

Mazzella Wire Rope & Sling Co., Cleveland

Intervention Key Words: Bridge Crane, Anti-Fatigue Matting, Jib Crane, Storage Rack, Synthetic Sling

Industry: Manufacturing

Risk Factor(s): Repetitive motion, Awkward Posture- Back deviations, Shoulder deviations, Squatting/Kneeling, Manual Handling- Lifting/Carrying, High Hand Force- Pinching/Gripping

Situation:

Mazzella Wire Rope & Sling Co. is a complete wire rope, chain and synthetic sling manufacturer. They also provide services such as product surveys, safety seminars, product recommendations, and sling inspection designed to maximize the value of the products. Do to the heavy nature of their products Cumulative Trauma Disorders (CTDs) have become a common concern among employees. Parts can weigh in excess of 100 lbs, more than twice the NIOSH guideline limit. In addition, some of the tasks require sustained forces measuring over 120 lbs to complete. Other CTD risks include repetition, excessive bending/reaching and awkward postures.

Solution:

Mazzella Wire Rope & Sling Co. purchased several items to address their CTD issues. A freestanding bridge crane was erected to assist lifting in the chain department, which has four separate hoisting units to serve each workstation. They also purchased another bridge crane to service both the synthetic sling assembly area and the proof tester. Also, a jib crane will be mounted at the 2500 ton swaging press, which will significantly reduce manual handling and eliminate the need utilize 2 employees when loading heavy collars and couplings into the press. A storage rack with roll-out shelving was obtained to assist with product storage and anti-fatigue matting was placed in various workstations to reduce physical stress on workers lower extremities. Total cost for the intervention was \$73,360. Mazzella received \$40,000 in assistance from SafetyGrant\$ to offset the costs.

Results:

- CTD, Restricted Days and Lost Days rates were at 0 (per 200,000 hours worked) the year prior to the intervention and remained at 0 for 24 months following.
- Employee Turnover rate increased following the intervention.
- CTD Risk Factor scores, averaged over 6 tasks, decreased 50% after the equipment was purchased.