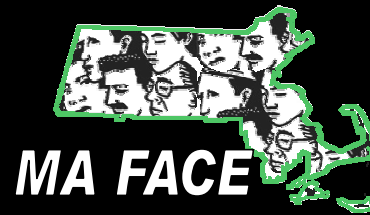


FACE Facts

FATALITY INVESTIGATION REPORT

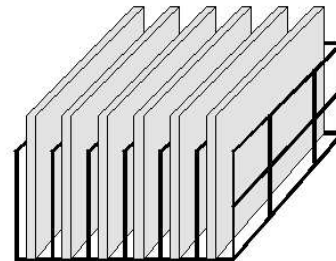
Occupational Health Surveillance Program
Massachusetts Department of Public Health
December 2006



Worker Killed When Crushed by Multiple Stone Slabs — Massachusetts

Background: In New England, six workers in the cut stone or stone distribution industry have been killed between August 2004 and April 2006. As with most work-related injuries and fatalities, these deaths could have been prevented.

Incident: A Brazilian male stone worker was fatally injured while retrieving a granite slab located in a vertical slab rack. The granite slab was the second of five stone slabs stored in the rack's end storage section between one pair of support pins. In order to create enough room to hoist the second slab out of the rack, the victim positioned himself with his back facing the first stone slab. With help from a coworker, the rack's end support pins were removed and the first stone slab was tilted away from the granite slab and onto the victim's back for support. The remaining four slabs that were located in the rack's end storage section started to tilt. All five stone slabs, weighing over 5,700 pounds, fell and fatally crushed the victim against a stone table and injured the coworker.



Slab rack with fixed support pins and individual compartments for each stone slab.

Recommendations

To reduce crushing hazards when storing and retrieving stone slabs:

- ♦ Use slab racks with fixed support pins and individual compartments for each slab.
- ♦ Never disassemble any portion of a slab rack that is storing slab materials.
- ♦ Ensure all slab racks are designed by registered professional engineers and load capacity documentation is available in the workplace.
- ♦ When available, use material handling equipment, such as gantry cranes or forklifts, with proper attachments, to lift and move slabs.
- ♦ Never stand under or next to slabs that are being moved.
- ♦ Never manually support large stone slabs.
- ♦ Always stand at the ends of stone slabs.
- ♦ When using racks that hold more than one slab in a section, ensure that:
 1. Slabs are placed in racks by height.
 2. Rack sections are never overcrowded with stone slabs.
 3. All slabs stored in the rack are tied down.

In addition, employers should:

- ♦ Develop, implement, and enforce a comprehensive written safety program, which includes standard operating procedures (SOPs) for receiving, storing and retrieving stone slabs.
- ♦ Provide training to employees on these SOPs and about hazard recognition and avoidance of unsafe work conditions.

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Respiratory Hazards

Respiratory hazards, although not a factor in this incident, should be addressed by employers.

Sand and stone materials, such as granite, contain silica. When cutting and buffing stone materials, employees can inhale dust containing silica. Exposure to silica can cause the lung disease silicosis. Silicosis is preventable, but once you have silicosis it is incurable, debilitating, and can be fatal. Employers should install and maintain engineering controls (exhaust ventilation, dust collection systems, water sprays) to eliminate or reduce the amount of silica in the air and train workers on silica hazards. For more information, see the health and safety resources for silica below.

Health and Safety Resources

In Massachusetts:

- ♦ Massachusetts Division of Occupational Safety
Offers free consultation services to help employers improve their safety and health programs and train employees
www.mass.gov/dos/consult/
- ♦ Massachusetts Department of Industrial Accidents
Has grants available for providing workplace health and safety training to employers/employees in companies covered by the Massachusetts Workers' Compensation Insurance Law
www.mass.gov/dia/Safety/

For stone slab movement and storage:

- ♦ OSHA: Safety and Health Information Bulletin (SHIB) 09-08-2005
Hazards Associated with Transporting Granite and Marble Slabs
www.osha.gov/dts/shib/shib090805.pdf

For silica:

- ♦ NIOSH: A Guide To Working Safely With Silica: If It's Silica, It's Not Just Dust (1997)
www.cdc.gov/niosh/pdfs/silicax.pdf
- ♦ NIOSH Publication No. 2004-108: Silicosis: Learn the Facts!
www.cdc.gov/niosh/docs/2004-108/
- ♦ OSHA Silica eTool
www.osha.gov/SLTC/etools/silica/
- ♦ The Center to Protect Workers' Rights: Silica Hazard Alert
www.cpwv.com/pdfs/pubs/hazard_alerts/KFsilica.pdf
- ♦ NJDHSS Publication: Dry Cutting and Grinding is Risky Business
www.nj.gov/health/eoh/survweb/documents/drycutting.pdf

The Massachusetts Department of Public Health (MDPH), in cooperation with the National Institute for Occupational Safety and Health, conducts research oriented investigations of fatal work-related injuries. The project, known as FACE (Fatality Assessment and Control Evaluation), seeks to identify the factors that contribute to occupational fatalities. The FACE project will help in the development and use of improved safety measures for preventing future work-related fatal injuries.

We hope you find the "FACE Facts" informative and that you will share it with others. This document is in the public domain and may be copied freely and can be found on the MDPH Web site at www.mass.gov/dph/ohsp. If you have comments or questions, please call the FACE Project at 1-800-338-5223.

