

PRELIMINARY CONTROL TECHNOLOGY ASSESSMENT

OF

Whitacre-Greer Fireproofing Company
Waynesburg, Ohio

Report Written by:
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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
Division of Physical Sciences and Engineering
Engineering Control Technology Branch
4676 Columbia Parkway
Cincinnati, Ohio 45226

Place Visited: Whitacre-Greer Fireproofing Company
Waynesburg, Ohio

Date of Visit: September 28, 1982

Survey Team: Frank W. Godbey

Employer Representative: C. V. Campbell
Operations Manager

Employee Representative: Vince Navarre
President of Local 578
United 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 brick products
and to determine the advisability of
conducting an indepth survey of this plant.

INTRODUCTION

The manufacture of brick involves worker exposure to a variety of potentially harmful chemical and physical agents. Some of the agents of concern are: silica, temperature extremes, and noise. Our literature review and contacts with people in the brick 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 brick products and to determine the advisability of conducting an indepth survey of this plant.

The primary contact was the company's Operations Manager, C. V. Campbell. 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 brick products.

PLANT DESCRIPTION

The Whitacre-Greer Fireproofing Company produces brick pavers, face brick, acid brick, and refractory brick from locally-mined clays. The Company employs 66 workers and operates one shift each day, five days a week. The plant area occupies about 10 acres and consists of nine buildings of brick and sheet metal construction. In addition, there are several periodic (beehive) kilns, storage bins, and raw materials receiving and storage areas.

PROCESS DESCRIPTION

Locally mined fireclays of medium hardness and shale are brought by truck to the plant raw materials storage area. These raw clays and shale, along with salvaged brick waste, are crushed in a roll crusher and transported by conveyor belt to a dry pan grinder where they are ground to 7-mesh particle size. The ground material is continuously removed through the bottom of the dry pan to classifying screens where the finely ground material passes to feeder bins and the oversize material is returned to the dry pan for further size reduction. The finished raw materials are blended with water and mixed in a pug mill. The blended mix is extruded from the pug mill and cut into slugs for forming into shapes in hydraulic presses. The final shapes are palletized and loaded onto kiln cars for transport through tunnel dryers and firing in periodic kilns. The fired shapes are transported by forklift truck to the grinding area for grinding into the

finished product. The finished product is stored or shipped by truck to the consumer.

HEALTH AND SAFETY PROGRAMS

The health and safety program is conducted by a union-management committee that holds periodic safety meetings in combination with grievance meetings. The personal protective equipment program includes 100 per cent use of head protection and the Company's making disposable face masks available to employees who want to use them.

CONTROLS

There are no specific engineering controls employed in this operation other than minimal local exhaust ventilation in the grinding area. The personal protective equipment program appears to be effective for head protection.

CONCLUSIONS/RECOMMENDATIONS

The Whitacre-Greer Fireproofing Company is not recommended for an indepth study since it does not have any sufficiently unique state-of-the-art controls.