

**Subject:** Re: Cleaning Procedure Waiver for AR Coated and Uncoated View ports

**From:** Helena Armandula <ahelena@ligo.caltech.edu>

**Date:** 11/19/2007 12:57 PM

**To:** Doug Cook <cook\_d@ligo-wa.caltech.edu>, Helena Armandula <ahelena@ligo.caltech.edu>

**CC:** "Bartie J. Rivera" <rivera\_b@ligo-wa.caltech.edu>, worden\_j@ligo-wa.caltech.edu, Dennis Coyne <coyne@ligo.caltech.edu>, Kyle Ryan <ryan\_k@ligo-wa.caltech.edu>

Hi Doug,

I am not aware that cold Liquinox used as the E990190-01-D describes poses any danger to the AR view port windows.

If you know that any view ports were damaged by this process, please, let me know.

Helena

At 12:06 PM 11/19/2007, Doug Cook wrote:

Helena,  
What about the AR coating on viewports and Liquinox?  
Doug

Helena Armandula wrote:

Bartie,

In my opinion, the procedure E990190-01-D should still be used for the cleaning of the view ports.

I tried to remove the Lensx 90 tissue from the procedure to eliminate particles. Contec clean wipes are a good replacement for this procedure.

However, for drag wiping optics, people prefer to use Lensx 90. When the wipes are used wet, they do not shed particles.

So, for drag wiping, wetted with methanol, use Lensx 90; for wrapping the optics after cleaning use the Contect clean wipes.

The use of Liquinox on the glass, is safe as called in the procedure, it also helps clean the metal part.

We have not found known detrimental effects from this cleaning procedure that I am aware of, when used to clean view ports.

Let me know if any questions remain.

Helena

At 02:23 PM 11/16/2007, Bartie J. Rivera wrote:

Hi John, et. all,

I am currently re-processing AR coated and un-coated view ports for the current bake load. While reviewing the cleaning procedure for view ports, (E990190-01-D), I've noticed that the procedure calls out for Lenx 90 lens tissue to be used on the glass surface, which was "retired" due to particulate issues and was substituted for with Contec clean wipes. There also is a step which requires a liquinox solution which I remember was abandoned due to deleterious effects on the view port AR coatings, plus a /post/ /bake/ "drag wipe" with methanol. I consulted Doug with my concerns and he provided me with an updated document titled "Up-dated LIGO /Optics/ Cleaning Specification, to be implemented during ELI installation" authored by Helena. However, this document is relevant to "en-situ" optic applications, and is not specific to vacuum baking view ports in general. If I am to use either of these procedures I require a "waiver" specific to the document that I am to follow, without which I cannot proceed, or an updated AR coated and uncoated view port cleaning procedure that does not raise question in order to avoid an increased turn around time on the current bake load.

Thanks,

Bartie

Bartie J. Rivera       \*       \*  
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