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| Traveler Title | Brazement Adapter Assembly Receiving Inspection Traveler |
| Traveler Abstract | This is a receiving inspection traveler for RF window adapter assemblies involving visual, dimensional, RF, and leak test.  |
| Traveler ID | P1-INSP-ADPT |
| Traveler Revision  | R1 |
| Traveler Author | S. Williams |
| Traveler Date | 06-Aug-2020 |
| NCR Informative Emails | georged,forehand |
| NCR Dispositioners | scott,macha,edaly |
| D3 Emails | scott,georged,macha |
| Approval Names | S. Williams | K. Macha |  | 1. Reilly
 |
| 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. |
|  | [CRM-120-7075-0024 B](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-61163/crm1207075-0024%5B1%5D%5B1%5D.pdf) | [Leak spec 11141S0029](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-61164/JLAB_SPEC_11141S0029_Rev%20A%5B1%5D%5B1%5D.pdf) | [Drawing-window coating CRM-120-7075-0039](https://jlabdoc.jlab.org/docushare/dsweb/Get/Document-61165/crm1207075-0039%5B1%5D%5B2%5D.pdf) |  |
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| Revision Note |  |
| R1 | Initial release of this Traveler. |

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| Step No. | Instructions | Data Input |
| 1 | This is an ultra high vacuum component. Wear talc free latex gloves at all times when handling this part.* Enter inspector name and date.
 | [[TechnicianName]] <<SRF>>[[DateTime]] <<TIMESTAMP>> |
| 2 | * Inspect shipping container and shipping documents.
* Is container damaged? If there is a sign of damage take pictures and upload file.
* Is shipping document matching with shipped parts (quantity, part number, etc)? If there is a discrepancy provide details in comment box.
 | [[ContainerDamaged]] <<YESNO>>[[ContainerPics]] <<FILEUPLOAD>>[[ShipDocOK]] <<YESNO>>[[ShipDocDetail]] <<COMMENT>> |
| 3 | Visual inspection* Is the assembly free from the brazing residue?
* Is ceramic surface clean, free from scratches, cracks or stain?
* If it shows any defect provide pictures and comments.
 | [[WBASN]] <<WBASN>>[[VisualClean]] <<YESNO>>[[VisualCeramic]] <<YESNO>>[[VisualPics]] <<FILEUPLOAD>>[[VisualComment]]<<COMMENT>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 4 | Copper eyelet and Stainless steel adapter gapC--UGS-scratch-MyModel_0062.tifUse the gap checking tool and sweep around the copper eyelet gap. If the brazing residue blocks the sweeping stop further inspection and generate NCR.  | [[SweepPass]] <<YESNO>> |
| 5 | Dimensional check (CMM) |
| Description | Specified DimensionsMin/Max | Measured Dimensions | Pass/Fail |
| Envelope dimensions | Width1.709/1.719 | [[Dim\_width]] <<FLOAT>>[[Dim\_length]] <<FLOAT>>[[Dim\_thk]] <<FLOAT>>[[Dim\_radius1]] <<FLOAT>>[[Dim\_radius2]] <<FLOAT>>[[Dim\_radius3]] <<FLOAT>>[[Dim\_radius4]] <<FLOAT>> | [[Compare the measured value to the specified value and show pass or fail- if it’s outside of the range it fails]] <<NOTE>>[[Dim\_widthPassed]] <<YESNO>>[[Dim\_lengthPassed]] <<YESNO>>[[Dim\_thkPassed]] <<YESNO>>[[Dim\_radius1Passed]] <<YESNO>>[[Dim\_radius2Passed]] <<YESNO>>[[Dim\_radius3Passed]] <<YESNO>>[[Dim\_radius4Passed]] <<YESNO>> |
| Length5.525/5.535 |
| Thickness.620/.630 |
| Measure radii of all 4 cornersR.683/.693 |
| Adapter opening Measure 3 different locations as shown. | .981/.991 | [[Dim\_opening\_1]] <<FLOAT>>[[Dim\_opening\_2]] <<FLOAT>>[[Dim\_opening\_3]] <<FLOAT>> | [[Dim\_opening\_1Passed]] <<YESNO>>[[Dim\_opening\_2Passed]] <<YESNO>>[[Dim\_opening\_3Passed]] <<YESNO>> |
| Ceramic window thickness Measure 3 different locations on centerline as indicated in the picture.C--UGS-scratch-MyModel_0066.tif | .0948/.0968 | [[Dim\_CerThk\_1]] <<FLOAT>>[[Dim\_CerThk\_2]] <<FLOAT>>[[Dim\_CerThk\_3]] <<FLOAT>> | [[Dim\_CerThk\_1Passed]] <<YESNO>>[[Dim\_CerThk\_2Passed]] <<YESNO>>[[Dim\_Cer\_Thk\_2]] <<YESNO>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 6 | Initial leak testMinimum Detectable Leak 1×10^-10 atm.cc/sec He | [[InitialLeakTechName]] <<SRF>>[[InitialLeakPass]] <<YESNO>>[[InitialLeakFile]] <<FILEUPLOAD>> |
| 7 | RF Test* Inspect the set-up and perform RF survey.
* Follow the F100 window power ramp up.
* Maintain the max power 12kW until the ceramic temperature has stabilized at its maximum (Temperature increase should be less than 1 degree C per hour).
* Observe and record the thermal activity at the window using IR camera.
* Record the window flange temperature using the thermocouple output signals.
* At the end of the test, turn off RF.
* Allow time for window and waveguide to cool before removing window from waveguide.
* If the RF test at this step is omitted provide the reason.
 | [[RF\_TechName]] <<SRF>>[[RF1\_Time]] <<TIMESTAMP>>[[UploadRF\_File]] <<FILEUPLOAD>>[[RF\_TestComment]] <<COMMENT>> |
| 8 | Final leak testMinimum Detectable Leak 1×10^-10 atm.cc/sec He* Enter technician name, test date and upload file.
 | [[FinalLeakTechName]] <<SRF>>[[FinalLeakTime]] <<TIMESTAMP>>[[FinalLeakPass]] <<YESNO>> [[FinalLeakFile]] <<FILEUPLOAD>> |
| 9 | * Package window adapter to ship to the ion implantation vendor, Cutting Edge Ions, LLC.
* Enter the technician name.
* Enter date of shipment.
 | [[ShipIonTechName]] <<SRF>>[[ShipIonDate]] <<TIMESTAMP>> |
| 10 | This traveler resumes when the adapter returns from the ion implantation vendor. Wear nitrile gloves at all times when handling this part.* Enter technician name and date.
* Inspect the shipping container from the ion implantor. Is the container free from damage?
 | [[TiTechName]] <<SRF>>[[TiDate]] <<TIMESTAMP>>[[TiContainerOK]] <<YESNO>> |
| 11 | * Has the ion implantation been performed on the brazement?
* Inspect if the correct side was ion implanted. Ion implanted surface shows yellow tint.

implant side.JPG* Provide comment if the brazement shows any abnormality.
* Contact the responsible engineer for next step.
 | [[TiVisPass]] <<YESNO>>[[TiComment]] <<COMMENT>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 12 | Is this brazement sampled for RF test?* If yes, perform the initial leak check per spec 11141S0029. Minimum Detectable Leak 1×10^-10 atm.cc/sec He. If not, re-pack it for shipping to the anti-multipacting coating vendor and go to the step 4.
* Enter leak check technician name and time of the test.
 | [[Ti\_RF\_smpl]] <<YESNO>>[[Ti\_ILeak\_Tech]] <<SRF>>[[Ti\_ILeak\_Date]] <<TIMESTAMP>> |
| Did the brazement pass the leak check?* If the brazement did not pass the leak check, generate NCR. Forward the passed brazement to the RF test personnel.
 | [[Ti\_ILeak\_Pass]] <<YESNO>> |
| Enter RF test technician name and the date of the test. * Inspect the set-up and perform RF survey.
* Follow the F100 window power ramp up.
* Maintain the max power 12kW until the ceramic temperature has stabilized at its maximum (Temperature increase should be less than 1 degree C per hour).
* Observe and record the thermal activity at the window using IR camera.
* Record the window flange temperature using the thermocouple output signals.
* At the end of the test, turn off RF.
* Allow time for window and waveguide to cool before removing window from waveguide.
* Did the brazement pass the RF test?
* If the brazement did not pass the RF test, generate NCR. Forward the passed brazement to the leak check technician.
 | [[Ti\_RF\_Tech]] <<SRF>>[[Ti\_RF\_Date]] <<TIMESTAMP>>[[Ti\_RF\_file]] <<FILEUPLOAD>>[[Ti\_RF\_Pass]] <<YESNO>> |
| Final leak check per spec 11141S0029.* Enter leak check technician name and time of the test.
* Did the brazement pass the final leak check?
* Package the passed brazement for shipping to the anti-multipacting coating vendor.
* If it did not pass the leak check generate NCR.
 | [[Ti\_FLeak\_Tech]] <<SRF>>[[Ti\_FLeak\_Date]] <<TIMESTAMP>>[[Ti\_FLeak\_Pass]] <<YESNO>> |

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| **Step No** | **Instructions** | **Data Inputs** |
| 13 | Is the brazement shipped to the Anti-multipacting coating vendor, Thin Film Labs? | [[Ship\_Anti]] <<YESNO>>[[Ship\_Anti\_date]] <<TIMESTAMP>> |
| 14 | Receiving inspection from anti-multipacting coating vendor* This brazement is from the anti-multipacting (Titanium Dioxide) coating vendor. Make sure you opened the correct adapter ID.
* Enter technician name and date of the inspection.
* Inspect the shipping container. Is the container free from damage?
 | [[TiO2\_Tech\_Name]] <<SRF>>[[TiO2\_Date]] <<TIMESTAMP>>[[TiO2\_ContainerOK]] <<YESNO>> |
| 15 | The existence of coating is hard to tell by visual inspection. * Until the specific method is developed inspect ceramic surface for visual damages.
* Provide comment if the brazement shows any abnormality.
* Contact the responsible engineer for next step.
 | [[TiO2\_VisPass]] <<YESNO>>[[TiO2\_Comment]] <<COMMENT>> |
| 16 | Is this brazement sampled for RF test?* If yes, perform the initial leak check per spec 11141S0029. Minimum Detectable Leak 1×10^-10 atm.cc/sec He. If not, repack, mark 'weld ready', and store in the designated area.
* Enter leak check technician name and time of the test.
* Did the brazement pass the leak check?
* If the brazement did not pass the leak check, generate NCR. Forward the passed brazement to the RF test personnel.
 | [[TiO2\_RF\_smpl]] <<YESNO>>[[TiO2\_ILeakTech]] <<SRF>>[[TiO2\_ILeakDate]] <<TIMESTAMP>>[[TiO2\_ILeakPass]] <<YESNO>> |
| * Enter RF test technician name and the date of the test.
* Inspect the set-up and perform RF survey.
* Follow the F100 window power ramp up.
* Maintain the max power 12kW until the ceramic temperature has stabilized at its maximum (Temperature increase should be less than 1 degree C per hour).
* Observe and record the thermal activity at the window using IR camera
* Record the window flange temperature using the thermocouple output signals.
* At the end of the test, turn off RF.
* Allow time for window and waveguide to cool before removing window from waveguide.
* Did the brazement pass the RF test?
* If the brazement did not pass the RF test, generate NCR. Forward the passed brazement to the leak check technician.
 | [[TiO2\_RF\_Tech]] <<SRF>>[[TiO2\_RF\_Date]] <<TIMESTAMP>>[[TiO2\_RF\_file]] <<FILEUPLOAD>>[[TiO2\_RF\_Pass]] <<YESNO>> |
| * Final leak check per spec 11141S0029.
* Enter leak check technician name and time of the test.
* Did the brazement pass the final leak check? If it did not pass the leak check generate NCR.
 | [[TiO2\_FLeakTech]] <<SRF>>[[TiO2\_FLeakDate]] <<TIMESTAMP>>[[TiO2\_FLeakPass]] <<YESNO>> [[TiO2\_FLeakFile]] <<FILEUPLOAD>> |
| * Is the part ready for weld?
* Send the passed adapter to the chem room to clean. Repack the cleaned part, mark 'weld ready', and store in the designated area.
* In inventory system, issue adapter to Ken Worland or his designate for welding.
 | [[Weld\_ready]] <<YESNO>> |