

## DSG-SoLID PLC Programming Meeting Minutes

**Date:** February 17, 2021

**Time:** 10:30 – 12:00

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

1. Solved license issues/ FactoryTalk Activation Manager on PHYCAD58 PC (Pablo Campero)
  - 1.1. Contacted Rockwell Tech support
  - 1.2. Backed up licenses and removed them from public access directory
  - 1.3. Uninstalled FactoryTalk Activation Manager and CodeMeter software
  - 1.4. Removed license key registries by using Windows Registry Editor
  - 1.5. Installed Factory TalkView Activation Manager Version 4.05.01; previous version was 4.00.02.
  - 1.6. Installed Code MeterVersion 7.10a
  - 1.7. Followed Rockwell technical note BF15887
  - 1.8. Solved issues and tested proper access to PLC and HMI software licenses
  
2. FactoryTalk View Studio is running on Demo Mode on PHYCAD58 PC (Pablo Campero and Whit Seay)
  - 2.1. Confirmed that purchased licenses are current and active with no time limitation
  - 2.2. Agreed to contact Rockwell technical support
  
3. Reviewed modifications and pending work on Cleo routine (Pablo Campero and Steven Lassiter)
  - 3.1. Sheets 9 and 10: Radial support upstream and downstream interlocks code needs modifications
    - 3.1.1. Radial supports will be evaluated independently, not by groups
    - 3.1.2. If radial support readout absolute value is greater than the set limit, a warning signal will be generated and displayed on the HMI screen
  - 3.2. Sheet 40: Mass flow controllers
    - 3.2.1. Steven Lassiter will provide formula used to calculate the set value of the mass flow controllers based on the current that passes through the leads
    - 3.2.2. Current code in PLC is set to output a value of 0–5 V. The conversion logic and parameter may require changes based on mass flow controller specs; Whit Seay will provide specs
  - 3.3. Sheet 49: Liquid levels and temperature interlock
    - 3.3.1. Sheet has been broken down into three sheets
      - 3.3.1.1. Sheet 49: Interlock – Liquid Levels
      - 3.3.1.2. Sheet 50: Interlock - LHe Temperatures Magnet
      - 3.3.1.3. Sheet 51 : Interlock – CL Temperatures
    - 3.3.2. Added fourteen temperature sensors located in the coil shell to be evaluated
    - 3.3.3. PLC code to generate an interlock based on the solenoid neck temperatures will be added
  - 3.4. Sheet 53: Radial support interlocks

- 3.4.1. PLC code will be added to independently compare each radial support with a second limit; if the readout absolute value is greater than the set second limit, an interlock will be enabled and the PSU will be ramped down
- 3.4.2. Radial support should dump the PSU; controlled or fast dump to be determined
- 3.5. Sheet 57: Sum and reset interlock
  - 3.5.1. List of interlocks to generate slow or fast discharge could be modified, based on future requirements of the magnet

4. PLC heartbeat routine in progress; ways to implement code will be discussed in next meeting

5. Discussed mechanical design of valve panels

- 5.1. Key switch, voltmeter, and 12-position rotary switch will be placed on 2U panel
- 5.2. Ten 3-position switches will be placed on 3U panel