

FILE NAME: National Safety Council (NSC)

DATE: 1957 Oct

DOC#: NSC207

DOCUMENT DESCRIPTION: Transactions of the NSC - General Sessions - 45th
National Safety Congress

157

CURRENT SAFETY TOPICS

Volume 1



GENERAL SESSIONS

Transactions of the
45th National Safety Congress
(October 21-25, 1957, Chicago, Ill.)

NATIONAL SAFETY COUNCIL

425 N. MICHIGAN AVENUE, CHICAGO 11, ILLINOIS

This is sheer gain, but these laws still focus on doing something for the man who has met with an accident, rather than on driving full steam into eliminating causes for accidents. When a ship is sinking, then the whole weight of responsibility rests on manning the life boats and getting the passengers and crew off the vessel. When an auto has gone hurtling off a thruway then the weight of moral responsibility is to rush medical care.

But neither life boats nor ambulances are the full measure of moral responsibility that rests upon us today when ships still sail the high seas and cars ride the highways. Our moral sense has grown up beyond that level of moral satisfaction. In its modern concept moral responsibility stresses preventing the worst from happening on the oceans and

on our roads rather than being content with picking up the pieces after the worst has happened.

Total security is a goal that is beyond our reach, but great progress can be made when men of competence and good will and devotion join together to help each other in every way possible to promote safety measures against accident hazards. The symbol of this step is, I suppose, the National Safety Congress itself. It stands for moral responsibility toward these hazards at its best, for our deepest responsibility toward the victim of accidents is to see to it that all is done to keep him from becoming a victim. And that is a worthy cause for all of us, wherever we are—in labor and in management, in education and in government. ▲

LABOR'S STAKE IN SAFETY

by A. J. HAYES

international president, International Association of Machinists; vice president, AFL-CIO, Washington, D. C.

I don't intend to stay within the limits of this title because I am certain little new information could be said about "Labor's Stake in Safety." It is obvious that no one could have a greater stake in industrial safety than the men and women who are the direct victims of industrial accidents.

To an employer — matters of industrial safety, occupational disease, accident prevention and workmen's compensation—are all tied up with economic considerations. They are important insofar as they affect—and can be made to reduce—insurance costs, training costs, and material costs. But these are all money costs—cash costs—costs that are measured in dollars and cents.

To a worker, on the other hand, an industrial accident is a matter of something that is even more tangible than money. It is a matter of a man's blood, bones and sinew—of tragedy, suffering and sorrow. And sometimes, in fact, more than 50 times a day—on every working day—it is a matter of life itself to someone, somewhere, in this country.

That is why I say that labor's stake in safety is pretty obvious. Therefore I will touch upon aspects of the subject that are not often discussed—aspects that are somewhat controversial. Perhaps they are not discussed because they are controversial.

ETHICS IN SAFETY

Since my views and public statements on the "corruption in unions" issue have been as frank and honest as I can make them, I see no reason to be any less candid in stating my views about matters of industrial safety. I assure you, however, that I am not injecting controversy for its own sake, but because these are matters that concern the men and women who run the daily risk of being injured, diseased or killed on their jobs.

Safety—and accident prevention—have an ethical as well as an economic side. I think none of us—whether we represent labor or management—would disagree with certain basic ethical principles in the field of industrial safety. We would all agree, for ex-

ample, should and the would a moral against infection.

We is not be sacr ethical day to In prac flict w thus m action, politica

As a as the for ex tion h years l and en dustrial industr tector dustrial

Here might ful wo on the ment early one.

I de indicate human factor matter were day. the ga pover their

Th that result ethic It can was the enough vailed

than being content with
after the worst has

goal that is beyond our
progress can be made when
and good will and devo-
help each other in
to promote safety mea-
sures. The symbol
suppose, the National
self. It stands for moral
and these hazards at its
best responsibility toward
elements is to see to it that
up him from becoming a
a worthy cause for all
are—in labor and in
education and in govern-

ETY

ists; vice president,

say that labor's stake in
vious. Therefore I will
of the subject that are
—aspects that are some-
Perhaps they are not
they are controversial

ES IN SAFETY

public statements on
"missions" issue have been
as I can make them,
be any less candid in
about matters of indus-
are you, however, that I
controversy for its own
these are matters that con-
women who run the daily
and, diseased or killed on

ent prevention—have an
an economic side. I think
er we represent labor or
and disagree with certain
ples in the field of indus-
would all agree, for ex-

ample, that the objective of industrial safety
should be the preservation of human life
and the protection of human health. We
would further agree that an employer has
a moral responsibility to protect his workers
against disease, accidents, mental stress and
infections from the conditions of employ-
ment.

We all profess to agree that human life
is not cheap; that man is not something to
be sacrificed to a machine. And yet, these
ethical principles are not always applied in
day to day life nor are they self-enforcing.
In practical application they come into con-
flict with individual economic interests, and
thus must be enforced either through group
action, or by society as a whole through
political action.

As a rule, society does not move as fast
as the need would indicate. We all know,
for example, that the first industrial revolu-
tion had run its course for more than 100
years before society got around to adopting
and enforcing rules and regulations of in-
dustrial safety. For more than 100 years
industrial workers were given no legal pro-
tection against the risks and hazards of in-
dustrial employment.

Here and there, a lone individual employer
might attempt to provide decent and health-
ful working conditions for his workers. But
on the whole, the story of factory employ-
ment in the 19th century—and through the
early 20th century—was a pretty ghastly
one.

I don't need to go into the details that are
indicative of the cold indifference with which
human life was held in American mines and
factories. Suffice to say, it did not seem to
matter how many men, women and children
were killed or crippled in the course of a
day. There were always more waiting at
the gates the next morning—driven by raw
poverty to plead for a chance to jeopardize
their lives and limbs.

SOCIETY BROUGHT CHANGES

The point I am getting at, of course, is
that change—when it came—was not the
result of any regeneration of moral and
ethical conviction on the part of employers.
It came rather because society as a whole
was thoroughly revolted. It came because
the American people were finally shocked
enough to correct a condition that had pre-
vailed—and grown worse—for 100 years.

So we finally got factory laws—and workmen's compensation—and an organized effort to make mines, factories and mills safer places to work. But of all the legislation aimed at this objective, workmen's compensation was the key. For until employers were made directly and financially responsible for the results of workers' accidents, they had no economic reason to prevent accidents. The whole pattern and fabric of our industrial safety program throughout the nation rests entirely on how good and how effective our workmen's compensation and our occupational disease laws are.

ECONOMIC REASONS

Oh, of course, you can point to many other good economic rationalizations for industrial safety. You can say industrial accidents add all kinds of direct and indirect costs to production. You can point to the cost of hiring and training a new employee, of equipment damaged in a work accident, of the time lost by other employees when an accident occurs.

But I will throw them all right back to you and say that these considerations were present long before we had industrial accident programs—and that it wasn't until accident prevention was reinforced with workmen's compensation and occupational disease legislation that employers really became safety conscious.

So it seems that the thing that counts here is how good our workmen's compensation and occupational disease legislation really are.

And that's a good question! I've spent my whole adult life in the labor movement. As a matter of fact, I was projected into it by the very thing we are talking about here today—an industrial accident. I went to work at 17 years of age because my father was totally disabled by a work injury—an injury that eventually killed him.

In the course of many years of studying and dealing with the problems of my union—which are, of course, the problems of the members of my union, I realized that our present system of workmen's compensation and occupational disease legislation is completely and wholly inadequate to meet the needs of our complex industrial society.

I am not alone in that conclusion. There are, in fact, many men in the labor movement today who feel even more strongly

than I do—men who are firmly convinced that workmen's compensation has been a gigantic swindle on the American worker.

This nation has tried to deal with a national problem by having 48 separate, conflicting—and in a sense—competing state statutes. And there is no doubt but that workmen's compensation is one kind of labor legislation that states use to compete with one another to attract industry.

In fact, whenever we go into the state legislatures to get improvement or expansion of existing laws, we invariably meet employer counter-arguments to the effect that any further improvement in coverage or benefit structure will shove industry into the waiting and sympathetic arms of states which are more concerned with payrolls—than with the people on those payrolls.

SAFETY INTEREST LACKING

Certainly the health and safety of the nation's work force should not be a pawn in any state's bid for new industry. But that is just what it is under a system that allows Mississippi or Arkansas or Georgia to compete for industry by offering low workmen's compensation benefits and a minimum of safety regulation at the plant level. Why should an employer pay \$40 a week for a temporary total disability in Illinois—when he can go to Arkansas and pay \$25 a week for the same injury?

The situation in workmen's compensation legislation is so bad, in fact, that the Secretary of Labor, Mr. Mitchell, although speaking for an administration that normally follows a hands-off policy in state legislation, has been constrained to speak out and to plead with the states to bring their laws into line with modern conditions.

But because employers can play off one state against another in this matter, the results have been somewhat negligible. There is no indication that the remedy will ever catch up with the need, until there is broader recognition that industrial accidents are a national problem—one that is truly solvable only on the national level.

The lack of a strong and equitable workmen's compensation system leads to a corresponding lack of interest in enforcement of safety codes and regulations. In many states the Bureau of Factory Inspection—by whatever name it goes under—is little more than a sop to the conscience of the

state legislature. In fact, the inspection service in such states is not only understaffed, but the staff is underpaid, untrained and technically unqualified to do a competent job in a field that needs a high degree of competency.

But as bad as the situation in workmen's compensation and factory inspection may be, the situation in occupational disease coverage verges on the criminal. And this is a matter of more than just poor legislation. It is incredible to think that in the second half of the 20th century 20 states still either have no coverage or limited coverage of occupational disease.

But the greater problem is that there is too little understanding of the nature and complexity of occupational disease. The range and source of occupational disease in modern industry is practically limitless. None of the ways by which man makes a living is completely free of some hazard to physical or mental health. The risk of occupational disease grows greater every day as industrial processes become more and more dependent upon and saturated with toxic dusts, fumes, vapors, gases, acids and alkalis.

Every day thousands of workers are exposed to everything from arsenic to mercury poisoning, from benzene compounds to magnesium poisoning, from sulphuric acid to chromium poisoning. Thousands have no physical or legal protection whatsoever against the chemicals and poisons that are slowly killing them.

UNAWARE OF RISKS

In fact, many are not even aware of the risk. They will find out when it is too late. In many states they will also find out that they have no right to compensation under the occupational disease law. I wonder how you tell a man who has contracted carbon tetrachloride poisoning, for example, that he isn't entitled to benefits under the occupational disease law because the legislature of his state hasn't seen fit to recognize that carbon tetrachloride poisoning is an occupational disease?

I recently read a statement to the effect that "the scope of occupational disease is vast almost beyond calculation" and "it comes, in fact, unpleasantly close to being the major public health problem of our time."

In fact, the inspection service is not only understaffed, underpaid, untrained and unqualified to do a competent job, but needs a high degree of

The situation in workmen's and factory inspection may be an occupational disease cover-up. And this is a more than just poor legislation. To think that in the second century 20 states still either have no or limited coverage of occupational disease.

Another problem is that there is a misunderstanding of the nature and extent of occupational disease. The scope of occupational disease in industry is practically limitless. The ways by which man makes a world free of some hazard to his health. The risk of occupational disease grows greater every day as processes become more and more complex and saturated with chemicals, vapors, gases, acids and

Thousands of workers are exposed to arsenic, mercury, benzene compounds, magnesium, sulphuric acid, and so on. Thousands have no protection whatsoever against chemicals and poisons that are

AWARE OF RISKS

are not even aware of the risks. It is not until it is too late. They will also find out that they are entitled to compensation under the disease law. I wonder how many who have contracted carbon monoxide poisoning, for example, that they benefit under the occupational disease law because the legislature of their state has been fit to recognize that carbon monoxide poisoning is an occupational disease.

A statement to the effect that "occupational disease is a matter of calculation" and "it is unpleasantly close to being a health problem of our

If that is so—and I for one am inclined to believe it—it is tragic commentary on our time—on the ethics of a business community that has done so little about it. It is even more tragic in view of the fact that we are now entering a new phase in our industrial development—a phase of such sweeping change that some commentators have referred to it as a new industrial revolution. Think of that—we are entering a new industrial revolution without ever having fully solved the problems that attended the old one.

I wonder if it will again take us 100 years to make even a decent start on the health and safety problems that will arise out of automation and atomic energy. These problems are not a part of a distant tomorrow but are already a part of the world today. Now more than 1,500 industrial plants are using atomic materials in one form or another—in 1,500 establishments American workers are already exposed to the hazards of atomic radiation.

Can we say the state laws in existence today—indeed can we say that any system of state inspection and compensation—are adequate to care for the workers who will get leukemia or bone cancer because of exposure to atomic radiation?

DON'T KNOW PROTECTIONS

Personally, I feel somewhat discouraged about the prospects. How can the states protect and care for victims of industrial radiation when they haven't yet learned to protect and care for victims of occupational diseases that have been prevalent for generations? We need only look at silicosis and pneumoconiosis to see the failure. And failure to provide adequate treatment and compensation for these dreadful dust diseases is paralleled by the failure of industry to finance programs of research that would lead to their prevention at the source of exposure.

Related to the problems of occupational disease and radiation is another matter that has received almost no attention in industry, or in government. That is the matter of mental disease. We already know enough about automation to know that it will throw workers into a lonely and eerie world inhabited by monster mechanical devices.

We also know that our mental hospitals are already crowded with people who have

broken down under the stress of life in a complicated, impersonal and highly industrialized society. But we don't know how much more stress people can take, or what effect automation will have on a worker's nervous system. At what point does the human mind crack up from sheer loneliness, lack of contact with fellow workers, from uninterrupted repetition and brainwashing boredom?

I am not just tossing questions out at random here. All of the things I am talking about—from workmen's compensation and occupational disease to radiation and mental distress—have a valid relation to industrial health and safety—and are proper subjects of labor interest.

LOOK FOR DANGERS

For safety is a broad term. It is defined as: (1) the state or condition of being safe; (2) freedom from danger or risk; and (3) freedom from injury.

Safety means freedom from any kind of danger, risk or injury. When we apply that definition to industrial conditions we must think in terms of hidden dangers as well. We must change our attitude toward occupational diseases—go out looking for them instead of trying to pretend they don't exist, or implying if they do exist, that they have no relation to industrial causes.

I am not exaggerating when I say that industry has taken a "head-in-the-sand" attitude up to now. It has tried to cover up occupational diseases rather than to isolate, prevent and care for them.

There has been little research—either governmental or private—in the field. The Public Health Service spends less than one cent for each worker each year on the prevention of occupational diseases. The National Institute of Health, which has made hundreds of research grants during the past three or four years, has made less than half a dozen in the field of occupational health. There is an iron curtain of secrecy around this whole subject.

Not only does industry fail to support and subsidize research in occupational diseases, itself, but men who have tried to do independent research find that it is virtually impossible to get facts, information, or co-operation from the people in industry who are in a position to help. Worse still, if a

research project does tend to show a correlation between employment and disease, the authors find it is almost impossible to get their work published or distributed.

The result is a deplorable lack of information about occupational disease. We are years behind other countries in this respect. One expert in this field said that research in pneumoconiosis in this country is 25 years behind that of Great Britain.

SECRETS PREVAIL IN INDUSTRY

Industry actively opposes objective research and free interchange of information on occupational diseases because it is more afraid of the possibility of paying compensation benefits than it is that workers will die from lack of proper information and adequate precaution.

Here are specific examples that will illustrate this point. There is some medical evidence that the chemicals used in the dye industry and in the manufacture of synthetic rubber cause or contribute to cancer of the bladder. In fact, one of these—amine—is so dangerous that it has been outlawed for all industrial uses in Britain since 1951. But efforts to prove, publicize and restrict the dangers of this deadly acid have hit stubborn resistance in this country. The large chemical companies have refused to find out if amine does contribute to cancer of the bladder and have strongly resisted independent research into this problem.

Much the same situation holds true in the asbestos industry. There appears to be decided after-effects on workers who produce asbestos in that there is a marked correlation between asbestos employment and lung cancer. Here again, the industry has been traditionally reluctant to cooperate in a full scale scientific study of this curious correlation. This reluctance to do research in health hazards recurs in industry after industry.

DOCTORS OFTEN BIASED

But even worse when workers do succumb to cancer of the bladder or the lung, or to some other equally horrible diseases, we are treated to the spectacle of company doctors who testify that the disease couldn't possibly have been caused by their employment. Doctors are supposed to be above reproach in our society. But as a labor official I have known of too many cases in which company

doctors have testified against workers as for management in occupational disease cases even though they knew their testimony was biased.

It should not surprise us that doctors can be unobjective in these cases where the testimony is bought and paid for. We have only to look at the wide-spread difference of opinion among doctors as to the effect of cigarette smoking to see that their testimony can sometimes be something less than truthful. Most doctors who are not in the pay of cigarette companies are convinced by all the scientific evidence on record that cigarettes undoubtedly contribute to lung cancer. But the doctors on the payrolls of the tobacco companies either deny that cigarettes contribute to lung cancer, or at best maintain that there is not yet enough proof.

As we contemplate these conflicting views among professional men—and as we thoughtfully study the reluctance of industry to be honest about this matter of occupational disease—we cannot help but wonder whether the lust for profits has made many men forget the real purpose of life. What is the real purpose of life? Is it production and profit—or the well-being of the individual? If there is conflict between the two, do we sacrifice production and profit or the well-being of the individual?

The ethical answer is obvious. But the practical methods of reaching the logical ethical conclusion are more difficult.

FEDERAL ACTS NEEDED

We could make a start by enacting comprehensive federal workmen's compensation and occupational disease legislation to take the place of the chaos that results from having 48 different state systems. But we have no hopes for such a constructive approach in the foreseeable future. I am afraid the insurance lobby, and the employer groups that profit from weak administration are too strong for us at this time. So we'll just have to make that one of our long range objectives.

But there are some things we can do right now. We can try to have program set up in the National Institute of Health and in the Public Health Service which would recognize the importance of occupational disease—and which would put the research effort in this nation on a par with that of other civilized industrial nations.

ified against workers and in occupational disease when they knew their testimony

surprise us that doctors can in these cases where their and paid for. We have the wide-spread difference of doctors as to the effect of to see that their testimony is something less than truth-ers who are not in the paypanies are convinced by all evidence on record that cigar- contribute to lung cancer. on the payrolls of the to- either deny that cigarettes cancer, or at best main- not yet enough proof.

ulate these conflicting views al men—and as we thought- reluctance of industry to be his matter of occupational not help but wonder whether has made many men for- pose of life. What is the life? Is it production and well-being of the individual? between the two, do we on and profit or the well- indulg?

answer is obvious. But the is of reaching the logical are more difficult.

AL ACTS NEEDED

a start by enacting com- workmen's compensation disease legislation to take os that results from state systems. But I or such a constructive ap- reseeable future. I am e lobby, and the employer from weak administration us at this time. So we'll ke that one of our long

some things we can do an try to have programs tional Institute of Health e Health Service which e importance of occupa- which would put the re- is nation on a par with ized industrial nations.

if we cannot get decent factory inspec- from the state government, then we in the labor movement must resort to self-help. Many unions are thinking in terms of col- lective bargaining clauses which would re- quire the employer to adopt the safety standards set by the American Standards Association as the minimum acceptable in the shop.

LABOR FIGHTS FOR SELF

We are also prepared to bargain for more supplemental injury benefits when the com- pensation provided by state laws is not ade- quate to sustain a worker and his family. Although our efforts will directly benefi- only the 17 million organized workers, per- haps they will release new pressures that will eventually result in improved legisla- tion benefiting all workers.

The American labor movement has but ne purpose—one reason for existence in American life—to serve and protect Ameri- can workers. There are times when we

make ourselves pretty unpopular because we keep looking for the things that are wrong with American industry and American society.

I may have offended industry men with this indictment of the ethics and morals of our business community. But I would be derelict in my duty and false to my trust as an elected officer of one of America's greatest unions if I did not say frankly and candidly that we in the labor movement are not satisfied with present legislation relating to industrial health and safety, workmen's compensation and occupational diseases.

In a sense this is a great challenge to the National Safety Council—a challenge that can be met only if all facts are squarely faced. If we in the labor movement could count on your assistance in the fight for better legislation and more research on both the state and federal levels we might, to- gether, make this a far happier, healthier and safer nation in which to live and work.

GOOD COMMUNICATIONS HELP SAFETY

by GEORGE SCRIVEN

public relations director, United Rubber, Cork, Linoleum & Plastic Workers of America, AFL-CIO, Akron, Ohio

Our organization has been safety minded for many years. The record on that score speaks for itself in a loud and clear manner. The results of our efforts, in cooperation with enlightened managements, tell the story of how we have seen the number of acci- dents reduced in the plants in which our members work. I shall not go into specific figures on frequency rates and such.

I don't suppose any of you would dispute the flat statement that good communications help safety. But I'd like to try and give you some of the techniques, the how and the why of that statement.

First, let's do a little word analyzing. I certainly don't want to sound like the pon- tiffical professor lecturing his class on sema- tics. But when we say *good* in our topic, "Good Communications Help Safety," we immediately infer that there is another kind

besides good. And there certainly is. I think there is a lot of bad and fuzzy com- munications going on in all fields.

Within the subject matter at hand, I would say the word *good* means that type which gets some concrete reaction and re- sults. In the United Rubber Workers, we think our communications have been *good* because we have the results to show for it.

MUST HAVE RECEIVER

Now for the word *communications* in the phrase. You can't have communications—the *good* type that is—unless someone is sending the message and someone is re- ceiving it. I was in the Air Force in World War II, and I served as a radio operator in the Pacific aboard a B-29 Superfortress. When I sent a message and no one received it, I didn't have communications. I was

INCENTIVE AWARDS FOR GOOD SAFETY RECORDS IN THE MINING INDUSTRY

by JOHN McKENNA SMITH

safety engineer, Asbestos Corporation Limited, Thetford Mines, Quebec, Canada

This paper deals with the application of safety incentives at Asbestos Corporation Limited in Thetford Mines, Quebec. Awards for safety achievements have been used by this company for the past six years. This period compared to an equivalent period before the award program shows the accident experience has improved appreciably.

To attribute the improved experience solely to safety incentives would be incorrect because supervisory training and revised and improved methods have helped our accident prevention program. Nevertheless, no single feature has been more instrumental in making our workers safety conscious than safety incentives.

Asbestos Corporation Limited is engaged in the mining and milling of asbestos ores in the Thetford Mines—Black Lake district of Quebec. Some 2,000 men are employed, operating three plants with a large expansion program in progress at one of them. Each plant consists of a mine, a mill, maintenance shops and facilities for the storage and shipping of bagged asbestos.

INCENTIVE PLAN

Six years ago the safety department of Asbestos Corporation Limited examined several plans to improve the safety record of the company. If accident prevention could be constantly before the worker, the accident frequency and severity would decrease. This would lower the compensation rate, since this company operates on a merit rating basis within the rate structure set by the Quebec Workmen's Compensation Commission for the Quebec Asbestos Mining Association.

A safety incentive plan was proposed to management based on the following principles:

1. The goals for safety awards should be realistic and possible to attain by any group which would pay particular attention to accident prevention.

2. The employees should know their standing during the time the plan is in operation.
3. The awards or incentives should be distributed to as many employees as possible.
4. One group of employees should not be penalized for the poor performance of another group.
5. Tangible prizes are better than monetary awards.
6. The safety incentive plan must be understood by all employees.

Management accepted a safety incentive plan based on these principles, and it began on November 1st, 1951. It is still in operation.

I will elaborate on each principle and show how these principles were applied by our company. The success of the plan is due to strict adherence to the basic principles.

GOALS EASY TO ATTAIN

Before proposing any safety incentive plan, it is advisable to review the past experience of the company and of other organizations in the same industry. This review or survey will guide in setting objectives for safety awards.

It would indeed be unrealistic to base objectives on a yearly frequency of lost time accidents per million man hours of exposure when your best previous frequency has been 20 and that of the industry 12. In other words examine your records and set your objectives so they may be reached by extra effort in the field of accident prevention. Do not expect miracles and do not set the objectives so high the employees will feel they cannot attain these objectives.

At Asbestos Corporation Limited, our survey of past experience and local conditions indicated that consecutive man-shifts worked without a lost time accident would

FOR GOOD SAFETY IN MINING INDUSTRY

AL SMITH

Thetford Mines, Quebec, Canada

The employees should know their standing during the time the plan is in operation.

The awards or incentives should be distributed to as many employees as possible.

One group of employees should not be penalized for the poor performance of another group.

Tangible prizes are better than monetary awards.

The safety incentive plan must be understood by all employees.

Management accepted a safety incentive based on these principles, and it began November 1st, 1951. It is still in operation.

will elaborate on each principle and how these principles were applied by the company. The success of the plan is a strict adherence to the basic principles.

GOALS EASY TO ATTAIN

When proposing any safety incentive it is advisable to review the past performance of the company and of other organizations in the same industry. This survey will guide in setting objective safety awards.

It would indeed be unrealistic to base objectives on a yearly frequency of five time accidents per million man hours exposure when your best previous frequency has been 20 and that of the industry is 50. In other words examine your records and set your objectives so they may be achieved by extra effort in the field of accident prevention. Do not expect miracles. Do not set the objectives so high the employees will feel they cannot attain these objectives.

Asbestos Corporation Limited, our company, based on past experience and local conditions indicated that consecutive man-shifts without a lost time accident would

be the best basis on which to make awards. This basis had several advantages, among which were:

- Within our reporting or labor accounting set-up, this figure could be easily reported by the timekeeping departments daily.
- If a lost time accident occurs on any day during the month, it is not necessary to wait until a new period before another no-accident record can start.

The objectives were set so that once the first was reached, the group continued to amass consecutive shifts since the last lost time accident. When the second or third objectives are reached, awards of greater value are distributed.

To be more specific, groups or plant divisions are awarded safety incentives after 10,000, 25,000 and 50,000 shifts without a lost time accident. The value of the award at 25,000 shifts is approximately two and one-half times the value at 10,000 although only 15,000 consecutive shifts have been added to the total.

EMPLOYEES KNOW WHERE THEY STAND

The employees should know their relation to the objective when the plan is in operation.

This principle is extremely important in any work where an objective is being attained. Everyone is familiar with the thermometer chart used in charitable campaigns and war bond drives. For the safety incentive plan at Asbestos Corporation Limited, bulletin boards at the plant entrances or in the punch clock rooms, showed the number of consecutive man-shifts worked since the last lost time accident for each group operating as a unit. These boards are kept up-to-date daily by the timekeeping department at the plant.

MANY AWARD WINNERS

The awards or incentives should be distributed to as many employees as possible.

Several plans operate with the supervisory employees rewarded for safety records established by their workers. Other plans allow so many awards per department or per 100 employees. We distribute awards to each employee of the department or plant division eligible under the plan. The cost

and selection of awards will be explained later in this paper.

By every employee receiving an award we are eliminating two employee oppositions to an incentive plan:

- They feel they work to establish the safety record and then the supervisor receives the reward.
- Many feel if their names were placed in a box and one name drawn for a safety award, their name would certainly not be drawn. In other words, they are just not lucky in lotteries.

All production and maintenance employees, the plant supervisory and clerical staff, and watchmen are eligible for safety awards. Head office staff, laboratory employees and a group at our non-operating properties are not included in the plan.

One group of employees should not be penalized for the poor performance of another group.

When setting up a safety incentive plan based on group incentives, have groups or units of employees who do the same work. The groups should not be too large. Too many employees might be penalized for the poor safety performance of a small proportion of the group. Since this is a group effort, it requires good teamwork and it is amazing to see how older employees advise new men on unsafe manner.

The breakdown of each plant for the safety incentive plan followed the main working divisions: i.e., mine, mill, shops or maintenance, and general or yard labor. Each group is a unit which operates independently in the plan. If a lost time accident occurs in the mill, it does not affect the records of other groups.

The groups are not equal in size but by setting the objectives on the basis of consecutive man-shifts worked since the last lost time accident, the exposure to injury is equal for all groups.

The objectives are the same for all groups. There were several objections to this; many employees maintained their work was more hazardous and should therefore receive a handicap. Our experience however, has shown that the equal objectives for all groups were justified. This is a point to study carefully before an incentive plan is put into operation.

It is preferable to distribute useful items as safety awards than to give the equivalent in cash. Many companies distribute individual pins, or departmental trophies. This certainly advertises the accident prevention program but a pocket knife, wallet or some small tool is a constant reminder of accident prevention. The distribution of useful items has been quite popular among our employees.

The safety incentive plan must be understood by all employees. This basic principle applies to any incentive plan initiated and operated by a business organization. When the safety incentive plan began, notices were posted on all company bulletin boards explaining its operation. Meetings with supervisors illustrated in more detail just how the plan would work. When new employees are hired, the plan is explained in the pre-employment interview.

To recapitulate briefly the safety incentive plan of Asbestos Corporation Limited: Each operating plant is subdivided into four sections which operate independently in establishing safety records of consecutive man-shifts worked without a lost time accident. When one of the following objectives is reached, 10,000, 25,000, or 50,000 and so on in 25,000-shift increments, each employee is entitled to a safety award if he has worked at least 75 per cent of the time in that section during the period the record or objective was being established. If a lost time accident occurs in a section, the cumulated man-shifts drop to zero and a fresh start is made.

SELECTING AWARDS FOR SAFETY

The selection of suitable awards is important. When employees are eligible for awards, they are entitled to the choice of one of five or six items.

The system used by Asbestos Corporation Limited entails more work and possibly has some disadvantages but it is more acceptable to our employees. If we decided everyone was to receive a flashlight or a pen knife there would be many complaints about how many our men already had; therefore, it is wise to allow a choice of awards.

The decision of the five or six items is made along the following principle: two personal items, i.e., pocket knife, flashlight, lighter; two items for the home, i.e.,

Pyrex ware, table lighters, mixing bowls; two tools, i.e., hand axe, pliers, tapes.

To illustrate the range of awards distributed over the past five and a half years, the following list for each series of awards has been compiled:

First Award (10,000 shifts)

Mixing bowls, flashlights, table lighters, playing cards, ash trays, pipes, thermos bottles, wescot wrenches, combination squares, hammers, tinners' snips, hand axes, wrench sets, ball point pens and razors.

Second Award (25,000 shifts)

Steak knives, Silux coffee makers, bill-folds, vises, can openers, casting rods, pipe wrenches, pocket watches, a cash allowance on a pair of safety shoes and First Aid kits.

Third Award (50,000 shifts)

This is reached on an average of once a year by one of the sections within the company. The awards consist of: safety footwear, flash camera, carving set, socket wrench set, aluminum chairs and in some cases, combinations of two 25,000 shift awards.

Fourth Award (75,000 shifts)

This mark has been reached once by one section. At the request of the majority of the employees in this section and with the approval of management, instead of increasing the value of the individual awards as we do for the first three objectives, each employee received an award in the 25,000 shift range and a drawing was made for two television sets, installed in the employees' homes complete with outdoor antenna.

Needless to say this created considerable interest in accident prevention throughout the company. The president, the general manager and other top company officials were present for the drawing. The event was covered by the local press and some local correspondents for the Metropolitan dailies. When another group reaches the 75,000 shift mark a drawing for an expensive award will be made only if it is the expressed wish of the majority of employees of the section.

Anyone in accident prevention knows it is difficult to attribute improvement in safety experience to any one item. Asbestos Corporation Limited has been constantly changing and improving working methods, and

table lighters, mixing bowls, hand axe, pliers, tapes.

the range of awards distributed the past five and a half years. A list for each series of awards is as follows:

(10,000 shifts)

bowls, flashlights, table lighters, ash trays, pipes, thermos bottles, wrenches, combination squares, snips, hand axes, wrench pens and razors.

(25,000 shifts)

Silex coffee makers, bill can openers, casting rods, pipe socket watches, a cash allowance for safety shoes and First Aid kits.

(50,000 shifts)

reached on an average of once a year. The awards consist of: safety foot-candle camera, carving set, socket aluminum chairs and in some instances of two 25,000 shift.

(75,000 shifts)

has been reached once by one of the sections within the company. The request of the majority of the management, instead of increasing the individual awards as the first three objectives, each received an award in the 25,000 shift and a drawing was made for the sets, installed in the employees complete with outdoor and

may this created considerable accident prevention throughout

The president, the general manager and other top company officials, for the drawing. The event was covered by the local press and some comments for the Metropolitan. When another group reaches the mark a drawing for an expense will be made only if it is the wish of the majority of employees.

accident prevention knows it attribute improvement in safety to any one item. Asbestos Corporation has been constantly changing working methods, and

has had an active supervisory training program during the past five years. I shall indicate the improvement in the safety experience since the inception of the safety incentive plan and point out some features which might be directly attributable to accident prevention awards.

Table I is a breakdown of our accident experience from 1947 through 1956. This period was chosen because it illustrates a period of five years, 1947 through 1951, prior to the introduction of the safety incentive plan and a five year period, 1952-56, that the plan has been in operation.

Tables II and III are a compilation and average of these two five-year periods.

These records indicate an improvement since the inception of the safety incentive plan. When the compensation cost plus the incentive cost for the 1952-56 period is compared to the compensation cost alone for the 1947-51 period, we find a yearly average saving of over \$30,000, and this in a period when the compensation benefits as well as the wages were increasing.

A downward trend has started in the accident frequency, severity and costs when the incentive plan was introduced. However, it is quite definite that the introduction of safety awards accelerated the improvement in accident prevention.

One prominent feature after the initiation of safety incentives was the sharp reduction in lost time accidents involving one to three days lost time. When the employees realized that this was a "team" or group contest, everyone co-operated in not losing time for minor injuries, a practice prevalent in previous years.

The company encouraged employees to return to work by allowing them to relocate to a less arduous task for a short period of time if the work would have to be done during the course of operations.

The application of safety incentives at Asbestos Corporation Limited in Thetford Mines has achieved the results desired since the plan was formulated and introduced, i.e., an improvement in our safety record and a decrease in compensation costs.

Safety incentives when properly applied will produce the following results:

- The workers will become more safety conscious.
- The compensation costs will decrease.
- Accident frequency and severity will improve.
- Workers will accept the safety program more readily when they will realize that management is willing to compensate them for safety achievements. ▲

TABLE I
ANALYSIS OF ACCIDENT EXPERIENCE, COMPENSATION AND
SAFETY INCENTIVE COSTS, 1947-1956

Year	Lost Time Acc.	No Lost Time Accidents	Days Lost	Hours of Exposure	Frequency	Severity	Compensation Cost	Incentive Cost
1947	232	198	5,824	4,461,293	52.0	1305	\$121,017	
1948	158	266	10,127	4,629,157	34.1	2190	32,616	
1949	162	155	15,231	3,141,106	32.5	4850	60,061	
1950	132	209	15,036	4,482,137	29.5	3350	102,688	
1951	91	216	1,602	4,361,799	20.8	367	22,914	
1952	54	199	8,492	4,143,237	13.1	2055	22,178	\$ 9,355
1953	63	203	7,712	4,062,835	15.5	1965	38,319	6,613
1954	29	232	7,781	4,177,222	6.9	1860	25,886	9,795
1955	52	267	1,542	4,387,010	11.9	353	31,262	7,575
1956	38	252	1,168	4,299,542	8.8	272	29,173	7,394

TABLE II
COMPARISON OF ACCIDENT EXPERIENCE, COMPENSATION AND
SAFETY INCENTIVE COSTS, 1947-1951, 1952-1956

Period	Lost Time Acc.	No Lost Time Accidents	Days Lost	Hours of Exposure	Frequency	Severity	Compensation Cost	Incentive Cost
1947-51	715	1,014	47,820	21,075,472	33.9	2270	\$339,296	
1952-56	236	1,153	26,725	21,069,846	11.2	1268	146,818	\$40,732

TABLE III
COMPARISON OF AVERAGE YEARLY ACCIDENT EXPERIENCE, COMPENSATION
AND SAFETY INCENTIVE COSTS, 1947-1951, 1952-1956

Period	Lost Time Acc.	No Lost Time Accidents	Days Lost	Hours of Exposure	Frequency	Severity	Compensation Cost	Incentive Cost
1947-51	143	209	9,564	4,215,094	33.9	2270	\$ 67,850	
1952-56	47	231	5,345	4,213,969	11.2	1268	29,364	\$ 8,147

OFFICERS OF THE

RAILROAD SECTION

NATIONAL SAFETY COUNCIL 1957-58

Summary report given to the division attendant. Handling in this manner, the items is kept to a minimum and in those requiring further study and in instances require appropriations which approved before corrections can be made.

DIVIDED INTO GROUPS

functioning of the committee is similar. Ordinarily there are 12 members who the rounds and this number is divided into three groups of four members referred to as Groups A, B, and C. Members present themselves at the first meeting. Immediately with the start of this meeting, or the subsequent meetings, Group moves forward to the next location to meet employees and introduce any preliminary feature or arrangement in anticipation of Group B.

Each talk or message is handled by Group. These are the discussion periods. Instances where more time is required than the scheduled 10 minutes, Group C stays on to clear up safety items that become involved during discussion period. The success of the program depends greatly on a functional well-balanced schedule, and the division of the Committee into the three groups has been very effective.

The primary objective of the work of this committee is to encourage employees to participate in the safety program, correct the causes of accidents, and help unsafe practices and conditions reduce the loss of department which becomes involved. In this safety promotional work, the use of equipment and stores operation so involved with the safety of the department that it is felt greater benefit obtained through a committee representative of all operations. Possibly this program would be of value at other railroad divisions.

General Chairman—J. LLOYD, Jersey Central Lines, Jersey City, N. J.

Vice Chairman—L. C. HAHNEY, Elgin, Joliet & Eastern Railway co., Joliet, Ill.

Secretary and News Letter Editor—F. C. LEWIS, The Pullman co., Chicago, Ill.

Associate News Letter Editors:

Southeast—H. C. DAULTON, The Louisville & Nashville Railroad co., Louisville, Ky.

West—P. H. JENNER, The Western Pacific R.R. co., San Francisco, Calif.

Central—J. E. SLAVEN, Chicago, Burlington & Quincy R. R. co., Chicago, Ill.

East—J. L. BABCOCK, Bangor & Aroostook R. R. co., Bangor, Maine

Southwest—G. R. KNIGHT, St. Louis Southwestern Railway Lines, Tyler, Texas

Canada—J. G. BELDHAM, Toronto, Hamilton & Buffalo Ry. co., Hamilton, Ontario

Association Liaison Committee—W. C. LARAWAY (Chairman), The Delaware & Hudson R. R. corp., Albany, N. Y.; A. V. ROHWEDER (Vice Chairman), The Duluth, Missabe & Iron Range Ry. co., Duluth, Minn.; G. W. ELSTE, The Baltimore & Ohio R. R. co., Baltimore, Md.; G. C. STROMSOE, Atlantic Coast R. R. co., Wilmington, N. C.; J. R. THEXTON, The Delaware, Lackawanna & Western Railroad co., Hoboken, N. J.; D. E. MUMFORD, New York Central System, New York, N. Y.

Contest and Statistical Committee—D. P. RUSSELL (Chairman), The Canadian Pacific Ry., Montreal, Quebec; J. P. KOLOC (Vice Chairman), Illinois Central Railroad, Chicago, Ill.; D. W. NAFF, The Norfolk and Western Ry. co., Roanoke, Va.; F. REYNOLDS, Boston & Maine Railroad co., Boston, Mass.; W. C. LARAWAY, The Delaware and Hudson R. R. corp., Albany, N. Y.; J. L. BABCOCK, The Bangor and Aroostook R.R. co., Bangor, Me.; O. W. SMITH, Grand Trunk Western R. R. co., Detroit, Mich.; C. A. BIRGE, Missouri-Kansas-Texas Lines, Dallas, Tex.

Film and Sound Committee—R. S. JAMES (Chairman), Denver & Rio Grande Western R. R. co., Denver, Colo.; E. H. BLEWER (Vice Chairman), New York Central System, New York, N. Y.; H. CONNOR, The Baltimore & Ohio R. R. co., Pittsburgh, Pa.; B. A. GRUBBS, The Norfolk & Western Ry. co., Roanoke, Va.; C. M. SCHAEFER, The Chesapeake and Ohio Ry. co., Richmond, Va.; G. R. KNIGHT, St. Louis Southwestern Ry. Lines, Tyler, Texas; M. A. NUGENT, The Southern Pacific co., San Francisco, Calif.; J. W. THOMPSON, Seaboard Air Line R. R., Norfolk, Va.

Highway Railroad Crossing Committee—R. S. JAMES (Chairman), The Denver & Rio Grande Western R. R. co., Denver, Colo.; G. M. DEMPSEY (Vice Chairman), Chicago, Milwaukee, St. Paul & Pacific R. R. co., Chicago, Ill.; W. H. ROBERTS, The Chicago & Northwestern Ry. co., Chicago, Ill.; G. W. ELSTE, The Baltimore & Ohio R. R. co., Baltimore, Md.; C. M. SCHAEFER, The Chesapeake & Ohio Ry. co., Richmond, Va.; E. W. HOBBS, Missouri Pacific Lines, St. Louis, Mo.; J. P. KOLOC, Illinois Central Railroad, Chicago, Ill.; G. C. STROMSOE, Atlantic Coast Line R. R. co., Wilmington, N. C.

Home and Off-the-job Safety Committee: R. P. HAMILTON (Chairman), St. Louis-San Francisco Ry. co., St. Louis, Mo.; C. M. KIMBALL (Vice Chairman), Southern Ry. Sys., Washington, D. C.; E. L. DUGGAN, Atchison, Topeka and Santa Fe Ry. Sys., Chicago, Ill.; E. H. BLEWER, New York Central System, New York, N. Y.; C. D. BLUE, Chicago & Eastern Illinois R. R. co., Danville, Ill.; H. C. DAULTON, The Louisville & Nashville R. R. co., Louisville, Ky.; JOHN D. WATT, The Monongahela Connecting R. R. co., Pittsburgh, Pa.

Membership Committee—H. E. SHAUGHNESSY (Chairman), Erie R. R. co., Cleveland, Ohio; J. J. SIMONET (Vice Chairman), Soo Line R. R., Minneapolis, Minn.; C. K. HOCH, The Reading co., Reading, Pa.; R. D. BEDGOOD, Chicago Great Western Ry., Kansas City, Mo.; P. H. JENNER, The Western Pacific Railroad co., San Francisco, Calif.; J. J. NEWBAUER, JR., Richmond, Fredericksburg & Potomac R. R., Richmond, Va.; F. A. GIBBS, The Minneapolis & St. Louis R. R. co., Minneapolis, Minn.; W. O. COTTINGHAM, Western Maryland Ry. co., Hagerstown, Md.

Nominations and Elections Committee—J. H. WILLIAMS (Chairman), The Texas & Pacific Ry. co., Dallas, Texas; C. T. DEWITT (Vice Chairman), Northern Pacific Ry. co., St. Paul, Minn.; R. S. JAMES, The Denver & Rio Grande Western R. R. co., Denver, Colo.; R. C. SABENS, The New York Chicago & St. Louis R. R. co., Cleveland, Ohio.

Program Committee—J. P. KOLOC (Chairman), Illinois Central R. R., Chicago, Ill.; G. M. DEMPSEY (Vice Chairman), Chicago, Milwaukee, St. Paul & Pacific R. R. co., Chicago, Ill.; F. L. WINEGAR, Chicago, South Shore & South Bend R. R. co., Michigan City, Ind.; R. C. SABENS, The New York Chicago & St. Louis R. R. co., Cleveland, Ohio; W. F. FRANCIS, Lehigh & New England R. R. co., Bethlehem, Pa.; R. A. NEWTON, Chicago & Western Indiana R. R. Belt Ry. co., Chicago, Ill.; C. K. HOCH, The Reading co., Reading, Pa.; G. R. KNIGHT, St. Louis Southwestern Ry. Lines, Tyler, Tex.; E. J. FLAHERTY, Lehigh Valley R. R., New York, N. Y.; M. E. STERNBURGH, New York City Transit Authority, Brooklyn, N. Y.

Poster Committee—W. G. LANDRAM (Chairman), Wabash R. R. co., St. Louis, Mo.; F. C. LEWIS (Vice Chairman), The Pullman co., Chicago, Ill.; J. R. BANNERMAN, Canadian National Rys., Montreal, Quebec; C. EDWARD THORNEY, Chicago, North Shore & Milwaukee Ry. co., Highwood, Ill.; P. S. MOCK, Long Island R. R. co., N. Y.; G. M. DYER, Kentucky & Indiana Terminal R. R. co., Louisville, Ky.; J. E. SLAVEN, Chicago, Burlington & Quincy R. R. co., Chicago, Ill.; F. L. HILDEBRAND, Duluth, South Shore & Atlantic R. R. co., Marquette, Mich.

Publications and Review Committee—J. T. WILLIAMS (Chairman), The Pennsylvania R. R., Philadelphia, Pa.; J. T. ANDREW (Vice Chairman), Great Northern Ry., St. Paul, Minn.; H. C. DAULTON, The Louisville & Nashville R. R. co., Louisville, Ky.; R. A. NEWTON, Chicago & Western Indiana R. R. Belt Ry. co., Chicago, Ill.; E. D. WALDT, Chicago, Aurora & Elgin Ry. co., Wheaton, Ill.; F. B. LEWIS, Union Pacific R. R., Omaha, Neb.; J. F. TOOHEY, New York, New Haven & Hartford R. R. co., New Haven, Conn.

Trespassing Committee—G. R. HUNTOON (Chairman), Chicago, Rock Island & Pacific Ry. co., Chicago, Ill.; R. P. HAMILTON (Vice Chairman), St. Louis-San Francisco Ry. co., St. Louis, Mo.; J. R. HUTTING, Detroit & Toledo Shore Line R. R., Toledo, Ohio; G. W. OXLEY, Virginian Ry. co., Roanoke, Va.; A. L. LENTZ, Akron, Canton & Youngstown Ry. co., Akron, Ohio; A. W. SHEA, Chicago, Milwaukee, St. Paul and Pacific R. R. co., Chicago, Ill.; R. F. DUVALL, New York, Susquehanna & Western R. R. co., Paterson, N. J.

Staff Representative—L. W. DUTTON, National Safety Council, Chicago, Ill.