

DSG-SoLID R&D Meeting Minutes

Date: July 29, 2022

Time: 11:00 – 12:00

Attendees: Mary Ann Antonioli, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran

1. HMI screen development

Pablo Campero

1. Completed modifications to *Solenoid Menu* HMI screen

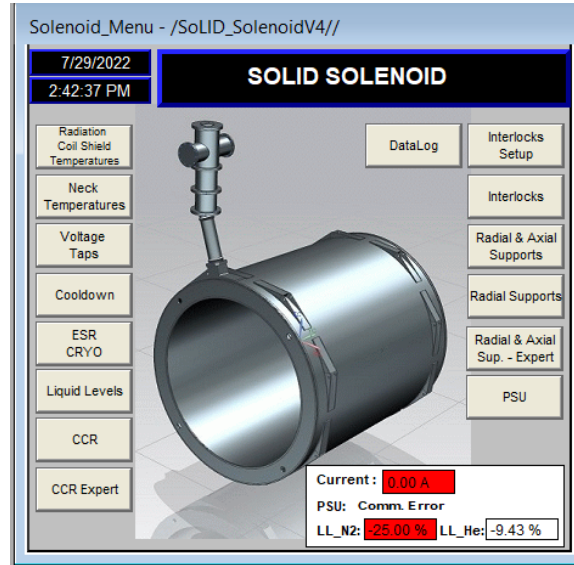


Fig.1. *Solenoid Menu* HMI screen

2. Completed *Solenoid Data Log* HMI screen
3. Working on *Solenoid PSU* HMI screen

2. FactoryTalk View Data Log system

Pablo Campero

1. Added all required sensors readouts to the database
2. Tested purge and backup options for archived file

3. Instrumentation debugging

Pablo Campero and Steven Lassiter

1. Valve checkout
 - Added jumper between pins b and c to connector on cable that reads Linear Variable Differential Transformer (LVDT) position sensor
 - On nine cables, swapped wires from LVDT secondary 1 and secondary 2 to match wiring provided by Hall A; worked as expected
 - Changed wiring at the CCR-TS-02 and TS-HX-02 terminal strips
 - Drawings will be updated to show changes
 - Successfully tested motor cables
 - Tested PLC and HMI monitoring features; no issues found

2. Tested PT-102 temperature sensors with 100-uA CCS board
 - The designed 1-mA CCS board did not work when connected to cryo control reservoir
 - To troubleshoot, removed 1-mA CCS board and connected a spare 100-uA CCS board to PT-102 sensors
 - Calibrated PLC channels based on excitation current (100 uA), sensor resistance at ambient temperature ($\sim 130 \Omega$) and Dataforth module specs (input to 50 mV and output 0–10 V)
 - Test showed that for two PT-102 sensors connected in the cryo control reservoir the expected value of $\sim 290 \text{ K}$ was read
 - Resistors on the 1-mA PT-102 CCS boards will be replaced to change the output current from 1 mA to 100 uA