Subject: Re: Need waiver for Al in SS
From: Dennis Coyne <coyne@ligo.caltech.edu>
Date: 11/20/2007 6:11 PM
To: Kyle Ryan <ryan_k@ligo-wa.caltech.edu>
CC: John Worden <worden_j@ligo-wa.caltech.edu>, "Bartie J. Rivera" <rivera_b@ligo-wa.caltech.edu>

OK -- makes sense. Ken Mason's (SEI) actuator will include a magnet, which will limit the maximum temperature as well as perhaps some other polymers.
Dennis

At 03:58 PM 11/20/2007, Kyle Ryan wrote:

> Hi Dennis--
>
> The most recent load completed, VBO A load#178, was an actuator for Ken Mason. This part was an assembly comprised of steel and aluminum as well as other materials. The baking instructions he listed on the traveler (E070262-00-D) was for 96 hours @ 150C. I don't know what VBO A's max uniform temperature is but 200C isn't a problem.
>
> Kyle
>
> 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