

*Introduction*

This article proposes to discuss the problem of accident prevention. There is no need to convince the reader about the importance of this problem. If one cares to look at the 'accident statistics' published by central and state governments, one can get information about number of accidents, the types of accidents, number of man-days lost, and so on and so forth. Similarly, there is no need to paint a grim picture of the various unpleasant consequences of accidents in order to bring out the importance of the need to prevent accidents. The million-dollar question is 'how to prevent accidents?' Our governments (central and state) and the managements have realised its importance and in their own light of understanding are trying their best to prevent accidents. And yet accidents continue to occur, almost unabatedly. Hence, there is a lingering suspicion that we might be going in the wrong direction. So let us try to re-think about the whole issue and consider the problem of accident-prevention with an open mind.

*Definition of an Accident*

An accident is defined as an unexpected event resulting in damage to machines and/or human beings. Usually an accident would result in loss of production time. Many researchers used to believe that accidents just happen. Implicit in such a belief is the fatalistic outlook viz., however hard one may try, accidents would continue to happen. Another im-

plication of this belief is that accidents cannot be prevented. However, now-a-days it is accepted that 'Accidents do not just happen; they are caused—caused by human beings. This latter outlook is certainly more sensible than the former because it would at least compel the researchers to think about the possibility of preventing some accidents, if not all. But along with this proper outlook on the nature of accidents, many managements have somehow become enamoured of safety campaigns as *the* preventive measure for accidents.

*Safety Campaigns*

Safety campaigns may assume various forms. Managements celebrate safety weeks; they may organise safety slogan contests or safety poster contests. They may display accident-free periods; they may have safety awards. All these devices have one common element—they all serve to arouse safety consciousness amongst the employees. And these managements have made an implicit assumption that employees get involved in accidents because they are not sufficiently convinced about the importance of safety. So they continue to believe that once they are able to convince their employees about the need to work safely, the employees will not resort to unsafe procedures of work and then many accidents can be prevented. This logic is faulty. Many of our employees may be illiterate or semi-literate but they certainly know what is advan-

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tageous to them. When an accident takes place, the employees still continue to be the worst sufferers. Therefore, it may be assumed that no sensible employee wants to get involved in accidents. There is no need for managements to convince him that in his own interest he should work safely. He is already convinced about this and yet accidents do take place creating unpleasant consequences for those employees who get involved in them. The reasons for employees' getting involved in accidents lie elsewhere. And the managements will have to search for these in order to think of preventive measures.

### *Accident Report Forms*

To unearth these reasons the organisations must study the accidents properly and thoroughly. It is here that the main problem begins. Many managements have not even bothered to evolve proper forms to study accidents. The forms that they use to record accidents primarily serve the legal purpose. The Factories Act expects the managements to report all 'reportable' accidents. The government has evolved some format for filing the returns. And many of our organisations continue to use the same forms to record accidents. The Government uses this information to collect and compile accident statistics which are published in their gazettes. Such forms are hopelessly inadequate if we want to study the accidents in order to prevent them.

There are some other organisations which believe that many accidents (especially those which involve serious damage to costly machinery and equipments) are acts of sabotage on the part of the employees. And their purpose in studying accidents is to identify the culprits in order to penalise them. This is another legal

point of view of studying accidents. Such forms in studying accidents are quite inadequate for the 'preventive' study of accidents.

The American Standards Association has evolved an excellent format to record and study accidents from this preventive point of view. These can be very conveniently used by organisations to study accidents. Using a proper form for studying accidents is the first step in studying accidents. The managements should make this purpose clear to the employees. When the employees realise that by studying accidents the management intends to penalise some of them, they would certainly try to conceal the vital information. They may give distorted information which is of not much use to managements for the purpose of preventing accidents. So the managements have to make sincere efforts to communicate this purpose of studying accidents. Only when the employees are convinced about this, they may be willing to give the managements the useful and vital information. This is the first step that managements can take to prevent accidents in their organisations. The study of accidents can be a joint venture of personnel departments and industrial engineers. The former can concentrate on eliciting information from human beings whereas the latter can study involvement of machines and faulty procedures of work.

### *Role of First Line Supervisors*

Another important step in the prevention of accidents is the involvement of first line supervisors in the prevention programmes. The first line supervisors are in direct contact with the operative and can play a vital role in preventing accidents. But in the managements' efforts at har-

anguing the employees in not getting involved in accidents and in organising various safety campaigns they seem to have forgotten the importance of these little men.

The first-line supervisors have ample opportunities to observe the operatives in action. They are knowledgeable as to whether the operatives are following the proper procedures of work or not. They also know whether the operatives are using the safety-equipments or not. They can spot out such operatives. And of course they are in a position to 'correct' the work procedures of these operatives. Thus with the help of the first-line supervisors one can prevent a large number of accidents. In organisations where more accidents are taking place the role played by first-line supervisors can be thoroughly investigated.

#### *Maintenance of Machines*

Another contributor to accidents is lack of proper maintenance of machines and equipments. A periodical inspection of machines and equipments can also be an important preventive measure. The Factories Act has provided for various safety provisions. Factories Inspectors are also expected to check up the machines and equipments. But there are instances where proper inspections are not carried out by these officials. One hears of instances where the 'inspector' visits the organisation but never visits the shop-floor. The managements are partly to be blamed for this. They try to cover up their own shortcomings by persuading the inspector not to visit the shop-floor. But managements on their own initiative can periodically inspect their own machines and equipments. In some organisations one comes across rusty fire extinguishers and empty first aid boxes. In a way these are indicative of wrong at-

titudes of the managements towards safety. And curiously some of these managements would spend huge sums of money on safety campaigns.

There are instances where employees refuse to use safety equipments and managements tacitly ignore these infringements. Here again supervision can go a long way to ensure that employees use the safety equipments. All these little precautions can go a long way in preventing a large number of accidents. Cleanliness on shop-floor is another such neglected area. Especially in organisations manufacturing vegetable oil, soap, etc., this is an important consideration. All these abovementioned responsibilities can be carried out by the first-line supervisors. This is why that first line supervisors must be more involved in the accident prevention programmes.

Training of operatives is another neglected area. Supervisors can indicate to the managements which operatives are using wrong procedures of work. In the initial stages the operatives may be following correct procedures of work but over a period of time they discover some shortcuts. They at times fail to use safe procedures because these appear to them as more time consuming. Slowly but surely these unsafe procedures get set in and then one day an accident may take place. The young operatives are more liable to be involved in such accidents e.g. where the wrong procedures of work adopted by the employee are responsible for the accident. When we are young we are more inclined to believe in our own invincibility. Safety precautions appear to quite a few young operatives as sort of 'old maidish'. They have a peculiar carefree attitude towards the work procedure. And this typical attitude may get them involved in accidents. Again, it is a problem of supervision and training. A supervisor will

spot out these wrong procedures of work and proper training in proper procedures of work can take care of the problem. If necessary the employees may also be penalised for following wrong procedures of work or for failure to use safety equipment. Operatives who persist in wrong procedures of work will have to be re-trained in proper procedures of operating the machines.

All these little hints sound so unglamorous but they play a very important role in prevention of accidents. Unfortunately, managements are so much enamoured of safety campaigns that they have more or less neglected these vital contributors to accidents.

### *Accident Proneness*

Still another glamorous idea that has captured the imagination of managements is that of 'Accident Proneness'. When safety campaigns fail to make any impact on number of accidents, managements seem to choose another scapegoat — the presence of so-called accident-prone employees. They would clamour for the removal of these so-called accident-prone employees so as to reduce the number of accidents. Let us try to see what this term implies. The meaning of the term accident-proneness is — the tendency on the part of the individual to get involved in accidents repeatedly. The underlying assumption is that this individual has some personality characteristics in him which make him liable to get involved in accidents. This description of accident-proneness appears to be deceptively simple. But it raises some interesting queries. Will such a person get involved in any kind of accident anywhere or only in some specific kind of accident in specific situation? The answer to this query can be discovered only

after a thorough research. The author believes that establishing accident-proneness in any individual is extremely difficult, if not impossible. After having eliminated the contribution of the 'failure of the machine', the fatigue effects and the role of unexpected contingencies we will have to establish the presence of accident-prone individuals. In practice, it is almost impossible to establish accident proneness on the part of any individual. So it is better for the managements to concentrate attention on other contributors to accidents and leave alone this elusive concept of accident-proneness. This term has achieved quite a popularity amongst the laymen and when accidents in an organisation occur persistently, 'accident-proneness' becomes the usual scapegoat. A layman is apt to over-look the distinction between the concept used as a descriptive device and the concept used as an explanatory device. And because of this confusion in the minds of the laymen (and some social scientists too) one is likely to be misled by this concept. It is better for all concerned that we forget the concept of accident-proneness as a solution to the problem of accident-prevention.

### *Summary*

To sum up, managements would certainly be able to reduce the number of accidents in any organisation. Managements will have to begin with proper and regular inspection' of the machines. They will have to use their supervisors as persons who can keep the operatives under close observation (esp. those operatives who have started their work recently. The supervisors, if necessary, would instruct the operatives in the proper procedures of work and also penalise the infringements of the rules for operating the machines,

etc. The organisation can consciously strive to maintain congenial working environment (lighting, ventilation, etc.) and take extra precautions in case of workers doing strenuous work and also avoid 'fatigue' in workers. These are the preventive devices to reduce accidents.

The organisation will study the accidents thoroughly with a view to avoid future accidents and not with an aim of penalising the culprit. The organisation can also seek co-operation from the employees and their unions in preventing accidents. This task can be achieved

through various safety programmes. The safety programmes do have a place in the problem of prevention of accidents. But a more important role is played by proper study of accidents, the training of workers, the constant supervision and the maintenance and periodical inspection of the machines. So is the role of congenial working environment and avoidance of fatigue in workers. The latter are certainly more important than the safety programme. Let us, therefore, not make the mistake of putting the cart before the horse.

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