

Subject: Re: Need waiver for large parts

From: Dennis Coyne <coyne@ligo.caltech.edu>

Date: 1/15/2008 11:39 AM

To: Kyle Ryan <ryan_k@ligo-wa.caltech.edu>

CC: John Worden <worden_j@ligo-wa.caltech.edu>, Ken Mason <kmason@ligo.mit.edu>

Kyle,

Since we do not know how Norcal handles the parts subsequent to their cleaning process and since we have not qualified their cleaning process, a blanket approval for (large) parts cleaned by Norcal would nor be prudent. For these specific parts, I would advise careful visual inspection followed by hand cleaning with liquinox, rinsed with DI water and finally cleaned with isopropanol (or similar solvent). Then the parts must be either RGA tested (if they fit into a vacuum bake chamber), or FTIR sample tested (after an air bake) if too large to insure that they meet our cleanliness requirements.

Dennis

Kyle Ryan wrote:

Hi Dennis--

I spoke with Ron Buracker(?) the production manager at NOR-CAL products regarding the cleaning that SS parts go through before being shipped. Without getting into specifics, he said that they only use water based cutting fluids etc. in their machine shop and that they had a long list of forbidden solvents and lubricants etc. that they don't use for contamination reasons. The final step in their cleaning process is an ultrasonic wash in Liquinox and then a DI water rinse (some parts are micropolished, others get bead blasted prior to this).

E960022 refers to E970063 for cleaning requirements of large in-vacuum parts (i.e. too large for our ultrasonic baths). E970063 calls for specific flow rates of steam and specific temperatures and cleaning solvents other than Liquinox/Alconox i.e. processes other than those used by NOR-CAL. I need to vacuum bake some large GS-13 "pods" fabricated by NOR-CAL as well as some large "Blade Springs" of unknown origin. These parts are too large for our ultrasonic bath. Will you waive the requirements spelled out in E970063 for these items. If so, may I use this as a general waiver for large parts fabricated by NOR-CAL in the future.

Thanks,

Kyle