Hall A SoLID Magnet Control Systems – Meeting Minutes

Date: September 30, 2020
Time: 10:30 – 11:30

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

1. Motor Controller Relay (MCR) board and Constant Current Source (CCS) board status
    - 1.1. PR for MCR boards is waiting for approval
        - 1.1.1. Per Steve Lassiter, the order could be approved by October 1st; he will provide the purchase code
    - 1.2. Marc McMullen tested first assembled CCS board; it works as expected

2. PLC programming status
    - 2.1. Steven Lassiter and Pablo Campero will review the PLC code still needed; Pablo Campero will arrange a Blue Jeans meeting
    - 2.2. Radial and axial support interlocks PLC Code is in progress
    - 2.3. Reviewed information generated by Pablo Campero about interlocks that will produce controlled ramp downs, fast dumps, and warnings

3. HMI programming status
    - 3.1. Completed three *JT Valve Page* HMI screens to control and monitor position of valves
        - 3.1.1. Seven JT valves in the CCR
        - 3.1.2. One EB valve for helium warm return flow
        - 3.1.3. Two JT valves for the heat exchanger
    - 3.2. Preliminary tests are completed
    - 3.3. Reviewed proposed list of HMI screens

4. *JT Valve Page* CSS-BOY screen completed by Mary Ann Antonioli
    - 4.1. Tyler Lemon developed program to allow testing of *JT Valve Page* CSS screen

5. Instrumentation status and questions
    - 5.1. Reviewed naming consistency for current leads A and B for documentation and programs
        - 5.1.1. PLC needs to be checked to ensure it has the same names as the documentation
        - 5.1.2. Checked I&C spreadsheet
    - 5.2. Steven Lassiter checked the ordered/in hand signal conditioning modules with the Solenoid parts list
    - 5.3. Confirmed that there is no need for another Red Lion voltmeter for the HX JT valves
    - 5.4. Added PLC relay channel to enable/disable 24 VDC to CCS board # 6
    - 5.5. The resistor board to be used with the voltage taps will be located on top of the Solenoid
        - 5.5.1. Resistor values are shown on I&C spreadsheet (200 kΩ)
    - 5.6. Per Steven Lassiter, there will not be a voltage tap resistor panel
    - 5.7. Confirmed total number of voltage taps
    - 5.8. The *Magnet* signal in the PLC layout (slot 9, channel 4) measures voltage across the entire magnet
    - 5.9. Steven Lassiter explained the reason for the repeated terminal strip number shown in the voltage taps tab of the I&C spreadsheet
    - 5.10. Steven Lassiter will contact Amrit Yegneswaran to request the schedule to assemble instrumentation and PLC racks

6. Electrical drawings status
    - 6.1. Reviewed modified PLC and Instrumentation rack drawings
        - 6.1.1. A00000-16-03-0100
        - 6.1.2. A00000-16-03-0101
        - 6.1.3. A00000-16-03-0102
        - 6.1.4. A00000-16-03-0103
        - 6.1.5. A00000-16-03-0104
        - 6.1.6. A00000-16-03-0105
    - 6.2. Modifications were made to the rack layout drawings
        - 6.2.1. Removal of unneeded 5 V breakers in the PLC rack
        - 6.2.2. Change in the valve control panel location
        - 6.2.3. Addition of terminal strips that will provide power connection to signal conditioning boards
        - 6.2.4. Addition of side, back and front doors for the racks
    - 6.3. More modifications to the instrumentation rack layout drawings required
        - 6.3.1. Additional holes to CCS board's panels. Marc McMullen will provide hole size
        - 6.3.2. Since full-sized racks are easier to get, the half rack (upper panel) in the drawings could be changed to a full-sized rack
    - 6.4. Updated drawing numbers in existing electrical drawings. Drawings are being reviewed
    - 6.5. Steven Lassiter provided information required to complete drawing A000000-16-03-0200