

I. Schumann & Co., Bedford

Intervention Key Words: Lift/Tilt Tables, Pallet

Industry: Manufacturing

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

Situation:

I. Schumann & Co. produces brass and bronze ingots (solid bars of metal) from recycled scrap metal they obtain from various sources. The process begins with melting down the scrap and then pouring it into molds. The finished products, which weigh 25 lbs each, are then palletized by hand onto skids containing 106 ingots. Each of the 10 employees classified as palletizers load an average of 20 pallets per day. This equates to each worker transferring over 50,000 lbs of metal per day. In addition, the ingots are transported to each work station in deep bins and as they are emptied the worker must reach deeper into the bin to lift the pieces. It's no surprise that this area of the plant has the highest incidence and greatest risk for Cumulative Trauma Disorders (CTDs). Risk factors include extreme bending, reaching, and twisting while repetitiously transferring ingots from the bins to pallets.



Worker loads ingots onto pallets

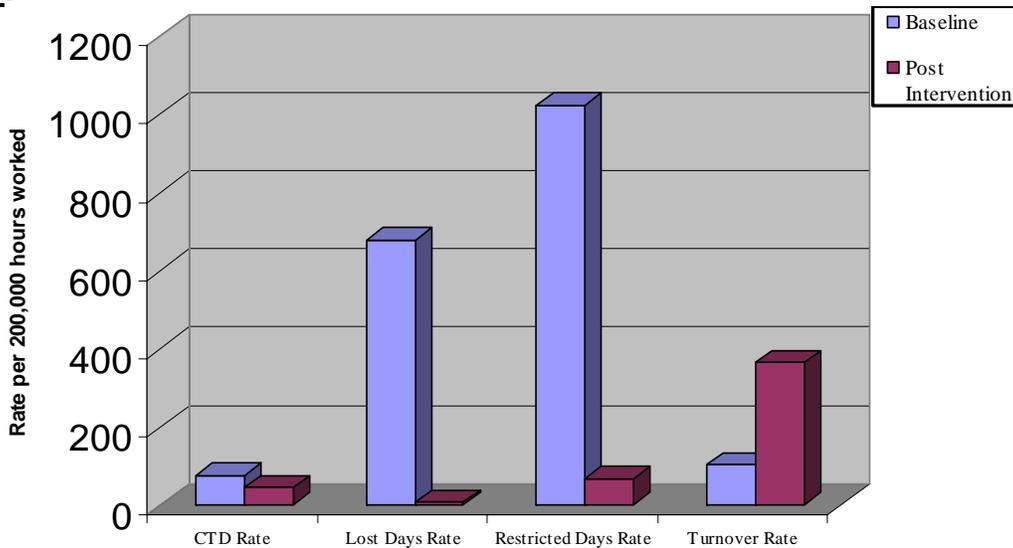
Solution:

The goal of I. Schumann & Co. was to reduce the CTD risk factors in this department, thus reducing the number of CTD injuries. In order to do this, they needed to reduce the motions involved with the task. Tilting lift tables were purchased to alleviate the extreme bending required to reach the ingots. These tables can be raised and tilted to facilitate easy removal of ingots from the transfer bins. The total cost to purchase and install 8 tables was \$23,776. I. Schumann was awarded \$19,021 from Safety Grant\$ to help offset the costs.

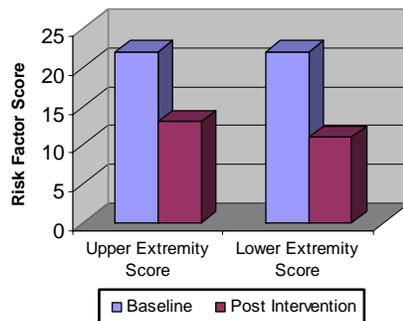


New lift tables effectively reduce back strain while loading pallets

Results:



- CTD Rate decreased from 77.4 to 45.6 incidents per 200,000 hours worked, a 41% improvement in 2 years following the intervention.
- A decrease of at least 94% was observed for Lost Days rate and Restricted Days rate (per 200,000 hours worked) in the 2 years following the intervention when compared to the year prior to any changes.
- An increase in Turnover rate was noted, but may not be directly attributed to the intervention.



- Upper and Lower Extremity Risk Factor scores decreased by an average of 45%.