

AMERICAN QUALITY STRIPPING INC., Sandusky

Intervention Key Words: Cart, Lift Table, Chute, Lifter, Table, Traction, Slippery, Slips, Anti-Fatigue Matting, Floor Scrubber, Pumps, Hoses, Plates, Rack, Drum, Barrel, Spill Containment System

Industry: Manufacturing

Risk Factor(s): Repetitive motion, Awkward Posture- Back deviations, Manual Handling- Lifting/Carrying

Situation:

American Quality Stripping Inc. removes paint from various manufactured parts for the automotive and medical industries. The process can be accomplished by several different methods, depending on the type of material they are working with. The three main processes that they utilize are termed: Burn-off and Pickle, Chemical Stripping and Media Blasting. Cumulative Trauma Disorder (CTD) risks can be found in all of these processes which require considerable bending, twisting, lifting and repetition. In addition, numerous environmental risk factors such as standing water and chemicals augment the already abundant CTD dangers.



Wet floors lead to hazardous working conditions



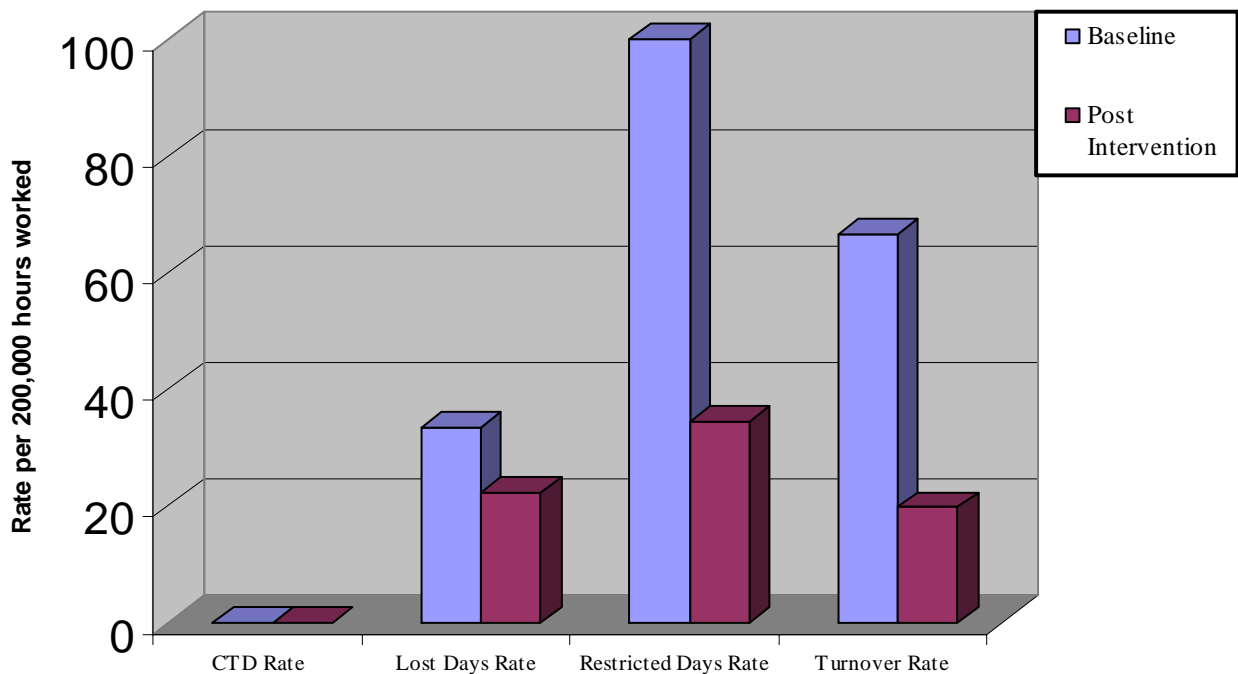
The screens in this filter press weigh 40 lbs and require cleaning every 2 hours

Solution:

American Quality Stripping Inc. introduced several different interventions to combat their CTD risks. The first was to have lift/recovery carts built for moving the parts between workstations. The carts are higher off the floor than the previous carts and also have a containment catch basin underneath to catch any chemicals dripping from the parts. This helps reduce the amount of bending and the containment basin allows the floors to stay drier and cleaner. Another intervention involved adding anti-fatigue mats wherever static workplaces were found and applying a traction grit product to floor areas that were

subjected to water and chemicals. A power floor scraper was purchased to clean the floors periodically, a task that was once done by kneeling workers with 6" scrapers. Lift tables and conveyors were installed to allow easy loading and unloading of parts and quick transfer between adjacent stations. To help reduce some environmental risk factors, AQS modified the placement of a water pump station and built a ramp up a step that ran through the middle of a doorway. By relocating their water pumps to a higher level, they were able to remove a number of hoses and wires that were once hidden by standing water. Also, an old filter press was replaced by a one that requires significantly less maintenance. The old press needed to be cleaned every 2 hours. This involved removing 40 lb racks from the machine at a high level. The new machine is virtually self-cleaning, and dramatically reduces the CTD risks placed on the workers. Finally, barrel carts were purchased to assist the workers in transporting 55 gallon drums from a stock room, where they once had to drag the barrels from. The total for all interventions was \$45,151. American Quality Stripping Inc. received a \$36,121 award from Safety Grant\$ to help offset their costs.

Results:



- When standardized per 200,000 hours worked, CTD rate remained at 0 over a 2 year period following the intervention.
- Lost Days rate decreased 33%, Restricted Days rate decreased 65% and Turnover Rate decreased 70% over the same time period.
- Risk factor scores for 4 tasks were measured before and after the intervention was introduced. An average reduction of 44% was noted following the intervention.