Reducing Cycle Time of the Infusion Preparation Process

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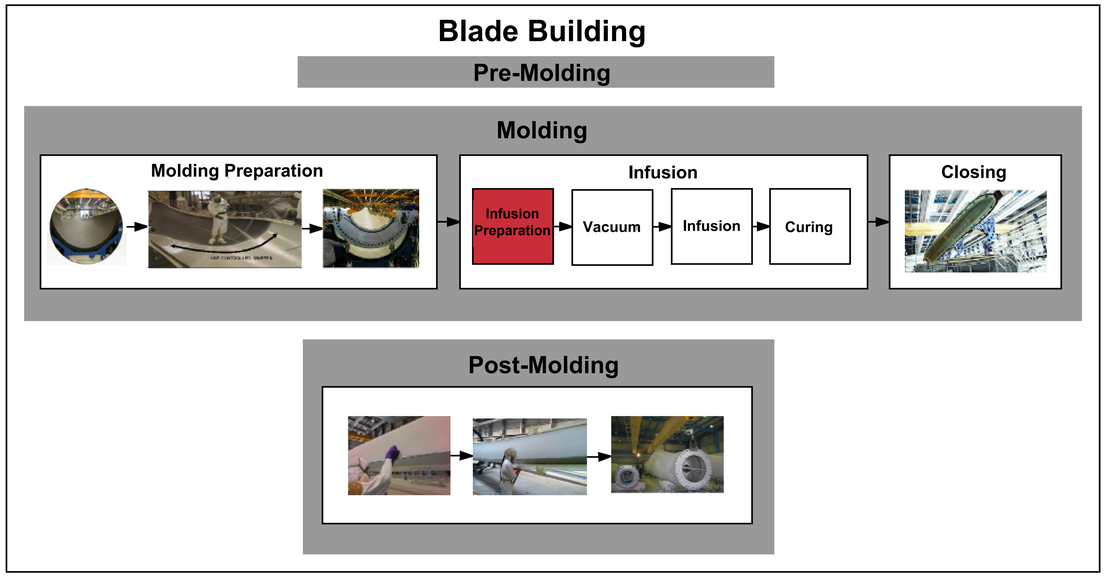
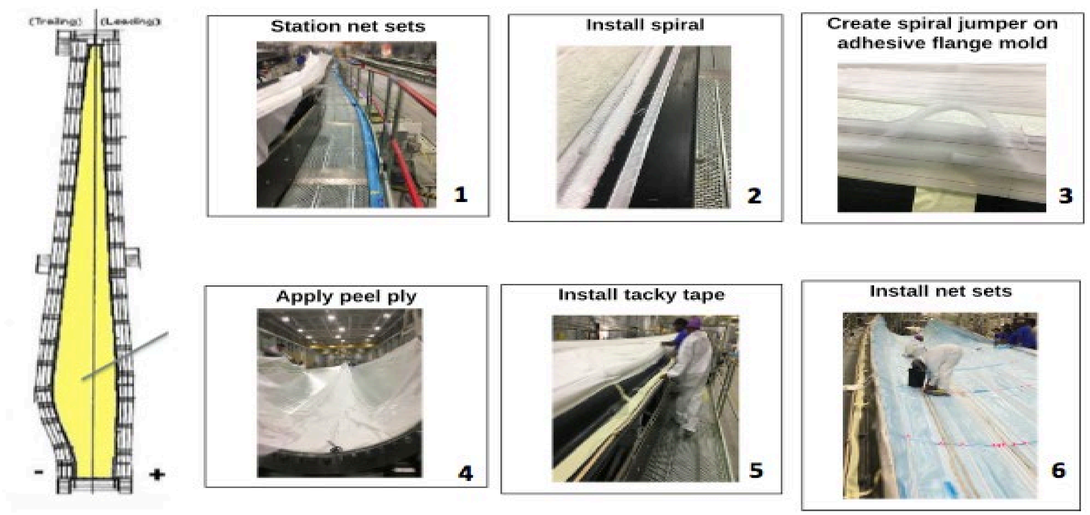
ABSTRACT

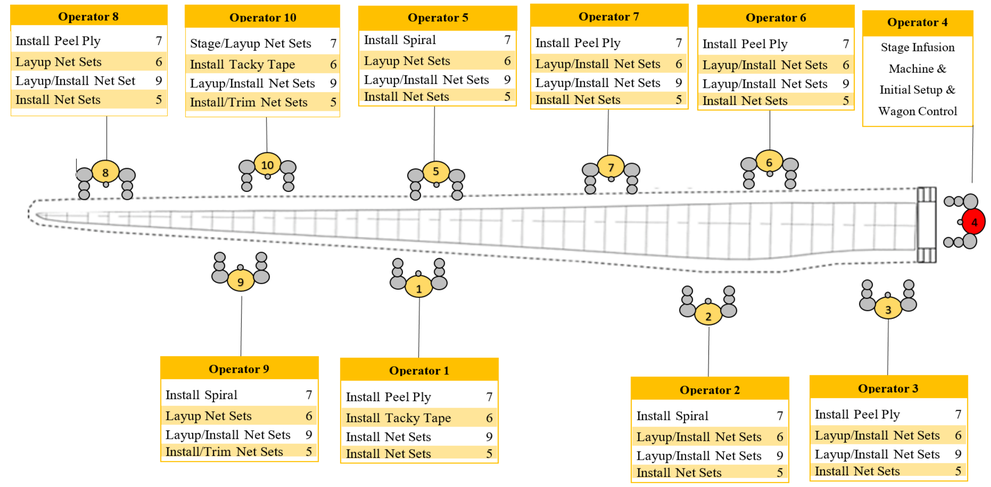
For this project, our team has partnered with LM Wind Power, the world's largest manufacturer of wind turbine blades. The making of a wind blade requires many manufacturing processes. This project specifically focuses on one, the infusion preparation process. The goals of this project have been to reduce the cycle time of this process, while maintaining or improving quality, and to develop a tool to aid in later process improvement. As part of a new big data initiative at LM, the company has been rolling out a new data collection tool formally known as "Cycle Time Tracker". With this tool comes increased granularity in their data which our team has been able to leverage to expand upon a previous tool used at LM. With our new tool, production managers will be able to track learning rates at the sub process level and determine if they are meeting the target production rates. One of the challenges we have faced is adapting to the range of blade sizes produced by LM. Understanding the relationship between blade size and cycle times was crucial in extrapolating any process changes as well as developing our decision support tool. While our team has been working specifically with LM's Little Rock facility, we expect to see the changes that result from this project implemented across their thirteen facilities worldwide.

PROCESS OVERVIEW



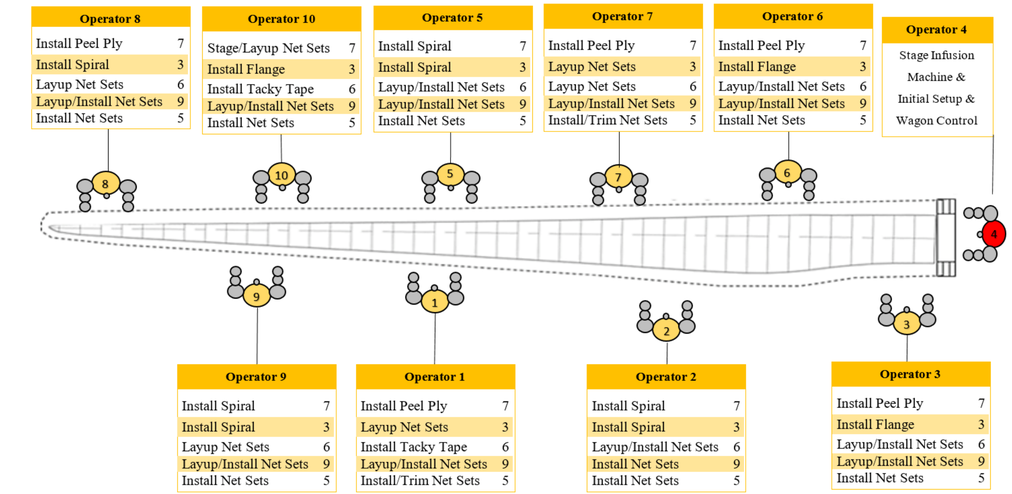


PROPOSED STANDARD WORK FOR THE UPWIND SHELL



* For initial standard work plan, see provided documents

PROPOSED STANDARD WORK FOR THE DOWNWIND SHELL



COST ANALYSIS