and one percent of nonfatal injuries.....emphasizes the importance of good installation and maintenance of power circuits as essential to minimize the hazards of shock, burns, and fire. This report presents some of the safe electrical practices used in two open-pit mines operated by two large copper mining companies in Arizona. Electrical hazards in these two mines have been reduced greatly by various means that are described, and through considerable expenditure and effort. These safety practices are described in some detail with illustrations, in the hope that other open-pit operators will benefit by them.--Condensed from Authors' Summary

971 Safeguarding Underground Workmen from Noxious Gases Resulting from Blasting in Strip Mines. E.H. McCleary, M.W. Price, and J.V. Mather. U.S. Bureau Mines, Inf. Circ. No. 7503. 8pp. and illustrations. (May, 1949).

Record of the hazards found and of the procedures followed by the supervisory personnel of the Jeddo-Highland Coal Company have proved of great value in protecting the lives of workmen in underground mines against noxious gases originating from blasting in adjacent strip mines. Precautionary measures taken by these officials for protecting underground workmen against such hazards should be of inestimable value to others operating under similar conditions. --Authors' Conclusions

972 Safety Practices at United Verde, Phelps Dodge Corp., Jerome, Arizona. A.D. Look and A.A. Sharp. U.S. Bur. Mines Inf. Circ. No. 7501. 25pp. (May, 1949).

Throughout the long period of activity of this mine (since 1876), soon to be ended, a safety program has evolved in keeping with the proficiency developed in mining the ore body. This paper records the safety practices in effect at this mine so that others may have the benefit of the lessons learned through experience and years of work toward an improved record of accident prevention.

-- Condensed from Authors' Introduction

973 Scientific Approach to Fire Risks. Behavior and Treatment of Burning Liquids. Anon. Chem. Age 60, 753-755 (May 21, 1949).

The Fire Research Board, of Great Britain, has been studying a number of problems concerned with oil fires, and their results are briefly reported here. The "hot zone" in a tank is the region where the oil is heated to 100°C or over by the fire and its depth varies with the duration of the fire. The experiments largely concern the hot zone. Extinction depends upon the cooling of the hot zone; and the amount of foam required is that required to cool the oil in the hot zone, plus that required to absorb the radiant heat. The oil froth increases to four times the volume of the hot zone. If foam is introduced into the bottom of the tank, the extinction is accelerated by the mixing of cool oil with the oil in the hot zone. Results with different grades of oil depended on the viscosities of the oil, the surface temperature, and the formation or absence of a hot zone. A study was also made of the efficiency of extinguishing materials. The results are given in tables. Methyl bromide and carbon tetrachloride have the highest efficiency considering the percentage by volume used, but their toxicity is to be considered.