

DSG-SoLID R&D Meeting Minutes

Date: October 8, 2020

Time: 11:00 – 12:00

Attendees: Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen and Amrit Yegneswaran

1. Discussed results of meeting between Pablo Campero and Steven Lassiter concerning remaining PLC programming tasks

- 1.1. Temperature, forces, and Cleo routines
 - 1.1.1. Add two temperature sensors that will be used for current leads' warm ends
 - 1.1.2. Add $T=f(R)$, T is temperature and R is resistance, curves for some temperature sensors, once calibration is performed
 - 1.1.3. Add $F=f(R)$, F is force and R is resistance, curves for strain gauges and axial load cells after their calibration, which could be done during commissioning stage
- 1.2. Radial support interlock sub-routine
 - 1.2.1. Add PLC code to group strain gauge sensor readouts by upstream and downstream locations
 - 1.2.2. Add two Boolean indicators to show upstream and downstream strain gauge interlocks
- 1.3. Pablo Campero requested typical operational range values for forces acting in radial supports when magnet is powered to its nominal current of 3300 A
 - 1.3.1. Logbooks to find information are at JLab; Whit Seay will provide the information once it is available

2. HMI and CCS screens

- 2.1. Pablo Campero completed three HMI trend screens, showing a real time plot of valve position vs time
 - 2.1.1. *Solenoid JTV Trend*: seven JT valves located in Cryo Control Reservoir
 - 2.1.2. *Solenoid JTV Trend WR*: EB valve located in Cryo Control Reservoir
 - 2.1.3. *Solenoid JTV Trend HX*: two JT valves located in heat exchanger
- 2.2. Mary Ann completed *Solenoid JTV Page HX CSS BOY* screen
- 2.3. Tyler Lemon is improving CSS-BOY testing program to include testing of macros
- 2.4. Amrit Yegneswaran requested addition of documentation column to HMI & CSS Screens spreadsheet, which will include links to notes related to each screen
 - 2.4.1. Status column of the list needs to be updated

3. Marc McMullen has ordered the Motor Controller Relay boards and components, which is expected to arrive by next week

4. Documentation

- 4.1. Pablo Campero is modifying the instrumentation rack layout drawings
 - 4.1.1. *Hall A SoLID Solenoid Rack Layouts* talk will be updated with modified drawings
 - 4.1.2. Major modification includes changing rack size from 22 U to 44 U
- 4.2. Mary Ann is working on updating drawing numbers for connection nodes in existing drawing A00000-16-03-0210
- 4.3. Mary Ann is working on drawing A0000-16-03-0211, Constant Current Source wiring diagram