

safety tenet that "safety must have top management support." It is believed that close introspection will produce the corollary, "management must have the safety engineer's support." This is not a contradiction of the first; nor its antithesis. It is more nearly a rearrangement of the emphasis. The first implies that the company leaders must demand safe machinery, safe operating methods, and the unwavering acceptance of safety engineering techniques. The second, more realistically, proposes that the safety engineer owes his management the kind of staff assistance that will provide an industrial environment conducive to safe operation. The first insists on a management stand; the second on a management philosophy. The first opposes the natural tendencies; the second makes use of them. The first can have only short-lived results; the second shows promise of a more permanent control. And so the responsibility of the safety engineer is to know management, (both art and science), and to acquire some of the management skills. Management is not for management only. It is a discipline that must be added to the others appropriate to the safety specialist. It should be high on the list of prerequisites for professionalism in the safety field.

-- Author's conclusion

ACCIDENTS AND PREVENTION

- 409 The Concept of Accident Proneness: A Review. P. Froggatt and J.A. Smiley. Brit. J. Ind. Med. 21, 1-12 (Jan. 1964).

The term accident proneness was coined by psychological research workers in 1926. Since then its concept—that certain individuals are always more likely than others to sustain accidents, even though exposed to equal risk—has been questioned but seldom seriously challenged. This article describes much of the work and theory on which this concept is based, details the difficulties encountered in obtaining valid information and the interpretative errors that can arise from the examination of imperfect data, and explains why accident proneness became so readily accepted as an explanation of the facts. A recent hypothesis of accident causation, namely that a person's accident liability may vary from time to time, is outlined, and the respective abilities of this and of accident proneness to accord with data from the more reliable literature are examined. The authors conclude that the hypothesis of individual variation in liability is more realistic and in better agreement with the data than is accident proneness.

--Authors' abst.

MISCELLANEOUS

- 410 Relative Resistance of Fish to Petroleum Refinery Wastes. Part 3. N.H. Douglas and W.H. Irw. Ind. Water & Wastes 8, 22-25 (March-April, 1963).

For Parts 1 and 2 see Absts. 1090 and 1091 in IHD for November, 1963. An extensive bibliography on the relative resistance of fish to petroleum refinery wastes is presented, which is helpful to those interested in the subject. Probably no one species of fish possesses the favorable testing characteristics that place it above all others for use as an indicator of toxicity in bio-assay. Most of the minnows and other small fish, such as N. percobromus, H. placitus, N. Zonatus and L. Sicculus, are always of a desirable testing size, but they are often difficult to collect in sufficient numbers, and their delicate tissue makes injury and scale loss a problem. There are 30 references.

-- Public Health Eng. Absts.

03121432