LOG OF MATERIALS DATA SHEETS, DEVICE SPECS, SPECIAL PROCUREMENT SPECIFICATIONS, ETC. PROVIDED BY TOSHIBA

Documents labeled **"TFD"** refer to the major progress summary documents provided by Toshiba, often at the Toshiba-Fermilab joint meetings. Documents labeled **"TFF"** refer to the faxes sent by Toshiba during the course of the project.

TFD-004 (03/15/97)

1. HASTINGS HFC Mass Flow Controllers Series 202,203
   (we need the low delta P version!)
2. SDC dielectric break test regime
3. HISAKA Ball valve spec sheet
4. TOKO Laboratory operated cryogenic valve
5. ISES bulletin for rad damage on plastics
6. CERN report for rad damage on plastics
7. BANTAM connectors and pins spec sheets
8. SDC FRP fatigue note
9. XD-911 data sheets
10. ARISAWA G-10 data sheet
11. SDC KGEPP shear tests
12. UGEPP data sheet and specification
13. Draft conductor specification PNKN50127

TFD-009 (04/21/95)

1. Final conductor specification PNKN 50127-c

TFD-026 (05/31/95)

1. CRYOLAB seal-off/vacuum pumpout
2. Rupture disc data sheet (vendor?)
3. AGCO Type 81 relief valve
4. KYOCERA connector specification
5. UPILEX data sheets

6. Conductor pull-out testing tooling
7. "Green Putty" (chapt. 3)

TFD-037 (07/21/95)

1. DC Breaker detail sheet
2. KYOWA pressure transmitter spec sheet
3. Helium reservoir stress calculation note (EKN-10247 G)
4. ROSEMOUNT transmitter spec sheets
5. NUPRO check valve spec sheets
6. Leak check QA sheet for sample tube welds
7. Rad damage data sheet (from CERN report?)
8. Belville washer spec sheet
9. XD-911 viscosity vs temperature
10. Solder articles
11. Aluminum articles
12. OUTOKUMPU strand QC reports
13. OUTOKUMPU cable QC reports

TFF-047 (08/22/95)

1. Ti data specs

TFF-048 (TFD-039) (09/01/95)

1. FRP creep test plan
2. He reservoir plate order PN KN501040
3. He reservoir pipe order PN KN501045
4. He reservoir bar order PN KN501042
5. He reservoir tube order PN KN501041

TFF-049 (09/14/95)

1. HOLTON CONFORM information sheet

TFF-050 (9/21/95)

1. ST plate tolerance sheet - thickness
2. Conductor shipping spool specs

TFD-043 (10/04/95)

1. SHOWA Nb3Sn conductor data sheet
2. FOX venturi spec sheet
3. Table of Relief Devices used:
   ANDERSON-GREENWOODS;
   KISHIKAWA rupture disc;
   CRYOLAB vacuum relief;
4. CRYOLAB CV1997B valve data sheets, Fermi PO for custom trim;
5. Spec for He reservoir heat exchanger tubing (PN-KN50141a)
6. Spec for He reservoir bar stock (PN-KN50142a)
7. Spec for He reservoir vessel tube (PN-KN50145a)
8. Spec for He reservoir heads (PN-KN50140a)
9. Dwg and Spec for dielectric break (dwg YMD957141)
10. ASAHI VAC-JOINT spec for AL-Ti-ST joint
11. Asahi CRYOCOUP bimetallic Al-Ti-ST joint spec
12. CRYOLAB pumpout/vacuum relief spec again
13. SEISAKUSHO Al alloy bolt spec sheets
14. Spec sheets for "keenserts"
15. SUPERIOUR Sn1819MAL aluminum solder and flux
16. Conductor shipping spool data sheet

TFD-044 (10/23/95)

1. NIBCO bayonet ball valve order specs

TFF-060 (11/17/95)

1. PECHINEY Al cert sheet for 29 billets
2. PECHINEY Al cert sheet for 2 billets

TFF-061 (1/20/95)

1. CGR calibration accuracy

TFF-073 (01/11/96)

1. Cryostat assy plans

TFF-079 (02/06/96)

1. Low Temperature lubrication paper
2. CLIMAX MoS2 lube data sheet
3. MoS2 friction sheet
4. Al7075BE tensile data

TFF-082 (03/08/96)

1. FEP data sheet for wire insulation
2. VITON rad damage data

TFD-046 (02/19/96)

1. None

TFF-083 (03/14/96)

1. Mtl sheet for Al He cooling pipe before heat treat
2. Mtl sheet for Al N2 cooing pipe before heat treat
3. NIPPON mtl data sheet for He reservoir flange
4. DAIDO mtl data sheet for He reservoir nozzle
5. KAISER mtl data sheet for He reservoir cylinder
6. NIPPON SANSO data sheet for Cu/ST transition
7. DAIDO mtl data sheet for Cu/StT ST
8. SAMBO mtl data sheet for Cu/ST Cu

TFF-084 (03/27/96)

1. SKY Al support cylinder mtl data sheet
2. GREENVILLE mtl data sheet for He reservoir heatexch pipe
3. Toshiba receiving inspection report PC-U-T004 for coil "ASME CODE"

TFF-085 (04/09/96)

1. GUG PN PNKN50174
2. Kapton shear stress data
3. GUG shear stress data
4. SKY Al s end flange mtl data sheet
5. SKY Al n end flange mtl data sheet

TFD-047 (04/23/96)

1. Brazing materials cert sheets
2. U-1 Report for Subcooler
3. Cold Mass R(8 mm), Z (10 mm) GFRP cert sheets
4. GUG data sheet
5. Solder data sheets, bond strength data (DM-K42A51)

TFF-087 (05/03/96)

1. Inspection report for VCL Cu spiral
2. FOX venturi hydro test certification
3. FOX venturi flow rate calibration
4. KOBELCO data sheet for T6 He cooling tube

TFF-094 (06/09/96)

1. Fox Venturi straight length minimum

TFD-048 (07/24/96)

1. Glass fiber "siran" treatment data sheet
2. UGEPP corona treatment
3. FIBERFRAX welding blanket data sheet
4. G10 in coil data sheet
5. Al-ST transition plate data sheet, plus those for the Al,Ti,ST
6. SANYO data sheet for ST for VCL
7. GONDA data sheet for helical copper C122 VCL
8. YPC data sheet for copper plating of current buses

TFF-106 (08/30/96)

1. 80 psi AGCO relief certs (void – see TFF-107)
2. Toshiba in-house pressure gauge calibration

TFF-107 (09/06/96)

1. AGCO 60 psig LN2 relief test report (serial 95-50636)
2. AGCO 60 psig LHe relief test report (serial 95-50637)

TFF-109 (09/20/96)

1. SUMITOMO He relief line bellows material cert
2. SANYO material data sheet for bellows cuffs
3. Leak and pressure test report for above
4. Same for liquid level line bellows (except DAIDO cuff report)

TFF-111 (09/27/96)

1. MLI heat leak data plots (from published paper)

TFF-112 (09/30/96)

1. CRYOMAGNETICS liquid level probe data sheet
2. IX-294 epoxy tensile shear, materials properties, thermal contraction data sheets (used for field joints)
3. SK-229 epoxy data sheet (used for sensors)

TFD-049 (10/15/96)

1. ES6 FRP data sheet/spec

TFD-050 (12/19/96)

1. CD Connector pin assignment table
2. Recorder channel input assignment for tests
3. Field Joint Procedure at Fermilab

TFF-129 (12/27/96)

1. Cryomagnetic Lhe level probe data sheet
2. Hastings flowmeter calibration data sheets(2)

TFF-133 (01/21/97)

1. System Heat Leak Table Review

TFF-137 (02/5/97)

1. Description of transfer tubes "T" and "F"
2. Cryofab Dewar volume nomograms, level sensor calibrations

TFF-139 (02/11/97)

1. Magnet test location wrt beams in floor

TFF-142 (02/18/97)

1. Manufacturer's Label on system

TFF-143 (02/19/97)

1. Quench detection threshold for buses, coil

TFF-144 (02/20/97)

1. Vacuum leak sealant VACSEAL (Space Env. Lab. Colorado)
2. Mounting spacers for field mapper

TFD-051 (03/07/97)

1. Test Electrical Circuit, potential tap channels
2. Corrected coil connector pin assignments

TFF-149 (03/17/97)

1. Quench detector status during tests

TFF-150 (03/21/97)

1. Shipping accelerometers g-value setting (2.5 g)

TFF-151 (03/28/97)

1. KYOWA Strain Gauge Thermal Offset nomogram
2. Thermal contraction of aluminum (copied from TFD-026)

TFF-156 (04/26/97)

1. Shipping crate details

TFF-157 (04/30/97)

1. Shipping crate lifting details
2. Crate shock sensor inspection instructions
3. Crate unpacking instructions

TFF-158 (05/08/97)

1. Crate lifting instructions
2. Magnet, Control Dewar, Chimney lifting instructions
3. Magnet lifting fixture CG

TFF-159 (05/13/97)

1. Shock sensor threshold
2. Location of repaired 1/4 - 20 keenserts (S end)

TFF-161 (05/15/97)

1. Accelerometer Sensitivity specification

TFD-052 (05/27/97)

1. Drawing revision status list
2. Many final drawings
3. Post-shipment inspection plan (incl. joint parallel sample)

TFF-166 (06/04/97)

1. Shipping fixture design/fab/mtls details

Note: This document was composed on 11/04/97 from file ~rpsmith/project/reviews/toshiba_certs_specs.log on fnalu.