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PLAINTIFF'S EXHIBIT
KEN-521

LOSS PREVENTION DEPARTMENT
1 HOYT STREET, BROOKLYN 1, NEW YORK ★ ULster 5-7300

June 16, 1964

Mr. E. Kuzmier, Plant Manager
Kentile Floors Inc.
58 Second Avenue
Brooklyn 15, New York

Dear Mr. Kuzmier:

At the request of Mr. V. J. Gentile, our Industrial Hygienist, Mr. R. A. Williams, completed a dust survey for your plant and tested for irritant vapors at production line #8.

Air samples for dust were taken at various locations in the plant on March 3, 1964. Air samples at production line #8 were taken on January 22, 1964, for hydrochloric acid and on April 15, 1964, for vinyl chloride vapors.

Mr. Williams has outlined in the two attached reports, the results of the air samples, and what further controls are needed to reduce the exposures.

Very truly yours,

Adam J. Koval

Adam J. Koval
Senior Safety Engineer
Loss Prevention Department

AJK:vwm

cc: Miss C. W. Kelly, Vice President & Treasurer
Mr. J. L. Kalcynski, Vice President
Mr. K. B. Young
Mr. V. J. Gentile
Mr. W. J. Pasacrita

Kentile Inc.
58 Second Avenue
Brooklyn, New York

DUST SURVEY - ASBESTOS EXPOSURE

On March 3, 1964 a dust survey was made at operations where exposure to mixed dusts containing asbestos existed. Mr. Adam Kowal, Safety Engineer, and Mr. Walter Pasacrita accompanied the writer during the survey.

To evaluate the dust exposure, air samples were collected at production lines 1, 2 and 3, and on the Banbury platform at the #2 production line.

Based on the results of the dust counts made, observation and ventilation measurements, the following conclusions have been reached.

CONCLUSIONS

1. Better control is needed at operations where asbestos material is handled. We have reached this conclusion on the basis of total dust counts of mixed dust containing asbestos as well as differential dust counts for asbestos alone. We believe that the exposure to mixed dusts containing asbestos is too high - concentrations ranged from 8 to 16 million particles per cubic foot of air and that better engineering control is feasible and desirable.

2. The major problem areas appear to be the weigh scales where Banbury skip buckets are loaded. Existing ventilation at these scales could, with some modification in the exhaust hood opening, be utilized to provide for better engineering control of the dusts generated.

3. Exposure at the Banbury platform needs further study to determine whether or not modifications in exhaust control is feasible.

4. Exposure to nuisance dusts particularly at the pigment scales is not a serious problem. However, at production line #2 total dust concentrations were in the order of 33 M.P.P.C.F. with a differential dust count for asbestos in the order of 1 M.P.P.C.F. This situation could be improved and conceivably would be changed if the modifications suggested are made at the Banbury weigh scale position at line #2.

Our recommendations for improved exhaust ventilation, discussion of our findings and dust counting data follow.

R. A. Williams
Industrial Hygienist
Loss Prevention Department

RAW:js
5/20/64

Kentile Inc.
58 Second Avenue
Brooklyn, New York

DUST SURVEY - ASBESTOS EXPOSURE

RECOMMENDATIONS

Weigh Scales - Asbestos Dust Control

1. Consideration should be given to modification of the existing exhaust control to improve capture of dust generated when asbestos and other materials are manually loaded.

2. The best control approach would be through the use of an enclosing type booth positioned over the Banbury skip and enclosing the weigh scale (see sketch enclosed).

3. The total volume of exhaust for the booth should be determined on the basis of 150 cfm/sq. ft. of booth face opening to assure positive capture of dusts generated.

4. The rear and one side of the enclosure should extend to the conveyor level or to the floor if possible to provide as complete an enclosure as possible.

DISCUSSION

Hygienic Standard

For exposure to total dust containing asbestos, the U. S. Governmental Industrial Hygienists recommend a value of 5 M.P.P.C.F. for continuous exposure.

For asbestos dust alone, the literature recommends a value of 1 M.P.P.C.F.

Current thinking concerning exposure to asbestos dust indicates that this material is implicated in lung conditions other than asbestosis. For this important reason, it would be prudent to minimize worker exposure. For nuisance dusts, a hygienic guide value of 30 M.P.P.C.F. is recommended.

Sampling Methods

To determine the dust exposure at worker positions where asbestos dust inhalation was found, air samples were collected using the midget impinger with distilled water as the capturing medium. These samples were subsequently counted using the standard light field technique with the Spencer bright line hemacytometer as the counting cell.

Total dust concentrations were made and to assist us in our evaluation of the potential exposure, differential dust counts were made of the asbestos fiber content of the dust.

RESULTS

At the scale position of production lines 1, 2 and 3, total dust concentrations were found to be in the order of 10.7, 9.0 and 10.8 respectively. Differential dust counts at the same locations indicated the asbestos fiber concentrations were generally in the order of 1 M.P.P.C.F. Much of the dust was of small particle size and in all probability was made up of fractured asbestos fiber.

EXISTING CONTROLS

At the weigh scales on lines 1 and 2, two exhaust openings 5" x 9" each are positioned in line with the face of the scale and just above the top of the Banbury skip. The worker is positioned approximately 2½ to 3' from these exhaust openings.

Ventilation measurements made at these openings indicate that an average of 2,750 fpm is entering these openings and about 1,705 cfm is exhausted at each of the scale positions.

On the basis of this quantity of air, a control velocity in the order of 42 fpm is calculated at a distance of 2' from the exhaust grills. This low (42 fpm) air movement is inadequate to control the dusts generated and should be improved.

SUGGESTED IMPROVED EXHAUST

Reference to the enclosed sketch will indicate one possible method of providing better engineering control over the dust generated when bags of asbestos are manually emptied into the Banbury skip.

The use of an enclosing type of hood would have the advantage of containing the dusts generated and preventing their dispersal in the general area, and further, could be utilized with the existing duct work with a minimum of modification. Exhaust requirements would be controlled by the size of the frontal opening and should not exceed the available exhaust capability. A minimum face velocity of 150 fpm should be used to assure positive capture. Using 150 fpm and a face opening in the order of 9 sq. ft. would require an exhaust capability of 1,350 cfm per scale.

DATA

#	Location	Time Of Sample In Minutes	Total Dust M.P.P.C.F.	*Asbestos M.P.P.C.F.
1.	Line #2 - Breathing zone of worker at asbestos scale - loading skip bucket.	20	8	Not counted
2.	Line #2 - Breathing zone of worker at pigment scale.	20	33	1.0
3.	Line #2 - Breathing zone on Banbury platform.	20	15.7	1.0
4.	Line #1 - Breathing zone at asbestos scale loading skip - very little work done.	30	10.7	.5
5.	Line #1 - Breathing zone at pigment scale.	30	17	1.0
6.	Line #3 - Breathing zone at scales - adding asbestos & Bakerlite.	20	10.8	.2
7.	Line #3 - Breathing zone at colar add - scales - (vinyl tile Brookstone).	20	8.7	Not counted

*Asbestos fibers only - 1 to 200 microns in length and 5 microns or less in diameter. These counts do not show asbestos dust particles - all particles are reflected in the total dust concentration figures reported.