|  |  |
| --- | --- |
| Traveler Title | L2HE Cavity Helium Vessel Leak Check |
| Traveler Abstract | Traveler documents leak checks of LCLS-II-HE cavity helium vessel leak checks after cold shock. |
| Traveler ID | L2HE-CLNRM-HELV-LEAK |
| Traveler Revision  | R1 |
| Traveler Author | D. Forehand |
| Traveler Date | 3-Aug-23 |
| NCR Informative Emails | dreyfuss,forehand,hannesv |
| NCR Dispositioners | cheng,kdavis,adamg |
| D3 Emails | kdavis,adamg,dreyfuss,forehand,cheng |
| Approval Names | D. Forehand | C. Dreyfuss | K. Davis | G. Cheng |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Group Leader | Project Engineer |

|  |  |
| --- | --- |
| References | List and Hyperlink all documents related to this traveler. This includes, but is not limited to: safety (THAs, SOPs, etc), drawings, procedures, and facility related documents. |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |
| --- | --- |
| Revision Note |  |
| R1 | Initial release of this Traveler. |

|  |  |  |
| --- | --- | --- |
| Step No. | Instructions | Data Input |
| 1 | Record cavity serial number | [[CAVSN]] <<CAVSN>>[[SRFCVP]]<<SRFCVP>> |
| 2 | Ensure the helium fill lines on the helium vessel are plugged with the appropriate VCR fittings and seals. Place the pump-down fixture on the helium return header and connect to a leak detector.Put a leak check bag around entire cavity and seal above 2 phase line explosion bonded joint.Partially inflate bag with helium and stop flow.Allow the leak detector the appropriate warmup time.Start the Labview tracing program to collect the leak check data.Do NOT use the zeroing feature on the leak detector during the helium vessel leak check.The helium vessel shall be pumped long enough to have a MDL of less than 2E-9 mbar l/s. Pump time will vary depending on how long it takes for the sensitivity to be low enough.Once the leak rate is indiczated below 2e-9 mbar l/s the bag can be filled with helium. Start helium flow into the bag and stop the flow when the bag starts to inflate.If any leak is indicated at all, the leak checked shall be considered to have failed.Five minutes after filling the bag with helium, the calibrated leak shall be opened. Allow the trace to run long enough for the helium to settle to a flat line, indicaticating the leak rate of the calibrated leak.Record the size of the leak with the calibrated leak open.Record the size of the calibrated leak and the expiration date of the calibration.Upload leak check data file and a saved picture of the trace with Cavity ID, total pressure, date, calibrated leak size, and time of helium spray indicated on the picture. Toggle the yes/no button to indicate if the leak rate is acceptable. | [[LeakRateWithCalLeakOpen]] <<SCINOT>>(mbar l/s)[[CalLeakRate]] <<SCINOT>>(mbar l/s)[[CalLeakExpirationDate]] <<FLOAT>>[[LkChkData]] <<FILEUPLOAD>>[[LkChkGraph]] <<FILEUPLOAD>>[[LkRateAcceptable]] <<YESNO>>[[LkChkComment]] <<COMMENT>>[[LkChkDate]] <<TIMESTAMP>> |