

***“Safety/Ergonomics Best
Practice Success Story
Through Innovation”***

Containerboard Mill Strapper Spool Change Ergonomic Improvement



Before

After



Problem Issue: When changing the steel strapper banding on any of our (3) machines, the operator must lift the 90lb strapper spool twice while being in a poor ergonomic position.

In order to solve the issue the operations team, maintenance team and engineering team were involved:

Vincent Arlukiewicz PM3 Winder Technician

John Dzioba Maintenance Mechanical T2 Technician

Steven Rolfe Engineering

David DeMaio Reliability Team Coordinator

There were several iterations of designs and testing that occurred before reaching the final design.

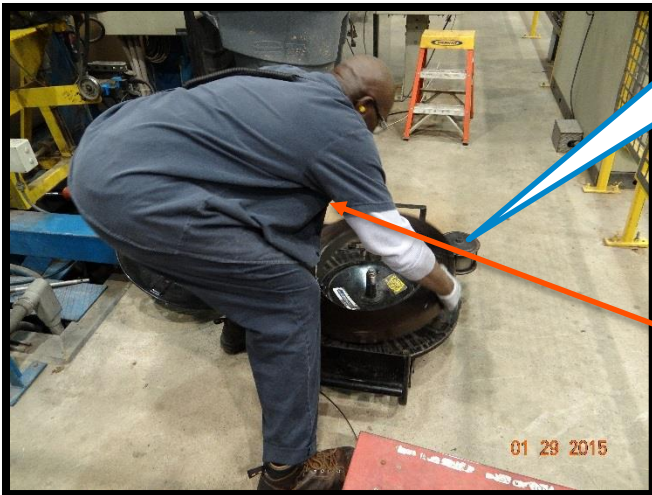
These are the “before” pictures and operations:



1.) Operator must tip the strapper assembly 90 degrees to the floor, the pivot point is just off the floor

2.) The operator must lift a 90lb steel spool and position it over the assembly

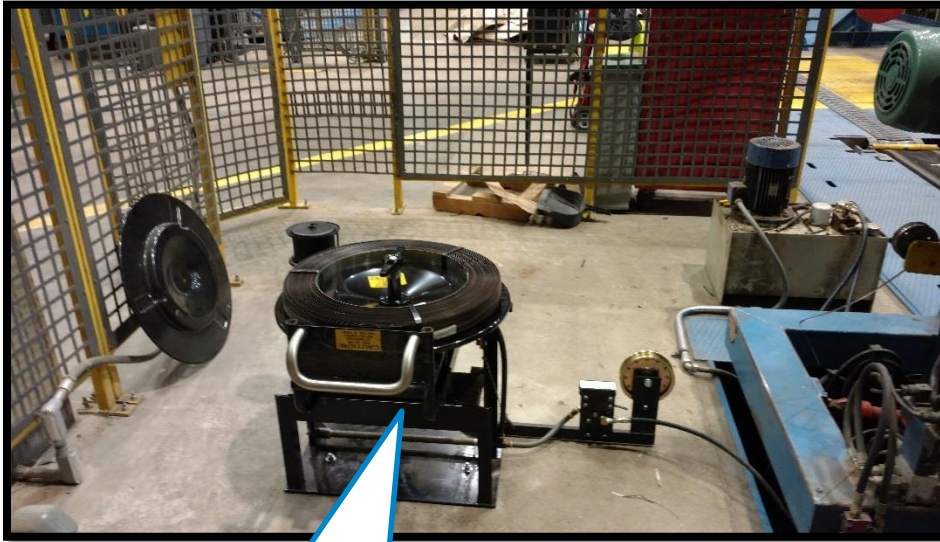
3.) The operator must lift the entire assembly upright, 90+ lbs.



Note poor ergonomic positioning



These are the “After” pictures and operations:



New design has pivot position 18 inches off the floor, requiring only 20 lbs. of force instead of 90 lbs. Also, easy grip handle added.

Electric motor driven winch lifts and moves the new strapper spool into position, Note clamping device in yellow, clamps with just (1) clamp arm



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In Summary

Using our unique talents and capabilities, the new system provides for injury-free changing of the heavy, sharp strapper spools.

The double lifting of 90lb assemblies has been eliminated, other ergonomic improvements were also made such as relocating the position of the spool direction which eliminated double handling of the spools.

Special handles were added and safety pins to prevent movement during a spool change.