

Hall A - SoLID Magnet Control Systems – Meeting Minutes

Date: November 20, 2019

Time: 10:00 – 10:45

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Steven Lassiter, Tyler Lemon, Marc McMullen, and Whit Seay

1. Constant Current Source (CCS) boards design and assembly

- 1.1. Marc McMullen presented updated parts list for the CCS boards.
 - 1.1.1. Parts list shows updated parts, vendors, status, cost, and in hand components.
- 1.2. Presented estimated total price for seven boards are within the \$2,000 budget.
 - 1.2.1. Price variations for ordering 10 or 20 bare board from manufacture is insignificant.
- 1.3. Marc McMullen showed progress of PCB design in Altium.
 - 1.3.1. Notes in the design will be specified based on the changes performed.
- 1.4. At least seven CCS boards will be designed and assembled for SoLID magnet controls
 - 1.4.1. All components required to for CSS boards will be arrange based on 100 μ A constant output current.
 - 1.4.2. Agreed that if different output currents for the CSS boards are needed, required components (e.g. resistors) will be ordered later.
- 1.5. Once CCS board design is completed and approved by Steven Lassiter, agreed to order:
 - 1.5.1. Bare boards (x20)
 - 1.5.2. Components for 10 CCS boards
- 1.6. Confirmed that CCS boards will be used to supply constant current to the temperature sensor to be located in the service tower.
 - 1.6.1. Number and type of temperature sensors are not defined yet.

2. Relay boards design and assembly

- 2.1. Steven Lassiter will look for any schematics, parts list, and Gerber files available for the PCB design.
- 2.2. Available parts/spare boards should be found in the box provided to DSG on 11/12/2019.
- 2.3. DSG will arrange the components, part list, and PCB design needed for one Relay board
- 2.4. Relay boards will be used to control motors of cryo JT-valves.
 - 2.4.1. There are 6 to 7 valves expected, so one board should be enough to control all of them.

3. P&I diagram for SoLID magnet controls is not available

- 3.1. Steven Lassiter mentioned that P&I will be based in the SHMS magnets, since cryogenics control systems to be implemented in the SoLID solenoid is similar.
- 3.2. Pablo Campero will review previous .dwg files sent by Steven Lassiter to check if DSG has SHMS P&I diagram in hand, if not, Steven Lassiter will provide a copy.

4. PLC and Instrumentation racks

- 4.1. Steven Lassiter suggested talking to Hall C personnel (Walter Kellner/ Joe Beaufait) to check racks availability

5. PLC code

- 5.1. Pablo Campero will start with the PLC code to read axial load cells
 - 5.1.1. Re-calibration of load cells will be required
- 5.2. Whit Seay will contact Hall A technicians to get the axial load cells to allow readout test and calibration