

Industrial Safety

During the years of growth, 1910 to the present, there has been an orderly development of knowledge, which, when applied with sufficient skill and judgment has produced significant reductions in many types of accidents and accidental injuries. However, the tremendous increase in scientific knowledge and technological advancement during the past 20 years has added to the complexities of safety work.

The approach has oscillated between one that emphasizes environmental control or engineering, and one that emphasizes human factors. From this, several important trends in the pattern of the safety professional's development have emerged. These indicate the future of the profession.

- First, increasing emphasis toward analyzing the loss potential of the activity with which the safety professional is concerned. Such analysis will require greater ability (a) to predict where and how loss- and injury-producing events will occur and (b) to find the means of preventing such events.

- Second, increased development of factual, unbiased, and objective information about loss-producing problems and accident causation, so that those who have ultimate decision-making responsibilities can make sound decisions.

- Third, the use of the safety professional in a more direct role in support of the development of safe products. The application of the principles of accident causation and control to the product is becoming more important because of the increase in products liability cases, the sudden emphasis in law of the entire field of negligent design, and the obvious impact a safer product would have on the overall safety of the environment.

To identify and evaluate the magnitude of the safety problem, the safety professional collects and analyzes information. He is concerned with all facets of the problem, personal and environmental, transient and permanent, to determine the causes of accidents or the existence of loss-producing conditions, practices, or materials. From the information he has collected and analyzed, he proposes alternate solutions, together with recommendations based upon his specialized knowledge and experience, to those who have ultimate decision-making responsibilities.

Therefore, future application of this knowledge in all aspects of our civilization—whether to industry, to transportation, at home, or in recreation—makes it imperative that those in this field of endeavor be trained to utilize scientific principles and methods to achieve adequate results. Of prime importance will be the knowledge, skill, and ability to integrate machines, equipment and environments with man and his capabilities.

The safety professional in performing these functions will draw upon specialized knowledge in both the physical and social sciences. He will apply the principles of measurement and analysis to evaluate safety performance. He will be required to have fundamental knowledge of statistics, mathematics, physics, chemistry, and engineering.

He will utilize knowledge in the field of behavior, motivation, and communications. Knowledge of management principles as well as the theory of business and government organization will also be required. His specialized knowledge must include a thorough understanding of the causative factors contributing to accident occurrence as well as methods and procedures designed to control such events.

The safety professional will also need diversified education and training if he is to meet the challenges of the future. The population explosion, the problems of urban areas and future transportation systems, as well as the increasing complexities of man's everyday life will create many problems and extend the safety professional's creativity to its maximum if he is to successfully provide the knowledge and leadership to conserve life, health, and property.

Training of the safety professional of the future can no longer be the "on-the-job," man-to-man type, only. It must contemplate specialized undergraduate level training, leading to a bachelor's degree or a certificate.

Training courses such as those conducted by the National Safety Council have and will continue to serve a very useful purpose for a large number of individuals who begin performing safety functions and must receive initial training or advanced training in certain specialized areas.

Few schools or universities currently offer courses in safety and none of these offers a bachelor's degree in safety, however, some