

# UI Debalers 2.0

## Instrumentation and Data Collection for Debaler Project Meeting minutes

**Location:** JML

**Date:** 9-30-2020

**Attendees:** Evan Allen, Nathan Stout, Benjamin Zimmerman, & Hope de Avila

**Time:** 3:00-4:00 p.m.

### • Meeting Agenda

- Take a tour of the JML shop with the manager Chad
- Discuss the suggested edits made from the mentor on the product requirements document
- Discuss new design improvements to the debaler

### • Meeting Notes

- The team was given a tour of the JML shops and brief instruction on operation requirements
  - We looked at the tools and other machinery in JML 72
  - We looked at the plasma table, lathe, and laser cutter in JML 80
- The team looked over the edits made by the mentor and made some revisions to the product requirement document
  - We added an extra safety req., SI units along with Imperial units, etc.
- The team talked about a few design ideas brought up by members
  - Looked over Evan's sketches/design ideas
    - Conveyor: The chain and channel conveyor seems more desirable than the belt because with a belt conveyor, one has to worry about tension and the angle must be perfect to prevent walking
    - Controls: Both the high frequency hall effect sensor to determine angular velocity of motor, and ultrasonic motion sensor seem suitable for this application to sense bale jamming and chute clogs.
    - Improvement to Current Design: The brush is more desirable to clean off the tines, and the chute extension could/should utilize a door to access the angle adjusting mechanism rather than the opening

- Looked over Ben's frame drawing completed in SolidWorks and latches that could be used to attach a conveyor to the frame.
- All members will keep working on designs to hopefully get a sense of direction on where the team would like to go with the prototype. A couple design ideas and proof of concept is desired for snapshot 1.

• **Action Items In-Progress**

<b>Action Item</b>	<b>Personnel Responsible</b>	<b>Status</b>	<b>Deadline</b>
PRD Edits from Instructor	All Members	Completed	9-30-2020
Design Ideas for infeed conveyor	All Members	Completed	9-30-2020

• **New Action Items**

<b>Action Item</b>	<b>Personnel Responsible</b>	<b>Status</b>	<b>Deadline</b>
Sketches of System	All members	In-Progress	10-7-2020