

ACCIDENTS AND PREVENTION

- 609 Applying Measurement Concepts to the Appraisal of Safety Performance. W. E. Tarrant. J. Am. Soc. Safety Eng. 10, 15-22 (May, 1965).

Attempts to control accidents and their consequences can, at best, be described as trial-and-error chiefly because adequate measures of the effectiveness of this control do not exist. New measuring instruments such as the Critical Incident Technique and behavior sampling hold much promise as improved methods of measuring safety effectiveness. Because of the role of chance, the consequences of accidents need not be fatal, they need not be injurious, they need not even be property damaging. But the potential for producing loss is always present. As long as there is such potential, the primary concern lies with environmental conditions that are not right, regardless of whether or not they evidence any statistical correlation with injury involvement within any fixed time period. Studying injury accidents, therefore, is less profitable than studying work conditions and worker behavior in a broad sense. Fortunately, most of these conditions, human and environmental, are modifiable or compensable. Correct or adjust these conditions and accident losses will inevitably be reduced. In the evaluation of safety programs as well as in research generally, injury frequency rates, injury severity rates and other presently used measures of loss-type accidents are not sufficiently sensitive, stable, or representative to serve as criteria of safety effectiveness. What is needed are measures of safety performance that do not depend upon injury involvement. There is good reason to anticipate a steadily increasing emphasis on measurement in the field of safety engineering. The lack of understanding and proficiency in the use of these new techniques will serve as a major deterrent to the future progress of professional safety work. Anyone who is earnest in his desire to improve his ability to predict and control accident losses must also be earnest in improving his ability and expanding his knowledge in the field of measurement.

-- Cond. from author's conclusion

- 610 Human Factors in "Cause Undetermined" Accidents E. C. Lentz. Aerospace Med. 36, 214-222 (March, 1965).

U. S. Air Force aircraft accidents over a 4-year period that remain categorized as cause undetermined indicate that the man-machine complex tends to fail during the stressful phases of flight. Loss of control and high speed impact are factors common to many of this series. Man's limitations and specifically his ability to maintain orientation—i. e., disorientation—are major problems in the operation of high performance aircraft. Aircraft performance has advanced to the place where exploration of the operational perimeters of the craft is reserved for the test pilot. Experienced combat pilots may still be novices with respect to the vagaries of the aircraft he flies. Safety of flight is enhanced by the division of duties with a qualified co-pilot.

-- Modified from Author's abstract

MISCELLANEOUS

- 611 Atlanta's River Water Supply Contaminated by Kerosene P. Weir. Taste and Odor Control J. 30, 1-7 (Oct. 1964).

The reaction of the Atlanta Water Department to a 60,000-gal. kerosene spill into the river water supply of the city is reported. During the critical 3-week period, the river water contained about 140 mg./liter of kerosene. Treatment by the Water Department included application of bleaching clay and activated carbon at the rate of 35 mg./liter and 7.2 mg./liter, respectively, to the water at the river intake. Camphor gum activity in treated water samples and the odor of heated samples were used to determine the absence or presence of kerosene. Only 50 bona fide complaints on water quality were received.

-- Public Health Eng. Assoc.