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Occupational Health Division
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April 15, 1977

Mr. R. Mellikow
Plant Superintendent
Crane Packing Company Limited
423 Green Street
Stoney Creek, Ontario

Dear Mr. Mellikow:

Enclosed is a copy of the Field Visit Report prepared
by Mr. J. Toth, P.Eng., following a visit to your
plant on February 28, 1977.

The directions suggested at the end of the report are
for issue to you by the Ministry of Labour's Industrial
Safety Officer.

Yours truly,

HMN:lm
Encl.


H.M. Nelson, Chief
Occupational Health Engineering



Ministry of
~~Health~~ LABOUR

I.S.B. File No. :
O.H.P.B. File No. : 6K-98 ✓

OCCUPATIONAL HEALTH ~~SAFETY~~ BRANCH

FIELD VISIT REPORT

Date: April 14, 1977

From: J. Toth, P.Eng.

Plant:	Crane Packing Company Limited	Requested by:	O.S.B.
Address:	423 Green Street Stoney Creek, Ontario	Accompanied by:	Mr. E. Dewhurst, O.S.B.
Contacts:	Mr. R.A. Mellikow - Plant Superintendent Mr. C. Morin - Union Assistant President	Date of Visit:	February 28, 1977
Material:	Methyl alcohol, chlorothene, asbestos and lead	Copies to:	Dr. V. Tidey Mr. H. Hendrickson Mr. E. May (2) Mr. R. Ogilvie Dr. J. Vingilis Mr. S. Morton Mr. R. Mellikow

Abstract: This visit was made to assess the dust and ventilation conditions in this plant. The report describes the operations and indicates where protective measures shall be taken. Recommendations are made and directions are suggested.

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The company manufactures precision ground seals from stainless steel, seals from teflon, packings from asbestos and Plastic Seals, a compound used in pipe joints.

In a 30' x 50' x 22' high lapping room methylalcohol as a compound in the grinding powder and chlorothene for degreasing are used. These operations are not exhausted.

In the 50' x 75' x 22' high teflon department phenolic resin containing materials are cut and the dust is exhausted by an industrial vacuum cleaner. In one corner of this room premixed teflon powder is moulded and heated in an exhausted furnace. Asbestos cloth and yarn coating with teflon is carried out in the north side of the room. The coating operation is not exhausted.

In the 50' x 75' x 22' high packing department 4 braiding machines are operating with teflon and wax coated yarns. None of these machines are exhausted. In covered and exhausted soaking sinks (2) asbestos yarns are soaked with wax. In the same room in a 25 gallon mixer packings, used on the bulkhead in the shipbuilding are produced, using about 250 lbs/year of chrysotile asbestos. The packing contains asbestos, resins and castor oil. The mixer is exhausted by a side hood, connected to a vacuum cleaner.

In one corner of this department plastic seal is produced in an open mixer of about 20 gallons capacity. The seal contains about 80% lead powder of 20-50 micron in size, castor oil, glycerin, butyl alcohol, traces of carnauba wax and pyrogalllic acid. About 30 lbs of lead powder is taken from a drum containing 200 lbs of lead powder and 170 lbs is dumped to the mixer. Air velocity at the 10" diameter side duct was about 900 fpm. The plastic seal is poured directly from the mixer into small tin containers.

One 2' diameter roof fan is installed in this department.

About 44 persons are employed in the whole plant but only 10-12 of them work in the above described departments.

Respirators for toxic dust are available and used at the lead mixer. Medical supervision is carried out by the Occupational Chest Disease Service.

Comments

1. The operations, where the workers are exposed to methyl alcohol and chlorothene vapours, are not exhausted. The grinding and degreasing operations are done with bare hands. Direct contact with these solvents may lead to skin dermatitis. The threshold limit value (TLV) is 200 ppm for methyl alcohol and 350 ppm is for chlorothene (methyl chloroform).
2. No operation was carried out in the teflon department during this visit. From the health viewpoint the cured teflon is physiologically inert. Operations involving exposure to teflon dust at room temperature may be regarded as nuisance dust with a TLV of 10 mg/m³.

It is expected that no hazard exists below 200°C (392°F) to the decomposition products.

1. Significant airborne dust generation is not expected at the braiding machines and at the mixers, but some dust was settled around this equipment.

2. Lead cards are posted above the lead mixer.

Recommendations

3. In the lapping department skin protection should be used while working with parts wetted with methyl alcohol and/or chlorothene. Direct inhalation of the vapours of these solvents should be avoided.

No smoking should be permitted in this area.

The teflon department should be no smoking area. Cigarettes if carried in pockets should be protected from teflon contamination.

The teflon should not be heated above 200°C without proper enclosure and adequate local exhaust.

About 500 cfm is exhausted at the plastic seal mixer. With a booth-like enclosure; not bigger than 2 sq. ft. at the face, this air volume appears to be adequate. Air velocity at any opening into the enclosure should be at least 200 fpm.

Consideration should be given to use full drums of lead powder. It would simplify the weighing and the lead dust generation at the scale would be avoided.

Considerable amounts of asbestos has been allowed to accumulate under the asbestos packing mixer. This mixer should be properly enclosed. If spillage occurs, it should be cleaned up after every operation.

I was told that blue asbestos is stored but not used any more in the plant. When it is not used it should be removed.

Air sampling for lead and for asbestos is suggested. Further comments will follow the air sampling report.

Respirators, approved by the National Institute for Occupational Safety and Health (NIOSH) should be used while working with unsoaked asbestos.

A list of NIOSH approved respirators is attached.

The respirators and clothing worn in the packing department should be cleaned every working day. There should be clean storage for this equipment. Clothing worn in this area should not be taken by the workers to their homes.

The employer should inform workers about the dangers involved and the preventive measures to be taken. Housekeeping should be maintained at a high level. The containers and bags containing lead and asbestos should be kept closed after taking the required amount of materials from them.

The operators in the packing department should be encouraged to practise good personal hygiene. This should include washing before eating drinking, smoking or using washroom facilities. They should have a shower at the end of the shift.

Directions to be Issued

- No dry sweeping shall be permitted in the packing department. Wet sweeping or vacuuming is suggested.
1. Proper enclosures with adequate local exhaust shall be provided at the asbestos and lead mixers.
3. Until such time as the above directions are implemented the operators in the packing department shall be provided with adequate personal respiratory protection.
4. No eating, drinking or smoking shall be permitted in the packing and teflon departments.
5. No food, drink or tobacco shall be brought into the packing department.
6. The company shall provide a medical program for workers exposed to lead which should include:
 - a) preplacement medical examination
 - b) annual medical examination
 - c) urine sample submitted from each lead worker every 6 months to the Occupational Health Laboratories, 360 Christie Street, Toronto, Ontario. M6G 3C2

JT:lm

J. Toth
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