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SUPERVISOR'S

SAFETY GUIDE BOOK

The Association of Casualty and Surety Companies, a non-profit organization, is wholly maintained by over one hundred capital stock casualty and surety insurance companies to perform public services in many fields of human interest and activity.

The safety of persons and their property has long been one of its primary public service responsibilities. The fulfillment of this activity is entrusted to the Accident Prevention Department, which is fully staffed by specialists in every field of safety effort, including industry, traffic, public places, and even home itself. In this vital work the department cooperates closely with schools and universities, public officials and private organizations, and the trained engineering staffs of member companies.

This booklet is but one of many publications issued regularly by the Association of Casualty and Surety Companies to help provide safety for everyone.

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SUPERVISOR'S SAFETY GUIDE BOOK

ACCIDENT PREVENTION DEPARTMENT
Association of Casualty and Surety Companies
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A Dedication

To the Supervisors — the men and women who labor with mind and hand to meet the nation's production schedules.

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THE VALUE OF ACCIDENT PREVENTION

This pamphlet is about safety and is for supervisors. It is an attempt to help the supervisor carry out one of the more important functions of his daily job—the saving of waste due to accidents. All top-notch supervisors are now aware of the need for promoting safety in their departments, but not everyone recognizes the many values that he will receive in the development of a safety program. What are these values to the supervisor? To name a few:

1. It is sometimes difficult for a supervisor to make the necessary personal contacts with the personnel working with him, for no supervisor wants to be considered a watch-dog or a policeman. One of the easier ways of letting a man know that his supervisor is observing him is to show interest in the man's safety. Fundamentally, good supervision depends on being watchful of personnel, without being arrogant. The supervisor who observes and checks his men by showing interest in their safety can stay close to them without the danger of criticism.

2. Since a successful safety program requires the supervisor's continued attention as he circulates through his department, he will perform, therefore, one of his principal duties — the frequent observation of the men in his department as they work. This is probably the principal reason for the beneficial effect of safety on production efficiency. The same factors that cause accidents are responsible for poor production. They are only noticed and corrected by capable supervision. Good supervision will bring about efficient production, and at the same time ensure the safety of the employees.

3. Another value to the supervisor, as he works to prevent accidents, is the satisfying of the fundamental desire within himself to prevent any of his men from being hurt while they are in his work area and doing a job for him. Supervisors readily recognize the undesirable results of accidents such as time lost, broken and damaged machinery, increased waste and ruined material. But, unless an accident occurs, they are often not aware of how sorrowful it can be to be responsible for the injury of a worker and how it will affect the supervisor's standing in the mind of his management. Accident wastes are the supervisor's responsibility regardless of how remote it may seem at the time. On the other hand, it gives one a feeling of goodness to know that he has done everything he should and could to keep the men for whom he is responsible from having accidental injuries.

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What Price Compensation?

There may be still many in industry who think that they receive some financial gain from suffering an injury while on the job because of the compensation payments that are awarded. But a moment's thought is all that is needed to point out how ridiculous such thinking is. Under any circumstance, would an amount of money compensate anyone for the loss of a limb or his physical ability, or for the time and suffering that would be spent while recovering from an injury? Of course it wouldn't! Actually there is no such thing as "compensation," for such payments are only an amount of money, fairly established by state officials, and awarded to the injured person to assist him over the difficult period while he is recovering from his injury. The supervisor here has another opportunity to promote safety to his men and at the same time use accident prevention as a means of establishing a good relationship with his employees. He can point out that whatever the compensation award allotted to an injured worker, the amount is set by state agencies and is in no way determined by either the supervisor or the safety engineer. This may be helpful, for there are times when an injured worker thinks his supervisor, employer, or the insurance carrier is responsible for controlling the size of the award payments and unfairly criticizes them all or individually.

What Are Accidents?

When this question is asked, the answer is apt to be cuts, bruises, fractures, and so forth, because most of us, when thinking about accidents, have the idea that an accident has occurred only when a serious injury has resulted. Obviously, accidents and injuries are not the same. An accident is a mishap. It does not have to result in injury to anyone or damage to anything. It is well to bear this in mind because if we wait only until some major injury results from an accident before we interest ourselves in the prevention of a recurrence, then we are never going to eliminate injuries. As an illustration, let us assume that a ramp exists between a stock room and a machine shop. It is customary during the day for stock room employees to deliver materials to the machine shop by way of this ramp. At the lower end of the ramp is a blind corner. It has been observed that time and again there have been collisions at this corner and the supervisor can recall vividly the many instances when employees were struck by the hand truck as it descended the ramp. However, no one was seriously injured. Then let us assume that finally the hand truck struck an approaching employee with such force that it broke his leg. In this instance the supervisor would probably be attracted to the accident because of the fact that the resulting injury was serious enough to command his and management's attention. After providing for the injured employee, he would search for the principal causes of the collision and attempt

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to remove them. However, if the supervisor had not delayed his investigation and corrective action until such time as an employee was seriously injured, the "accidental" injury would not have occurred. If he had observed the mishap at the blind corner in the past, regardless of whether someone was injured or not, and recognized it as an accident which could very easily produce any degree of injury, then he might have taken the necessary corrective action to prevent recurrences, without waiting for the accident to repeat itself a number of times, and eventually result in a broken leg. Accidents are mishaps and are not to be confused with injuries. The only way that supervisors can prevent injuries to their employees is to prevent the accidents which may cause those injuries. When industrial supervisors understand this important point, then they can truly attempt to prevent accidents which, in turn, will prevent injuries.

ACCIDENTS, THEIR CAUSES AND RESULTS

Under no circumstances should the supervisor think that his accident prevention work requires an unfair amount of his time. Actually the greatest part of his program will, and should, be done along with his regular duties. If the supervisor has the impression that the work of preventing accidents is long and tedious, he is mistaken. This booklet, as an example, is only as detailed as it is so that it will provide the supervisor with some thoughts that he will want to remember and ought to refer to. Learning what he must know about safety is comparable to learning how to count, and equally important. If one were required to learn counting with the additional work of adding, multiplying, etc., at the same time in his life that he was required to learn accident prevention, both would seem confusing and difficult. Yet, once the necessary basic ideas are acquired the whole thing becomes simple and effortless. Everyone who learned counting and arithmetic in his youth uses numbers with relative ease in his everyday life at home and on the job. So, too, should everyone, especially people supervising and guiding the safety of others, have an understanding of the fundamentals of accident prevention. For example, the supervisor should know something of accident types in order to understand how accidents can be prevented.

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Common Types of Industrial Accidents

To the uninformed supervisor there might appear to be a multitude of types of accidents that when considered all at once are confusing. Actually there are only *eight* common types of accidents that occur.

An accepted list of accident type classifications is printed below: (The more common accident types are listed first.)

1. *STRUCK BY* (falling, sliding, flying objects)—Such accidents include being struck by moving vehicles, flying objects, swinging doors and so forth.

2. *FALLS* (of persons on same level)—These accidents, for example, are those where the person slips or trips and strikes the floor.

3. *FALLS* (of persons to a lower level)—Such accidents include falls from ladders, platforms, stagings and any other device where the individual strikes the floor or a lower level.

4. *STRIKING AGAINST*—This includes accidents where the person accidentally runs into equipment, another person, or some object.

5. *CAUGHT IN, ON, OR BETWEEN*—These accidents are those where the person becomes accidentally engaged in machine parts, such as being caught in a gear or caught in the links of a crane chain, or caught between two moving objects.

6. *OVER-EXERTION* (causing strains)—These accidents include those where the individual attempts to handle loads that are beyond his capacity, or tries to move loads improperly, thereby causing a pulling or stretching of the muscles of the body.

7. *INHALATION, INGESTION AND ABSORPTION*—Such accidents include those that result from breathing poisonous fumes and vapors, swallowing toxic materials, or absorbing them through the skin. The most frequent of these is the inhalation type which occur most often around materials which are being melted, are easily evaporated, or which are in a dusty state.

8. *TEMPERATURE EXTREMES, INCLUDING ELECTRIC SHOCK*—These accidents include sunburn, sun-stroke, frost-bite, or contact with electrified objects.

From this list, the supervisor can quickly see that fundamentally there are just a few accident types that he will be concerned with in his department. The cause of these accidents will be determined through his familiarity with the equipment used and the job operations. If he examines his jobs to deter-

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mine what materials, equipment and procedures are used that might cause these few types of accidents, he will have at his fingertips a thorough working knowledge of the potential hazards in his department and will, therefore, be able to overcome them.

Major and Minor Accidents and Injuries

Much of the success of accident prevention work depends on one's state of mind—the state of mind of the employee, of the supervisor, and of top management. It is important to develop correct concepts. There are many common expressions used or misused even by professional safety specialists, that indicate wrong information or faulty ideas. For example, such commonly used expressions as "major accidents" and "minor accidents" in themselves indicate that one has not identified in his mind the fact that all accidents are important. When one segregates accidents into two such classifications he is apt to pay attention only to those he considers to be "major" or important. If he permits himself to encourage such thinking he cannot do a satisfactory job of accident prevention. We know now that there are no such things as minor accidents. The injury or damage which the mishap caused may be major or minor, but the accident which produced it should, in all cases, be regarded as major. The extent of injury is in itself due principally to luck. In other words, there is very little any supervisor can do to control the extent of injury except to prevent the mishaps which so commonly cause injury.

Common Accident Causes

Honest investigation of all accidents discloses first of all that they are all CAUSED. This simple statement needs a great deal of emphasis in order to overcome such faulty notions as: "If your number is up, it's going to get you," "Accidents are bound to happen," and so forth. Such beliefs, in regard to the occurrences of mishaps, do not permit one to see the possibility of preventing accidents. Actually, every accident is caused by some personal or mechanical failure. The supervisor who recognizes very clearly that all accidents are caused, and that their causes may well be expressed as unsafe acts or unsafe conditions in his department, has crossed an important threshold in his thinking and has entered the area that permits him to seek out and correct the accident causes. Supervisors can never do a "top notch" job of improving accident experience until such time as they direct their thinking along these lines and persistently search for the common unsafe acts and conditions which may cause accidents to their men.

Cost of Accidents

In addition to the increased insurance costs due to accidents, a quantity that is familiar to most thinking supervisors, the cost of accidents should include the production time lost to the department when one of its members is away receiving first aid treatment, or in the hospital or at home recovering

from an injury. In addition, an accident that injures an individual very often is responsible for damaging machinery or material. For example, the screwdriver that slips and penetrates the palm of a hand may have scratched the surface of the fine machine part he was working on. The wrench with the spread jaws that doesn't grasp the nut firmly and slips when the mechanic puts pressure on the handle thereby banging his knuckles, has also marred the edges of the nut. The train of gears that has caught the unsuspecting fingers of the thoughtless worker must be dismantled in order to disengage the injured man, requiring the shutting down of the machine for a certain length of time while the operation is accomplished.

In short, associated with every accident that injures a workman is the loss of a certain amount of time and perhaps injury to the machine or material that the plant must pay for. A very elaborate study was made of these losses, and it was found that it could be estimated that the cost of an industrial injury is four times the amount paid for workmen's compensation and medical costs. This additional amount is not paid for in insurance, but is absorbed by the plant and reflects on its efficiency.

UNSAFE ACTS VS. UNSAFE CONDITIONS

Many accident preventionists will say that most accidents are the result of more than one cause. Usually one can find an unsafe act of the person or persons involved and an unsafe condition. As an individual, it is often difficult to control the unsafe condition. Supervisors, of course, should be continually striving to do this. But *in every case* we are able to control our own thinking and our actions. Therefore, if each individual is taught to understand that he should *work* and *think* safely, he can eliminate the unsafe personal factor that is partially responsible for the occurrence of an accident, and thereby save himself from accidental injury. In other words, if the individual does the job properly, even though a situation may be hazardous, the chances are no accident will happen to him. Accident records of jobs where extremely hazardous machines are being used show that most often the number of accidents that occur in those situations is less than in those jobs where less hazardous equipment is being employed. This undoubtedly is because the worker is conscious of the dangers of the equipment and takes particular personal care to act safely and protect himself.

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When it is stated that all accidents are the result of unsafe acts or unsafe conditions, it should be borne in mind that the analysis of any particular mishap will probably disclose one or more unsafe acts and one or more unsafe conditions. Usually, however, in the list of specific accident causes it will be recognized that either one particular act, or one particular condition, was the principal cause and that the others were more or less contributing causes.

CARELESSNESS VS. THOUGHTLESSNESS

Under no circumstances should carelessness be considered the cause of any accident. The word carelessness does not describe the reasons for a person's behavior. If one were to take the word apart it would mean that an individual described as "careless" did not care whether he was injured. Of course, this is not so. Actually everyone of us wants to avoid injury, but sometimes we *fail to think about the possibilities of an accident occurring to us. It is these failures to think ahead of accident possibilities and correct them that more often contributes to an accident.* In fact, it is often felt, with some justification, that *all accidents stem from thoughtlessness.* It may be thoughtlessness on the part of the person injured, or perhaps thoughtlessness on the part of the supervisor who failed to instruct him so that he would act safely, or thoughtlessness on the part of some third person. Thoughtlessness as a one-word description for the underlying reason for a person's unsafe act is a much better word than carelessness. The word carelessness as an accident cause should be eliminated from the vocabulary of every supervisor and every other person who is interested in doing his share to prevent accidents. Carelessness as an accident cause is a cover-up word. It means nothing in itself and is useless as a means of arriving at sound corrective action after an accident has occurred. No other word in the English language is so commonly misused in the realm of accident prevention as this word. Usually when the cause of an accident is indicated as "carelessness" it will be found that the word was used to describe some specific unsafe act. If the supervisor who is prone to use this meaningless word will ask himself this question, "What was it that the man did that was described as careless?" he will then be lead to the specific unsafe act and can then take some suitable corrective action.

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GOOD SUPERVISION CORRECTS UNSAFE ACTS

An examination of the methods of operation in an ordinary industrial establishment shows very clearly that the supervisor has the best opportunity to correct unsafe acts. He obviously knows the men in his department better than anyone else and has a keen appreciation of their individual make-ups and differences. He cannot and should not depend on the safety engineer, if there is one associated with his company, except for technical information concerning accident prevention procedures. Obviously, the safety engineer has only two eyes and his services are limited to intermittent visits to any shop or area. It is highly possible that he may, during these occasional visits, observe no unsafe act or unsafe condition. On the other hand, the supervisor while making his rounds continually, during the course of the productive day's work, has an excellent opportunity to frequently observe and correct the many unsafe conditions which creep into the operations during the day and the many unsafe practices which often may be committed by any of his workmen. If he takes immediate corrective action in each of these instances, then he is discharging his responsibility in regard to removing accident causes and is going a long way toward holding employee injuries at a minimum.

THE SUPERVISOR CAN CONTROL ACCIDENT CAUSES

Previous paragraphs have shown that *all accident causes* can be classified under the heading of *unsafe acts* and *unsafe conditions* and it has been pointed out that the supervisor has a better opportunity to recognize and correct these accident causes than anyone else.

Correction of Unsafe Conditions

If the supervisor were to list the possible *unsafe conditions* in his department he would recognize that he could correct many on the spot without the assistance of anyone in higher management or in outside agencies. Such conditions as improperly stacked material, a hand truck in the aisle, and an unattended machine in motion can obviously be eliminated immediately by the supervisor who recognizes these conditions as potential hazards. On the other hand, an examination of the list will disclose many conditions which

will require the supervisor to seek assistance of others in order to eliminate the hazards. The lack of sufficient personal protective equipment, broken flooring, insufficient tooling, a broken ladder, inadequate lighting, are conditions which the supervisor will recognize as being accident causes, but in most cases he cannot entirely eliminate them himself. Presuming that his superior has the same interest in accident prevention as he, it is logical to assume that his responsibility for conditions beyond his control requires his reporting of the condition to his superior, or to the authority in the plant set up by company policy to handle such matters. As we ascend from one level of supervision to the next higher level we see that each higher level has an increased responsibility and rightfully more authority. This exists in regard to every production problem in every production plant. When the supervisor has a production problem beyond his control, he is expected to report it to the next higher level for attention. This holds true, too, in safety work and consequently it is only reasonable that the supervisor who recognizes an unsafe condition beyond his control should make certain that the condition is quickly brought to the attention of his immediate superior. If the condition is beyond the control of the next higher level then it needs again to be passed up the line until eventually it is placed in the hands of top management for correction. If this simple procedure were followed in our modern industrial establishments many of the common unsafe conditions which cause today's accident toll would be removed. Once the supervisor understands the simple idea that he must eliminate all hazards to his employees by himself, or by reporting to higher management if beyond his control, he will be able to cope with any of the unsafe conditions with which he is apt to be confronted. If the plant employs a safety engineer or safety director, then his advice and counsel might well be sought by supervisors of any level, in order to determine the most effective means of overcoming the hazard. This, however, does not mean that the safety director should be totally responsible for the recognition of all unsafe conditions. This responsibility must always remain with the supervisor who is on the job continuously.

Correction of Unsafe Acts

In regard to the *correction of unsafe acts*, many factors involving the make-up of people must be considered by the supervisor. Supervisors pride themselves in knowing their men. If a visiting safety engineer or a plant safety engineer observed a man committing an unsafe act, he would be wise to report it to the man's immediate supervisor. Such action on the safety engineer's part implies that the supervisor alone is the man to take corrective action. The supervisor must determine why the unsafe act is being committed, and shape his corrective action to overcome that reason. The supervisor is the only one who can tell whether the man is committing the unsafe act

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because of some faulty attitude such as undue haste, showing off, disregard of instruction, laziness, or because of a lack of realization of the danger or a lack of knowledge or skill. The supervisor alone who has daily contact with the man is in the best position to determine which of these faults need correction, and his corrective action, whatever it may be, will probably be in the field of instruction, discipline, or better job placement. If the man acting unsafely is doing so because of a physical handicap, a mental deficiency, or an emotional instability, then the supervisor will most likely consider having the man's job changed to one that he is able to do, or able to be instructed to do, in a safe manner. If the supervisor feels that the unsafe act is being committed because of a lack of appreciation of the danger in the job, or a lack of information or skill, then he will most likely resort to instruction as a corrective. If the unsafe act is being committed because of some one of the faulty attitudes such as showing off, then the supervisor will recognize that his corrective action should be disciplinary. Job assignment, job instruction and the maintenance of discipline are supervisory responsibilities which if properly discharged not only prevent accidents, but also increase production and efficiency. The supervisory tools used to maintain good production are the same devices called upon by the efficient supervisor to promote accident prevention.

JOB PLACEMENT AND SAFETY

Invariably a new employee comes to the supervisor after being "screened" and approved by the personnel or employment department. It can be assumed, then, that he is an individual acceptable to the plant and is able to do the work in the department to which he is assigned. However, it is up to the supervisor to relegate him to the specific job within the department at which he will be most efficient. To do this the supervisor should have information from the personnel department as to the new employee's experience, interests and physical capacities. He should use this data in placing him on the specific job so that in no way is the employee asked to do work which he may be unable to do because of physical incapacity, lack of interest or experience. For example, it would be impractical to assign a man who is a diabetic to a job where he is apt to cut himself. Because of the blood condition peculiar to his disorder he does not heal readily when cut, and is apt to suffer a severe infection. The danger of this is extreme and can result in either amputation of the injured part, or death. Neither would it be wise to assign a man with a heart ailment to a job where he must do heavy lifting, climb stairs or in other ways exert himself. Again, it would not be sensible to give

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a man with poor vision the job of working on high speed machines, that, because of their design, are apt to injure the operator if he cannot see the point of operation clearly. In short, a man's physical capacities should fit the job's requirements. Also his interests should match the job demands. The assignment of an intelligent, imaginative person to a routine job may result in his complete boredom with that kind of work, and because of his resultant lack of attention might result in his having an injury. At the same time his disinterest in his work would most certainly affect his productivity. In short, a person should be thought of as an individual. Each differs, one from the other, and cannot be ranked in groups, as machines can. When assigning a man a job, consideration should be given to the man's individual abilities.

Job Instruction

Regardless of the amount of experience he has had when he first comes to work in a new department, or a new plant, every employee should be considered a new worker. When he comes to a different department, it will be a new environment for him, new co-workers, probably new assignments and a new supervisor. He will, more than likely, be nervous and anxious to please. This should be remembered and the supervisor should attempt to put him at ease, so that, in his more than usual excitement, he will not become involved in an accident. By doing this, the new worker will at the same time be more comfortable and will enjoy a better feeling about being at his new position. Instructions must always be given to a newly assigned employee. This is not hard to do. Fundamentally, it consists of:

FIRST—*Preparing the man* by putting him at ease, arousing his interest and finding out what he knows about the job.

SECOND—*Presenting each new idea and skill,* step by step, in logical order by demonstrating and explaining how the job is to be done.

THIRD—*Application by the man,* letting him try the job while the supervisor stands by to help and re-instruct as necessary.

FOURTH—*Testing him* sometime later to see if he can do it alone.

Some things the supervisor should explain to every new employee are:

1. The location of the first-aid station.
2. All injuries are required to be promptly reported and attended to.
3. Accidents can be avoided by following instructions and by *thinking* of how to do the job properly.
4. Safety rules must be obeyed.
5. Mechanical safeguards must be used and kept in place at all times.
6. Goggles and other personal protective equipment supplied by the company for specific jobs must be used.
7. Each worker is responsible for his own safety and that of his co-worker, as well.

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It is important to remember that repetition of instructions can rarely be over-done. One can *never assume* that instructions are understood. The supervisor must be as *certain* as is practicable that the worker knows what is expected of him. Questioning a learner after instruction has been given will check his understanding. Encouraging workers to ask questions has many advantages. It is natural for them to assume a "know-it-all" attitude to make an impression on the boss, but no one can expect any worker to know everything about his job. Questions often come to his mind and he should feel free to ask the boss about them without running the risk of being ridiculed or thought stupid—even if the answer is an obvious one. Perhaps the best way to encourage questions is not to discourage them by being impatient or sarcastic in answering. This, of course, requires real tact and understanding on the part of the supervisor, as do most all of his dealings with his workers.

Job Follow-up

Every supervisor should recognize the need for making frequent checkbacks to ascertain whether the worker is properly placed and whether instructions have been adequately given and are being followed out. Too often the worker who is doing the job improperly has not been fully instructed, or is at a job that is beyond his capacity.

ENFORCEMENT OF SAFETY RULES

The question often arises as to what to do about enforcing safety rules. In general, the problems of enforcement do not present difficulty when the supervisor demonstrates the right kind of leadership. It is difficult to expect any group of men to obey safety rules that are not in themselves being followed by their boss. It is impossible to expect them to excuse the boss for his violation of safety rules on the basis that because of his work he is not as exposed to the job hazards as they are. All they know and think is that he is the man assigned by a top management to show them *how*. There may be times when some individual in the department, for some reason, is unable to understand the value of obeying safety rules and it will then be necessary to take some action to impress upon him the need for following instructions. It is important that management have a definite policy for infraction of rules that has been agreed upon by all concerned. For example, before any severe penalty is inflicted, the violator should be warned that he is to receive a

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penalty if he doesn't mend his ways. He may be warned once or twice, or three times, but each warning should be of such nature that he is impressed with the danger to him if he continues his present way of working. The first warning, for example, may come from the supervisor, the next from the plant superintendent, the next from the plant manager, but the warnings should not be repeated to the point where they lack support. Too frequent warnings, not backed up with a penalty, will remove any value that they may have. If a penalty is imposed and it is necessary to be firm again with the same man, the succeeding penalty should be more severe in nature.

SAFETY ENGINEER'S PART

In companies that employ safety engineers, the organizational charts most often place the safety engineer outside of the line of authority. His position then, is a staff or advisory one and it is well for each supervisor to remember that the primary function of the safety engineer within the plant is to assist all levels of management in accident prevention. He cannot do the job alone, even presuming that he is a well qualified safety engineer. His value to the company is greatest when he serves as advisor. One of his duties may be to accompany supervisors on intermittent plant inspections so that when some unsafe condition or unsafe process is observed, he may offer counsel as to the best way of eliminating or revising it. Supervisors must remember that they are responsible for the prevention of accidents to all their employees and for the safe working conditions of those in their assigned area. They should feel free, however, to call on the safety engineer for assistance with any safety problem. If the supervisor while attempting to investigate the occurrence of an accident in his department is somewhat bewildered as to the principal causes, he should not hesitate to seek the help of the safety engineer in order to correctly determine the specific causes. When the supervisor wisely uses the services of the safety engineer, he is cooperating fully with his higher management. Many plants do not warrant the full-time services of a safety engineer because of the small number of employees. In this instance, it is usually found that a well qualified safety engineer representing an insurance company calls on the plant at regularly scheduled intervals for the sole purpose of assisting the supervisor and other management personnel in the problems of accident prevention. The supervisor should get to know this safety engineer and recognize him as one who wants to help, in any way possible, to make the supervisor's accident prevention problems easier to handle.

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SAFETY COMMITTEE'S PART

Most plant safety programs include a safety committee on which the supervisors are represented. The value of the plant safety committee is tremendous when it is properly worked out and enthusiastically supported. Perhaps its principal objective is to provide an opportunity for the "key" personnel, or their representatives, to discuss current accident prevention problems and what can be done to solve them. Obviously, such an opportunity for a meeting of the technical minds in a plant will result in the improvement of many of the unsafe conditions. However, this committee's activities should be reserved for only the most knotty problems. In other words, the foremen should not feel that every accident prevention difficulty that confronts them is referable to the safety committee for solution. There would be two principal disadvantages if they depended entirely upon the safety committee. These are, (1) There would be a time lag that would have elapsed between the period the problem presented itself and the time the committee takes to solve it, and (2) The reference of all safety matters to the committee would soon destroy the supervisor's initiative in solving the problems before him. The supervisor, then, should consider the safety committee as a reference group whose recommendations can be acceptable to everyone concerned and which, when followed out, will solve the most difficult problems he is confronted with. It is not intended that the safety committee shall attempt to take the responsibility for accident prevention away from the supervisor, but rather that it can assist him in problems that are beyond his authority. This is important to keep in mind.

INVESTIGATION OF ACCIDENTS

It is always necessary in a safety program to keep accurate records on the accidents that have happened. The value in doing this is two-fold. First, the safety specialist after analyzing the data can determine in which direction he should steer the accident prevention program and second, it permits him to estimate how successful the plan has been, by comparing the present record

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with the past. To do the kind of job he would like to do, he must depend upon the supervisor in any case. It isn't enough to just have a record that an accident occurred, and the time it happened, and the machine or operation that was involved, for he must know every last detail that can be uncovered as to the causes of the accident. We know now, from our past discussion in this booklet, that there is generally more than one cause for each accident. We know too, that most often an accident is not only caused by an unsafe condition, but also by an unsafe act on the part of someone. The supervisor is in the best position to provide much of this information through his knowledge of the men in the shop, their behavior and attitude, and what their jobs consist of. By checking back on this data, the safety specialist can uncover much of the information he will need in determining the unsafe act. A word of caution should be entered here concerning the use of accident statistics. Too often, the emphasis on their value for pointing out hazardous locations is over-balanced. There are many times when top management, supervisors, and safety committees believe that they should only concentrate on eliminating hazards that have resulted in accidental injuries. Many times obvious hazards are therefore overlooked in the conscientious job of collecting accident data to be used as a guide, indicating what hazards are to be eliminated. Logically, the most effective safety work is to prevent accidents before they happen. Many hazards are apparent without depending on statistics to point them out. Every responsible member of an industrial organization should be aware of the need for concentrating his attention on the discovery of hazards and overcoming them before they have caused an accidental injury.

THE SUPERVISOR'S PART IN ACCIDENT ANALYSIS

Every supervisor will want to learn all he can about how an accident occurred that injured one of his men, for every thinking supervisor understands that it is only through his personal interest in the men working with him that he can be sure of their loyalty, respect, and enthusiastic support. The inquiry into accident causes, therefore, should not be considered just another task, but instead a piece of work that is inspired by personal interest in the men for whom he is responsible. Just how much of an investigation or what procedure the supervisor will want to follow, depends on him. It is not to be recommended here that he prepare a detailed analysis of the accident,

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for in many cases the supervisor is already so busy that he will not have the time, even if he had the inclination to do this. But no supervisor should ever consider that he is too busy to inquire into the reasons for the occurrence of an accident. If he sincerely believes that he is a busy man, then by all means he is too busy to have accidents. For each accident deprives him of valuable production time from his personnel.

When a man in a shop is injured, his supervisor will probably feel not only sympathetic, but something approaching a sense of guilt. Once he has made sure that the man is provided for medically, he has done all he can for him in his present plight. But there is something far more constructive for him to do in order to prevent another accident from injuring another man. If the supervisor will reconstruct the story of the accident and try to learn in detail just exactly what was being done and under what conditions it was being done when the mishap occurred, he will be able to discover much that will permit him to prevent recurrences of the accident. He will find many tangible causes lending themselves to corrective action. In any event, the supervisor when making his inquiry into the cause of an accident should always attempt to develop information that is accurate and factual so that he will not be misled in taking corrective action, and so that when the information is made available to the safety specialist either employed by the plant, or by the insurance carrier, the specialist will be able to provide the utmost in assistance.



Modern industry uses many materials in its operations that are apt to have a harmful effect upon the men working with them. The supervisor, of course, cannot be expected to have a profound knowledge of the toxicity of the various chemicals that may be used, but he should have an awareness of the potential dangers involved. He should not accept into his department any new solvents, paints, chemicals or other materials that have not been certified to him, by a responsible person, as being safe for use in the manner in which they are intended. Under no circumstances should the supervisor accept a material as harmless on the fact that it has been used in the plant for a

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considerable length of time without apparently injuring anyone. It may be that a supervisor reading this pamphlet will have many materials in his department that he knows nothing about except that they have been used and are apparently causing no one any harm. Such an assumption would be dangerous, for the effect of most of the poisonous chemicals that are being used is cumulative. That is, exposure over a period of time might lead to a health impairment, but it requires a period of time before the effects are noticeable. He will, therefore, want to inquire about those materials he knows nothing about that are presently being used. In almost every case, industrial products are safe when used as they are intended. The supervisor, therefore, will be anxious to make certain that harmful products are used strictly as recommended. If the plant has a medical department and a safety engineer, it is advisable for the supervisor to consult with the medical and safety staffs, concerning the problems of industrial health.

USE AND IMPORTANCE OF FIRST AID

The role of the dispensary or medical department is an important one. It is apparent from reading the text of this booklet that the stress here is placed on preventing accidents before they occur. The supervisor also wants to insure that "minor injury" does not become "major injury." The first-aid department assists fundamentally in accomplishing this objective. The man who suffers a slight cut today, but who neglects to receive prompt first-aid attention, might have a severe infection tomorrow. It is important, therefore, that every worker report to the first-aid staff as soon after he receives the injury as possible, so that proper care can be given him. In fact, it is to the injured employee's advantage to report his injury immediately for then an official record can be made of the time and place the injury occurred, providing valuable assistance to the plant's insurance carrier in the event his injury becomes so severe that he is entitled to workman's compensation payments. If there is no record of his injury there may be some question as to whether he was injured on the job. The supervisor, then, will want to point out to the men in his department that the reporting to the first-aid station is for their protection.

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PERSONAL PROTECTIVE EQUIPMENT

Quite often it is necesary for the worker to wear specially designed protective equipment. When the plant supplies personal protective equipment, it should be worn by every worker who is exposed to danger. The supervisor should demonstrate his leadership qualities by setting the proper example and wearing the personal protective equipment required on any job or operation in his department. It is well for the supervisor to bear in mind that even though he may not be qualified to select, and purchase the most efficient type of personal protective equipment, his responsibility does include the recognition of hazards. Personal protective equipment is designed specifically to prevent injury, but it should be remembered that in itself it does not prevent accidents. It does insure, however, that if a mishap occurs the injury will be eliminated or reduced. Because there often is misunderstanding concerning this equipment the following is a list of common types of personal protective equipment, and the occasions for their use:

Goggles—Should be worn on all chipping, grinding, caulking jobs, and those operations where caustic or acid solutions are being poured, or in any area where such solutions are apt to be spilled or where objects are apt to fly and strike the worker. Where harmful rays exist, as in the case of arc welding, all workers should be protected with a filter lens-goggle if they are apt to be exposed. The ordinary safety goggle will filter the harmful burning rays from an arc welder's torch satisfactorily. The value in adding coloring materials to the arc welder's lens, is that the goggles then also remove some of the glare, making the worker more comfortable.

Face Shields—This type of eye and face protective equipment has become popularized within the past few years. Under no circumstance is it considered to replace the goggle. It can be used in exposures where light, small particles are apt to fly without force. It may be used too, in some cases where the pouring or handling of caustics is done in small amounts.

Cartridge Type Respirators—Fundamentally, there are two types of face respirators of the cartridge type. One is intended to screen out dust particles of a harmful size, and the other is intended to absorb dangerous chemical vapors. *The dust respirator cannot be used in an exposure where there is a chemical vapor hazard.* The respirator should be fitted to the man's face according to the manufacturer's instructions, should be of a type approved by the United States Bureau of Mines for the operation it is to be used on, and should have its cartridge replaced when the worker begins to smell the odor

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of the material from which he is being protected. Each worker requiring this equipment should have his own respirator which should be cleaned regularly. Respirators should not be exchanged by the men.

Air Line Respirators—In some cases, an air line respirator is recommended. This is a special type of equipment permitting the worker to enter a hazardous atmosphere by equipping him with a hood and individual air supply under positive pressure. It is used when going into an environment that has no oxygen or contains poisonous vapors, such as when cleaning trichlorethelyne and petroleum tanks.

Gloves—Gloves are recommended on many material handling jobs. They should never be worn when working on or around moving machinery unless their use is approved by some responsible person.

Safety Toe Shoes—In the newer designs of safety toe shoes the construction of the toe will protect the wearer from ordinary heavy impacts, and yet be comfortable while he is wearing them. In many cases, the design is such that they are difficult to distinguish from ordinary dress shoes. Their reasonable economy and long wearing quality should make them desirable to every employee, in addition to the advantage of being protective.

Safety Hats—Every man working in an area where rocks or tools or other small but heavy objects are apt to fall, should wear a safety helmet. These can be ordered in various sizes and shapes so that the comfort of the worker is assured, as well as his safety.

OFF THE JOB SAFETY

Fundamentally, safety is just a way of life. It is the development of an attitude that permits one to think about the possibilities of accidents and then how to prevent them. It is impossible to believe that a man has the "safe attitude" if he thinks about safety for just a small portion of the day.

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To be "safe," one must think about being alert through all his waking hours, whether he is on the job, driving his car, playing at the beach, working at home, or in any other activity that normal people are apt to be engaged in. Although no worker is the responsibility of the supervisor when he is off the job, it can do no harm—and perhaps a lot of good—if the supervisor will point out to his men the need for their being safe at all times. Such encouragement and emphasis will do much to develop the desirable correct attitude.

This may be done in casual conversations with the men and through the use of posters, publications or any other means.

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