

Subject: Re: Need waiver for Al in SS
From: John Worden <worden_j@ligo-wa.caltech.edu>
Date: 11/20/2007 3:55 PM
To: Dennis Coyne <coyne@ligo.caltech.edu>
CC: Kyle Ryan <ryan_k@ligo-wa.caltech.edu>

Dennis,

Kyle and I were just talking about this.

We do not need to mix a load at this time. Previously Kyle had baked and shipped two clean "septum window clamping flanges" to LLO. They have only used one with their septum so they can fedex one back here. If this plan fails then we can consider a mixed load or aluminum only load next week while the septum work proceeds. The clamping flange is needed only at the end of the installation.

You might wonder why only two parts were baked - it was because the machined parts required some rework and Rusyl was waiting so two were reworked for him. Since then the remaining parts have been reworked and are ready for clean and bake.

I think Kyle was proposing a compromise.

John

Dennis Coyne wrote:

Kyle,

The nominal temperature for baking SS is 200C (per E960022), not 150C. At 200C, and even at 150C, the strength (temper) of aluminum alloys degrades. The amount of degradation depends on the time at temperature. This is why E960022 stipulates a 120C bake for 48 hr nominally for aluminum alloys. Larry Jones once calculated that 150C for 48 hr causes a reasonably small decrease in the yield strength.

So ... what are these "septum window clamping flanges" used for? Are they strength critical?

Can your bake oven not go to 200C, or were you proposing 150C as a compromise?

Dennis

At 02:55 PM 11/20/2007, Kyle Ryan wrote:

Hi John---

We need a waiver to include the (4) Aluminum septum window clamping flanges listed on E070303-00-X with the SS load which should start tomorrow if these are to be available next week. Keep in mind that, because of the long weekend, this load could could bake longer at a reduced temperature, say 150C for 96 hours(?), without impacting the schedule. Also, there aren't any aluminum only loads scheduled in the foreseeable future anyhow.

Kyle

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