Senior Capstone Design

Project: Forest Products Debaler

Team: UI-Debalers Date: 10/24/19

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Design Validation Plan & Results (DVP&R)

Requirement	Test	Test Subject	Target Date	Result	Recommendation
Minimal generation of fines during debaling of material	Fluff bale material apart and measure fines already contained in bale before processing	-	10/21/19	Tested 10/21/19 -1 flake of straw contains approximately 2 oz of fines, 1 flake of grass contains approximately 4 oz	
Force requiered to draw claws through material	Draw a pitchfork through the bale material in different orientations and measure the force requiered to do so	1 straw bale and 1 grass bale	10/21/19	Tested 10/21/19 - Force to draw pitchfork though bale at a depth of 2" ranges from 5-15lbs	Draw claws through bale perpendicular to the orientation of the material, as this was observed to require much less force and casues better dispersion of material
Consistant feed of bales into debaling mechanism	Test whether a claw feed, conveyor feed, or gravity feed best suit the goal of the project	1 bale, as well as conveyor, claw, gravity feed mechanisms	11/18/19		