Woman C.P.A.

Volume 17 | Issue 3 Article 7

4-1955

Foundations for Standard Cost Systems

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FOUNDATIONS FOR STANDARD COST SYSTEMS

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Much has been written about the installation of standard cost systems but little has been written about the necessary foundation that must be solidly established before a standard cost system is installed. Too often management decides that a standard cost system should be installed without recourse to the necessary surveys that should be made before such a system is installed. Any system that incorporates any or all of its present incompetents or inefficiencies is not a good system and will always be a compromise that will require continual adjusting and changing as the incompetents and inefficiencies are brought to light or "suddenly discovered" by the cost accountant. There are many steps that should be taken by management before a standard cost system is installed. In order, these steps are:

Management Survey

Is the present staff efficient, adequate and progressive enough in its thinking to permit the company to grow? It is an unusual company wherein a management survey will be able to answer these questions honestly and in the affirmative, without suggesting beneficial changes. The survey should indicate to management its strength and weaknesses and endeavor to have the weaknesses corrected before any attempt is made to install a standard cost system. The survey must take into consideration the company's past record of performance and growth and its future plans for expansion. These future plans must include an adequate and efficient staff for future progressive growth.

Personnel Relations

Related to the management survey and only slightly less important is the survey of junior management personnel and the various and more important department heads, section heads and foremen. Are they efficient, adequate and progressive enough to permit the company to grow and to grow with it? A survey of these personnel will generally bring to light many inequities in salary and wage rates that should be corrected before any attempt is made to install a new system. Depending upon the size of the company and whether or not it is a closely held "family" company or corporation, many suggested changes in positions or jobs may be necessary to take care of "old time loyal employees" who are no longer in a position to grow with the company. Provision should be made to place these employees in positions or jobs more in line with their present and future capabilities to the extent that they will be happy, not present a personnel relations problem, and, most important of all, not block the progress of the company as a whole. Management owes its first loyalty to the majority and not the minority. If the minority blocks progress and the company stagnates or stops growing the jobs of all employees will be jeopardized and the company or corporation as such may cease to exist.

Sales Policy and Plant Layout

A survey of plant layout should start with the company's basic sales policy. Does the company have a definite policy as to its position in its particular industry and what it intends to do about maintaining and improving its present percentage of total business in the industry? Is the business diversified? If not, are there future plans for its diversification? Does the company have a definite policy regarding the amount of government and commercial business it plans to obtain? Does the company have a good research and development program? Is it properly tied in with market analysis so that research will know what future products it should be developing to add to the present product line to take the place of products that are currently falling by the wayside and have no future? The best approach is to determine which products in the present line have a profitable future, which products should be discarded and the extent to which the company can support

and maintain a research and development program for new or allied lines. The research and development program can be augmented by obtaining government development contracts that will parallel or supplement the company program. Do not be afraid of such contracts. In my opinion, they are beneficial to both government and private industry and probably are one of the reasons that the United States is technologically further advanced than any other country in the world.

After management has made its sales and product policy decisions, the next project should be plant layout. Is it properly located and streamlined for efficient handling, storing, processing and shipping? Does it have the machinery and equipment to do the job properly and at the lowest possible cost? Many times the survey will show that material handling methods are obsolete and store rooms improperly located for quick and efficient delivery to the production lines. These defects should be corrected.

Equipment on the production lines may be obsolete and need replacement. On a particular product there is often too much handling and crisscrossing of production. This should be eliminated and streamlined straight line production methods should be adopted to the greatest extent possible. Too often the complaint is heard that a product does not lend itself to straight line production methods. As the product is then constituted this may be correct. However, changes in design at the time the product was developed would have gone a long way toward making the product a straight line production product.

Plant layout, therefore, should be properly planned and streamlined before any attempt is made to set up a standard cost system. If this isn't done, any estimate or cost will be based on present inefficient methods and no standard cost system based on such a foundation will produce good standards or costs.

Production Planning and Scheduling

If management and personnel relations problems have been resolved before reaching this point then undoubtedly production planning and scheduling problems have been largely removed. It is important that planning and scheduling be done so efficiently that machine change overs and overtime are kept to a minimum, that items are produced on the lines best equipped to produce them and that materials flow smoothly to and from the production lines. If delivery promises are realistic and such promises are backed up by performance, the necessity for quick and costly changeovers will be kept at a minimum. Here the salesman can be of inestimable help in "selling" realistic delivery dates. The personnel scheduling production must know the plant equipment, its flexibility or lack of flexibility, the proper lines on which to schedule production, the economical size of production runs and when to consolidate orders of a like nature so that advantage can be taken of straightline machine setups.

Purchasing

Purchasing and material cost is one of the most important elements of almost any cost. Depending upon the industry and the product, purchased material costs may run as high as 80% of total cost and the higher the percentage of material costs to total cost the more important it becomes that purchasing personnel know the products they purchase and the sources from whom they purchase.

The purchasing organization must purchase quality consistent with the product to be produced, be sure that the material is delivered on time and that the price is right and competitive. If the quality of the material purchased is poor, it will probably overload the quality inspection points and "jam up" production lines; if delivery is not made on time, it may cause considerable "down time" on the production lines; and if the purchase price of the material is not competitive, a loss may be incurred before production commences. The importance of efficient purchasing can not be too highly stressed in its relation to total cost. It is one department that should be thoroughly budgeted as to performance. It should be charged or credited with good or bad performance on quality, delivery and price. None of these material factors should be charged or credited to the performance of the production lines.

Another essential of good purchasing is to maintain a sufficient number of suppliers so that a sudden interruption in deliveries from one supplier will not jeopardize plant operations. If proper material specifications are set up for the purchasing department and it is properly staffed and budgeted for efficient performance, then a long step toward efficient material costs will have been taken.

Size and Type of Cost System

Before installing any cost system a determination should be made as to how much or how little system will be necessary. It

is a mistake to burden a company with more system than it can properly afford, and, by the same token, it is a mistake to install any system that cannot grow and expand as the company grows and expands. In a large corporation with many allied products and quantity production a standard cost system may be an ideal installation. In a small plant with short custom made production runs, the job order cost system may be the ideal installation, whereas, in many of the process industries such as chemicals, a process cost system may be the ideal installation. In any case the system should be tailored to the needs of the company, present and future, rather than attempt to change the company to suit the system.

The Cost System

Now that we have an efficient and sufficient management, a planned sales policy and development program, good personnel relations, proper plant layout, efficient process and production scheduling and efficient purchasing, we are ready to set up a "before the fact" cost system rather than an "after the fact" cost system. Any estimate or standard that is made now will be made as the product should be produced most efficiently, and not as the product would have been produced under the old inefficient methods.

Why should industry set up a standard that it knows is wrong just because it has always been done that way? Why not do first things first and on a good firm foundation?

Either a prospective customer submits a sample of a product or proposed product to a company for a quotation or the company develops its own product and submits it to the prospective customer. From the idea alone, the sample, the drawings, or the specifications of the product, the Estimating department prepares its estimate. The estimator, depending upon the size of the organization and the complexity of the product, collects his cost data from the research engineers, design and production engineers, the purchasing department and the industrial engineering staff. The first problem is to determine whether or not the product fits into the company line and can be produced profitably. If it does fit in to the production lines or can be fitted in with certain changes, such changes should be suggested to the customer.

After product changes have been decided, the next step is to determine how much of the finished product should be made, i.e., what materials should be purchased completely processed and what materials should receive further processing and fabricating in the company plant. These decisions on subcontracting will change from time to time depending upon plant capacity and future backlog of orders on the books. If the plant is overloaded with work, management will probably wish to retain in its shop the type of work that is most profitable on its production lines and subcontract the components that are less profitable. If the plant is not operating at capacity and is badly in need of work, it will undoubtedly endeavor to do all of the work that it possibly can in its own shops in order to absorb overhead and retain its trained working force.

After the decision has been made as to how much of the work will be done in the shop and how much will be purchased from outside suppliers, the estimator is ready to compile his standard cost. He will supply the purchasing department with a list of the quantities and items to be purchased. The quotations they receive will be used in formulating standard material costs for the new items of material.

Standards are intended to reflect operating efficiency and, if the ideal operating efficiency is intended to be 100%, then standards should be set on that basis.

Material standards may be established on a variety of bases, an average year or an average of a number of years reflecting good, bad and average conditions. Once established, it is best not to change them unless the product or the processing changes. If this practice is followed, comparisons of operating efficiency are easily made from year to year.

In preparing standards for materials the estimator allows for losses, shrinkage and spoilage of material in processing.

Next in order is to assemble the labor costs on the materials that will require further processing or fabrication and on the assembly work of the completed product. If plant layout has previously been streamlined, the assembly of this information will not be too difficult and will be a labor standard of an efficient operation. From previous time studies and estimates of like products and processes the estimator can probably assemble most of his data, leaving very little for new time studies and standards.

A percentage of standard time for fatigue is allowed by the estimator on labor. This factor will vary with the type of work involved, i.e., manual, automatic or semi-auto-

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TAX NEWS

By LOUISE A. SALLMANN, C.P.A., San Francisco, California

Conversion of residential property to rental property—depreciation basis—

In the past, the Commissioner's method of computing depreciation on residential property converted to rental property has not been seriously challenged. Most tax accountants and attorneys have accepted the theory that the basis for computing depreciation on such property is cost or market value whichever is lower as of the date of conversion. Regulations to this effect appear to be bolstered by the Supreme Court rule which supports the Regulations insofar as a deduction for loss on sale of converted residential property is concerned. That is, residential property converted to rental use and subsequently sold retains the cost or market value basis at date of conversion whichever was lower, less accumulated depreciation to date of sale.

In recent years, however, property values in most areas exceed original cost. The New Jersey Court challenges the correctness of this longstanding rule and states where value at date of conversion is greater than original cost, depreciation should be computed on the higher value because the rentals are based upon this value rather than on cost. Under the Court's rule the taxpayer would be permitted to recover tax free an amount substantially in excess of cost through annual depreciation deductions. In effect, the taxpayer would recover the appreciation in value of the property without having to pay any tax thereon. Needless to say, the Commissioner will probably not go along with the Court's decision in Parsons, USDC, N. J. 12/9/54.

Rental of single residence—trade or business?

Does the renting of a single residence, by a taxpayer, not engaged in renting for a livelihood constitute a trade or business? A District Court decision to the effect that it does not has been affirmed in Grier CA-2. This conclusion is directly contrary to that reached by the Tax Court in the Leland Hazard case which had been accepted by the Commissioner and has been quite consistently followed by the Tax Court.

The above question is important for a number of reasons. Prior to the 1954 Revenue Code, if renting a single residence "was not" a trade or business, loss on the sale of such property was a capital loss and could be carried forward to future years. Prior to the 1954 Revenue Code, if renting a single residence "was" a trade or business, loss on the sale of such property constituted an ordinary loss which was only usable in the year of loss.

Under the 1954 Revenue Code, there is more fuel to toss on the fire of dispute between Court and Commissioner. Tax-wise loss on sale of property used in a trade or business, under the 1954 Code, is treated as an operating loss which may be carried back two and forward five years. If a single rental unit is defined as non-trade or non-business property, then the loss on sale becomes a capital loss.

In any event, it seems that most taxpayers will benefit under the 1954 Code in the treatment of such losses. In either case they will be able to utilize such loss over a period of more than just the year of sale.

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matic machine work. Down time is also allowed for any required loading of machines.

Standards may be set on an individual product basis or on a product line basis, depending upon the conditions prevalent in the company or industry involved.

As operations progress, actual costs are compiled against the standards. The variances (differences between actual and standards) are broken down into as fine detail as the company executives require for efficient operation.

In the case of materials this variance factor generally consists of the difference between the actual cost of the material purchased, and the standard cost of the material, and the difference between the actual waste and breakage of material in processing and the standard cost of such waste and breakage.

In the case of labor the variance factor may consist of the difference between the actual wage rate paid per hour and the standard wage rate per hour and the actual pieces produced per hour against the standard pieces required.

In addition to the material and labor costs there are also the costs of material handling, plant overhead and administrative overhead. In my opinion, material handling costs should not be buried in plant overhead but should be shown separately as a material handling cost. Too often, material handling is more costly than it should be. The best way to make it efficient and keep it under control is to show the cost separately and relate it to the percentage of material cost.

Estimates or budgets of the total amount of material to be purchased at standard cost during the coming year, the cost of handling such materials at standard, the amount of direct labor expected to be expended during the coming year at standard cost and the various overhead or expense items that must be recovered at standard cost for each direct labor dollar expended, the estimated cost of general and administrative expense that must be recovered for each dollar of factory cost at standard are all taken into consideration and when applied against actual operations reflect the efficiency of operations.

If standards are set on a good firm foundation, they should generally not be changed unless the process changes, and if they are not changed unless the process changes, it is easy to make a comparison of operating results on a year by year basis. If standards are continually changed to reflect price increases in materials, wage rate increases or less pieces produced per hour, etc., even though processes have not changed, then all we succeed in doing is to cover up many inefficiencies that should be brought to light.

If the variance factor climbs, company officials should act, and the higher it climbs, the more quickly they should act. Possibly a review will indicate that different and less costly materials should be used, or if labor rates are rising and production per hour is decreasing, possibly better and more up to date equipment is required to offset such factors. In any case, it is time to act.

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So—look before you leap—into transferring life insurance policies.

Incidentally, quite recently I heard a prominent attorney, whom I consider without a peer in fiduciary matters, say that he had not yet found an instance where he could conscientiously recommend transfer of insurance policies for the express purpose of escaping estate taxes.

Moreover, may I quote from the Estate Planner's Letter of November 18th:

"The Wall Street Journal reports that a strong drive is shaping up to tighten the *life insurance provisions of the 1954 Code* which eliminated the payment of premium test. Reasons why *changes predicted:* (1) Democratic minority on Ways and Means Committee attacked change as 'windfall' for wealthy; (2) Democrats will control tax revision next year; (3) Administration may back modification because provision will cause loss of $25 million in revenue and Treasury is annoyed with life companies for 'selling' provision as only way to escape estate taxes completely; and (4) Administration may propose compromise exempting only cash surrender value."

MARITAL DEDUCTION

The scope of the marital deduction is extended under the 1954 Code in two important respects. Discrimination against a legal life estate coupled with a power of appointment has been eliminated. Heretofore, it was necessary that a power of appointment, to qualify for the marital deduction, be exercisable by will or deed. Now, a legal life estate coupled with a general power stands on a par with the marital deduction trust. Supposedly, this modification should be especially welcomed in agricultural areas where legal life estates with powers of appointment are more frequently employed. Without any detailed analysis, however, I can recall from my own limited experience, several instances in which a denied marital deduction would now be allowable because of this change in respect to marital deductions.

Another inequity removed was the discrimination against fractional interests under a trust. Heretofore, the marital deduction has been denied where the entire net estate was left in trust with the provision that one half of the income be paid to the surviving spouse who was given a general power to appoint one half of the corpus by will or deed. Though under such circumstances the marital deduction would no longer be denied, the single trust idea can be quite costly taxwise—both income taxwise and estate taxwise. The single trust would deny the combined estates the benefits to be obtained through a wasting marital trust.

For example, A, who is survived by a wife and two adult children, leaves a net estate, after taxes, of $400,000 in the conventional manner—one half to a qualifying marital trust and the other one half