

A sound policy of management involves the knowledge and practice of sound management principles. In order that company officials may construct sound policies they must have these principles presented to them in such a way as to command their respect. That respect must be sufficient so that they will not leave the understanding and application of these principles to subordinates, such as the works manager, the production manager and the personnel manager.

The codification of procedures has been accepted as a worth while undertaking for the industrial engineer, the office manager, the cost accountant and the employment manager. The codification of policies should justify or cause a modification of procedures and help to co-ordinate them. To increase the likelihood of appointing competent executives, an employment policy regarding these executives should be definitely approved and recorded. The following is an example of such a codified employment policy:

"While it is the company's policy to give officials, executives and department heads the final authority as to whom they shall employ, it is mandatory that every new employe, no matter how high his rank, be inducted into our service by a personal introduction to the appropriate members of the personnel department, and that prior to being put on the payroll he fill in the regular form of application and furnish the necessary data required by the employment specifications relating to the particular position he is to fill.

"It is the company's policy to furnish the personnel department with specifications as to the requirements for the higher positions to be filled, giving the personnel department sufficient time to make a search for suitable candidates, even if officials or executives have in mind filling these positions with persons of their own selection. The personnel department shall then present any candidates they may be able to find available in competition for this position. These candidates shall be accorded a hearing by the official or executive who is to make the final choice.

"These procedures shall be mandatory. If they are not lived up to there is the likelihood that those arbitrarily appointed will in turn fill their own departments with persons of their own selection on the mere endorsement and recommendation of the superior officer. This naturally would result

in the requirements of selection, test and placement so carefully set up by our personnel department being looked upon as mere gestures and applied only in those rare cases where no favorite could be found to fill an opening in the company's force.

"When these specifications are fully met it is the company's policy to give preference to friends and relatives of employes, but the specifications must be furnished and the personnel department must be the final judge as to whether or not they have been met by any candidate."

Some such codified employment policy is necessary if we are to realize Mr. Bryant's fundamental requirement that authority shall be based on fitness and function. In recent years so much stress has been laid on the acquirement of what is called personality that the old-time requirement of thoroughness has almost disappeared. Local personality schools and even deans of scientific and technical schools have taken to advocating the playing of golf and poker and even the marrying of the boss's daughter as a better and easier way of getting to the top than acquiring the capacities for the job. Only a week ago I heard the youthful president of a company which has gone through all kinds of mergers and stock pyramiding state that the major requirement of their executives was personality. He said that capacity on the job could be acquired by anyone with personality. There is likely to be a change of front soon. Thousands of corporations with top-heavy financial superstructures and hordes of young undisciplined officials are up against the distribution problem in a world where the percentage of outlay for salaries and wages is on the decline. Capacity for a job may again be looked upon as of vital importance as well as training to fit for that capacity.

John Younger. I have been greatly interested in Mr. Bryant's paper and think he has ably covered a broad subject. I was a little surprised, however, at one omission. Great emphasis was placed on the standardization and operation of machines, on processes and on tools, but nothing was said about what happened between machines. That, it seems to me, should have been an important part of the paper. The handling of materials between machines is not merely a handling operation. The

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conveyor is a pace setter and must be considered in working out any forms of control. You can get any type of conveyor. We are of course all familiar with them and they were perhaps considered under "space around machines."

Mr. Bryant's discussion of maintenance reminded me that we might borrow a little from the automotive industry. In that industry maintenance is considered as preventive. Things are "prevented" rather than fixed. Steam and fuel lines, for example, are looked after continuously so that emergency repair is unnecessary. Maintenance is the term used to describe this work and service is the term used to cover actual repair work. I think the distinction between the two terms is a good one.

Ralph C. Davis. I want to second Mr. Younger's comment on conveyors and add my own. There is one phase of the utilization of facilities that ties in very directly with what Mr. Younger has just pointed out. That is the rate at which you turn over your capital. In manufacturing this of course means the rate at which you turn over your inventories and working processes. Part of the economy of the conveying system lies in the effect it has in shortening the time of material in process. In a great many cases in industries such as the automotive industry material is received, passes into production and appears in the finished product before the invoice for that material is discounted for cash. The economic utilization of labor is also a factor that must be kept in mind in planning inventories and their commitments. It is not alone the requirements of economical storing and processing that are important in determining how much material shall be started in production. The automotive industry has perhaps gone farther than most in realizing the possibilities of conveyors, but the small job shop as well as the continuous process industry would do well to consider this factor. Too little attention has been paid in many industries to getting the maximum turnover of inventories and working processes.

Stewart M. Lowry. I can perhaps add a bit to Mr. Younger's comment also. When I was associated with the Westinghouse Electric Company I

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was interested in the subject of materials handling. I was supervisor of materials handling and transportation and in that position wanted to get some information on the proportion of time that physical material was actually in the machine and the proportion of time it spent in transit, in tote boxes beside the machine, in storage, etc. I wanted this data from the time the raw material entered the plant until it entered the warehouse as finished product. We found it was a difficult subject on which to get accurate data but after the production manager and various department managers had worked on it for some time we arrived at a pretty fair estimate. We found that material in that industry is being worked on only from 20 to 25 per cent of the time it is in the plant. During the rest of the time it is either being transported from one operation to another or standing still.

King Hathaway. I am not in accord with Mr. Bryant when he says that methods study includes routing and the various functions of planning and control. I am in accord with him in principle, however, and in fact, when he says that methods study calls for a co-ordination of all the functions of a business, including general policies, sales, design, financing and others. I made the same point in my December meeting paper which has not yet been published.

I think we have reached a point in the matter of planning the flow of work where it would be very well to classify industries. We have on the one hand the industries making one product which has a continuous flow, or straight line, of production. In these industries the inoperative time should make up a very small percentage of the total time of processing. That is the one extreme. The automotive industry perhaps approaches that condition more closely than any other machinery manufacturing line. Between that and the other extreme, of which Mr. Bryant's plant is probably an example, we have the job and the repair shop. Here a machine will be at work on a certain kind of work for perhaps an hour and then change to another type of operation, and so on. There is no continuous flow. The same principle may govern the work of handling in both shops but the mechanisms must be very different. By the techniques of

⁴Manning, Maxwell & Moore, Inc., New York, N. Y.