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The Systems Man Helps the Maintenance Manager Control and Reduce Costs

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The systems man makes his most effective contribution to cost reduction when he understands the basic problems of operating management. Obviously, there is more to systems work than finding more efficient methods of shuffling paper. Accomplishing the purpose of the system is all important.

At one time, the cost of maintaining productive facilities in operating condition was a relatively minor problem; it was just another overhead cost. Today, the automated or semi-automated plant requires a maintenance department which is a major factor in the production set-up. The more expensive and the more productive a piece of equipment is, the more important it becomes to reduce down-time to a minimum. To accomplish this, a larger maintenance staff is required. Not only are more maintenance personnel necessary but the greater sophistication of the equipment demands better-trained and better-paid mechanics, which factors must be evaluated as offsets to the cost-savings expected from the equipment.

Management's concern over maintenance costs has caused the systems man to find ways and means of keeping management informed on the cost of this function, of controlling the maintenance cost, and of furnishing reports to the maintenance manager that will assist him in running his department efficiently and without excessive paper work.

Records should not be kept unless they have a purpose. There are a number of aims in keeping records for the maintenance function, some of which are:

To collect maintenance department costs as part of a budgetary control program.

To allocate maintenance costs to the appropriate operating departments.

To develop sufficient information on maintenance expense so that this element of cost will be given proper consideration in pricing of products.
To control the preventive maintenance program so that it will be planned for optimum economy and effectiveness, and to ascertain that the program is being carried out as planned.

To ascertain the maintenance costs of individual pieces of equipment and the production delays created by breakdowns of equipment as an aid in reaching decisions on replacements.

To assist in evaluating the feasibility of contracting out some areas of the maintenance work.

There is no pat answer to the question of whether the records should be kept in the accounting department or in the maintenance department. It depends on the data-processing facilities of the company, the availability of records of equipment and the clerical work load in the maintenance manager's office. Since the budgetary control and the cost distribution must be handled in the central accounting office, it is generally desirable to keep most of the records in the accounting department. Some records pertaining to maintenance management rather than to financial management—such as preventive maintenance schedules, corrective maintenance records, and inspection reports—would usually be kept in the maintenance department.

Among the records of maintenance operations affecting financial management and also important as aids to the maintenance manager in fulfilling his responsibility are:

Accumulation of labor and material costs for the maintenance department itself, for the particular jobs, for the operating departments served, and for the equipment of facilities worked on.

Record of down-time due to breakdown or expected breakdown. Comparison of actual life expectancy of equipment with the engineering forecasts.

Allocation of maintenance costs to the product.

The above-mentioned records are utilized in developing the budget for the maintenance department and also in establishing the standard of service. The budgeting process, expressed in financial terms, is a forward planning of the expected responsibilities for the ensuing period and the associated requirements for personnel, materials, and tools. The maintenance manager, thinking of the frequent emergencies that face him, may wonder about the reliability of future planning,
but even unreliable plans are better than none; analysis of the problem will show that only a portion of the department's work is completely uncertain. The work generally can be broken into three areas:

Maintenance of a repetitive or routine nature, such as lubricating, painting, inspection, or replacing light bulbs. These operations are predictable to the extent that they can be scheduled in advance.

Major projects, such as roof repairs, conveyor part replacements, moving equipment from one plant location to another, and major overhaul of equipment should generally be considered predictable, since they are somewhat optional and subject to management decision.

Non-predictable jobs would include emergency repairs, the effect of unforeseen changes in production, and the results of abnormal weather conditions. These cannot be anticipated in detail, but past experience, as shown in the records, will indicate that they will occur and a realistic amount can be budgeted in a total amount to cover such contingencies.

Preparation of the maintenance budget requires the joint efforts of the maintenance department, the engineering department, the operating department supervisors, and the accounting department. Responsibility for keeping to the budget is also joint, since the maintenance manager controls the usage of labor and materials and the production department manager is accountable for the costs of his department including the allocated maintenance costs.

The accounting department should prepare reports by work center showing the actual costs compared to the budgeted costs, and significant variances should be explained. Such variances may be explained by other reports analyzing the expenses in various ways. Reports of value in this respect are:

Labor and material costs by work order for each production department.

Maintenance labor costs and hours showing the labor expended for routine work, major projects, emergency tasks, and the significant controllable areas of idle time and overtime.

Backlog of maintenance work based on uncompleted projects and work orders that have been approved but on which work has not been started.
Machine idle time for the period showing the machine number and the down-time caused by breakdowns and repairs. The effectiveness of the maintenance program is reflected in this report.

A good maintenance-cost-control system need not be complicated or expensive to operate. If properly designed to meet the requirements of the individual situation, it will help the maintenance department to perform a more effective job and to be prepared for the expansion of responsibilities in the maintenance area.