|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Traveler Title | SNSPPU Cavity Receiving Inspection | | | |
| Traveler Abstract | Incoming Inspection of SNSPPU Production Cavities. | | | |
| Traveler ID | SNSPPU-CAV-INSP-CAV | | | |
| Traveler Revision | R2 | | | |
| Traveler Author | Pashupati Dhakal | | | |
| Traveler Date | 6-Oct-20 | | | |
| NCR Informative Emails | kwilson, edaly, dhakal, macha | | | |
| NCR Dispositioners | kwilson, edaly, dhakal, macha | | | |
| D3 Emails | kwilson, edaly, dhakal, macha | | | |
| Approval Names | Pashupati Dhakal | Kurt Macha | G. Dekerlegand | Ed Daly |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Reviewer | Project Manager |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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. | | | |
| [104211800-M8U-8200-A001 Cavity Assembly](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219292/104211800-M8U-8200-A001-R00___.pdf) | [104211800-M8U-8200-A002 Probe End Sub-Assy](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219293/104211800-M8U-8200-A002-R00.pdf) | [104211800-M8U-8200-A002 FPC End Sub-Assy](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219294/104211800-M8U-8200-A003-R00.pdf) | [Cavity in Shipping Crate](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219295/Cavity%20in%20shipping%20crate.JPG) | |  |  | | --- | --- | |  | [104211800-M8U-8200-A017 FPC Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219298/104211800-M8U-8200-A017-R00.pdf) | |
| [104211800-M8U-8200-A016 FPC End Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219299/104211800-M8U-8200-A016-R00.pdf) | [104211800-M8U-8200-A011 Probe End Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219299/104211800-M8U-8200-A016-R00.pdf) |  |  |  |

|  |  |
| --- | --- |
| Revision Note |  |
| R1 | Initial release of this Traveler. |
| R2 | First Revision after the first cavity Inspection |

|  |  |  |
| --- | --- | --- |
| Step No. | Instructions | Data Input |
| 1 | Enter the cavity serial number ID that is going to be inspected. The SN should be ingraved on end dish. It not contact cavity SOTR. | [[CAVSN]] <<CAVSN>>  [[Inspector1]] <<SRF>> |
| 3 | Cell Serialization ( FPC-FP, Cell 1-6)  Each cell has two SN for each half record both. The numers are alpha numeric. | [[Cell 1]] <<FLOAT>>  [[Cell 2]] <<FLOAT>>  [[Cell 3]] <<FLOAT>>  [[Cell 4]] <<FLOAT>>  [[Cell 5]] <<FLOAT>>  [[Cell 6]] <<FLOAT>> |
| 4 | Ensure the right Angle Valve is in the closed position. | [[RightAngleValve Clsoed]] <<YESNO>>  [[ValveComments]] <<Comments>> |
| 5 | **Torque Value Check.** A286 8/32 – 40 in-lb. A286 5/16 – 30 ft-lb    ***Joints are numbered 1 to 7. NOTE - Starting location is at valve end of cavity*** | [[Are torque values correct]] << YES NO>>  [[Torque]] <Comments>> |
|  | 1. Valve screws ~30 ft-lb | [[DIMTOL25]] <<YESNO>>  [[TorqComment1]] <<COMMENT>> |
|  | 2. Beamline flange FPC End ~ 30 ft-lb | [[DIMTOL26]] <<YESNO>>  [[TorqComment2]] <<COMMENT>> |
|  | 3. FPC Flange ~ 30 ft-lb | [[DIMTOL27]] <<YESNO>>  [[TorqComment3]] <<COMMENT>> |
|  | 4. FPC coupler ~ 30 ft-lb | [[DIMTOL28]] <<YESNO>>  [[TorqComment4]] <<COMMENT>> |
|  | 5. Burst disk joint ~ 40 in-lb | [[DIMTOL29]] <<YESNO>>  [[TorqComment5]] <<COMMENT>> |
|  | 6. Beamline flange Field Probe end ~30 ft-lb | [[DIMTOL30]] <<YESNO>>  [[TorqComment6]] <<COMMENT>> |
|  | 7. Field probe ~ 30 ft-lb | [[DIMTOL31]] <<YESNO>>  [[TorqComment7]] <<COMMENT>> |
| 6 | **CMM Inspections**  **Perform dimensional inspections on CMM. Fill out NCR for any out of tolerance measurements.**  [104211800-M8U-8200-A001 Cavity Assembly](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219292/104211800-M8U-8200-A001-R00___.pdf)  [104211800-M8U-8200-A002 Probe End Sub-Assy](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219293/104211800-M8U-8200-A002-R00.pdf)  [104211800-M8U-8200-A003 FPC End Sub-Assy](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219294/104211800-M8U-8200-A003-R00.pdf)  [104211800-M8U-8200-A017 FPC Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219298/104211800-M8U-8200-A017-R00.pdf)  [104211800-M8U-8200-A011 Probe End Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219299/104211800-M8U-8200-A016-R00.pdf)  [104211800-M8U-8200-A016 FPC End Flange Detail](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-219299/104211800-M8U-8200-A016-R00.pdf) | [[Inspector3]] <<SRF>>  [[CmmComments]] <<COMMENT>>  [[AdditionalFile2]] <<FILEUPLOAD>> |
|  |  |  |
|  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Drawing number** | **Description** | **Drawing Value (inch)** | **Measured Value** | **Within Tolerance** |
| 104211800-M8U-8200-A001 | Distance between end dishes. Measure from machined step to machined step. | **35.423** | [[DIM1]] <<FLOAT>> | Reference Dimension N/A |
| 104211800-M8U-8200-A003 | Coupler flange perpendicularity. | .005 | [[DIM2]] <<FLOAT>> | [[DIMTOL2]] <<YESNO>> |
| 104211800-M8U-8200-A017 | Coupler flange perpendicularity OD | 4.889 | [[DIM3]] <<FLOAT>> | [[DIMTOL3]] <<YESNO>> |
| 104211800-M8U-8200-A016 | Beamline Flange OD- FPC side | 4.889 | [[DIM4]] <<FLOAT>> | [[DIMTOL4]] <<YESNO>> |
| 104211800-M8U-8200-A011 | Beamline Flange OD – FP side | 4.889 | [[DIM5]] <<FLOAT>> | [[DIMTOL5]] <<YESNO>> |
| 104211800-M8U-8200-A002 | End Flange to Dish ( FP side) | **6.397** | [[DIM6]] <<FLOAT>> | Reference Dimension N/A |
| 104211800-M8U-8200-A003 | End Flange to Dish ( FPC Side) | **9.01** | [[DIM7]] <<FLOAT>> | Reference Dimension N/A |
| 104211800-M8U-8200-A003 | Perpendicularity of FPC end dish to beam center | .005 | [[DIM8]] <<FLOAT>> | N/A |
| 104211800-M8U-8200-A002 | Perpendicularity of FP end dish to beam center | .005 | [[DIM9]] <<FLOAT>> | N/A |
| 104211800-M8U-8200-A002 | Tuner 120 Deg. C-Bore location | 2.559  5.118 | [[DIM10]] <<FLOAT>>  [[DIM11]] <<FLOAT>> | [[DIMTOL10]] <<YESNO>>  [[DIMTOL11]] <<YESNO>> |
| 104211800-M8U-8200-A002 | Tuner tapped hole locations.  Verify 10-32 Thread inserts are installed and test thread. | .590  1.180  2.559  5.118 | [[DIM12]] <<FLOAT>>  [[DIM13]] <<FLOAT>>  [[DIM14]] <<FLOAT>>  [[DIM15]] <<FLOAT>> | [[DIMTOL12]] <<YESNO>>  [[DIMTOL13]] <<YESNO>>  [[DIMTOL14]] <<YESNO>>  [[DIMTOL15]] <<YESNO>>  [[ThreadCheck1]] <<YESNO>> |
| 104211800-M8U-8200-A002  104211800-M8U-8200-A001 | Lollipop tapped hole C-Bore face. Side of flange at FP side.  Flange rotation, Lollipop tapped hole 0 Deg. To FPC flange.  Verify 5/8-11 threads with thread gauge. | 2.351  0 Deg. | [[DIM16]] <<FLOAT>>  [[DIM17]] <<FLOAT>> | [[DIMTOL16]] <<YESNO>>  [[DIMTOL17]] <<YESNO>>  [[ThreadCheck2]] <<YESNO>> |
| 104211800-M8U-8200-A002 | Alignment tool tapped hole C-Bore face. Side of flange at FP side.  Hole location 90 deg from FPC face  Verify 5/8-11 threads with thread gauge. | 2.351  2.351  90 Deg | [[DIM18]] <<FLOAT>>  [[DIM19]] <<FLOAT>>  [[DIM20]] <<FLOAT>> | [[DIMTOL18]] <<YESNO>>  [[DIMTOL19]] <<YESNO>>  [[DIMTOL20]] <<YESNO>>  [[ThreadCheck3]] <<YESNO>> |
| 104211800-M8U-8200-A003  104211800-M8U-8200-A001 | Lollipop tapped hole C-Bore face. Side of flange at FPC side.  Flange rotation, Lollipop tapped hole 0 Deg. To FPC flange.  Verify 5/8-11 threads with thread gauge. | 2.351  0 Deg. | [[DIM21]] <<FLOAT>>  [[DIM22]] <<FLOAT>> | [[DIMTOL21]] <<YESNO>>  [[DIMTOL22]] <<YESNO>>  [[ThreadCheck4]] <<YESNO>> |
| 104211800-M8U-8200-A002  104211800-M8U-8200-A001 | Alignment tool tapped hole C-Bore face. Side of flange at FPC side.  Hole location 90 deg from FPC face  Verify 5/8-11 threads with thread gauge.  Are the threads okay? | 2.351  2.351  90 Deg | [[DIM23]] <<FLOAT>>  [[DIM24]] <<FLOAT>> | [[DIMTOL23]] <<YESNO>>  [[DIMTOL24]] <<YESNO>>  [[ThreadCheck5]] <<YESNO>> |