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| Traveler Title | LCLS-II-HE BPM Housing Inspection Traveler | | | |
| Traveler Abstract | Traveler defines the inspection process for the LCLS-II-HE BPM Housing | | | |
| Traveler ID | L2HE-INSP-BPM | | | |
| Traveler Revision | R1 | | | |
| Traveler Author | Michelle Oast | | | |
| Traveler Date | 24-Mar-22 | | | |
| NCR Informative Emails | mbevins | | | |
| NCR Dispositioners | Weinmann, adamg | | | |
| D3 Emails | Weinmann,adamg,mbevins,mdickey | | | |
| Approval Names | Michelle Oast | Liang Zhao | Anne McEwen | Mike Bevins |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Reviewer | Project Manager |

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| 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. | | | |
| [Cold BPM Assembly](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-254214/F10023160_G_DWG1.pdf) F10023160 | [BPM Housing](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-254215/F10030776_D_DWG1.pdf) w/ Cu Plating F10030776 | [BPM Housing F10023168](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-262018/F10023168_E_DWG1.pdf) | [SCRF Seal for NW40 Flange F00439231](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-262017/F00439231_G_DWG1.pdf) |  |
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| Revision Note |  |
| R1 | Initial release of this Traveler. |
| R2 | Addition of section 4: Cleaning |
| R3 | Added drawings F10023168 and F00439231. |

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| Step No. | Instructions | Data Input |
| General handling guidelines: Both end flanges contain sealing surfaces. Care shall be taken to avoid scratching/gouging these surfaces and protective covers shall be installed over these surfaces at all possible times. | | |
| 1 | Initial Inspection: | |
| Technician Name  Date of Inspection  Serial Number | [[InspectionTech]] <<USERNAME>>  [[InspectionDate]] <<TIMESTAMP>>  [[BPMSN]] <<BPMSN>> |
| Is part clean, free from dust, oil, finger prints or other contaminants? | [[PartClean]] <<YESNO>> |
| Inspect the flanges’ sealing surfaces for scratches/gouges. | [[SealingSurfaceOK]] <<YESNO>> |
| Visually inspect the assembly for any pitting on internal and external surfaces. (Note shallow pitting in the comments, do not create NCR for shallow pitting.) | [[PittingOK]] <<YESNO>>  [[Pitting\_Comment]] <<COMMENT>> |
| Measure surface finish of seal groove of both flanges. Indicate "no" if roughness is equal to or higher than 0.8 um.  NOTE: Based on input from Andrei Lunin (FNAL) the surface finish specification in drawing F10023168 of Ra = 0.8 µm is typical for all beam line components sealed with diamond-aluminum gaskets, not specific to BPM seal surfaces. NCR is needed only if there are visible imperfections in the sealing surface. | [[Flange1]] <<YESNO>>  [[Flange2]] <<YESNO>> |
| Comments:  • If discrepancies are found, upload photos of the discrepancy. | [[VisualInspComment]] <<COMMENT>>  [[BPMH\_Photos]] <<FILEUPLOAD>> |
| 2 | Plating Inspection: |  |
| Comment on, but do not create NCRs for the following issues if found:  • Light spots  • Water marks  • Dark spots under 1/8" in diameter  • Small dents under 1/8" in diameter  • Darker shading than is typical of the overall copper plating  • Shallow pitting  Borescope not necessary. |  |
| Technician Name  Date of Inspection | [[PlatingTech]] <<USERNAME>>  [[PlatingInspectionDate]] <<TIMESTAMP>> |
| 3 | Does copper plating cover the designated area shown in drawing F10030776? | [[PlatingCoverageOK]] <<YESNO>> |
| Is there pitting that goes through the plating? | [[Pitting]] <<YESNO>> |
| Is there flaking in the plating? | [[Flaking]] <<YESNO>> |
| Is there blistering of the plating? | [[Blistering]] <<YESNO>> |
| Are there dark spots over 1/8” in diameter in the plating? | [[DarkSpots]] <<YESNO>> |
| Are there areas over 1/8" in diameter missing plating? | [[BareSpots]] <<YESNO>> |
| Comments:  • If discrepancies are found, upload photos of the discrepancy. | [[PlateVisInspComment]] <<COMMENT>>  [[BPMPlating\_Photos]] <<FILEUPLOAD>> |
| 4 | Cleaning: |  |
| Seal surfaces require manual polishing and cleaning to meet UHV standard. Specify in each comment box which cleaning/polishing method was utilized.  Upload before and after pictures. | [[Cleaning\_Method]] <<COMMENT>>  [[Polishing\_Method]] <<COMMENT>>  [[Before\_Photos]] <<FILEUPLOAD>>  [[After\_Photos]] <<FILEUPLOAD>> |
| 5 | General Comments:  • Use this for general comments or comments that don’t fit in the categories above. | [[GenComment]] <<COMMENT>> |