

December 22, 1941

PLAINTIFF'S
EXHIBIT
BRK-48

Mr. Thos. P. Kearns, Supt.
Division of Safety and Hygiene
The Industrial Commission of Ohio
Columbus, Ohio

In re: National Tube Co.
Lorain, Ohio

1. On December 16, the writer visited the above named company's plant to check conditions under which a claimant, Casimir Szurek, had worked.
2. Contact was made with J. A. Daniel, Manager of Industrial Relations; X. North, Safety Supervisor; H. A. Getty, Casualty Agent; Al Benson, Safety Inspector who specializes in dust, fumes and gases.
3. In the foundry the company makes ingot molds and other castings that are used in the Lorain and other plants of the company.
4. The foundry is located in a building approximately 300' x 175' x 30' to the crane and consists of one main bay and two side bays. The ingot molds on which the claimant worked are large molds, 6 or more feet in height and 3 or more feet in diameter. These molds are used to pour metal into; this metal comes out of the open hearth. The cores of the molds are made by placing a layer of sand around a metal core. There is, of course, another layer of sand next to the flask. The molds are made and the metal is poured during the day. The mold is allowed to cool during the afternoon shift and the shakeout takes place at the 11 P.M. to 7 A.M. shift. The molds in which the ingot molds are made are upright when they are cast.
5. (a) In the shakeout operation the first step is the removal of cores by crane; when the cores are lifted from the molds a cloud of dust is visible. The first sample was taken at 12:55 P.M. when the employees were just completing the de-coring operation. It was taken in the area where they are following the crane; this was about 50' from the east end and in the center bay of the foundry. The sample taken contained 2.2 million particles of dust per cubic foot of air. It was observed that at the time the sample was taken, the flow of air was coming in from both ends of the building. A sand slinger was in operation about 125' from the sampling point. Other employees were shaking out stool flask rails about 50' from the point at which the sample was taken.
- (b) Following the removal of the core from the mold, the flask is laid on its side by the crane. Employees then "split the flask" that is, remove the top half of the flask with the crane. The mold is then removed from the lower half of the flask and loaded on a car where it is taken outside and the sand clinging to the casting is removed. The next sample was taken beginning at 2:40 A.M., December 18. At that time employees were removing molds from the lower half of the flask and brushing the sand from the joints of the flask. This sample contained 4.7 million particles of dust per cubic foot of air. Visible clouds of dust were observed when the casting was lifted out of the mold and also when the flask was split at the flask joints.
6. In taking the samples the writer walked around in the area in which the samples were taken. He was careful not to sample visible clouds of dust. He observed that employees in their work avoided breathing air containing visible clouds of dust. A much higher count would have been obtained, of course, if air containing these clouds of dust had been drawn through the impinger. It should be pointed out that the employees noticing the presence of Mr. Benson and the writer probably wet down the sand in the foundry more often than is usual. The above description pertains to the casting of ingot molds. It should be pointed out that smaller castings were being shaken out at the same time and that work was also being done on stools on which these ingots set when molten iron or steel is poured into them. Dust of this character has been found to

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National Tube Co.
Lorain, O

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7. Inasmuch as the company officials are very interested in the dust conditions in this foundry and are working toward extensive improvements, no specific recommendations are made at this time. It should be pointed out that the company has its own midget inspinger apparatus and is securing a set up for a micro-projector.

Respectfully submitted,

DeWitt Huffman,
Safety Engineer

DDH:MLH

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December 22, 1941

Medical Department
The Industrial Commission of Ohio
Columbus, Ohio

In re: C. B. 1210-22
Casimir Szurek

Gentlemen:

On December 18, the writer visited the National Tube Company, Lorain, Ohio, to check conditions under which the above named claimant worked. This company manufactures ingot molds and other castings used in the Lorain and other plants of the company in the foundry.

The claimant's job was the shaking out of ingot molds. This work is done on the 11 P.M. to 7 A.M. shift. The claimant worked in this capacity on that job for a period of approximately 12 years. The molds are made and poured during the day turn and cooled during the afternoon shift. The shakeout takes place at night. The first step in the shakeout is the removal of cores from the ingot molds. The large flasks are then turned on their side and the flasks are split, that is, the top half of the flask is removed. The mold is then removed from the casting and taken outside where the sand is cleaned from it. The employees then re-assemble the flasks and clean up the floor. In all of these operations, dust is created.

A sample taken during the removal of cores from the molds contained 2.2 million particles of dust per cubic foot of air. A sample taken during the removal of castings contained 4.7 million particles of dust per cubic foot of air. Dust of this character has been found to contain approximately 15 to 20% free silica.

Very truly yours,

DeWitt Huffman,
Safety Engineer

Wm: 21

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December 22, 1941

National Tube Co.
Lorain, Ohio

Gentlemen:

Copy of a report submitted to us by Mr. DeWitt Huffman
is enclosed for your information.

If there is anything further this Division can do to
assist you, kindly let us know.

Very truly yours,

Superintendent

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N.C.

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