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NATIONAL SAFETY CONGRESS



GENERAL SUBJECT AND
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CHICAGO
OCTOBER 6-10, 1941

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October 9, 1941

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Accident Records—Essential to Effective Accident Prevention

By R. L. FORNEY

Director, Industrial Division, National Safety Council, Inc., Chicago

Industrial safety work over a long period has shown that success in accident prevention cannot be attained unless accident records are completely recorded and analyzed and use made of the information.

Accident records and statistics on flight accidents have been collected and analyzed by the Civil Aeronautics Administration. In many of the principles I shall advocate have been applied to flight accident records by the Civil Aeronautics Administration.

A company which has paid little or no attention to safety is likely to answer any inquiry regarding its accident record by the statement—"We don't have any accidents."

Further inquiry usually reveals two reasons for this statement: either there are no accidents made, or there is no understanding that accidents should be counted. This brings me to my first topic—accident definitions and accident rates.

Since the beginning of organized industrial safety, a need has been felt for standardized definitions and rates, so that accurate comparisons could be made of accident experience from one plant to another, and from one period of time to another. All of this discussion has been carried on by practical men, interested in workable procedures; hence, the results they have achieved are not theoretical, but are eminently practical.

The rules finally developed on these matters are now incorporated in the American Standard Method of Compiling Industrial Injury Rates. This method is used not only by members of the National Safety Council, but by community councils, federal and state governments, trade associations, and others in industrial accident reporting.

The definitions are contained in the National Safety Council's Safe Practices Pamphlet No. 21, which may be secured by any

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MONDAY AFTERNOON SESSION

October 6, 1941

Topic:—GENERAL CHAIRMAN V. I. TROTTER, Supervisor of Safety, Plymouth Division, Chrysler Corporation, Detroit.

What Contribution Can the Plant Protection Man Make From the National Defense Aspects?

By E. T. ADAMS

Assistant Plant Protection, Linden Division, General Motors Corp., Linden, N. J.

Two days ago I received a call from an officer in the army. He wanted me to recommend to him all the men I knew about with plant protection qualifications. I attempted to give him the names of several fine appearing men from my files, but as I read their qualifications and other qualities he would stop me and say "Sorry, but that man does not have the qualifications."

I told him what the qualifications were. He replied: "We would like them to have army or navy experience, although that is not essential as having been a member of an organized police force. If possible they should have had plant protection experience in some company which gives a good training and above all they should be fine investigators and be able to write full and comprehensive reports."

Finally I told him that all men such as he described were on steady payrolls at figures with which he could not hope to compete with his offer of \$1320 per year. He did not mention intelligence and loyalty, but those two very essential qualities were implied within the framework of the qualifications of the desired men.

Two weeks Post has an article by Gareth Jones in which he states that new plants in the United States financed by the U. S. Government, the British government and private capital, now built, building or pending,

total 3,429, at a total cost of \$3,930,000,000. Figures have come to mean little, but the fact is that every one of those plants must be protected against all manner of influences and forces that could lessen their productivity. This does not take into consideration any of the thousands of existing plants now being operated for the government or producing other necessities. They also have to be guarded.

A moment's consideration of the foregoing allows the deduction that there is soon to be a greatly increased demand for trained and experienced plant protection men, and a corresponding shortage of them.

It follows that the qualified plant protection men of existing industry can and must make contributions to further national defense activities. Such contributions may take two main forms: one, the training of thousands of new men for the job; and, two, the assistance in the planning of plants to permit the job to be done with fewer men.

An axiom of training plant protection men which has been forcibly impressed on me, is that only a plant protection man can train another one in *all* the many phases of the job. You may get better safety training from good safety engineers; you may get better fire prevention training from good firemen, and employee relations training from personnel men, but only the experienced pro-

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WEDNESDAY AFTERNOON SESSION

October 8, 1941

Presiding—GENERAL CHAIRMAN R. A. DITTMAR, Plant Manager, Universal Atlas Cement Company, Hudson, N. Y.

Cement and Quarry Accident Experience

By IVAN F. LeGORE

Cement and Quarry Section, NSC, October 8, 1941

Last year in this meeting we discussed the place of industrial safety work in the national defense program and the effect the national defense program might have on safety work. We spoke of the magnified problems of labor turnover and shifts of personnel within the plant organization to be expected, and of the much greater attention that would have to be given to the placement, training and education of new workers, transferred workers, and old-timers.

As anticipated, the period has been one of tremendous readjustment. Well under way is migration of labor to defense centers. It is said not to be as broad as World War migration, and is not yet drawing heavily from farm areas and non-defense centers. But the movement is growing and it is estimated that industry must recruit 500,000 workers in the next 12 months from outside local areas to forestall shortages.

Added to our problem is the problem of priorities which confronts maintenance and repair groups with the necessity of utilizing substitute materials in place of those with which they have been familiar for years. Careful thought and planning will be needed in instructing workmen in the use of substitutes, including the use of lumber in some cases for lack of steel and iron.

Organizations that heeded the signals lost no time in reviewing their programs and in perfecting their methods of selecting, placing and training employees for safe job performance.

These plants got ready for the period also by putting more individual work on the numerous details of the program, and they tightened up the inspections of physical properties. The environment cause almost as many accidents as personnel faults, and this factor gains importance when operations are expanded. Old equipment and old sources of materials returned to service after previous disuse require especially careful attention, and, where necessary, these were brought up to safety standards.

Plants that moved tardily to meet the situation suffered adverse safety records for the most part. While accepting accident prevention work as "a good thing", they were slow to take steps to detect and promptly correct environmental and personnel faults. Accidents could occur. While giving the safety program lip service, these plants failed to make use of accident prevention tools which are available.

It is hard to believe that after almost

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MONDAY AFTERNOON SESSION

October 6, 1941

Presiding—JOHN S. SHAW, Director of Safety, Hercules Powder Company, Wilmington, Del.

How Research Can Assist in Accident Prevention

By R. W. CAIRNS

Director, Hercules Experiment Station, Hercules Powder Company, Wilmington, Del.

There are a number of institutions established for the express purpose of conducting research on causes and conditions leading to accidents in various hazardous occupations or industries. These are well exemplified by the

Bureau of Mines of the Department of Commerce. In many instances, where hazards are particularly troublesome, cooperative efforts have been made involving a number of individuals or groups. Cooperative efforts of the

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TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding—GENERAL CHAIRMAN R. J. REIGELUTH, Vice-President, C. W. Blakeslee Inc., New Haven, Conn.

The Safety Engineer's Problems in Construction

By J. E. JACKMAN

Safety Director, McCrady-Rodgers Company, Pittsburgh, Pa.

We come here annually, not merely to be told that accident prevention work is important, but to find, if possible, some answer to our problems. It is my opinion that the most important problem is HOW TO GET COMPLETE COOPERATION IN THE ACCIDENT PREVENTION PROGRAM from the top to the bottom of the organization.

Another problem is HOW TO ENCOURAGE AND ASSIST IN KEEPING THIS COOPERATION ACTIVE.

If we safety engineers GET and KEEP this cooperation it seems to me that we will have solved most of our accident prevention problems.

We, of course, must assume that some interest in our accident prevention work has been shown by the management. Just how much is shown will depend to a great extent upon the ability of the safety engineer to SELL the idea.

To properly consider the problem of GETTING cooperation, we must first consider what the general attitudes of the average organization are.

First, we ask the laborer. His answer will probably be, "No one wants to get hurt

and I do all I can to keep from getting hurt."

Then we will talk to the foreman. He will probably answer, "I do all that I can to keep the men from getting hurt, but generally I don't get very far because they are just careless. They don't do what I tell them."

Now, we will ask the superintendent. He thinks about accident prevention, accidents, etc., and probably he will answer, "As long as our insurance rate doesn't get too high, I don't think we have anything to worry about." He will probably add that he is very busy and that his foremen are responsible for the safety of their men.

Then, we will ask the president. He will probably answer that he doesn't know anything about the costs of accidents and that the secretary or treasurer takes care of the insurance—"GO ASK HIM ABOUT IT." He may add that he has hired a safety engineer and that this whole problem is his.

There is something radically wrong with all this reasoning, and it's all because of a misunderstanding of the problem and a lack of need for complete cooperation from the laborer to the president.

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MONDAY AFTERNOON SESSION

October 6, 1941

ding—GENERAL CHAIRMAN D. M. CLARK, Secretary-Treasurer, Society of Grain
 Elevator Superintendents of North America, Chicago.

Applying Psychology to Accident Prevention

By R. C. HAVEN

Safety Engineer, Continental Baking Company, New York, N. Y.

carrying on the activities of our indus-
 it seems to me that our problem is not
 mechanical one but one of dealing with
 man beings. It is true that a wrapper,
 er, moulder, or other piece of machinery
 go wrong occasionally, but the job of

repairs and getting the machine to run as we
 want it to is only a matter of time and ma-
 terials. When we step from the problem of
 machinery to that of the human being, it is
 an entirely different matter; for when the
 human machine breaks down we can never

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MONDAY AFTERNOON SESSION

October 6, 1941

Presiding—GENERAL CHAIRMAN FRANK E. AMES, Manager, Safety Department, Bros. Steamship Company, Inc., New Orleans.

The Why of Safety

By LT. COL. ELLIOTT VANDEVANTER

Executive Assistant, Upper Mississippi Valley Division, Corps of Engineers,
U. S. Army, St. Louis

Safety work was started about 1910, possibly somewhat earlier. We have been steadily working and earnestly trying to prevent accidents for 31 years. We have made progress, yes, but are any of us satisfied with our results? Why, I ask you, must we fight continually to protect our workers? Why must we coddle them, display posters, have frequent safety meetings on their employers' time, and pay them for lost time injuries, many of which have been caused by their own carelessness, lack of obedience and of interest? Why shouldn't our personnel have enough interest in their own welfare and in their family's welfare to learn all they can about how to protect themselves?

It seems to me that were I in their boots I would first of all learn how to take care of myself. And certainly our supervisors, who have been with us for many years, should accept their responsibility and *really make an effort* to protect the men under them.

As an example, a number of electric cranes are operated on many of our dams. For several years no injury occurred. Then one man grew careless. He was thoroughly accus-

tomed to oiling this unguarded gear. He should have realized his danger. He slipped and it was badly mashed by a pin in the gear wheel. Not one of the supervisory force had reported this hazard to the injured man. It could not be from the superstructure and the inference is that not even the foreman had ever been up on top of the crane. After the accident occurred, of course guards were installed.

But why! Oh why! must we wait until the accident to lead us to the danger? Why should we not have frequent thorough inspections of all installations, made by responsible men who are well acquainted with the situation, and have the ability to spot a hazard and to make the necessary changes? subject, of course, to the approval of the local supervisor? In case funds are required, request should be made to the District.

I feel that every "Brass Hat" at District headquarters, when making a trip in the field, should look into the safety situation in addition to attending to the particular problem which is the cause of his visit.

There is nothing new in the organization

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MONDAY AFTERNOON SESSION

October 6, 1941

Presiding—VICE-CHAIRMAN C. M. MENSE, Lehigh Valley Shoe Company, Allentown

Federal Meat Inspection and Safety

By W. G. REED

Meat Inspection Division, Bureau of Animal Industry, Chicago

Modern industry has created problems in safety of such a nature that it is the responsibility of every organization to acquaint its employees with the modern-day hazards and at the same time to develop within each individual an attitude of safety as an integrated part of his personality.

Inspectors working for the Bureau of Animal Industry of the Department of Agriculture in the packing industry encounter their greatest accident hazards on the killing floors of these plants. In January 1941 this class of personnel reported eleven disabling injuries for a frequency of 22.30, and severity of 0.22 for that month. The victims of these injuries were lay inspectors, junior veterinarians, and assistant veterinarians, most of them skilled workers doing a wide variety of work, most of it under conditions which may be considered hazardous in nature.

It is interesting to note that all of these injuries were reported from offices which report only 26.6 per cent of the total man-hours for that class of employees. If only the offices which reported injuries were considered and the frequency calculated for them only, the frequency would be 83.06 per million man-hours, but as 73.4 per cent of the man-hours reported for the same class of employment by all offices carried no injuries, the frequency, as previously stated, was 22.30 and the severity 0.22.

Reports for April of this year show a slight decrease in man-hours and a slight increase in both frequency and severity, the frequency being 12.41 and severity 0.12. The number of injuries was reduced from eleven in January to four in April. Three of the offices reported four of the disabling injuries in April.

Only one was caused by slipping on the killing floor against the four reported in January. The same number of knife injuries was reported as in January, four. The fact that these were reported from widely separated offices indicates that this hazard is common to most operations of the same kind and is not the result of a few stations with fewer trained men or that the employees at a few stations are more careless than others. Hazards on the killing floor are difficult to control, but we have no "repeaters" of the same men experiencing more than one injury of the same kind reported from that office of employment during the months of January, April and June. We believe that this indicates that reasonable safety precautions are being taken.

In June of this year the man-hours reported dropped to 473,214, but the number of injuries had increased to nine for a frequency of 19.13 and severity of 0.19. Two offices reported injuries in all three months. Two

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MONDAY AFTERNOON SESSION

October 6, 1941

—GENERAL CHAIRMAN IRVIN A. BRINKMAN, Personnel Director, Mackintosh-Hemphill Company, Pittsburgh, Pa.

Good Housekeeping Program and How to Keep It Effective

By M. W. DUNDORE

Production Manager, Beloit Iron Works, Beloit, Wis.

Housekeeping in the plant, as in the home, has often been summarized by the phrase, "A place for everything and everything in its place." If management fails to carry out the "place," the employee finds adherence to this principle impossible. Proper housekeeping should be carried out in the simplest sense. The start of a good housekeeping program is an analysis of physical plant facilities to determine the adequacy of existing equipment, such as shelves, bins, storage

rooms, working places, and the like. Technically, therefore, management has the first responsibility in the good housekeeping program, the employee plays a continuously important role.

The purpose of an industrial good housekeeping program is to promote order and cleanliness throughout the organization. Such a program should accomplish three objectives; first—the elimination of accident and fire hazards; second—the conservation of

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J. BARRETT, Oliver Iron Mining Co., Duluth, Minn.

E. BEDALE, Consolidation Coal Co., Inc., Fairmont, W. Va.

W. L. BOARDMAN, Anaconda Copper Mining Co., Butte, Mont.

GUS D. CAMPBELL, McIntyre Porcupine Mines Ltd., Schumacher, Ont., Canada.

H. COMINS, Baroid Sales Div., National Lead Co., Texarkana, Texas.

L. COULTER, Clearfield Bituminous Coal Corp., Indiana, Pa.

M. FELLMAN, The Montreal Mining Co., Montreal, Wis.

W. GIBBS, Duquesne Light Co., Pittsburgh, Pa.

DAWSON HALL, "Coal Age," McGraw-Hill Publishing Co., Inc., New York, N. Y.

T. HARPER, Tennessee Copper Co., Copperhill, Tenn.

C. HENRIE, Phelps Dodge Corp., Bisbee, Ariz.

THOMAS E. LIGHTFOOT, The Koppers Coal Co., Pittsburgh, Pa.

GEORGE MARTINSON, Pickands Mather & Co., Cleveland, Ohio.

E. MCKNIGHT, Lake Shore Gold Miners, Ltd., Kirkland Lake, Ont., Canada.

WILLIAM G. METZGER, The Hudson Coal Co., Scranton, Pa.

D. MOFFAT, Utah Copper Co., Salt Lake City, Utah.

O. MURRAY, The Union Pacific Coal Co., Rock Springs, Wyoming.

H. SEIP, The New Jersey Zinc Co., Franklin, N. J.

T. SICKA, St. Joseph Lead Co., Bonne Terre, Mo.

HOWARD I. YOUNG, American Zinc Lead & Smelting So., St. Louis, Mo.

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Program Committee Chairman—J. J. FORBES, U. S. Bureau of Mines, Pittsburgh, Pa.

Members at Large—

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*P. M. ARTHUR, American Zinc Company of Tennessee, Mascot, Tenn.

§G. J. BARRETT, Oliver Iron Mining Co., Duluth, Minn.

FRED E. BEDALE, Consolidation Coal Co., Inc., Fairmont, W. Va.

JOHN L. BOARDMAN, Anaconda Copper Mining Co., Butte, Mont.

*ANGUS D. CAMPBELL, McIntyre Porcupine Mines, Ltd., Schumacher, Ont., Canada

*L. C. CAMPBELL, The Koppers Coal Co., Pittsburgh, Pa.

*W. H. COMINS, Baroid Sales Div., National Lead Co., Texarkana, Texas

C. M. FELLMAN, The Montreal Mining Co., Montreal, Wis.

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*R. DAWSON HALL, "COAL AGE" McGraw-Hill Publishing Co., Inc., New York, N. Y.

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*THOMAS E. LIGHTFOOT, The Koppers Coal Co., Pittsburgh, Pa.

*GEORGE MARTINSON, Pickands Mather & Co., Cleveland, Ohio

C. E. McKNIGHT, Lake Shore Gold Mines, Ltd., Kirkland Lake, Ont., Canada

*WILLIAM G. METZGER, The Hudson Coal Co., Scranton, Pa.

D. D. MOFFAT, Utah Copper Co., Salt Lake City, Utah

V. O. MURRAY, The Union Pacific Coal Co., Rock Springs, Wyoming

R. H. SEIP, The New Jersey Zinc Co., Franklin, N. J.

L. T. SICKA, St. Joseph Lead Co., Bonne Terre, Mo.

HOWARD I. YOUNG, American Zinc Lead & Smelting Co., St. Louis, Mo.

*Past General Chairman

§Deceased

†As elected by delegates in Congress Session.

MONDAY AFTERNOON SESSION

October 6, 1941

Presiding—GENERAL CHAIRMAN CADWALLADER EVANS, JR., Vice-President & General Manager, The Hudson Coal Company, Scranton, Pa.

Paper and Pulp Section

Officers 1940-1941

General Chairman—D. B. CHANT, Ontario Pulp & Paper Makers' Safety Assn., Toronto, Canada.

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J. HASTINGS, Port Huron Sulphite & Paper Co., Port Huron, Mich.

D. T. MEANY, New Brunswick International Paper Co., Dalhousie, N. B., Canada.

B. J. MCCLOSKEY, Hoberg Paper Mills, Green Bay, Wis.

W. B. PLACE, Kieckhefer Container Co., Delair, N. J.

JAMES W. TOWSEN, West Virginia Pulp & Paper Co., New York, N. Y.

Engineering-Safe Practices Committee—JULIUS A. DRAPER (*Chairman*), Consolidated Paper Corp., Ltd., Grand'Mere, P. Q., Canada.

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JAMES J. HANKS, American Paper & Pulp Assn., New York, N. Y.

C. O. HOLMER, Minnesota & Ontario Paper Co., Minneapolis, Minn.

D. A. MCALARY, Fraser Companies, Ltd., Edmundston, N. B., Canada.

E. A. PAGE, Kimberly-Clark Corp., Neenah, Wis.

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Statistics Committee Chairman—FRED W. BRAUN, Employers Mutuals, Wausau, Wis.

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C. C. FITZGERALD, Bowater's Newfoundland Pulp & Paper, Ltd., Corner Brook, Newfoundland.

O. R. HARTWIG, Crown Zellerbach Corp., Portland, Ore.

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A. S. COOK, Quebec Pulp & Paper Safety Assn., Quebec, Canada.

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 ROBERT M. ALTMAN, Marathon Paper Mills Co., Rothschild, Wis.
 KENNETH L. FAIST, The Champion Paper & Fibre Co., Hamilton, Ohio.
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 J. J. PLZAK, Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.
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O. R. HARTWIG, Crown Zellerbach Corp., Portland, Oregon.

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L. C. SMITH, Thilmany Pulp & Paper Co., Kaukauna, Wis.

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C. O. HOLMER, Minnesota & Ontario Paper Co., Minneapolis, Minn.

JAMES W. TOWSEN, West Virginia Pulp & Paper Corp., New York City, N. Y.

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Statistics Committee Chairman—FRED W. BRAUN, Employers Mutual, Wausau, Wis.

Safety Instruction Card Committee—R. W. CROUCHER (*Chairman*), Minnesota & Ontario Paper Co., International Falls, Minn.

†As elected by delegates in Congress Session.

- J. BIENVENU, Gaylord Container Corp., Bogalusa, La.
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 JOHN M. LAVIN, St. Croix Paper Co., Woodland, Maine.
 J. MUNK, Racquette River Paper Co., Potsdam, N. Y.
 ARTHUR E. WINSLOW, Hollingsworth & Whitney Co., Waterville, Maine.
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 S. GARBER, Hummel & Downing Co., Milwaukee, Wis.
 R. LATTER, Anglo-Canadian Pulp & Paper Mills, Ltd., Quebec, Canada.
 T. MEANY, New Brunswick International Paper Co., Dalhousie, N. B., Canada.
 A. McALARY, Fraser Companies, Ltd., Edmundston, N. B., Canada.
 DON E. McDOWELL, Kalamazoo Vegetable Parchment Co., Parchment, Kalamazoo Co., Mich.
 L. WOOD, American Coating Mills, Inc., Elkhart, Ind.
 General Chairmen—
 GEORGE J. ADAMS, International Paper Co., Glens Falls, N. Y.
 ROBERT M. ALTMAN, Marathon Paper Mills Co., Rothschild, Wis.
 B. CHANT, Ontario Pulp & Paper Makers' Safety Assn., Toronto, Ont., Canada.
 KENNETH L. FAIST, The Champion Paper & Fibre Co., Hamilton, Ohio.
 ALTER A. GLEASON, Hammermill Paper Co., Erie, Pa.
 E. GRANT, The Crystal Tissue Co., Middletown, Ohio.
 G. HOYMAN, Kimberly-Clark Corp., Neenah, Wis.
 W. PHILLIPS, The Champion Paper & Fibre Co., Canton, N. C.
 J. PLZAK, Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis.
 SAMUEL PRUYN, Pruyne & Co., Inc., Glens Falls, N. Y.
 F. SHATTUCK, Kimberly-Clark Corp., Neenah, Wis.
 GEORGE E. WILLIAMSON, Strathmore Paper Co., West Springfield, Mass.

MONDAY MORNING SESSION

October 6, 1941

ing: D. B. CHANT, Secretary-Engineer, Ontario Pulp and Paper Makers' Safety Association, Toronto, Ontario, Canada, and General Chairman, Paper and Pulp Section, NSC.

CHAIRMAN CHANT: I am happy to have many of you present at this Thirtieth Annual Safety Congress.

The program this year is somewhat less complete than in previous years. We felt that we have at previous Congresses tried to accomplish too much as a whole and that because of the number of members and the number of papers, many of our Section members were prevented from attending proceedings of other Sections or of the Council as a whole which they would have liked to attend and from which they have obtained great benefit. So this year our program is shorter. Tomorrow afternoon we have two separate group meet-

ings. One of those is especially set up for members who are interested in paper products and paper specialties manufacturing; the other is for those interested in pulpwood logging operations. Wednesday is a completely open day. On Thursday we have our annual Section Luncheon, followed by the final session. The presentation of the trophies for the Section's safety contest will, as usual, be made on Thursday afternoon following the luncheon.

(The General Chairman then presented his "Progress Report of Section Activities," briefly reviewing the year, and mentioning the good work of the many Sectional Committees.)

Petroleum Section

Officers 1940-1941

- General Chairman*—CHAS. A. MILLER, The Texas Co., Houston, Texas.
- Chairman for Production*—H. T. MARKEE, Phillips Petroleum Co., Bartlesville, Okla.
- Chairman for Pipe Lines*—J. L. MANES, Sun Oil Co., Dallas, Texas.
- Chairman for Manufacturing*—J. HOWARD MYERS, The Atlantic Refining Co., Philadelphia, Pa.
- Chairman for Marketing*—F. R. McLEAN, White Star-Ohio Div., Socony-Vacuum Oil Co., Inc., Detroit, Mich.
- Letter Editor*—GEORGE A. LEXANDER, Socony-Vacuum Oil Co., Inc., Boston, Mass.
- Engineering Committee Chairman*—J. W. WELCH, Cities Service Oil Co., East Braintree, Mass.
- Public Relations Committee Chairman*—DR. J. W. LONG, Gulf Oil Corp., Port Arthur, Texas.
- Public Relations Data Sheet Committee Chairman*—J. L. RISINGER, Socony-Vacuum Oil Co., Inc., New York, N. Y.
- Public Relations Committee*—J. L. MANES, Sun Oil Co., Dallas, Texas.
- Production Committee*—H. T. MARKEE, Phillips Petroleum Co., Bartlesville, Okla.
- Manufacturing Committee*—F. R. McLEAN, White Star-Ohio Div., Socony-Vacuum Oil Co., Inc., Detroit, Mich.
- Marketing Committee*—J. HOWARD MYERS, The Atlantic Refining Co., Philadelphia, Pa.
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- Public Education Committee Chairman*—T. S. MAFFITT, JR., Houston Oil Co. of Texas, Houston, Texas.
- Atlantic Division Chairman*—A. H. VINEYARD, Shell Oil Co., Inc., New York, N. Y.
- Lakes Division Chairman*—J. W. ATKINS, The Texas Co., Lockport, Ill.
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- Continent Division Chairman*—HADLEY H. MYERS, Sinclair Prairie Oil Co., Tulsa, Okla.
- England Division Chairman*—J. J. REILLY, Tide Water Associated Oil Co., Boston, Mass.
- Pacific Coast Division Chairman*—BARTON CATER, Standard Oil Co. of Calif., Los Angeles, Calif.
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- R. S. BONSB, Standard Oil Co. of N. J., New York, N. Y.
- A. W. BREELAND, Lone Star Gas Co., Dallas, Texas.
- J. H. BROWN, Tide Water Associated Oil Co., New York, N. Y.
- R. E. DONOVAN, Standard Oil Co. of Calif., San Francisco, Calif.
- C. L. HIGHTOWER, United Gas Pipe Line Co., Shreveport, La.
- G. O. LOCKWOOD, Continental Casualty Co., Tulsa, Okla.
- C. J. NOBMAN, Shell Oil Co., Inc., Sacramento, Calif.
- GEORGE F. PRUSSING, La Crescenta, Calif.
- R. B. ROAPER, Humble Oil & Refining Co., Houston, Texas.
- E. J. SENNE, Baldwin, N. Y.
- C. W. SMITH, Standard Oil Co. (Ind.), Chicago, Ill.
- D. J. WALLACE, Sinclair Prairie Oil Co., Tulsa, Okla.
- Secretary*—H. N. BLAKESLEE, American Petroleum Institute, New York, N. Y.

Officers 1941-1942

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Vice-Chairman for Pipe Lines—J. L. MANES, Sun Oil Co., Dallas, Texas.

Vice-Chairman for Manufacturing—J. HOWARD MYERS, The Atlantic Refining Co., Philadelphia, Pa.

Vice-Chairman for Marketing—J. J. REILLY, Tide Water Associated Oil Co., Boston, Mass.

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Health Committee Chairman—DR. V. M. BRIAN, The Texas Co., Lawrenceville, Ill.

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J. L. MANES, Sun Oil Co., Dallas, Texas.

J. HOWARD MYERS, The Atlantic Refining Co., Philadelphia, Pa.

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Great Lakes Division Chairman—ALEXIS DE TARNOWSKY, The Pure Oil Co., Chicago, Ill.

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Mid-Continent Division Chairman—C. L. BARRETT, Gulf Oil Corp., Tulsa, Okla.

New England Division Chairman—EUGENE SWANSON, Colonial Beacon Oil Co., Boston, Mass.

Pacific Coast Division Chairman—W. E. LOVEJOY, Standard Oil Co. of California, Taft, Calif.

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H. W. BOGESS, Sinclair Prairie Oil Co., Tulsa, Okla.

R. S. BONSB, Standard Oil Co. (N. J.), New York, N. Y.

A. W. BREELAND, Lone Star Gas Co., Dallas, Texas.

J. H. BROWN, Tide Water Associated Oil Co., New York, N. Y.

R. E. DONOVAN, Standard Oil Co. of Calif., San Francisco, Calif.

C. L. HIGHTOWER, United Gas Pipe Line Co., Shreveport, La.

G. O. LOCKWOOD, Continental Casualty Co., Tulsa, Okla.

CHAS. A. MILLER, The Texas Co., Houston, Texas.

C. J. NOBMANN, Shell Oil Co., Inc., Sacramento, Calif.

GEORGE F. PRUSSING, La Crescenta, Calif.

R. B. ROAFER, Humble Oil & Refining Co., Houston, Texas.

E. J. SENNE, Baldwin, N. Y.

C. W. SMITH, Standard Oil Co. (Ind.), Chicago, Ill.

D. J. WALLACE, Sinclair Prairie Oil Co., Tulsa, Okla.

Secretary—H. N. BLAKESLEE, American Petroleum Institute, New York, N. Y.

TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding:—GENERAL CHAIRMAN C. A. MILLER, Assistant to Manager, Personnel Department, The Texas Company, Houston, Texas.

Power Press Section

Officers 1940-1941

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Secretary—G. H. BERRY, Western Electric Co., Hawthorne Works, Chicago, Ill.

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Committee—DR. R. J. DEMOTTE (*Chairman*), Pullman-Standard Car Manufacturing Co., Pullman, Chicago, Ill.

Committee—DR. R. L. NICHOLS, American Can Co., Chicago, Ill.

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Committee—C. H. KRANTZ, Reeves Steel & Manufacturing Co., Dover, Ohio.

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Committee—J. G. FREDERICKSON, The Chicago Hardware Foundry Co., North Chicago, Ill.

Committee—J. B. KAPP (*Chairman*), Fisher Body Cleveland Div., General Motors Corp., Cleveland, Ohio.

Committee—R. H. FERGUSON, Republic Steel Corp., Cleveland, Ohio.

Committee—H. A. ZACHARI, Henry Vogt Machine Co., Louisville, Ky.

Program Committee—W. C. BAKER (*Chairman*), Whiting Corp., Harvey, Ill.

Committee—M. J. FELDMAN, General American Transportation Corp., Chicago, Ill.

Committee—G. B. TYBRING, International Business Machine Corp., Endicott, N. Y.

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Committee—H. A. McDONALD, Erie Forge Co., Erie, Pa.

Committee—C. S. PHILLIPS, Revere Copper & Brass, Inc., Rome, N. Y.

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Committee—C. F. HERBERT, Bituminous Casualty Corp., Rock Island, Ill.

Committee—A. H. PFEIFFER, Harnischfeger Corp., Milwaukee, Wis.

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*P. G. HUNTER, Motor Wheel Corp., Lansing, Mich.

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*T. O. MEISNER, American Can Co., Chicago, Ill.

*B. E. ROCKHOFF, Detroit Steel Products Co., Detroit, Mich.

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DR. R. L. NICHOLS, American Can Co., Chicago, Ill.

Industrial Data Sheet Committee—R. W. HOBSON (*Chairman*), Gorham Manufacturing Co., Elmwood, Providence, R. I.

C. H. KRANTZ, Reeves Steel & Manufacturing Co., Dover, Ohio.

CARL STATZ, Sunbeam Electric Manufacturing Co., Evansville, Ind.

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R. E. FREDERICK, International Business Machines Corp., Endicott, N. Y.

N. S. MILLER, Stewart-Warner Corp., Chicago, Ill.

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E. E. GREENE, Timken Roller Bearing Co., Canton, Ohio.

A. H. PFEIFFER, Harnischfeger Corp., Milwaukee, Wis.

*Past General Chairman

†As elected by delegates in Congress Session.

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 J. HINE, Scovill Manufacturing Co., Waterbury, Conn.
 A. JUDD, Lyon Metal Products, Inc., Aurora, Ill.
at Large—
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TUESDAY AFTERNOON SESSION

October 7, 1941

ing—GENERAL CHAIRMAN V. G. PENDLETON, Safety Engineer, West Lynn Plant,
 General Electric Company, West Lynn, Mass.

Protecting the New Operator in the Power Press Industry— Effective Training Methods

By R. J. GREENLY

Chief, Training Division, Carnegie-Illinois Steel Corporation, Pittsburgh, Pa.

accidents really a serious problem in power press industry? You know the answer to that question or you would not be asking it today. Last year industrial accidents cost six hundred and fifty million dollars in cash outlay. The additional cost due to lost time and to the removal from production of skilled workers would add greatly to this figure. It is undeniable that a large part of this unnecessary loss is due to accidents involving new employees. The figures show that during the last year, accidental deaths in industry have been increasing at a rate twice as fast as should be expected from the increasing number of employees. During the last year, deaths were up 10 per cent over 1939, while employment in manufacturing industry increased only 6 per cent. Lost-time accidents have followed the same pattern as deaths. The inexperienced employees clearly have been a major source of accidental cost and delay.

This is not surprising in view of the many studies which usually show that accident rates during first year of employment are at least twice the rates for subsequent years. We must conclude, therefore, that our new, inexperienced men are largely responsible for the recent disproportionate rise in industrial accidents. This conclusion suggests that substantial results can be obtained from concentrated safety promotion among this high-accident group of workers.

A clue to the answer to this problem lies in a recent study by the National Safety Council. In one industry—the only one for which figures are available—the principal cause of accidents among experienced men was found to be the disregard of instructions. Among new employees, however, the principal causes were (1) deficient knowledge of safe practices and (2) lack of skill. This suggests that the *new men were not prepared to be safe workers.*

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TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding:—GENERAL CHAIRMAN CHARLES S. BOWDEN, General Safety Chairman, Public Service Company, Alliance, O.

The Use, Cost and Preparation of Film Slides for Safety Work

By J. L. McNEALY

Purchasing Department, Columbus & Southern Ohio Electric Co., Columbus, Ohio

I am going to discuss film slides, not glass slides. I intend to give you a brief idea of a simple and inexpensive way whereby any organization, be it large or small, can effectively transmit by means of pictures any safety idea to any group regardless of its size. This method is well within the means of the smallest organization and requires no elaborate or expensive equipment.

First, let us consider the physical aspects of these slides. They are prepared from 35 mm. film, and are cut to size and mounted in cardboard holders approximately 2 inches by 2 inches. Some are prepared in black and white and some in color.

The first type is the simplest and most inexpensive. It is nothing more than a negative projected on the screen. In this case the image is reversed, the blacks are white and the whites are black. This type is considerably limited in scope and when projected to any size, its clarity is lost through the inherent grain of the film. However, in cases where persons are not included in the film it will suffice to illustrate the point that you desire to get across to your men.

This film can be purchased for approximately 90 cents for 36 exposures, development and mounting approximately 55 cents, making a net cost of approximately 4 cents per slide.

The second type of slide is a positive and white slide. In this case the blacks and whites are not reversed but are in the relationship with one another.

This is somewhat better when the persons in the scene. In many cases people are recognizable and this always adds additional interest to the scene.

The cost of this slide is approximately 7 cents each. The same base material as in the case of the negative slide, plus the amount of material required to convert negative into a positive film.

From black and white positives the next step is toward a more finished product being slides. This finished product being slides. Colored slides have many advantages. Grain is absent, there is inclined to be a spectroptical effect which enhances the positive and gives an effect of solidity or reality.

In this case the persons are easily recognizable, the wires are clear and distinct, also the absence of rubber protective element is clear.

Many are unfamiliar with poison in this case you can show them what it is like without fear of becoming poisoned.

Or you may want to stress the value of maintaining your eyesight. Use your goggles to protect your eyes so that you can still see pictures such as these.

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TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding:—GENERAL CHAIRMAN A. A. RALL, Safety Supervisor, Kansas City Power & Light Company, Kansas City, Mo.

Safe Use of Refrigerants

By H. H. SCHRENK

Chief Chemist, Health Division, Bureau of Mines, Pittsburgh, Pa.

The properties of refrigerants may be broadly classified into three main groups: (1) Those important for refrigeration; (2) those significant from the standpoint of confining the refrigerant; and (3) those that become important if the refrigerant escapes from the machine or container.

The first group of properties, such as latent heat of vaporization, specific heat of vapor, specific heat of liquid, etc., is not considered to be directly related to safety and is not discussed here.

The second group—those properties important in confining the refrigerants—has particular significance because it relates to "built-in" safety. This is emphasized because it is believed that the soundest procedure in designing equipment is to give due consideration to both the health and safety hazards likely to be associated with it. Furthermore,

the toxicity, fire, and explosion hazards are controlled as long as the refrigerant is properly handled. Some properties of this group are: (1) stability, (2) corrosiveness, (3) boiling point, (4) pressure developed in the system, (5) warning odor or irritation, and (6) method of detection.

The third group includes such properties as toxicity (of compound and decomposition products), irritating action, and explosibility.

Many substances have been suggested and tried as refrigerants, but the number of substances more or less extensively is limited. (Table 2 gives a list of refrigerants that are included in the American Standard Safety Code for Mechanical Refrigeration B9-1939.)

The compounds are listed in four groups: (1) Miscellaneous, (2) hydrocarbons of the methane series, (3) chlorinated

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MONDAY AFTERNOON SESSION

October 6, 1941

Presiding:—GENERAL CHAIRMAN OLIVER HOPKINS, Supervisor of Safety, U. S. Rubber Company, Providence, R. I.

Lest We Forget

By M. A. CLARK

Manager, Industrial and Public Relations, U. S. Rubber Company, Detroit

As I look back a quarter of a century and review our attitude toward safety, I find there are four periods. The first was the very indefinite and small amount of interest and thought of safety developed only by those few brave souls who had the crusader spirit. The next period undoubtedly was that of the definite crusaders, and we went out with a lot of enthusiasm and hope and desire to save our fellow man from injury and death because we believed, or at least gave appearance of belief, that we were interested in him as a human being.

At that time, every speaker portrayed the husband and father leaving for work in the morning with the wife and children waiting on the doorstep, waving goodbye with the prayer that he come back to them in the same condition that night. He mustn't come back with mangled limbs or be brought home on a stretcher. Of course, it was all exaggeration. No wife and children ever waved Dad off to work on a cold winter morning. Perhaps they were all glad he was gone, "the old crab." But the very exaggeration was intended to create emotion which would cause people to rise up and develop this great mission of accident prevention, and it was worthwhile.

Then came the next period, the rational one, when we began to preach accident prevention on the basis of the economic loss through lack of safety. We used figures and statistics to show the cost of insurance, the terrible loss in industry, to the wage earner,

to the whole economic system, because of production and elimination of production through accidents, and because of compensation costs which might have been avoided. There, again, a sound contribution was made by those devoted people, who in spite of every setback still worked for men. In approaching the situation today, I have used as the subject of my short address to you, "Lest We Forget," that in a new era of safety we are mindful of all types of preceding safety efforts.

Let us forget the value of the first and second, and not be unmindful of the results of the third. I am wondering, as I talk to you, if we haven't possibly, in the last phase of this situation, been devoting too much time to statistics and too little time to the real facts and doing something about it? I realize that there must be an accounting and I realize too that there must be some sort of proof to justify expenditures for safety work, but I wonder too, if we haven't erred a little in our statistics in side-stepping and being a little bit on the dishonest side.

I am well aware of the splendid records that have been made all over the country and the great reductions in lost time accidents, but I am wondering if we have not been altogether too prone to call the lost time accident only that accident which compels the individual to be absolutely away from his place of employment. We have not faced the fact that the lost time accident is the accident that prevents a man from carrying on his normal

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A. V. ROHWEDER, Duluth, Missabe & Iron Range Railway Co., Duluth, Minn.
Statistics Committee—T. H. CARROW (*Chairman*), The Pennsylvania Railroad, Philadelphia.
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L. G. BENTLEY, The Chesapeake & Ohio Railway Co., Richmond, Va.
G. W. ELSTE, JR., Baltimore & Ohio R. R. Co., Baltimore, Md.
L. R. PALMER (*Secretary*), Equitable Life Assurance Society of U. S., New York City.
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†As elected by delegates in Congress Session.

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 DR. HARVEY BARTLE, The Pennsylvania Railroad, Philadelphia, Pa.

TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding:—GENERAL CHAIRMAN J. R. TENNEY, Superintendent of Safety, Western Maryland Railway Company, Hagerstown, Md.

Grade Crossing Accidents

Presiding:—CHAS. E. HILL, General Safety Agent, New York Central System, New York City.

The Highway Grade Crossing Accident Situation as Viewed by the Railroad Claim Department

By WM. J. HOLDEN

District Claim Agent, New York Central System, Cleveland, O.

In 1940 over 1,800 people were killed and 4,500 injured in grade crossing accidents and for the first six months of 1941, 880 were killed and over 2,200 injured.

There are approximately 230,000 highway

grade crossings in the United States, each a potential accident hazard. The cure, if there is one, and we believe there is, lies primarily in education and law enforcement, and education must always begin with funda-

Textile Section

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J. T. BROWN, E. I. du Pont de Nemours & Co., Old Hickory, Tenn.
H. R. CORY, Beacon Manufacturing Co., Swannanoa, N. C.
ARTHUR S. JOHNSON, American Mutual Liability Insurance Co., Boston, Mass.
W. H. MONROE, Alabama Department of Industrial Relations, Montgomery, Ala.
*FRANK E. MORRIS, Liberty Mutual Insurance Co., Boston, Mass.
*T. A. WILSON, North Carolina Industrial Commission, Raleigh, N. C.

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*F. E. MORRIS, Liberty Mutual Insurance Co., Boston, Mass.
*T. A. WILSON, N C. Industrial Commission, Raleigh, N. C.

* Past General Chairman

TUESDAY AFTERNOON SESSION

October 7, 1941

Presiding:—GENERAL CHAIRMAN W. B. WEAVER, Manufacturing Division, Marshall Field & Company, Spray, N. C.

How to Interest the Employee in Your Safety Program

By J. T. BROWN

E. I. du Pont de Nemours & Co., Old Hickory, Tenn.

You will all agree that no one method has proved satisfactory in getting the individual employee interested in the safety program. It requires many methods.

No doubt the most important individual in getting safety across to the employee and developing his, let us say, safety consciousness, is the supervisor and foreman. He must be sold—he must accept the responsibility for safety in his department. The foreman or supervisor who has a good safety performance has a good production record. He knows how to handle employees and employee relations. He is the key man in any safety organization on any plant.

The problem facing the safety department of a plant is to supply the tools with which supervision is to maintain the interest of employees at all times. The first and we might say the most essential thing is to have a sound safety organization which reaches every employee from the plant manager to the man on the bottom.

First let me say that the management should be sold on safety and should expect every employee to make safety a part of his every-day job. Such an organization should have a central safety committee composed of the plant manager, the members of his staff and safety supervisor. Area or departmental safety committees composed of supervisors, foremen and key operators in each area. Shift and sectional safety committees which cover all employees. All of the committees should meet on a regular

schedule at least monthly and every employee some time during the month would attend a safety meeting in their department.

Next I believe there should be a sound method of classification of injuries such as those established and used by most industries. There should be no discrimination against departments or individuals in such classifications and all should be treated alike. Such classifications include major or lost time injuries, sub-major injuries and minor injuries. Our plant and I believe a good many plants of our company have an additional classification which we call the sub-minor injury. I am sold 100 per cent on this classification and let me take a few minutes to explain its significance in our safety program.

In 1925, the first full calendar year of operations, we had 33 major injuries, two of which were fatalities, 177 sub-major injuries and 11,790 minor injuries. We worked slightly more than 3,000,000 exposure hours which gave us a frequency ratio of 10.9. By 1933 we were able to reduce this to four major injuries, 44 sub-major and 2,260 minor injuries. But included in these injuries were infection cases of major or sub-major classification, which had failed to get prompt first aid attention. Pressure had been put on the prevention of all injuries and employees were failing to report those of a very minor nature, which were all potential infection cases. With the permission of our home office, we initiated the sub-minor in-

Wood Products Section

Officers 1940-1941

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*E. ROSS FARRA, Grand Rapids Safety Council, Grand Rapids, Mich.

*ROLAND JONES, The Surty Manufacturing Co., Chicago, Ill.

J. H. LEE, Liberty Mutual Insurance Co., Rockford, Ill.

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*J. C. WILSON, Lumbermens Mutual Casualty Co., Chicago, Ill.

*Past General Chairman

MONDAY AFTERNOON SESSION

October 6, 1941

Presiding:—GENERAL CHAIRMAN O. C. BOILEAU, Safety Engineer, RCA Manufacturing
Company, Inc., Camden, N. J.

CHAIRMAN BOILEAU: We have a very interesting program this afternoon. I wish to welcome all newcomers to the Wood Products Section at this Thirtieth Congress and also wish to welcome all the old-timers.

Today in accident prevention work our job is just about twice as hard as it was during the last three or four years. There may be plenty of new ideas that will come out of these discussions; I would like everybody to

participate in the so that we may pass on to each other some new thoughts, and take them back to our companies who are trying to hit a high level in the conservation of manpower.

(Here the Chairman called for the Report of the Nominating Committee, Roland Jones, Surty Manufacturing Company, Chicago, presented the report, and officers were elected as given elsewhere in this record.)

The Importance of Manpower Protection in the Wood Products Industry

By V. A. ZIMMER

Director, Division of Labor Standards, U. S. Department of Labor,
Washington, D. C.

Today the term "man hours" has a new significance. It is now something more than a convenient expression for economists, production analysts, or time study experts. In

a very real sense the safety of our whole country now rests upon man hours:—man hours to produce weapons and materials for defense; man hours to produce goods vital