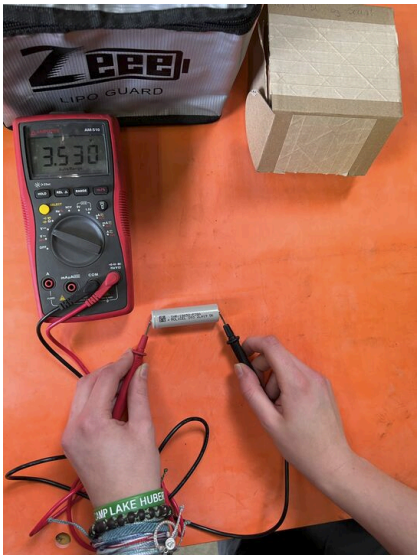
RM27 Accumulator Manufacturing 2024

Manufacturing Timeline:

- Accumulator One RTD (4/15/24)
    - System level testing
        - Insulation installed
            - Wiring complete (GLV & TS)
                - Components in accumulator (3/25/24)
                    - Segments ready for install (3/11/24)
                        - BMS voltage taps connected
                            - Segments spot-welded (2/12/24)
                                - Material list by (1/15)
                        - BMS thermistors installed
                        - MT Plugs installed
                    - Precharge installed + wired
                    - Discharge installed + wired
                    - IMD installed + wired
                    - Accu Indicator installed + wired
                    - TSAL installed + wired
                    - AIRs installed + wired to main fuse
                    - Main fuse installed + wired to AIRs and MT Plugs
                    - External plugs installed + wired to AIRs
                - HVD installed + wired to external plugs
                - Energy meter installed + wired
            - Charging (4/1/24)
                - Shutdown circuit integration
                - Wall outlet integration
- Accumulator two (4/29/24)
    - Parallel

Cell Prep:

- Prior to spot welding
- Inspect cells for physical damage
- Measure cell and ensure it is in voltage range of 3.5-3.7V
- 

- If any cells are not good (damage or out of voltage range): set aside, note issue, and tell ESO
- Label boxes of measured and inspected cells with: name & date measured
- Stick insulative rings on positive terminals of each cell

Segment Manufacturing:

- Prep nickel fuse strips
    - Cut the 100 x 0.1 x 4mm strips into 4 pieces ~23mm long each using tin snips

- Waterjet cell holders
- Assemble cell holder (two sides using nylon standoff and nylon hardware (bolts/washers))

- Insert rivets into holes of nickel strips on one side (2 holes)
    - Sharp side down (nickel strip)
- Spot weld negative ends with nickel bus bars
- Remove rivets, place second layer bus bar, replace rivets
    - Sharp side up (nickel strip)
- Rivet two layers of bus bars onto cell holder
- Spot weld second nickel layer to first layer
- Flip over
- Insert rivets into holes on other side
    - Sharp side down (nickel strip)
- Spot weld negative ends with nickel bus bars
- Remove rivets, place second layer bus bar
    - Sharp side up (nickel strip)
- Rivet two layers of bus bars onto cell holder
- Spot weld second nickel layer to first layer

- Insert rivets into copper bus bar slots through nickel strip (6 holes)
- Spot weld nickel strip onto negative sides of cells
    - Sharp side down (nickel strip)
- Remove rivets, insert through copper and nickel bus bars, and rivet copper and nickel to cell holder
- Insert rivets into copper bus bar slots through nickel strip
    - Sharp side down (nickel strip)
- Spot weld nickel strip onto POSITIVE side of cells
- Remove rivets, insert through copper and nickel bus bars, and rivet copper and nickel to cell holder

You should now have all negative connections made, copper bus bars placed onto negative AND positive sides of the segment, and all of those riveted and spot welded down

- Next step here