

Subject: waiver to roughen surface of HLTS pen mass in situ - urgent

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Re: waiver to roughen surface of HLTS pen mass in situ

Dear LLO SUS

This e-mail is a waiver from systems to allow the HLTS pen mass to be roughened up in situ prior to re-bonding the Alum standoff. Please follows these steps: -

- 1) The roughening should be performed with a clean diamond drill bit and wiped afterwards with a wet clean-room wipe (iso-proponal).
- 2) The adjacent area must be protected i.e.
 - first contact on optic
 - lens cap
 - catch pan tray
 - wipes on all exposed areas
 - use "sucking" vacuum cleaner nearby (if space)
- 3) Following the roughening and subsequent clean up an inspection with a high intensity light should be performed prior to bonding. Any dust found in this step should be removed again with a wet wipe prior to continuing.
- 4) As per [LIGO-T1000522-v1](#) the bonding surfaces must be rough, clean and dry prior to bonding. So prior to bonding clean with Freon * then Acetone before wiping with Iso-proponal.
- 5) Bond

These details should be captured so they can be added to the procedure (when / if in this situation again).

* You can waste an FTIR kit for the Freon.

cheers, Calum

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