

Spark Is Blamed For First Page Dairy Explosion

Industrial Adviser Says Other Caused By Foreign Matter

A spark set off the first of the two recent ammonia gas explosions at the Page Dairy Co., Wade and Knapp Sts., and the second was due to a foreign substance in the ammonia, Don Hanna, safety adviser of the Ohio Industrial Commission, said today in a preliminary, unofficial report.

Speaking before the 18th annual All Ohio Safety Congress in Columbus, Mr. Hanna said the spark "may have been generated at an exciter motor" by the commutator and brushes and that the foreign matter "could have been oil, water or a slug of ammonia" that were noncompressible.

2 Fatally Injured

Ammonia gas exploded in the dairy compressor room Feb. 20, injuring 27 persons, 2 fatally, and again March 8, causing \$175,000 damage but hurting nobody. The dead were Fredrick W. Brubach, 71, of 1511 Kelsey Ave., chief engineer, and Earl Spewak, 29, of 1038 Belmont Ave. Both died three days later.

The presence of an impurity in either the ammonia or the lubricating oil was discounted, however, in a report to Henry Page, Jr., general manager, April 2 by the Maumee Development Co. on chemical analyses.

Mr. Hanna, who examined the dairy with Fred J. Wenzel of the commission's Toledo office, said the second explosion "can be classified as being the first of its nature in which an explosion of ammonia gas was accompanied by fire."

Gives Explanation

Explaining that "high temperatures would be reached due to the explosion and the ammonia would break up into its constituents, hydrogen and nitrogen," he said that "if there were oil vapors present, this oil vapor would be ignited and fire would ensue."

He pointed out that in the first explosion a 400-pound cylinder of ammonia fell on a 3-inch nipple, breaking it off and letting the ammonia escape. He recommended strongly that "some type of cradle be designed so adequate control of the cylinder can be had at all times." He said "these cylinders would travel with rocket force" if they were ruptured.

Mr. Hanna asserted that "there were absolutely no markings or designations upon any of the valves involved" and recommended that they be lettered according to their function. The compressor that sustained a cracked head in the second explosion "had been in operation approximately 30 years," he said, and suggested that compressor heads be X-rayed during overhauling.

Safety Head Cited

"It has been intimated that the safety head on the compressor did not function," he said. "I cannot prove this statement, but it may have some bearing on the explosion because if the safety head had moved, it would have prevented the terrific pressure on the head."

Mr. Hanna, who has not yet made an official report to the commission, also recommended explosion-proof and vapor-proof lights and transparent plastic encasements for the spark-producing units of motors.

He expressed the opinion that proper first aid would help to prevent panic that "in many instances causes more deaths and injuries than the accident or explosion itself." He suggested that plants search among their employees for ex-servicemen trained in rescue work and the use of the gas mask and organize them into first-aid squads of three or four persons.