

CONTENTS—Continued

IMPROVING YOUR SAFETY PICTURE	
What Is Photography?	Earl R. Wallace 73
Why Use Photographs in Safety Engineering?	Robert H. Albisser 76
How Are Photographs Used in Safety Engineering? (A Symposium)	
(a) Simple Record Pictures	Jack R. Barr 77
(b) General Public Education	Ralph Kahli 78
(c) Special Uses of Photography in Safety Engineering	Allie C. Peed, Jr. 81
L P GAS SAFETY FROM BULK PLANT TO YOU	
Round Table Discussion	84
SAFETY IN MULTI-PLANT OPERATIONS	
Solutions for Multi-Plant Safety Administration Problems (Panel)	86
CHEMICAL SAFETY IN LABORATORIES AND SMALL PLANTS	
Personnel Training Methods	Ellis L. Stout 98
HOW PLANT SAFETY ENGINEERS MEET FLEET PROBLEMS	
Background of the Plant Motor Vehicle Accident Problem	Clyde F. Schlueter 101
What Can the Safety Director Do to Control Motor Vehicle Losses	Richard Wilkins 104
Techniques We Can Use to Reduce Our Company's Motor Vehicle Losses	
(a) Selection of Drivers	John A. DePew 108
(b) Training	D. A. Weaver 109
(c) Emphasis on Supervision	Amos E. Neyhart 111
INDUSTRIAL MEDICAL PROGRAMS—THEIR DEFICIENCIES AND EXCESSES	
Medical Aspects	Dr. Kenneth E. Markuson 112
Nursing Aspects	Helen A. Reischl, R.N. 116
WHAT WE HAVE LEARNED	
Recent Research on Fire Spread and Fire Control in Public Buildings	Dale K. Auck 119
What to Look for in Determining the Origin of Fire and Telltale Signs Concerning Progress	Sgt. Drew Brown 125
Theories of Combustion of Wood and Its Control	F. L. Browne 127
OFFICERS, AMERICAN SOCIETY OF SAFETY ENGINEERS, 1959-60 134	
Other Volumes in 1959 National Safety Congress Transactions	Back Cover

ACCIDENT PREVENTION FUNDAMENTALS

PART I—KNOWING YOUR PROBLEM

GATHERING ACCIDENT FACTS

By RICHARD M. BRYANT

Superintendent, Engineering-Audit Dept., Glen Falls Insurance Co., Glen Falls, N. Y.

No accident in itself is of primary importance, even though the resultant cost and inconvenience may be of great consequence. Studying the results of accidents merely informs us of their number and severity, but leaves us wide open for more of the same. What is important is the reason why the accident happened, and whether or not the conditions still exist which might result in another. Gathering the facts of the accident must include a careful investigation of the cause or causes that were responsible.

All of us here have one thing in common: an interest in safety. Not all of us work at it from the same point of view, and not all with the same size budget. My particular interest as supervisor of the engineering department of the Glen Falls Insurance Co., is to help our insureds to eliminate accidents. I'll admit that we have the ulterior motive of trying to make a profit on the various types of business which we service, but our department is interested in preventing accidents rather than in compiling statistics.

In our efforts we try to work with the people responsible for safety in the plant, institution, hotel, or whatever the risk may be, in analyzing the accident for the contributing factors. A knowledge of these factors is a primary requirement. I'm sure that all of you are familiar with the American Standards Association's Code Z-16.2 "Compiling Industrial Injury Causes" but I would like to re-state and discuss these five factors. They are: 1) The agency and agency part, 2) The unsafe mechanical or physical condition, 3) The accident type, 4) The unsafe act, and, 5) The unsafe personal factor.

There is other information that must be included in an accident report in order to

be complete. Such data as the workers' name, sex, age, and occupation; the date, hour and place of accident. These, however, have little direct bearing on our efforts to prevent further accidents of the same nature.

Getting back to the five major factors involved in an accident, let's consider them one at a time. First, the agency and agency part. There will normally be little difficulty in determining the machine, elevator, hand tool, or what-have-you, and the particular part of the agency involved in the accident. In Amarillo a scaffold turned over, causing an employee to break an arm and be badly bruised, resulting in an insured loss of \$3,973. There was no question but what the agency involved was the scaffold. Any time there is personal injury or property damage, the injured person, foreman, or supervisor will be very willing to place the blame on the inanimate object. The agency might even be an animal, bird, or insect, but here again, there will be no reticence about placing the blame.

Factor #2: The unsafe mechanical or physical condition. Here again, with no great effort, it can be determined if the accident resulted from improperly guarded or defective equipment, hazardous arrangement or procedures, improper illumination or ventilation, or unsafe dress or apparel. In the previously mentioned scaffold case, the unsafe physical condition of the scaffolding was the cause. In LaFayette, Ga., a mechanic and helper were taking a track off a caterpillar dozer. A chip from the mushroomed head of the chisel took the sight of one eye of the helper who was holding it. The chisel was defective and the man should have been wearing safety goggles. Due to the fact that the management had refused to cooperate in eliminating such unsafe practices, our coverage