RDDS1 Issues

Mike Neubauer showed the latest concept (NLC production version) for the structure to strongback mating. The structure would remain in a vertical orientation following the last braze operation, and would be inserted into and attached to the strongback while also in a vertical orientation. There was a discussion of the issues and potential mechanisms for setting the location of and constraining the upstream end of the structure so as not to overconstrain or add moments to the structure while it is attached to the strongback.

Mike then reviewed his list of issues, concentrating on those associated with the RDDS1 unit. Generally, we have not baked out the unit until after the ASSET test, and the bake has sometimes been at 450 °C and sometimes at 150 °C. Since the HOM load geometry will most likely change between RDDS1 and RDDS3, the concept of establishing a “stay-clear” zone was discussed. Whether to clamp, weld, or braze the attachments for the adjusters was discussed. The vacuum manifold brazed to the structure or bolted on with flanges later was discussed, along with the need for a welded commercially-available bellows versus a custom-designed eyelet similar to that used on klystrons and the SLC. The need for the cooling water to flow both directions along the structure to minimize delta T problems was confirmed.

Gordon reviewed his recent memo introducing the concept of one structure per floor support rather than the current three. It was agreed that the relative pros and cons of this will take a while to fully flesh out.

The requirement that the structure not move within its support system during transport, installation, and recovery from ASSET was mentioned by Chris Adolphsen. The DDS3 support did well in x but poorly in y. Gordon is planning to add supports to this basic design to remedy this.

The welding test on the adjusters by Mike Palrang and the structure sag calculations by Nancy are underway and will be presented when complete at a later meeting.

The specific fit issues of RDDS1 onto Gordon’s planned support structure and into ASSET and NLCTA need to be explored in more detail when all the drawings are available. We have not yet clearly identified, prioritized, and evaluated all of the issues with respect to RDDS1 and its support into ASSET and NLCTA, RDDS1 into the current NLC strongback concept (production version), as well as with the anticipated structure design (migration from RDDS1 to RDDS3 and beyond) into the production strongback design.

Minutes by John Cornuelle