

Subject: Re: Request to Vacuum Review Board

From: Rainer Weiss <weiss@ligo.mit.edu>

Date: Wed, 9 Jan 2008 20:51:02 -0500 (EST)

To: John Worden <worden_j@ligo-wa.caltech.edu>

CC: Mike Zucker <mike@ligo.mit.edu>, Fred Raab <fjr@ligo-wa.caltech.edu>, Riccardo DeSalvo <desalvo_r@ligo.caltech.edu>, John Worden <worden@ligo.caltech.edu>, Dennis Coyne <coyne@ligo.caltech.edu>, Janeen Romie <janeen@ligo-la.caltech.edu>

To the Vacuum review board,
I agree with John's instinct. Prefer not to change the cutting fluid since we have survived it in initial LIGO.
RW

On Wed, 9 Jan 2008, John Worden wrote:

VRB members;

Janine is asking about machining fluids. My first reaction is that the cutting fluid cost should be a small part of the fabrication costs. I would also be nervous that loosing this up might expose us to contaminants that our standard cleaning processes would not remove.

Jasine - Can you provide any more information as to why or how this has come up? What would an example of a "regular machining fluid" be?
thanks

Comments any one?

John

----- Original Message -----

Subject: Request to Vacuum Review Board

Date: Tue, 08 Jan 2008 17:46:17 -0600

From: janeen@ligo-la.caltech.edu

Reply-To: janeen@ligo-la.caltech.edu

To: worden_j@ligo-wa.caltech.edu

CC: janeen@ligo-la.caltech.edu, coyne@ligo.caltech.edu

Dear John,

There's an issue I'd like you and the Vacuum Review Board to consider. It concerns the machining fluids allowed for use with in-vacuum metals.

Currently, we call out on all metal parts drawings the following note:

ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL).

The fluids that comply are expensive compared to regular machining fluids. All parts go through a regular clean and bake, per E960022, prior to installation in our vacuum chambers. Also, unless all surfaces are machined, this note does not protect against hydrocarbon and other contaminants from the stock material fabrication process.

Please consider waiving this requirement for small parts, say under 5 ft on any one side.

Janeen Romie

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John Worden

Site Manager

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