate. It is more appropriate to refer to them as indirect costs.
2. Overheads comprise of indirect material, indirect labour and indirect expenses. They are termed indirect because they are not directly identifiable or allocable to the ultimate cost object, usually a product or service, in an economically feasible way.
3. Increasingly with the spread of information technology, more and more costs can be identified with the final cost object. Even small materials which would not be precisely identified with the products in an economically feasible way can now have the issues recorded by product.
4. On the contrary, the sophistication of manufacturing technology renders workman as observers of machines working or instrument watchers or console operators instead of tending to the machine or product directly. Thus a greater part of the labour cost is becoming indirect to the product.
5. Since overheads cannot be economically traced to products, they are traced to production centres through which the product passes to be absorbed by the product generally on the basis of time spent by the product at the production centre.
6. Also there are service cost centres through which the product does not pass through but which provide a support function to the production cost centres. The service department costs are assigned to production cost centres before being traced to products and services.
7. In traditional cost systems a cost distribution sheet is prepared to capture the expenses in the nature of overheads booked in the books of accounts and supporting records like stores records. These are then analysed by cost centres.
8. Some overheads are booked in the system by cost centres. For this purpose, many General Ledger systems have extensions to account codes to book transactions by cost centres.
9. In other cases, the overheads individually or after being grouped into homogenous groups are apportioned to cost centres on some suitable basis. The following table reproduced from Cost Accounting Standard 3 lists the commonly used bases.

Item of Cost	Basis of Apportionment
Power	-H.P Rating of Machines x hours x LF*
Fuel	-Consumption rate x hour
Jigs, Tools & Fixtures	-Machine hours or Man-hours
Crane Hire Charges	-Crane hours or weight of material handled
Supervisor's salary & fringe	-Number of employees



Benefits

Labor Welfare cost	-Number of employees
Rent & Rates	-Floor or space area
Insurance	- Value of fixed Asset
Depreciation	-Value of fixed Asset

10. For a long time the method of apportionment used was based on “charging what the traffic will bear” i.e. the bigger the cost centre the greater the charge to it. This is actively discouraged now.
11. Charging overheads on the basis of benefits received by the various cost centres is preferred. This requires some measure of benefit to be developed.
12. After the spread of modern cost accounting concepts, particularly activity-based costing (ABC), there is a distinct preference for apportioning overheads on the basis of cause and effect analysis. What or who causes the costs to be incurred is a more rational criterion to charge costs rather than size or benefits received.
13. Thus the Purchase Department costs are best charged based on an analysis of what causes the Purchase Department to be manned and be operating at the present level. It could be the number of purchase requisitions, the no of items being ordered, the degree of inspection required by various items, the logistics requirements involved or a weighted combination of these.
14. After the overheads are allocated or apportioned to various cost centres, the costs apportioned to service cost centres are redistributed to production cost centres and other service cost centres, generally based on one of the bases described above.
15. Given the information processing capability, individual items of overheads or groups of them are taken up for redistribution.
16. Rendering of service by one or more service cost centres to other service cost centres or even rendering of services inter se by service cost centres are adequately handled in a spread sheet environment.
17. It is useful to remember that the use of sophistication in distribution methods does not improve the quality of the costing system. It is the direct recording of costs to cost centres, the appropriateness definition of cost centres and the use of proper measures of benefits received that will improve the costing. Ultimately it is the analysis of what triggers the cost that is relevant.
18. Ultimately all overheads must be charged to products or services. Hence the total production overheads of Production Cost Centres are applied to products passing through them using a suitable absorption base. The absorption basis commonly used are listed below (reproduced from Cost Accounting Standard 3 para 5.6).



Base of Denominator	Applicability
Unit of Production	When single product is produced or various products are similar in specification
Direct labor cost	When conversion process is labor intensive and wage rates are substantially uniform
Direct labor hour	When conversion process is labor intensive
Machine hour or Vessel Occupancy or Reaction hour or Crushing hour etc	When production mainly depends on performance of the base

19. Before the final step of absorption,, production overheads of production cost centres have to be segregated between fixed overheads and variable overheads. The fixed overheads are absorbed by products based on normal capacity or actual capacity utilization whichever is higher. Variable overheads are absorbed by products based on actual capacity utilization. This treatment is in line with Accounting Standard as well.
20. Under absorbed fixed overheads are carried to Costing Profit & Loss Account or Reconciliation with financial accounts.
21. Normal capacity is defined in Cost Accounting Standard.2 as the production achieved or achievable on an average over a period or season under normal circumstances taking into account the loss of capacity resulting from planned maintenance. it is practical capacity minus the loss of productive capacity due to external factors (CAS 2 para 4.4). In arriving at the practical capacity, the following are factored:
 - holidays
 - no of shifts
 - shift duration
 - annual maintenance
 - preventive maintenance if it involves overtime
 - batch change over time
 - lunch break, personnel changeover etc.,
 - production per hour which is in turn based technical specifications, loss in efficiency due to ageing, operational constraints etc.,
22. It is usual to employ a predetermined overheads rate throughout the year based on budgeted overheads and budgeted production base and to absorb overheads on the basis of actual production multiplied by the predetermined overhead rate.
23. The difference between the absorbed overheads and the actual overheads arises due to,



- variation between the budgeted level of capacity utilization and actual production and
 - variation between budgeted level of overheads and actual overheads.
24. It is easy to lose perspective on the amount of overhead absorbed by different product in the web of calculations involved in allocation, apportionment and absorption. Operating managers have great difficulty in comprehending the result of a complex allocation, apportionment and absorption algorithm. A simple casual relationship is better understood. It may be preferable to limit complex distribution models if required to major items of overheads and to use simple adhoc methods for the balance overheads.



Administrative Overheads

1. Administrative overheads must be understood as costs of administrative functions in an entity and not as a collection of elements of costs such as travel, communication, printing and stationery etc.,
2. Administrative overheads are of two types:
 - a) Costs of administrative support functions which support operations such as Purchase, Personnel, Accounts, Factory administration, Marketing support etc.,
 - b) Costs of policy making and strategic management such as Finance, Human Resource Development etc.,
3. The functions covered in (a) above are generally attached to a unit like Factory Administration or Marketing administration and are readily identified with production or selling and distribution function.
4. Even when they are located in a Head Office or Corporate Office, it should make little difference, because they cater to the needs of specific functions in the entity. For example, purchase may be located in a central office but they cater to the requirements of specific factories or manufacturing and costs can be assigned to such units.
5. The assignment of such costs to functions and activities benefited by them is feasible subject to limits. The use of activity- based costing can lead to identification of activities within the administrative function and what causes them. Thus the Head office Purchase activity costs can be assigned to user functions based on some measure of activity like no of purchase requisitions.
6. The use of the terms “share of administrative overheads relating to production “and” share of administrative overheads relating to selling” in the erstwhile Cost Accounting Record Rules has led to arbitrary practices in some entities to assign all administrative overheads on an arbitrary ratio say 60:40 between production and selling. These terms can only refer to administrative costs of functions attached to production or selling. There will be a residuary head of “Administrative Overheads” which cannot be assigned to production or selling functions representing costs of policy making and strategic management. Also included in this category are expenses such as Directors sitting fees, audit fees, filing fees and other corporate expenses. Paragraph 6.3 in Cost Accounting Standard 3 on overheads should be interpreted in the light of the above discussions.
7. It is significant to note that the reporting format under the new Cost Audit Report Rules has a separate line item for Administrative overheads.
8. The assignment of as much of the administrative overheads as possible based on identified cost drivers is recommended. The balance of administrative overheads can only be



assigned to cost centres or objects based on capacity or sales value. It is usual in textile industry to charge corporate office cost to mills based on installed spindlage.



Selling and Distribution Overheads

1. The use of the term “Selling and Distribution Overheads” is unfortunate since some of these costs are not “overheads” but are direct to products such as commission on sales, freight etc., The use of the term “selling and Distribution Costs” is to be preferred.
2. It is necessary to distinguish “selling” costs from “distribution costs”. The latter relate mainly to costs incurred before sales are generated and are therefore indirect to product while distribution costs are more direct to products.
3. It is also usual to speak of “order getting” costs and “order filling” costs to distinguish between the two sets of costs.
4. Selling costs are generally fixed in nature except for commission on sales and the like.

Examples of selling costs are:

- a. Salaries of sales personnel
 - b. Travelling expenses of sales personnel
 - c. Commission to sales agents
 - d. Advertisement costs
 - e. Sales promotion expenses including cost of promotional material such as product brochures, catalogues etc.,
 - f. Collection costs including legal expenses for recovery of dues
 - g. After sales service costs
 - h. Warranty costs etc.,
5. Selling overheads or selling costs are a combination of direct costs relating to selling of products or service and indirect costs of sales management.
 6. Distribution overheads or distribution costs are the costs incurred in handling a product from the time it is ready for dispatch until it reaches the ultimate consumer.
 7. Distribution costs include:
 1. Secondary packing cost
 2. Packing repacking / labeling at an intermediate storage location
 3. Transportation costs
 4. Cost of warehousing (cover depots, godowns, storage yards, stock yards etc.,)
 8. Transportation costs comprises of the cost of freight, loading and unloading, transit insurance, costs of operating a fleet and other incidental charges whether incurred internally or paid to an outside agency for transportation of goods.
 9. Broadly transportation costs are divided into two categories
 - a. Cost of operating own fleet
 - b. Cost of hired transport



10. Costs under either category may include costs
 - a. Directly allocable to products or
 - b. To be apportioned to products
11. A good costing system must be able to record separately transportation cost from factory to depots (primary freight) and from depot to customer place (Secondary freight)
12. Penalty, detention charges, demurrage charges and other abnormal costs are excluded from transportation cost.



Interest and Finance Charges

1. This cost head includes the following items of cost
 - a. Interest on debentures and bonds
 - b. Interest on long term loans
 - c. Interest on working capital finance in the form of cash, credit or overdraft including short term loans
 - d. Interest on overdue payments to suppliers and others
 - e. Discounting charges on bills of exchange
 - f. Bank charges on bills negotiated through Bank for sales or purchases
 - g. Letter of credit charges
 - h. Guarantee commission/ commitment charges
 - i. Cash discount and many more

Interest and Finance charges are accumulated under suitable heads as in (1) above in the financial books before they are taken to cost accounts.

2. For a long time, it was the practice in India to ignore interest as an element of cost following text book discussions on whether interest is a cost.
3. In the last few years, following the new set of Cost Accounting Record Rules and Cost Audit Report Rules, there is recognition for interest and finance charges as cost.
4. Similarly it is usual to develop an average rate of interest paid on various forms of finance for working capital and apply it to working capital investment in product lines or products.
5. Working capital investment by product line is arrived at directly in most cases or apportioned on the following
 - Raw material stocks – Direct or on the basis of raw materials consumed
 - Stores – generally on the basis of stores consumed excluding special high value items which can be identified directly.
 - work-in-process and finished goods - Direct
 - Book debts – Direct or on the basis of sales (gross)
 - other current assets – except high value items which can be directly identified with products, on the basis of sales or cost of sales.
6. It is also not unusual to arrive at the working capital investment on the basis of length of the operating cycle in no of days for each product line multiplied by cost of sales or sales.



7. Other finance charges are identified by product lines or products for big items of expenditure or otherwise grouped and charged to product lines or products based on cost of materials consumed, cost of production, cost of sales or sales.
8. Where the assignment is done initially to product lines as for interest on long term loans, such charges are assigned to individual products on the basis of cost of sales or sales.



Chapter 10

Applicability of Cost Accounting Practices

1. The above discussions embody the cost accounting practices followed in various industries while applying the cost accounting principles.
2. However they may vary from practices adopted by specific regulated industries like banks, electricity, fertilisers. In many cases these practice are laid own by the regulator and are followed without fail in the industry. For example depreciation rates based on life of equipment are prescribed by the regulatory agency in the electricity generation industry and will prevail over the practices mentioned earlier regarding depreciation rates.