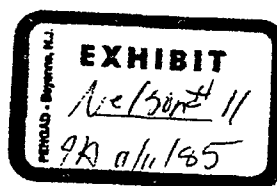


Mr. R. [unclear]
Mr. [unclear]
Mr. [unclear]
Mr. [unclear]
Mrs. Bowen

INDUSTRIAL HYGIENE REPORT

ZENITH DREDGE COMPANY, DULUTH, MINNESOTA
Lieut. Comdr. G. W. Bergman, Supship USN
D. E. Wright, Personnel Director

March 19, 20, 1945



LT. (jg) K. W. NELSON USNR
Regional Health Consultant
Division of Shipyard Labor Relations
United States Maritime Commission

This document contains information affecting the national defense of the United States within the meaning of the Espionage Act 50 U.S.C., 31 and 32. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

RECOMMENDATIONS

1. It is recommended that summaries of all injuries whether lost time or not, be compiled in the first aid station monthly and be classified as to type of injury.
2. Salamanders for heating purposes should not be used below decks or in confined spaces of the ships.
3. Anti-flash goggles should be distributed to all welders for wear under welding hoods and to helpers who must work in the vicinity of welding arcs.
4. Small portable welding screens should be used whenever practicable to shield welding arcs.
5. Periodic physical examinations should be given crane operators. (See section H-3.2 of the Minimum Requirements for Health & Safety in Contract Shipyards).

REPORT

General Description

The Zenith Dredge Company is currently engaged in the construction of small Navy tankers and employs approximately 900 men. Employees of sub-contractors operating within the yard number about 200. Ships are built in berths and launched sideways into the waters of the St. Louis Bay.

Two 9-hour shifts are worked. Workmen's compensation is handled by the American Mutual Liability Insurance Company.

Lieutenant Commander G. W. Berman USNR is Navy supervisor of shipbuilding. Safety activities come under the supervision of Mr. D. E. Wright, Personnel Director.

Medical Facilities

Minor injuries to employees are treated at the first aid station located in the Accounts Building near the yard's main entrance.

The first aid station has a small waiting room, one bed, one eye treatment chair, and the usual stock of dispensary supplies. The bed can be screened off by drawing a canvas curtain. One disadvantage of the station is the manner in which the waiting room interferes with the access to the bed. The transfer of a stretcher case from the outside onto the bed would involve awkward maneuvers. Though the dispensary is located near the yard entrance, no point within the yard is at a greater distance from the dispensary than recommended in the Minimum Requirements.

Mr. Earl Maarill, formerly chief orderly at St. Luke's Hospital, mans the first aid station during the day shift. First aid cases occurring on the night shift (about 200 workers) are handled by the guard at the gatehouse. All cases requiring a doctor's attention on either shift are sent to anyone of a number of Duluth doctors or to a physician of the patient's choice. Eye specialists are consulted on eye

injuries involving imbedded foreign bodies or other injuries of like seriousness.

City or hospital ambulances are called as needed.

Pre-employment examinations are done at a clinic in the city. There are no periodic examinations.

A female visiting nurse makes calls to homes of all absentees to offer assistance in the case of illness or injury on the part of employees. She also compiles a report on absenteeism from all causes which is submitted to the Personnel Director. According to Mr. Wright valuable information has been obtained thus on causes of absenteeism and has enabled management to cope with the problem more effectively. Figures for recent months indicate that non-industrial illness and inclement weather have been the greatest contributing factors.

Welding

The number of eye flashes resulting from exposure to

welding area could not be determined since no summaries of non-lost time injuries are made. Occasionally, however, eye flashes have been lost-time accidents.

Distribution of anti-flash goggles to welders and others exposed was fair. Screening of arcs in most cases had not been done.

According to Mr. Kaarili complaints of fumes by welders had been rare. The few cases so reported were sent to physicians.

Goggles are sterilized before being reissued.

Spray-Painting

Zinc chromate is the primer paint used. Only outside spray-painting is done. Binks and M.S.A. "Comfo" cartridge respirators, having the cartridges covered with replaceable gauze filters, are issued individually to the painters. The observed use of respirators was good.

Fiberglass

Dolomite cements used to attach fiberglass bolts to bulkheads are of the non-toxic, inflammable variety.

Asbestos Shop

An asbestos shop is operated for the manufacturing of insulating materials. Three men are employed, and all cutting of materials is done by hand. General appearances and examination of rafters and wiring where dust might have collected indicated no dust hazard to be present. Nevertheless, the workers should be encouraged to moisten asbestos materials by sprinkling them with water as is the usual practice. Dust is thereby kept at an absolute minimum.

Ventilation

Three men in the electrical maintenance department have charge of placing and servicing blowers used for ventilation. There are 40 blowers of about 700 cfm capacity on hand and 24 additional blowers on order. Lengths of stove

-6-

pipe are fitted to the discharge side of the blowers and ventilation effected by forcing air into unventilated portions of the ship. Observed conditions indicated that ventilation was fair.

Fumes of galvanized pipe welding in the shops are controlled by local exhaust arrangements which operate effectively. Brazing in the pipe shop is done under a hood.

Ordinarily the hulls are heated during cold weather by unit steam heaters. There were, however, numerous salamanders being used on one hull. Salamanders should not be used below decks or in confined compartments because their haphazard construction and operation may produce sufficient carbon monoxide to overcome men working in the same area. Such accidents are known to have happened in other shipyards.

Employee-Feeding

One large lunch room and small lunch rooms in individual shops are available wherein workers may eat lunches brought from home. No food is served within the yard.

Canteen dispensers of candy are available.

A small lunch stand in a gasoline station just outside the yard entrance is heavily patronized by workers.

Water Supply & Sewage Disposal

City water is used by the yard. The sewage from yard toilets passes into settling tanks and the effluent is discharged into the bay.

Toilet Facilities

Toilet and washing facilities are adequate.