

DSG-SoLID Magnet Controls Meeting Minutes

Date: September 15, 2021

Time: 11:00 – 12:00

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

1. Completed drawings

Mary Ann Antonioli and Pablo Campero

1. A00000-16-03-0280 *Power Supply Control Crate Connections*
2. A00000-16-03-0301 *PLC I/O, Remote A, Slot 1 Wiring Diagram*
3. A00000-16-03-0305 *PLC I/O, Remote A, Slot 5 Wiring Diagram*
4. A00000-16-03-0312 *PLC I/O, Remote B, Slot 2 Wiring Diagram*
5. A00000-16-03-0292 *Keep Alive Timing Relay Wire Diagram*

2. Drawings in progress

Mary Ann Antonioli and Pablo Campero

1. A00000-16-03-0306 *PLC IO Remote A, Slot 6 Wiring Diagram*
 - Need to change cable colors
 - Channel 4 of PLC relay module shown in drawing controls remote reset of the liquid level controller unit, which is connected to the voltage controller module
 - Based on specifications for voltage controller module, 15 VDC is required to reset liquid level controller unit; currently there is no 15 VDC power supply
 - Steven Lassiter will check liquid level remote power reset connections

3. Changes to power distribution to instrumentation

Pablo Campero and Brian Eng

1. Completed drawing A00000-16-03-350 *Power Distribution Wiring Diagram*
 - Realized that 5 VDC power supply on sheet # 2 of the drawing may not have the required output power based on specifications; power supply output power ~25 W, power required ~32 W
 - Will add a 5 VDC power supply dedicated to strain gauges and load cell sensors

4. Changes to Rack #1 and Rack #2 layouts

Pablo Campero

1. Modified drawing A00000-16-03-0100 *Instrumentation Control Panels Front Layout*
 - Confirmed additional circuit breakers and terminal strips
 - Confirmed location for circuit breakers, terminal strips, and power supplies, all located in rack #2
 - Will add a DIN rail for this instrumentation

5. Cable work

Mary Ann Antonioli, Pablo Campero, Brian Eng, Mindy Leffel, and Marc McMullen

1. Sixteen cables completed
2. Generating *Cable List Information* spreadsheet of information required to fabricate cables
3. Once first batch of cables are completed, they will be used in the racks to verify if estimated lengths are correct
4. Marc McMullen will move PLC module terminal blocks and connectors from TEDF 1544 to Test Lab High bay area

6. Cable procurement

Marc McMullen

1. Reviewed *Cable List* spreadsheet
2. Need to order 32-conductor cable 306-01 for LL, QD, PLC fast/slow dump MPS, and CCS reset
 - Connects signals from PLC terminal strip to PLC module's terminal block
3. Received connectors for pressure transducer, MFCs, and liquid levels
4. Cables for connection of PSU crate to terminal strip in rack #1 will not need to be procured or fabricated by DSG
 - Reference drawing A000000-16-03-0280, cable 280-01 and cable 280-02

7. Other topics

Pablo Campero, Brian Eng, Marc McMullen, Steven Lassiter

1. For now, all terminal blocks of PLC modules will be moved to high bay area to allow the complete wiring of the instrumentation to PLC modules
 - Eventually PLC chassis could be moved to rack #2 rear or entire PLC rack currently located in room 1544 will be moved next to rack #1 and rack #2
2. Discussed drain wire connections for temperature sensors cables
 - Checked drawing A00000-16-03-0210 (e.g. cable 400-01, 210-01)
 - Third level terminal strip could be added to wire the drain wire
 - All drain wires should be connected to the designated ground in the chassis
 - Will perform analysis of ambient noise to see how it affects the signals