LANL Capstone Project: Wire Puller
Montana State University

**Objective:**

The objective of this project is to pull 200 ft of 14ga, 16ga, or 18ga Aluminum wire from one spool to another. The dimensions of the receiving spool can be up to a 2.5” flange diameter, a 2.33” traverse, and a 0.83” barrel outer diameter. The receiving spool needs to be spun at a speed of 1400 RPM and needs to consistently stack the wire neatly along its entire traverse. To stack this wire neatly, the receiving spool needs to traverse 2.2” back and forth while winding. The wire tension needs to be roughly 5-10 lbs. Design a mechanism to park the receiving spool at a fixed location along the traversing travel after all of the wire has been wound on to the receiving spool. A secondary function/mechanism is needed to keep the wire coil from springing loose from the receiving spool when the winding operation stops. This device needs to be purely mechanical.

**Budget**

LANL will provide a budget of $2,000

**LANL Representative**

Tanner Morrison

Office: 505-667-8147

Cell: 406-314-0458

tannerm333@lanl.gov