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| Traveler Title | SNS PPU Thermal Shield Inspection Traveler | | | |
| Traveler Abstract | Traveler defines inspection process for the SNS PPU Thermal Shield | | | |
| Traveler ID | SNSPPU-CM-INSP-THRM | | | |
| Traveler Revision | - | | | |
| Traveler Author | Matt Marchlik | | | |
| Traveler Date | 15-Apr-20 | | | |
| NCR Informative Emails | Marchlik, kwilson, edaly | | | |
| NCR Dispositioners | marchlik, kwilson, edaly | | | |
| D3 Emails |  | | | |
| Approval Names | M. Marchlik | K. M. Wilson | A. DeKerlegand | E.F. Daly |
| 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. | | |
| 104211100-M8U-8200-A002-RevA (THERMAL SHIELD ASSEMBLY) | | 104211100-M8U-8200-A003-RevA (50K SHIELD SUBASSY) | 104211100-M8U-8200-A025 (SUPPLY END THERMAL SHIELD ASSY) |
| 104211100-M8U-8200-A014 (RETURN END THERMAL SHIELD ASSY) | | 104211100-M8U-8200-A042 (SHIELD BELLOWS ASSEMBLY) | 104211100-M8U-8200-A040 (SUPPORT ASSY) |

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

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| Step No. | Instructions | | | Data Input | |
| **General handling guidelines:** When moving the assembly alone and not installed in a spaceframe, it should be supported/lifted at three points: At the center and approximately four feet from each end. The thermal shields shall be handled according to standard cleaning and handling practices. | | | | | |
| 1 | **Initial Inspection:** | | | | |
| Technician Name  Date of Inspection  Serial Number of part | | | [[TechName]] <<SRF>>  [[InspectionDate]] <<TIMESTAMP>>  [[THRMSN]] << THRMSN>> | |
| Is the assembly clean, free from dust, oil, finger prints or other contaminants? | | | [[PartCleanOk]] <<YESNO>> | |
| Inspect all of the sheet metal panels of the assembly and verify that there are no ding/dents that exceed ¼” in depth. | | | [[PanelsOk]]<<YESNO>> | |
| Bellows:     * The access panels above the bellows should be removed to provide access to the bellows and replaced after inspection. * Visually inspect the three bellows assemblies in the helium line and verify that they are free from dings/dents greater than .02” in depth and are free from gouges in the convolutions. * Verify that the bellows are straight, not squirmed. | | | [[BellowsOk]]<<YESNO>> | |
| Heat Stations:     * Verify the thermal heat stations are installed on both ends of the shield assemblies and that the thermal strapping braze joints look to be in good condition. * The shipping restraint may be removed for the inspection and shall be replaced afterwards. | | | [[heatstationOk]]<<YESNO>> | |
| Space Frame Mounts:    Verify that all 32 of the G11 space frame mounts are accounted for and installed correctly and securely. | | | [[MountsOk]]<<YESNO>> | |
| End Supports:    Verify that both end shield supports assemblies are installed securely and correctly. | | | [[SupportOk]]<<YESNO>> | |
| Field Probe Cable Intercepts:    Verify that all four of the field probe cable thermal intercept blocks are accounted for and installed securely. | | | [[InterceptOk]]<<YESNO>> | |
| He line braze:     * Verify that the helium lines is brazed properly to the thermal contraction fingers. * Verify that there is not exidation around the braze region from remnant flux as shown in the image below. | | | [[BrazeOk]]<<YESNO>> | |
| Nitronic Rod Thermal Intercept:     * Verify that all 32 nitronic rod thermal intercepts are brazed to the shield adequately. * Verify that there is not exidation around the braze region from remnant flux. | | | [[RodinterceptOk]]<<YESNO>> | |
| Comments:  Upload photos of any damage. | | | [[VisualInspComment]] <<COMMENT>>  [[VisualInspPhoto]] <<FILEUPLOAD>> | |
| 2 | **Dimensional Inspection:** | | | | |
| Dimensionally inspect the thermal shield assemblies with serial numbers ending in 001, 003 and 006. | | | [[DimcheckOk]] <<YESNO>>  [[DimcheckComment]] <<COMMENT>> | |
| **Drawing Number** | | **Description** | **Drawing Value** | **Measured Value** | **Within Tolerance** |
| N/A | | Overall Length: From outer face of end extensions | 228.61” +/- .25” | [[MeasLength]] <<FLOAT>> <<YESNO>> | |
| N/A | | Outer diameter of the shield | 27.97” +/- .25”  Or  28.19” +/- .25” | [[MeasOD]] <<FLOAT>> <<YESNO>> | |
| N/A | | FPC penetration local center to center distance, 2 places. | 15.80” +/- .25” | [[MeasFPC1]] <<FLOAT>> <<YESNO>> | |
| N/A | | FPC penetration pair to pair. Measure distance between centers of the two center FPC penetrations. | 93.04” +/- .25” | [[MeasFPC2]] <<FLOAT>> <<YESNO>> | |
| 3 | **Storage:** | | | | |
| Replace all components that have been removed for inspection and ensure the bellows covers are replaced. | | | [[StorageTech]] <<SRF>>  [[StorageDate]] <<TIMESTAMP>> | |