

job. The net result is a progressive expansion in the total safety know-how of the entire plant population.

These are the five objectives I would aim towards in putting together the plans for a safety program.

It is quite obvious that the supervisor who is in direct contact with the workers will be the person needing most of your attention. Your plans must keep him constantly in view because he, not you, will be the key man as your plans materialize.

The safety engineer who counsels foremen and who spends ninety per cent of his time helping foremen with safety problems is making headway.

Each foreman brought into the camp of the safety engineer is one more salesman for safety, and it behooves the safety engineer to work with him untiringly. Foremen are the spokesmen for the safety program. They are the communication system. We must understand them and respect them in the job that lies ahead.

YOUR ACCIDENT RECORD CAN HELP YOU

By W. EUGENE STUFFING

Director of Safety, Carrier Corp., Syracuse, N. Y.

The premise on which this paper is based is that "Records are the basis or foundation of a scientific approach to accident prevention." Records give you, the safety engineer, the basic information necessary to transform haphazard, costly, and ineffective accident prevention work into planned programs so that specific conditions and situations which are causing accidents can be controlled.

So that all of us who are engaged in the profession of preventing accidents can measure our accident experience and progress by the same units of measure, the American Standards Association, with the assistance of many safety experts, has developed two standards. These standards are the basis for the majority of accident records developed and maintained by industries, federal, state, and local agencies, and associations such as the National Safety Council and the U. S. Department of Labor.

These standards are: A. S. A. Standard Z16.1 and A. S. A. Standard Z16.2. Standard Z16.1 presents the standard method of classifying and recording injuries and computing injury rates. Standard Z16.2 contains a detailed classification of accident factors and a recommended procedure for classifying and analyzing accidents on this basis. This standard comes in two parts.

If you build your records around these standards, you will be able to provide your-

self with an objective evaluation of your safety program. Records will help you identify your high-rate departments and, in addition, will provide you with information on your principal accident causes.

Records can also be used to:

A. Create interest in safety among members of your management by furnishing them with information about the accident experience of their departments.

B. Help you determine your principal accident sources so that your efforts can be focused in directions which will effect the largest reductions in accidents.

C. Provide supervisors and safety committees with information about the most frequent unsafe practices and unsafe conditions, so these persons can utilize their time and efforts to the greatest advantage.

D. Judge the effectiveness of your safety program and activities by showing you whether your accident experience is improving or getting worse.

E. Make comparisons with other companies, industries, or groups.

There are four steps which you must take if your records are to be of value to you. They are:

A. Obtain a report on every injury.

B. Record and classify these injuries in accordance with the A. S. A. standards already mentioned.

C. Prepare a monthly or periodic summary report which adequately shows the injury rates, as well as the circumstances and causes of the accidents which resulted in the injuries.

D. Periodically analyze the circumstances and causes of the accidents.

Obviously you must be fed basic information regarding accidents and injuries before you can build a set of adequate records. So the first type of report that you must receive is the first-aid report. The Medical Department should provide you with information regarding every injury. This report should give you the injured employee's name and department, the time of the accident, the preliminary impression of the injury, and the injured's description of how the injury occurred.

The other report which must be provided the safety engineer is the supervisor's report of accident investigation. This report is completed by the supervisor as soon after the accident as possible because time has a way of causing us to forget details which could be of vital importance in the prevention of similar accidents.

Supervisors' accident investigation reports vary widely as to format, but you should be sure that the form asks adequate questions to give the information you need. Obviously, each supervisor must know how to fill out the form properly. Otherwise you will find yourself spending needless time going back to the supervisor for additional information. This program of accident investigation reports also provides other interested management personnel with information regarding accidents occurring in their areas of responsibility and interest.

As stated earlier, you should prepare a monthly or periodic summary report which shows the circumstances and causes of accidents which resulted in injuries. The information for the summary comes from the first-aid reports and the supervisors' accident investigation reports. This summary report forms the foundation for all other reports which emanate from your office.

One type of summary report form is furnished companies by one of the leading casualty insurance organizations. Another form more completely describes an injury in terms of the A. S. A. standards previously mentioned. All of the "factors" with which you

would work to analyze accidents are contained in this report.

By taking information from the monthly summary report, you can cross match the "factors" involved in accidents with each other, in order to find out what combinations of factors are causing the majority of your accidents. After you have found the combinations which are showing up in large percentages, your next step is to take measures to reduce accidents being caused by said combinations.

You can use your monthly summary to cross match specific "agencies" against "types of accidents." You also could use a similar work sheet to cross match "agencies" against "unsafe acts," or "agencies" against "unsafe mechanical or physical conditions."

Safety performance is relative. It doesn't mean too much until you compare it with the performance of other departments, plants, companies or industries as a whole, to say nothing about comparing it with your previous experience.

To make these comparisons, a method of measurement is needed that will adjust to the effects of certain variables contributing to differences in injury experiences. A standard procedure for developing records, which provides for these variables is included in A. S. A. standard Z16.1.

This procedure uses injury frequency and severity rates which relate injuries and days charged as a result of the injuries to the number of man-hours worked. These rates automatically adjust for the differences in the hours of exposure to injury. Secondly, this procedure specifies the kinds of injuries which should be included in the rates. These rates have been generally accepted by industry as a uniform procedure which will permit the desired comparisons.

Now I would like to mention a few ways in which various types of reports can be helpful to you. Since you are most familiar with your own company's situation, you should look these over from the standpoint of serving your own purposes.

Cumulative disabling injury frequency rates can be used to rank departments. This is only one type of measurement that can be used, but I should warn you that this type of measurement used by itself is no panacea. Departments can also be ranked by monthly disabling injury frequency rates.