Weekly Reporting SNS PPU

WBS P.02.03 Cryomodule Integration (JLab Scope)

January 27, 2023

**Issues:** None

**Accomplishments this week:**

Management:

* PPU activities are continuing onsite with testing of production cavities, continuing with cryomodule assembly, and receipt inspection of components.
* Off-site work efforts continue, focused on completion of original procurement activities, continuing procurements for 8th CM and production activities.
* End Can vendor visit report circulated.
* Cryogenic test facility is back on-line as of Monday 1/23, providing helium to CMTF and VTA.

Engineering & Design:

* Sustaining engineering activities are continuing in order to revise drawing packages based on feedback during the procurement phase.
* Plan for transmitting complete set of CM drawings – request submitted to Doc Control Group to prepare drawing package. Discussion with SMEs on format for CAD files on-going.

Procurement:

* Two people from JLab visited end can vendor on 1/20. Reviewed progress on remaining end cans. Was unable to witness leak check of end can items since none of them were ready for HLT during the visit. JLab leak check specialist got an opportunity to exchange with vendor's leak check personnel.
* On the cool down valve galling, vendor found one such valves galls. The valve has been partially cut apart, it appears that the cause may simply be the tight fit between the stem and the guide. Vendor is going to repair the galling stem and make a new stem for the last REC.
* ORNL advises that REC3 vacuum shells weld is not fully penetrated. Vendor says that they perform TIG root pass, then add 3 or 5 layers of flux core passes.
* Supply End Cans (SECs):

|  |  |  |
| --- | --- | --- |
| S/N | Status | Estimated Delivery Date |
| 01 | Installed on CM-03 | - |
| 02 | Installed on CM-04 | - |
| 03 | Installed on CM-01 | - |
| 04 | Welded onto CM-05 | - |
| 05 | Welded onto CM-06 | - |
| 06 | Delivered to JLab on 6/6. Uncrated, inspections started. Phase 1 dimensional inspection done. Bridge tube angle is off by ~5 degrees. JLAB will try installation of SEC 06 and exercise loosening the hardware at both ends of the elbow/bellows and see how well it corrects. Plan to use on PPU-07. | - |
| 07 | Installed on CM-02 | - |
| 08 | Completed the thermal strap sub-assemblies and will complete some misc. helium leak testing of components. The components ready for assembly milestone will be completed this week. | Mar 20 |

* Return End Cans (RECs):

|  |  |  |
| --- | --- | --- |
| S/N | Status | Estimated Delivery Date |
| 01 | Installed on CM-03 |  |
| 02 | Installed on CM-01 |  |
| 03 | Installed on CM-05 |  |
| 04 | Installed on CM-02 |  |
| 05 | Vacuum shell body welds are complete, CWI inspection to happen soon. | Feb 15 |
| 06 | Installed on CM-04. |  |
| 07 | Vendor is about done with Thermal Shield, expect to be starting MLI soon. | Mar 3 |
| 08 | Top plate weldment complete. Finished the Relief Stack weldment. | Mar 20 |

Production:

* Cryomodule Status:
* CM05: REC 03 welded to VV. Leak checking in progress. Identified leaks in feedthrus.
* CM06: Awaiting REC
* CM07: Space frame/thermal shield completed. Troubleshooting alignment of Cold Mass. It has been removed from the Vacuum Vessel.
* CM08: Delivered to CMA 1/18. Idle.
* U-Tube status: Four nearly complete. Two more in progress. These are the smaller u tubes. Awaiting large bellows.

Project Management:

* Provided Monthly Accrual Data to ORNL
* Updated Mid-month Manpower report
* Completed December VARs
* Updated CAM Notebook

Quality Assurance:

* Continue to monitor quality data for possible trends.
* Continuing to gather data deliverables for CM05.

Project Photos: