

Excess Treat Drip Mitigation



Team C

Abdullah Al-Muhatil, Hussain Yousif, John Thurner and Zack Johnson

Industry Representative Faculty Advisor

Dan Jackson

Robert Bach



Project Summary

Andersen Corporation was experiencing over 30% scrap on their wood painting lines. This was due to excess wood treatment building up on the bottom of their wooden parts. This caused the paint to chip. Scrap costs for Andersen were over \$3.5 million per year. Andersen had tried multiple times to fix this problem and was only successful with an expensive and large chemical treatment. This solution was not able to be implemented on other paint lines. Team C created a mechanical solution using an air blower to direct a sheet of air to remove the excess treatment from the bottom of the wooden parts.

Design Goal

Andersen wanted a simple mechanical design that requires little to no maintenance. This design must fit on their current line configuration. Due to electrical safety standards pictures were not allowed in the paint line area.



Design Constraints

- Electrical safety standards Class 1 Div 1
- Line speed (12 parts per minute)
- Visual inspection criteria for scrap (excess treatment removed and no contamination)
- Space limitations (mounted at the end of the drying oven)
- Must work for all parts (6, 4, 2-part shields)
- Minimal maintenance
- No compressed air