Spec-Temp, Inc., Antwerp

Intervention Key Words: Bottero CNC cut/breakout Grind Line, Robotic Loader
Industry: Manufacturing
Risk Factor(s): Awkward Posture- Back deviations, Shoulder deviations, Manual Handling- Lifting/Carrying, Direct Mechanical Pressure, Vibration- Localized

Situation:

Spec-Temp, Inc. fabricates and tempers glass to various shapes and sizes. Due to its fragile nature, historically, glass has been transferred and worked on manually. This poses significant Cumulative Trauma Disorder risks upon workers due to its awkward shape and weight. In addition, grinder and cutters create substantial vibrations and the machines are built to accommodate a wide variety of shape and sizes of glass. Workers handling smaller pieces of glass must reach over the work areas designed for larger pieces, making tasks more difficult and hazardous. Spec-Temp records show that between 1/1/97 and 10/22/99, 63% of their total injuries and 67% of their lost time days occurred at glass handling workstations.

Heavy Lifting and Awkward Postures can result in CTDs

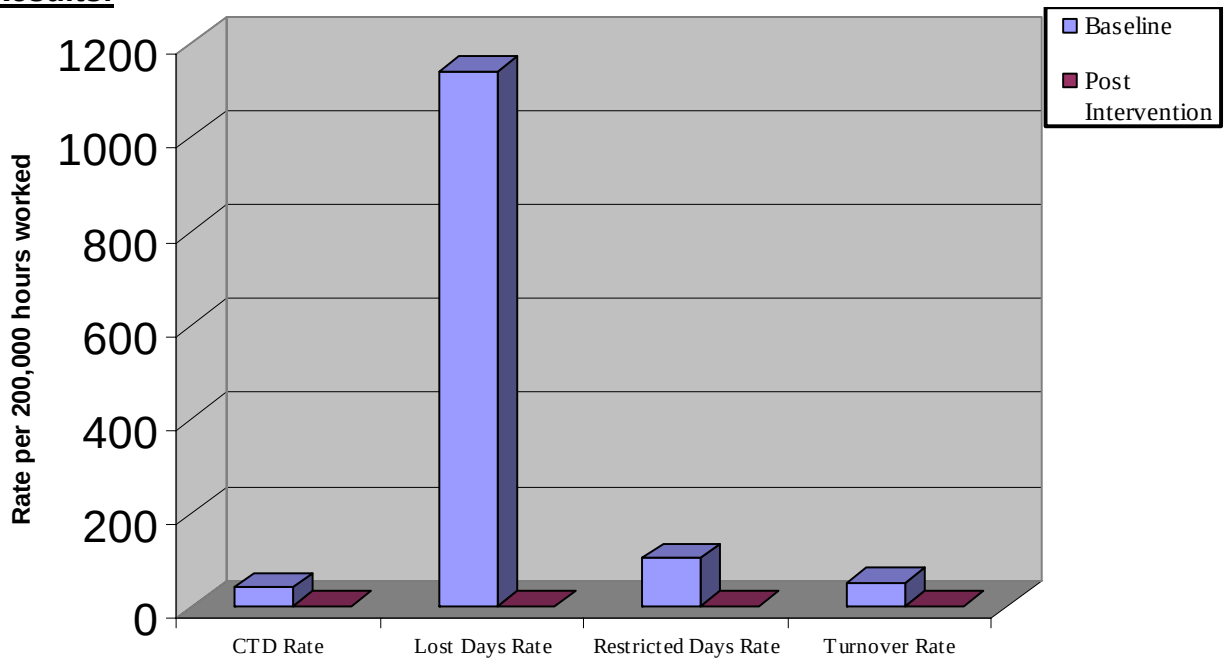
Solution:

Spec-Temp sought the assistance of an Italian company, Bottero, to assist them with this problem. Bottero manufactured a robotic system that automatically loads, cuts, breaks and grinds the edges of the glass. This machine replaced a number of high risk steps although there is still a small amount of manual work required. Total cost for the intervention

was $565,000. Safety Grant$ awarded $40,000 to Spec-Temp to offset the costs.

Cutter and Robot in action

Results:



- A 100% improvement was seen in CTD, Lost Days, Restricted Days and Turnover rates (standardized per 200,000 hours worked) in the 24 months following the intervention when compared to the year prior.

- The new machine maintains the productivity of 2.5 production lines using 74% fewer employees.

- CTD Risk Factor scores decreased from 39 to 21 following the intervention, a 46% improvement.