

PLAINTIFF'S EXHIBIT

MET-443

Statistical Bulletin 1971



Metropolitan Life

Changing Hazards in Industry

During the past quarter of a century many reductions have been made in occupational ratings for Life and Accident Insurance. Such ratings have been based partly on the findings of mortality investigations among insured lives and partly on special studies and reports made by agencies such as the U.S. Bureau of Labor Statistics, the National Safety Council, and various governmental and private organizations. The most recent broadly based Life Insurance investigation of occupational mortality was the 1967 *Occupational Study*, published by the Society of

Actuaries, reviewed in the April 1968 issue of the *Statistical Bulletin*.

Some of these changes in rating reflect the general decrease in death rates during the 1940's and early 1950's. Despite the resulting somewhat more stringent qualifications, numerous occupations formerly classified as Substandard were made eligible for Standard Insurance or for one of the less highly rated Substandard classifications. The following illustrations are typical of the reductions in ratings for Life Insurance.

IMPROVEMENTS IN RATINGS—TWENTY-FIVE YEARS

Industry	Substandard to Standard	Substandard to Less Highly Rated Substandard
Chemical Industry	Stillman Centrifuge operator Other skilled worker	Lead burner Laborer
Electrical	Electrician—voltages over 250	Lineman—climbing poles
Glass Industry	Lehrman Kiln packer Grinder or beveler of plate glass	
Metal Industries	Forgeman Hammerman Ladler Puddler	Chipper Cinderman Laborer
Oil Refineries	Stillman Treater Compounder	Laborer
Railways	Locomotive engineer Yard foreman	Car cleaner Yard and freight brakeman
Tanneries	Skilled worker in tanning yard	Laborer

A number of common occupations continue to involve exposure to harmful agents, so that programs to minimize health hazards in industry require unceasing attention, and are of particular importance when new processes and new materials are introduced. For example, mechanical processes that substitute power for manual labor may produce dusts and fiber particles in greater volume. New materials such as plastics, metals for which new uses are found, and new processes utilizing radiant energy may lead to physiological disorders that do not become clinically evident until some years have elapsed.

A recent series of reports of the California Department of Health entitled "Occupational Disease in California," dealing with the manufacturing industries in that state, shows that skin conditions, chemical burns, and eye irritation were foremost among the common work injuries. Solvents, acids, and other chemicals have been considered as the principal causative agents. Respiratory diseases resulting from exposure to dust and vapors, as well as injuries caused by excessive heat, were less common but important among cases requiring hospitalization and prolonged medical attention. This series of reports brought out that injury rates have generally been lower for women than for men, and that injury rates in the manufacturing industries were raised if a high proportion of employees were in production work.

Studies of the incidence and effects of silicosis, asbestosis, and other forms of pneumoconiosis emphasize the special problems encountered in dealing with materials that contain silicates, asbestos, and similar substances. These diseases do not manifest themselves till many years following the exposure to the causative agent. When a case is finally recognized, it may be difficult to

document it historically. Current mortality or morbidity experience relating to cases that had their inception in the past may be representative of neither the efficacy of present day preventive measures nor current manufacturing methods. There is general agreement that continuing medical surveillance of workers in many industrial processes is advisable.

Recent trends in occupational injuries are presented in the accompanying table based on statistics published by the National Safety Council for a sizable number of the larger manufacturing concerns. The table shows the arithmetical averages of the rate of frequency of injury, as well as averages of the related index of severity of injuries, for the years 1955-57 and 1967-69. The frequency of injuries for all industries combined has risen by about 15 percent, but the severity rate has decreased in about the same degree. Eleven industries showed decreases in injury rates. Seven industries recorded increases in both the injury and the severity rate in excess of 20 percent.

The surveys of the U.S. Bureau of Labor Statistics cover a much wider range of manufacturing concerns, including many of the smaller ones. The experience data cited by the U.S. Bureau of Labor Statistics indicate that recently occupational injuries have increased significantly in a number of industries.

The 91st Congress passed an Occupational Safety and Health Act, which will go into effect April 28, 1971. This Act provides for the Federal Government to set compliance standards, issue citations for violations, and impose penalties. A National Institute for Occupational Safety and Health is being created to carry on research and conduct experimental programs to reduce health and accident hazards in industry.

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