

Solenoid Load Cells Limits

Date: May 9, 2017

Time: 9:00 – 10:30

Attendees: Pablo Campero, Ruben Fair, Dave Kashy, and Renuka Rajput-Ghoshal

1. Discussed Load Cell thresholds during energization of Solenoid magnet.
 - 1.1. Agreed to have interlock threshold to generate PLC Fast Dump event.
 - 1.1.1. Axial support load cells assigned to not exceed a maximum limit of 1800 [lbf].
 - 1.1.2. Radial support load cells assigned to not exceed a maximum limit of 18290 [lbf].
 - 1.1.3. Pablo Campero will perform the PLC code modifications.
 - 1.1.3.1. Add new thresholds assigned on the *Solenoid EM force* spreadsheet.
 - 1.1.3.2. Add new logic to generate a PLC Fast Dump.
 - 1.2. Modified interlocks threshold Controlled Ramp Dump event.
 - 1.2.1. Axial support load cells assigned to not exceed a maximum limit of 1750 [lbf].
 - 1.2.2. Radial support load cells assigned to not exceed a maximum limit of 14630 [lbf].
 - 1.2.3. Pablo Campero will perform the PLC code modifications.
 - 1.2.3.1. Add new thresholds assigned on the *Solenoid EM force* spreadsheet.
2. Discussed Load Cells thresholds during cooldown of the Solenoid
 - 2.1. Agreed to use same thresholds designed for Controlled Ramp Down displayed on *Solenoid EM Forces* spreadsheet.
 - 2.2. Pablo Campero will add PLC code to have interlock generated for the over limits on the load cells.
 - 2.2.1. PLC code will close the supply valves of cryogenics fluid and stops the cooldown of the Solenoid magnet if some of the defined load cell thresholds are exceeded.
3. Agreed that EPICS Interlocks status screen has to be modified
 - 3.1. Alarm level for the load cells limits will be controlled by the Alarm Handler in EPICS.
 - 3.2. Decided to implement an indicator (LED) status to the PLC Fast Dump Interlock screen.
 - 3.3. Pablo Campero will contact to Wesley Moore after completion of modifications on PLC code to provide the information required to the screen modifications.
4. Renuka Rajput-Ghoshal will update *the EM Force* spreadsheet with the agreed thresholds for the load cell in this meeting.
5. Solenoid Leak Test will be required for the Solenoid magnet
 - 5.1. Procedure document has to be elaborated by Ruben Fair, Dave Kashy and John Hogan
 - 5.1.1. It has to contain detail information of the steps to follow and the mechanical fits identified.