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I) IMPORTANCE OF COST ACCOUNTING IN A CO-OPERATIVE SUGAR FACTORY:

Costing system plays a dominant role in the sugar factory. Planning Budgeting, Decision making, Organising, Controlling, Maximisation of profit as well as survival of the units which are dependant upon the costing system in the sugar factory. Therefore the costing system in sugar factory is useful to varify the nature, method and stages of production.

The need for reduction in costs and improvement in quality has become a major factor for the sugar co-operatives. Even without resorting to greater automation, there is considerable scope for cost reduction and financial control. Here the accounting personal will have to closely with the production and sales department and the later also must help the accounts controller in his work. This serves as a mirror of information for control purposers. This equally applies to the recording of capital expenditure or the so called development expenditure.

Thus the report of the Factory Chief Accountant covers the questions of control over operation cost, the utilisation of plant and equipment, cash and working requirements and the like, Integrated cost and financial accounting methods are useful and the expenditure revenue and oter heads of accounts in the financial books should be so conceried as to serve the purpose of Cost Accounting. Such an arrangement will bring about reconciliation between Cost and Financial Accounts with case. Profits related by the Cost

accounts when reconciled with the profits shown by the Financial books, makes the finance controller sure of his ground.

Costing is always necessary in a manufacturing business. Waste Occurs in fixing price of raw material, stocking and manufacturing of materials, inutilisation of Labour, plant and machinery in different operating, distributing and selling methods and the other aspects of production, Initially the sugar co-operatives may concentrate on cost accounts relating to Materials, Labour, Plant and equipment. Ultimately when the necessary staff is properly organised to work simultaneously and efficiently it will be able to produce accurate and prompt total costs of manufacture.

Followings are the points which are related to importance of costing in co-operative sugar factory:

- 1) It is helpful to avoid mis-appropriation, obsolescence and losses from scrap and defective part of by efficient store keeping.
- 2) It will help to control wages and Labour by jobs processes, departments, or services that are interpreted in the light of cost factors.
- 3) Costing also helps to detect weakness in manufacturing operations and improve the new process.
- 4) It will provide complete analysis of cost of production.
- 5) It will analyse the losses properly.

- 6) It will be helpful to provide adequate information to such outside agencies as state Government, Central Government, Banks and others.

II) THEORITICAL ASPECT OF COST ACCOUNTING:

A) INTRODUCTION:

Cost means the total of all expenses. Cost is defined as the amount of expenditure (actual or notional) incurred on or attributable to a given thing. Thus it is that which is given or is sacrificed to obtain something. The cost of an article consists of actual outgoings or ascertained charges incurred in its production and sale.

According to Anthony and Welsch "Cost is a Measurement, in monetary terms, of the amount of resources used for some purpose". It has been defined by the committee on Cost Terminology of the American Accounting Association as the foregoing, in monetary terms, incurred or potentially to be incurred in the realisation of the objective of the management which may be manufacturing of a product or rendering of a service.

B) COSTING AND COST ASCERTAINMENT:

Costing refers to the technique and process of ascertaining cost, the methods used and the actual process of cost finding. Before proceeding further with the discussion of the process of costing, however, it will be necessary to state what is meant by cost,

The technique of costing involves two fundamental steps namely:

- i) Collecting and classification of expenditure according to the cost elements and,
- ii) Allocation and apportionment of the expenditure the cost centres or cost units.

C) ELEMENTS OF COSTS:

A manufacturing organisation is concerned with the conversion of raw materials into finished products with the help of Labour and certain other services. In order to compute the cost of each of these functions the cost of manufacturing a product is sub-divided into what are known as elements of cost. Thus elements of cost are the primary classification expenditure is incurred Breakup of cost into its elements is essential for the purpose of accounting and for cost control.

The elements of cost are composed of:

- i) Material cost i.e. the cost of commodities supplied to the undertaking.
- ii) Wages or Labour cost: i.e. The cost of remuneration (Wages, Salaries, Commisison, bonus etc.) of the employees of the undertaking and the notional cost of the use of owned assets. Each of these elements is further sub divided into direct and indirect cost.

III) COST ACCOUNTING AND ITS OBJECTS OR PURPOSE:

Cost Accounting is the application of the Costing and Cost accounting principles, methods and techniques to the science, arts, and practice of cost control and ascertainment of profitability. It also includes the presentation of Information derived therefrom for the purpose of managerial decision making. Cost Accountancy is thus the science, Art & Practice of cost Accounting.

Science includes the systematic knowledge which a cost Accountant should possess for proper dis-charge of his responsibilities.

Art includes the ability and skill with which a cost Accountant is able to apply his Cost Accountancy and background knowledge to the conditions and problems with which he is required to deal. These problems include the ascertainment of costs, control of cost and ascertainment of profitability, replacement of plants by new and improved ones etc.

IV) THE PURPOSE OF COST ACCOUNTING:

A) ASCERTAINMENT OF COSTS:

It is through the mechanism of cost Accounting that cost of products of services are ascertained. As mentioned earlier, costs may be ascertained under different circumstances using. Any one or more of the costing principles such as Historical costing, Standard costing, Marginal costing, Direct costing, Absorption costing and uniform costing.

B) DETERMINING THE SELLING PRICE:

Cost Accounting provides detailed and relevant Cost Figures for determining the selling price of product or service. In fixing selling price however, regard must be had to the cost structure, condition of the market, the type of the consumer, the area of distribution etc.

C) DETERMINING AND CONTROLLING EFFICIENCY:

A Cost Accountant must study the various operations involved in the manufacture of products. This study will enable him to render the service of measuring the efficiency of the organisation as a whole or cost centrewise and in doing so he will be able to devise mean of exercising efficiency.

D) PREPARATION OF FINANCIAL STATEMENT:

It is essential to have a frequent review of production, sales and operating result in order to prepare financial statement it is required to determine the stock value at the end of the period for which such financial statements are to be prepared.

E) PROVIDING A BASIS FOR OPERATING POLICY:

Cost Accounting plays an important part in the management as it is used as a bai for formulating operating policies,

These policies may be:

- 1) Determination of cost volume profit relationship.
- 2) Whether to shut down or operate at a loss.
- 3) Whether to make or buy from outside suppliers.



- 4) Whether to continue with the existing plant and Machinery or to replace them by improved and economics ones.

Moreover, cost accounting helps in taking Vital decisions such as introduction of a new product, selection of most profitable product, improve method of manufacturing, exploring new market, replacement of existing assets and profitability of proposed investment to meet expansion programme etc.

V) ADVANTAGES OF COST ACCOUNTING:

- 1) A cost system reveals unprofitable activities losses or inefficiencies occurring in any form such as:
 - a) Wastage of man-power, idel time and Lost time.
 - b) Wastage of material in the form of spoilage excessive scrop etc.
 - c) Wastage of resources e.g. inadequate utilisation of plant, machinery and other facilities.
- 2) Cost Accounting locates the exact causes for decrease or increase in the profit or loss of the business.
- 3) Cost accounts furnish suitable data and information to the management to serve as guides in making decisions involving consideration.
- 4) Cost accounting is useful for price fixation purpose.
- 5) Cost comparision helps in cost control.
- 6) A cost system provides ready figures for use by the govt.wage tribunals & boards & Labour & Trade Union.

- 7) Introduction of cost reduction programme combined with operation research and value analysis technique leads to economy.
- 8) Assisting a developing cost calculation for new products and designs to guide management in its efforts to determine the profitability of proposed changes in products and designs.

B) THEORITICAL ASPECT OF PROCESS COSTING:

I) INTRODUCTION:

Process costing is the type of costing applied in industries where there is continuous or mass production. The necessity for compilation of the costs of a process or a department for a given period as distinct from the costs of a whole job or a specific batch of production units has given rise other concept of process cost accounting. There are many industries engaged in continuous processing in which the end products are the results of a number of operations performed in sequence. In such industries it is necessary to apply process costing. Even in a jobbing factory which mainly adopts job costig the cost of a particular department or operation is often required to be worked or operation is often required to be worked out necessitating the application of process costing method.

II) PROCESS PLANS:

Process costing is suitable for a large number of miling manufacturing and public utility industries like Sugar, mines and quarries cotton wool and Jute textiles, chemicals, paper and plastic etc.

III) PRINCIPLES OF PROCESS COST ACCOUNTING:

The basic principles involved in the accounting of process costs are simple and are similar to those adopted for the job costing system. The first step is for the cost Accountant to familiarise himself with the complete layout or flow chart of the production process. As the emphasis is on departments or process rather than on individual products fixation of suitable cost centres for the purpose of determination of process costs should be carefully done, costs are classified into Labour, Material and overhead and are collected for each cost centre for each accounting period.

The following are the special features of process cost Accounting:

i) PROCESS DEPARTMENTS:

The factory is divided into process or departments which carry out certain operations each of which constitutes a definite stage in the process of manufacture.

ii) PRODUCTION SCHEDULES:

Production or process schedules are used in process industries in the same way as production orders are used in jobbing factories but they function in a slightly different manner. The operations in the various process are more or less.

a) Materials:

Ordinarily there is no distinction between Direct or Indirect material, almost all materials being charged to the

process or departments.

b) Labour

Like material there is not much of a distinction between Direct & Indirect Labour.

c) Direct Expences:

Items of expenditure directly traceable to a process are charged to the processaccounts concerned.

d) Manufacturing Overhead:

Most of the manufacturing expenses would be charged directly to the process or department.

III) PROCESS COSTING PROCEDURE:

The procedure for costing applicable to process or departments will vary in details according to the requirements of production methods. The various situations and problems which may be envisaged and the methods of calculation of costs in respect of each of the situation have been discussed under the following heads.

- i) Single Process production.
- ii) More than one process involved, output of one process transfered in full to the subsequent process.
- iii) Output of the process partly transferred to the next process and partly retained in stock.
- iv) Process consisting of opening and closing stock fully completed.

- v) Normal and abnormal losses Occuring in a process but there is no closing stock or the closing stock is fully complete.
- vi) Process consisting of partly completed closing stock.
- vii) Normal loss or Abnormal loss invcolved closing stock partially complete.
- viii) Process consisting of partially completed opening stock.
- ix) Normal and abnormal losses and both opening and closing stock work in progress.

V) ACCOUNTING OF BY-PRODUCT:

Accounting of by-products takes into consideration their two basis characterstics i.e.:

- i) that a by-products are relatively less important than joint products.
- ii) that it has a fairly stedly market value which is not as significant as the main or major products but is definitely much more than that of scrap or waste.

The accounting consists of two steps: Firstly to determine or assign costs to the by prodcts and secondly to deduct the cost so assigned from the total costs, in orderto arrive at the unit cost of the major product.

If there are several major products the residual cost i.e. the total cost less the assigned cost of the by-product is further

apportioned to the joint product in accordance with any of the methods discussed earlier. Another method of Accounting by-products is to credit the sale of by-product to profits, no attempt being made to cost the by-product or to credit its value to the cost main product.

VI) ABNORMAL LOSS AND ABNORMAL GAIN:

Abnormal spoilage or defective work may arise in a process due to unforeseen factors. The cost of such abnormal loss is not included in the cost of process but the average cost of the cost units is charged to an Abnormal loss Account which is credited with the scrap and closed to the profit and Loss Account.

Sometimes, when the actual loss in a process is less than the anticipated loss the difference between the two is considered to be abnormal gain. The value of the abnormal gain is calculated in the same way as described above for abnormal loss and is credited to an abnormal gain Account which is ultimately closed to the profit and loss Account.

VI) ADVANTAGES AND LIMITATION OF PROCESS COSTING:

I) ADVANTAGES OF PROCESS COSTING:

- i) Process costs may be determined periodically at short intervals. When pre-determined overhead rates are in use, it may be possible to complete unit costs weekly or even daily.
- ii) It involves less efforts and less clerical expenses as the accounting method is simpler than that in job costing.

- iii) Detailed costs budgeted as well as actual are made available for each process operation or department.
- iv) Allocation of overhead to departments and process can be made fairly, accurately on definite bases.
- v) Since the material consumption and the various operations are more or less standardised more accurate cost estimates are available for price quotations.
- vi) It is easier to set effective and fairly stable standards in the case of mass production or continuous production.

II) LIMITATIONS OF PROCESS COSTING:

- i) When different products come out of one and the same process the common costs are apportioned to the various products, such costs of individual products are not reliable as they may, at best be taken to be only approximations.
- ii) Being only average costs for the accounting period, process costs cannot be considered to be very accurate for the purpose of detailed analysis, evaluation and control.
- iii) For the purpose of calculation of unit costs of continuous process work in process is required to be determined at the end of an accounting period.
- iv) Cost obtained at the end of the accounting period are only historical & are not of much use for effective control.

TECHNIQUE OF COSTING APPLIED IN SUGAR INDUSTRY

Compulsary maintenance of Cost Accounting records by the Sugar Industry, as Prescribed, will naturally bring up for consideration the cost. Accounting system that would suit the Industry Process Costing may conveniently be adopted for the ascertainment of cost of production and cost of sale of sugar.

A) COST CENTRES:

For the purpose of collection and allocation of expenses and so effect cost control, a sugar factory may be divided into convenient cost centres. The following cost centres are suggested for collection of cost, which may be modified to suit the individual circumstance of each factory.

B) CANE PROCUREMENT:

- a) Cane collection centres.
- b) Own cane form.
- c) Gate cane.

C) PRODUCTION DEPARTMENT:

Crushing of cane.

D) UTILITIES AND SERVICES:

- a) Boiler House.
- b) Power house.
- c) Water supply.
- d) Work shop.

e) Transport Development.

E) OTHER SERVICE COST CENTRES:

a) Administration including personnel Department.

b) Accounts Department.

c) Store Department.

d) Purchase Department.

e) Security Dept.

F) WELFARE:

a) School.

b) Hospital.

c) Recreation club etc.

It is necessary to maintain the cost records on a systematic and regular basis. If the cost records are to serve a useful purpose to the management in regard to cost control, cost reduction and elimination of wastages etc., it is desirable to work out the costs on a monthly basis.

RECORDS FOR WASTAGES, SPOILAGES, LOSSES ETC.

Proper records should be maintained showing the quantity and cost of wastages, spoilages, and losses of sugarcane and other raw materials, process materials, consumable stores, small tools, machinery spares etc.

ACCOUNTING OF BY-PRODUCTS

During the manufacture of sugar certain by-products are produced viz; bagasse, molasses, pressmud, proper records are

required to be maintained showing the quantity and value of by-products, produced, their disposal and the closing balance. The basis adopted for the valuation of the by-products should be reasonable and consistent molasses should be valued at the controlled rate fixed by the respective state Government.

The actual realisation obtained from the sale of the by-products during the period should be shown in the records in compared with the amounts adopted in the records.
