

M1.06 – Calendaring Roll Mill

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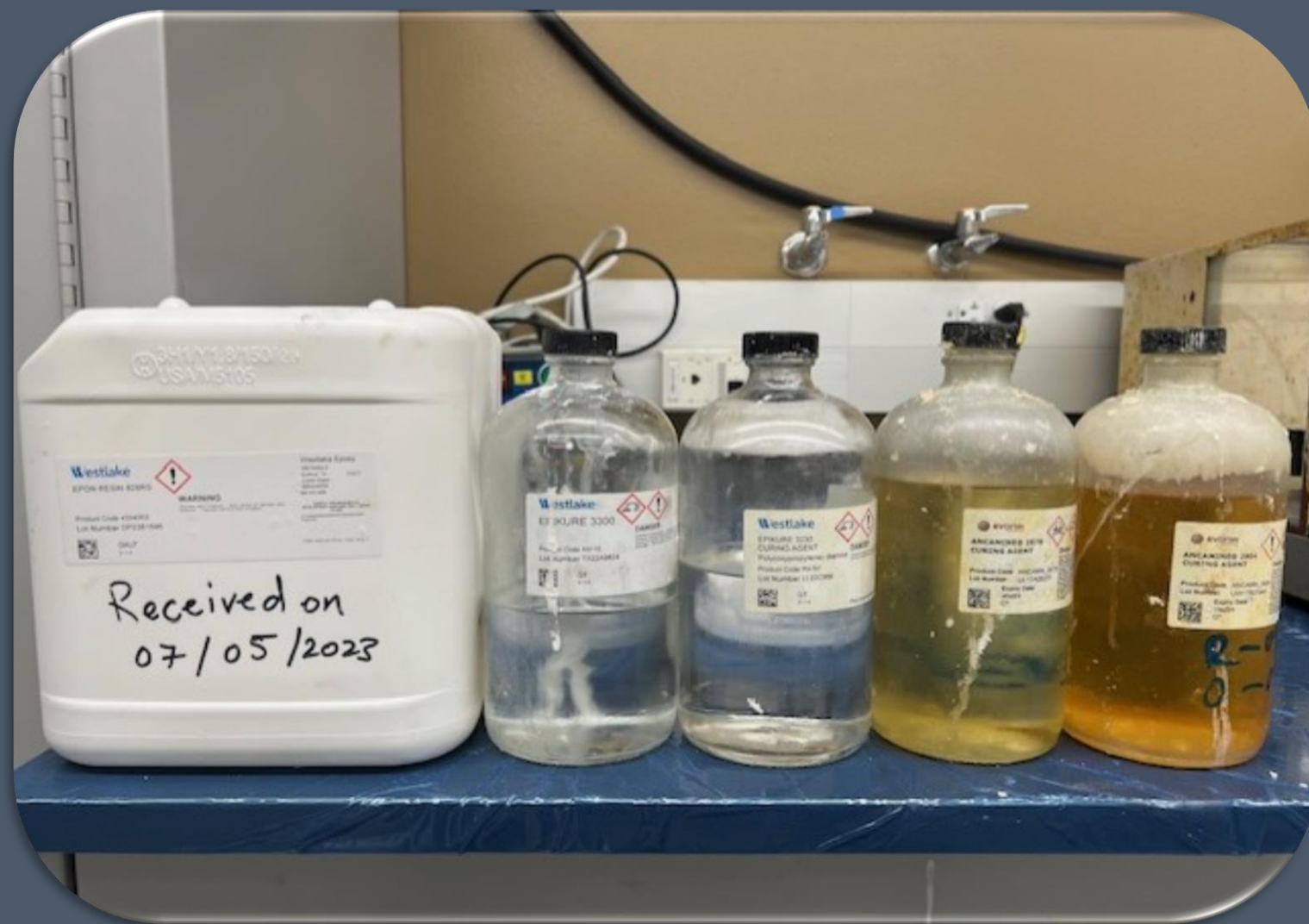


Goal

- Provide Makerspace a small-scale and portable Calendaring Roll Mill
 - Continuation of Past Senior Design Project
 - Test, and improve the Calendaring Roll Mill
- Be able to manufacture composite materials
- Perform Physical and Mechanical tests on manufactured parts
- Evaluate Finished Product

Material Index

Resin Formulation



1. EPON Resin 828
2. EPIKURE 3300
3. EPIKURE 3230
4. ANCAMINE 2678
5. ANCAMINE 2904

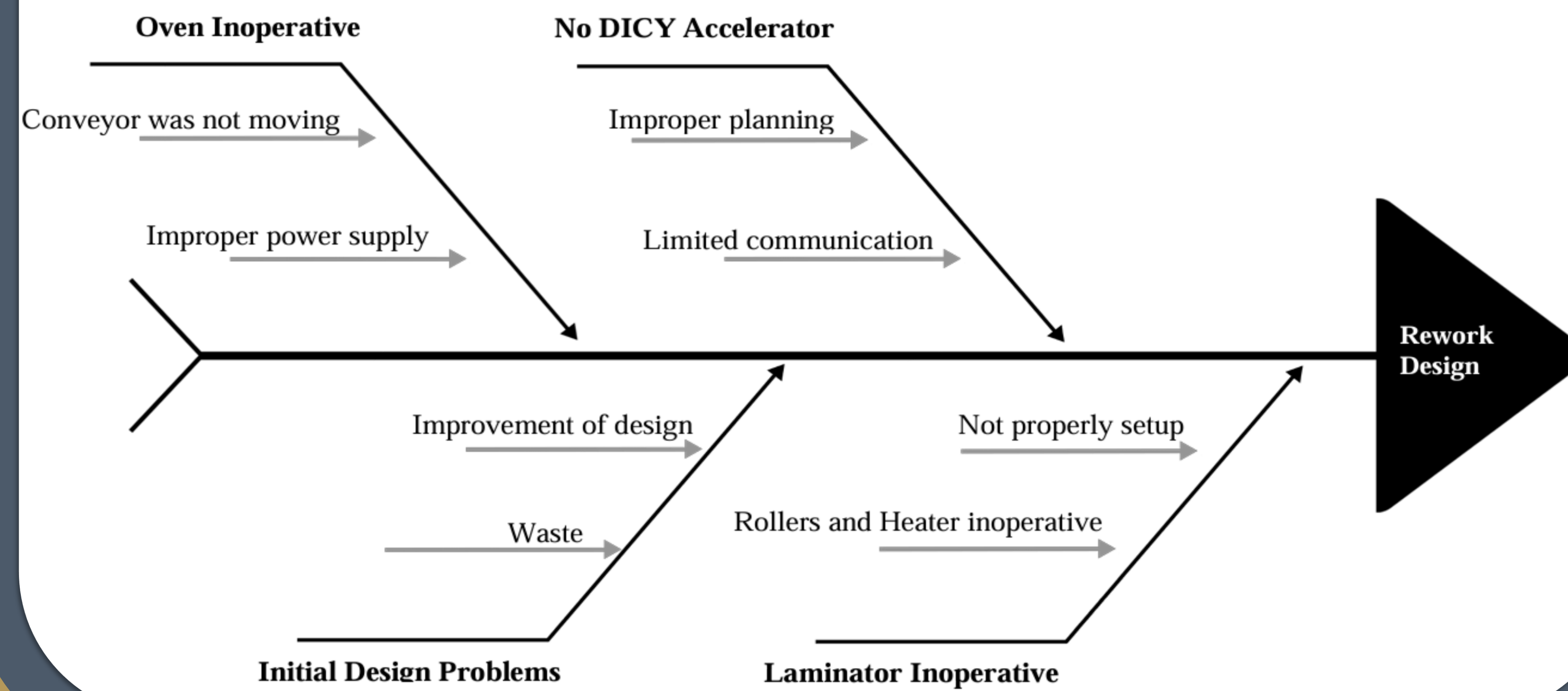
Fabric



E-Glass Fiber
 Weave Pattern: +/- 45 degrees stitched

Problems

Cause Effect Diagram



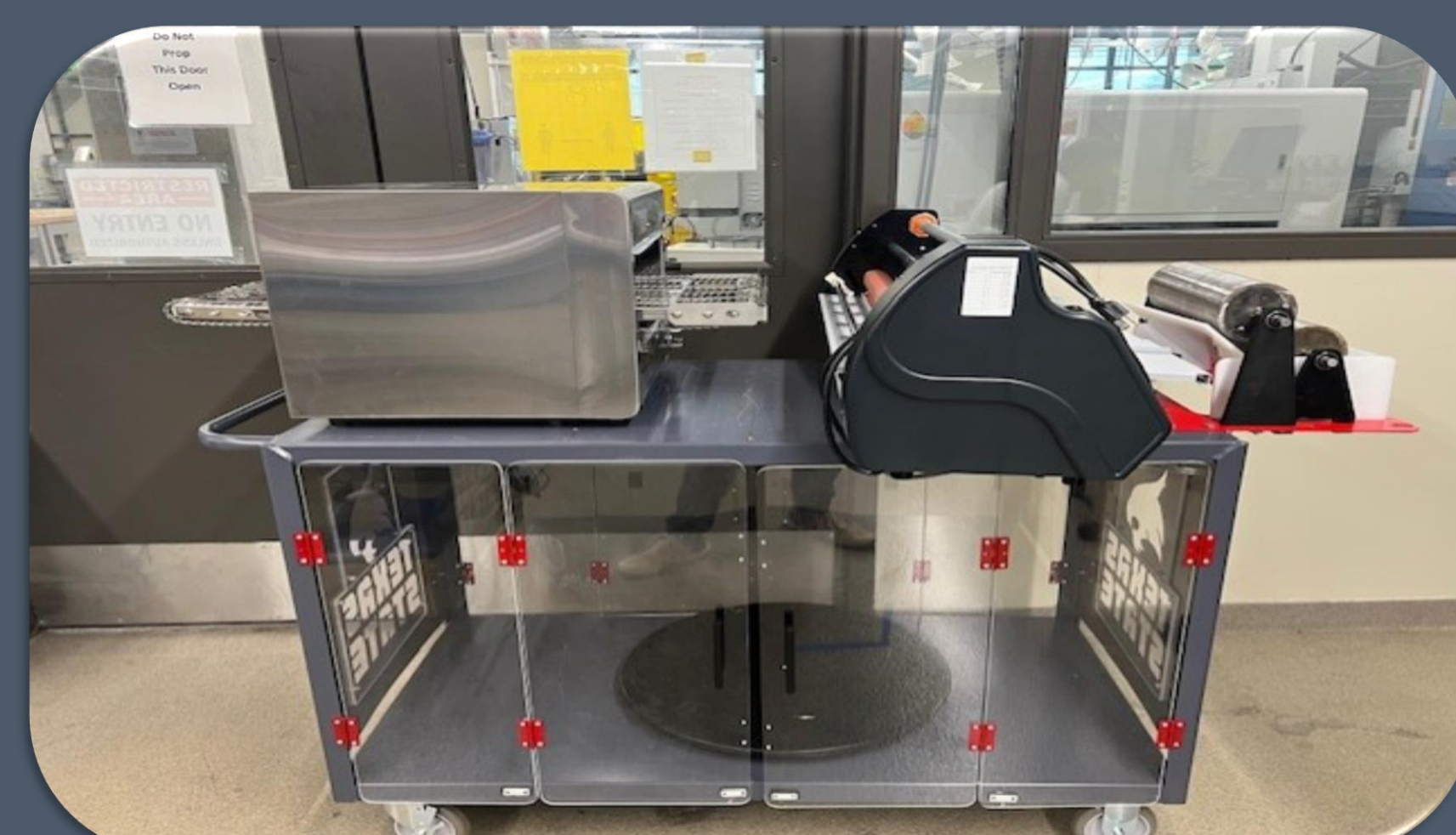
Solutions

Improved Layout

Old



New

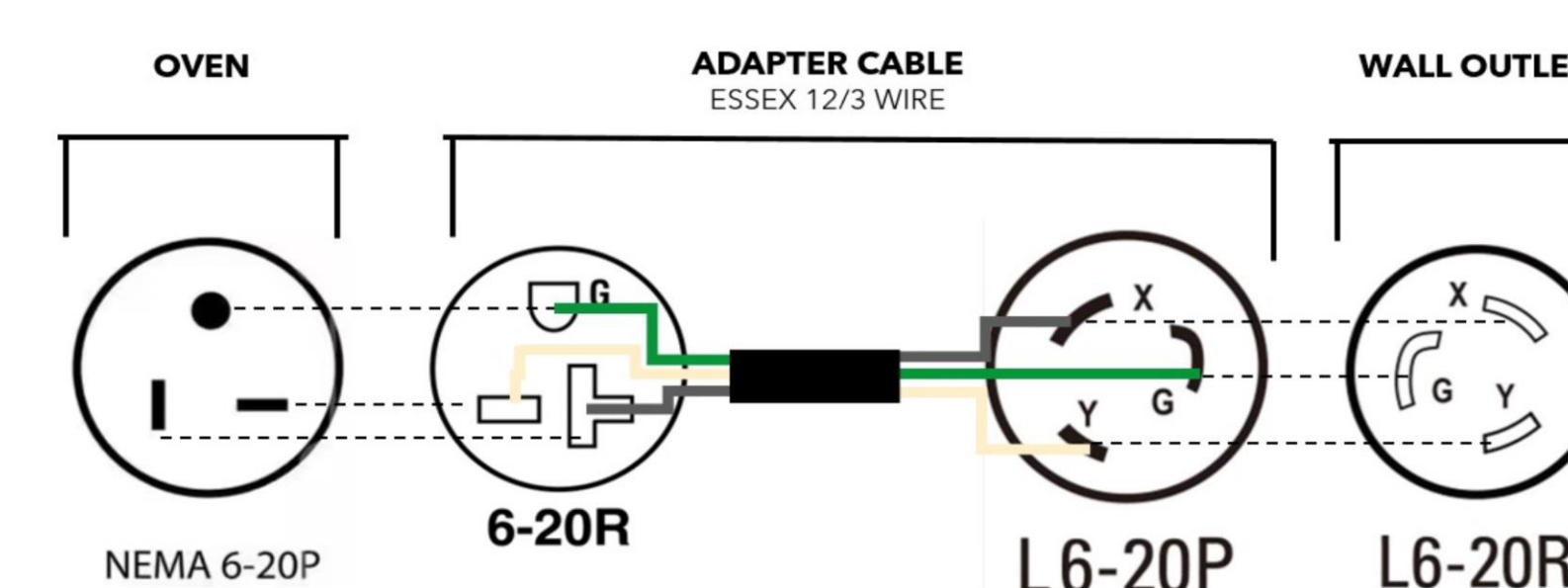


Adaptive Wiring



Made adapter for Oven's 220V/1ph Outlet to go to 3ph

CRM - OVEN WIRE DIAGRAM

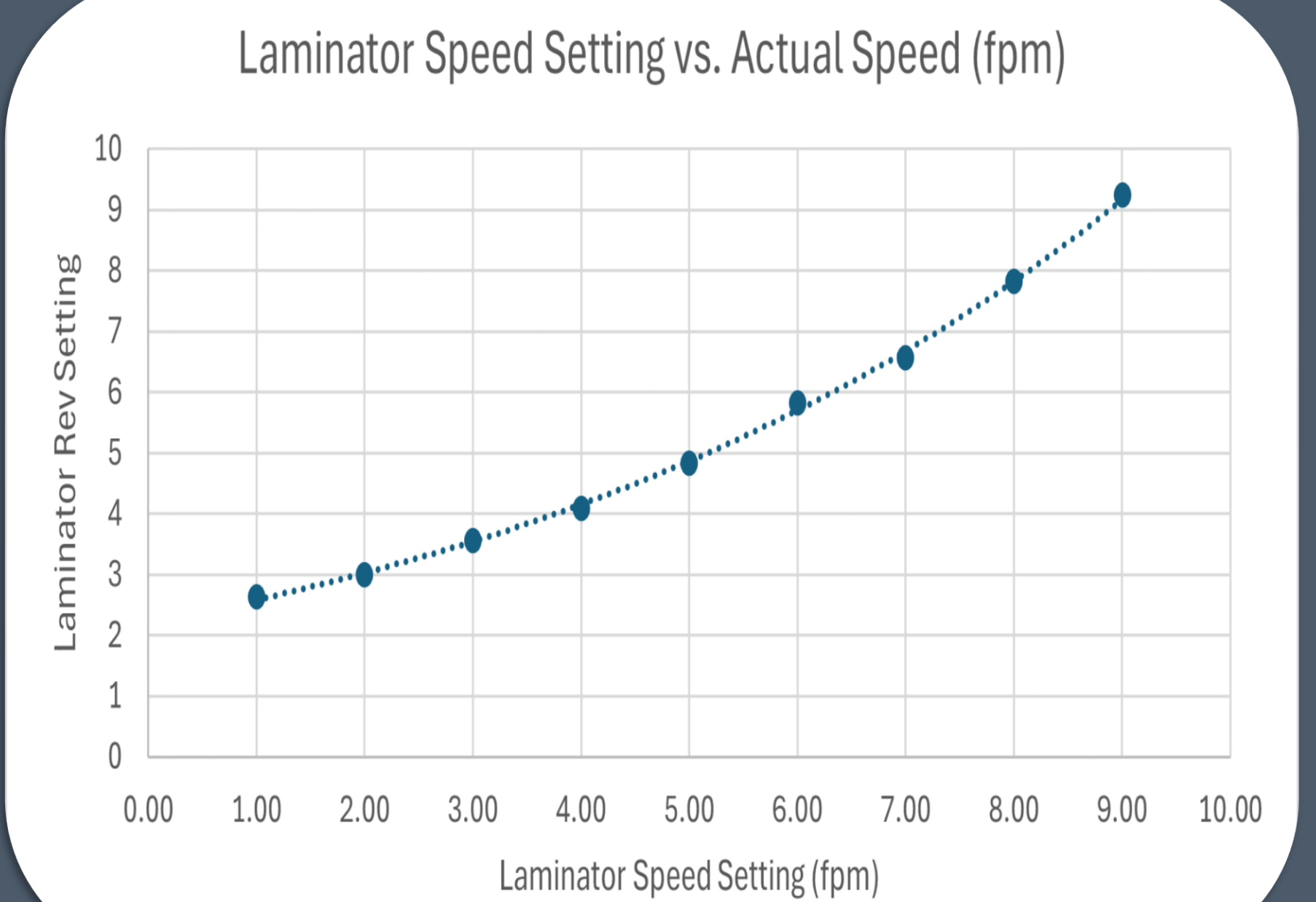


Data

Speed Testing



Results



What's Next

Future Scope

- Complete Run of Manufacturing Process
- Research Industry Standard Resin Formulation
- Design Ways to Reduce Waste of Resin