

PRELIMINARY CONTROL TECHNOLOGY ASSESSMENT

OF

STARK CERAMICS INC.
CANTON, OHIO

Survey Conducted by:

Frank W. Godbey

Report Written by:

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Centers for Disease Control
National Institute for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, Ohio 45226

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PLACE VISITED: Stark Ceramics Inc.
Canton, Ohio

DATE OF VISIT: September 27, 1982

SURVEY TEAM: Frank W. Godbey

EMPLOYER REPRESENTATIVES: Robert Hoverkamp, Personnel Director
Richard Tillette, Vice President

EMPLOYEE REPRESENTATIVES: Sharon Scott, President, Local 715
Aluminum, Brick and Clay Workers

STANDARD INDUSTRIAL
CLASSIFICATION (SIC CODE): 3251-Brick and Structural Clay Tile

PURPOSE OF SURVEY: To perform a preliminary assessment of the
methods used in controlling potential health
hazards in the manufacture of glazed tile
products and to determine the advisability of
conducting an in-depth survey of this plant.

INTRODUCTION

The manufacture of glazed tile products involves worker exposure to a variety of potentially harmful chemical and physical agents. Some of the agents of concern are: silica, glazes, temperature extremes, and noise. Our literature review and contacts with people in the glazed tile products manufacturing industry, indicates that there is control technology in place in the industry to prevent the over exposure of workers to these agents.

The Engineering Control Technology Branch of the Division of Physical Sciences and Engineering, NIOSH is conducting a research study to assess and document the control technology being used to minimize worker exposure in the ceramics industry. Exposures to the above mentioned harmful chemical and physical agents have been documented as a cause of a variety of health problems. This walk-through survey was conducted to obtain information on the use of health control technology, when manufacturing glazed tile products and to determine the advisability of conducting an in-depth survey of this plant.

The primary contact was the company's Personnel Director, Robert Hoverkamp. During our walk-through survey, we met briefly with other management personnel and talked to a number of personnel physically involved in the manufacture of glazed tile products.

PLANT DESCRIPTION

Stark Ceramics Inc. produces glazed structural clay tile from locally-mined ball clays and shale. The company employes 166 workers and operates one shift each day, five days a week. The plant area occupies about ten acres and consists of two brick and sheet metal office and production buildings containing approximately 100,000 square feet.

PROCESS DESCRIPTION

Locally-mined ball clays and shale are brought to the plant by truck and dumped in the raw materials storage area. These raw materials are transported by a frontend loader and fed into the crusher for rough crushing. The crushed materials are transported by conveyor belt and automatically fed into a dry pan for fine grinding. The fine ground material is transported by conveyor belt and passes through heated vibrating screens with the oversize material returned to the dry pan for further grinding. The classified material is conveyed to a pug mill where it is blended with water and the mix extruded in a column, cut to size, and automatically conveyed through an automatic glaze spray. The glazed tile is placed on carts and transported by forklift truck to a tunnel drier where 80-85 percent of the moisture is removed in 24 hours. The dried tile is placed on kiln cars and allowed to set in a preheating area for 24 hours before being placed in tunnel kiln for 3-4 days at 1800^oF temperature for firing. The fired tile is placed on a conveyor belt where it is inspected and transported through an automatic grinder for sizing and finishing. The finished product is sorted, packed, and stored or shipped by truck to the consumer.

HEALTH AND SAFETY PROGRAM

The health and safety program is conducted by the Personnel Director who performs periodic inspections of the plant operations and holds monthly departmental safety meetings. The personal protective equipment program includes the use of safety glasses, safety shoes, and hard hats in designated areas of the plant.

CONTROLS

The company has installed a local exhaust ventilation system at the glaze spraying and grinding operations that appears to be effective in protecting potentially-exposed employees. The personal protective equipment program appears to be effective for eye, foot, and head protection.

CONCLUSIONS/RECOMMENDATIONS

Stark Ceramics Inc. is not recommended for an in-depth study since it does not have any sufficiently unique state-of-the-art health controls.