Weekly Reporting SNS PPU

WBS P.02.03 Cryomodule Integration (JLab Scope)

November 4, 2022

**Issues:**

*Last week for this issue* - Impact of COVID-19 - JLab status is MEDCON-3 since 14-MAR-2022.

**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.
* Evaluating impacts of COVID-19 on overall project schedule and developing mitigations.

Engineering & Design:

* Sustaining engineering activities are continuing in order to revise drawing packages based on feedback during the procurement phase.

Procurement:

* Two from JLab visited the end can vendor on 11/2 to witness REC 5 successful leak check.
* End can vendor is informed of the galling issue between cool down valve drive rod and its guide. JLab sent videos on a few types of JT-style valve stem actuation demonstrations, all can be pressed by hand to slide. Of the 2 valve stems at the vendor, one appears to move freely, the other is seized tightly. Vendor plans to cut apart the seized valve and investigate, as well as rebuild the part to ensure it functions correctly.
* 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. | - |
| 07 | Installed on CM-02 |  |
| 08 | SEC 08 is at the vendor's place. Machine shop has completed all work for SEC-08, parts moving through inspection. Top-Plate fit up to begin shortly. | Late Jan/early Feb |

Return End Cans (RECs):

|  |  |  |
| --- | --- | --- |
| S/N | Status | Estimated Delivery Date |
| 01 | Installed on CM-03 |  |
| 02 | Installed on CM-01 |  |
| 03 | Delivered to ORNL 9/30. ORNL performed multiple leak checks, leaks are confirmed to be inside the end can body on the LP line. Next is to cut the end can open and proceed with investigations. |  |
| 04 | Installed on CM-02 |  |
| 05 | JLAB witnessed shield supply line leak check. Next LC will occur after the 0.25 in lines are welded in place, followed by a final LC once half of the thermal shield is brazed in place, prior to closing the shell. | 11/28 |
| 06 | Installed on CM-04. | - |
| 07 | Top plate nearly complete, moving on to fit-up to prepare for welding once REC-05 brazing is complete. | Mid-Jan |
| 08 | REC 08 is at the vendor's place. 99% of machining is done. New shell to be complete, to work on the spools next. | TBD |

Production:

* Cavity Status:
  + PPU-31t was RF tested. The cavity reproduced the bare cavity rest result, limited by FE. The cavity needs additional HPR and RF test tests.
  + PPU-26t is in preparation for RF test next week with additional HPR
  + PPU-30t is in preparation for RF test next week with additional BCP followed by HPR.
* Cavity String Status: String #8 – 1 of 4 cavities qualified.
* Cryomodule Status:
  + CM05: Punch list items I.P. awaiting REC.
  + CM06: Punch list items I.P. awaiting REC.
  + CM07: mag shield installation on-going; welding FPC bellows I.P.
  + Helium Vessel Update – Gathering parts for added HV’s.
* FPCs: Total of 10 FPCs in the Annex inventory area. Two FPCs in the clean room cabinet.

Project Management:

* Held Progress Meeting
* Held Progress Analysis Meeting
* Sent October Schedule Data to ORNL
* Updated the CAM Notebook

Quality Assurance:

* Continue to monitor quality data for possible trends.
* Early work gathering data deliverables for CM05 begins.

Project Photos:



