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M.O.V.E.
Musculoskeletal Injury Prevention
& Occupational Virtual Education

AGC

Soft Tissue Injury Prevention Tool

Tip Sheets

Trade: Concrete Work

Job Task: Finishing - Manual Screeding

General Tasks

- Screeding/rodding is the first step in the process of leveling and smoothing just-poured concrete. Screeding/rodding involves pulling a device such as a 2x4 over fresh poured concrete to even out and fill in the surface prior to the completion of finer finishing processes such as floating or troweling.
- A single worker may screed a narrow pour area, whereas two workers generally work as a team to screed wider pours.

Common Tools

- 2X4 for Manual Screeding
- Walk Behind Power Screed

Potential Risk Factors

Risk Factors can lead to increased risk for Work Related Musculoskeletal Disorders (WMSD's)

Extreme Forward Back Bending

- Frequent and sustained extreme forward bending for extended periods when manually screeding concrete during large mat/deck pours.

High Pinch Grip Force with Highly Repetitive Motion

- Manual screeding requires extended periods of sustained high pinch grip force of 2X4 coupled with repetitive hand/wrist and arm motions when pulling concrete.

High Pinch Grip Force with Awkward Wrist Postures

- Manual screeding requires extended periods of sustained high pinch grip force of 2X4 coupled with awkward hand/wrist and shoulder postures when pulling concrete.

Highly Repetitive Motion with High Forceful Hand Exertions

- Manual screeding requires extended periods of highly repetitive motion when manually rodding with 2X4. The HIGHEST RISK may be realized when concrete pours are a 1000 yards or more.

Possible Solutions

Awkward Posture, High Grip Force & Repetitive Motion Solutions:

- Minimize awkward back postures by rotating every 1-2 hours between screeding/rodding and other finishing tasks.
- Stretch frequently, particularly performing back and upper extremity stretches.
- Utilize a power screed as often as possible. Use of a power screed also pulls concrete and helps to minimize concrete raking.
- Limit manual rodding/screeding to confined areas with limited space such as around electrical and plumbing stubbing.

Potential Benefits

- Increases blood flow and reduce muscle tension.
- Reduces exertion of lower back.
- Increases productivity.
- Reduces strain on hand and arm muscles.

Feasibility

- Engineer Control
- Administrative Control
- Work Practice Control

Estimated Cost of Intervention

- $919.97 for a Single person Power Screed