

NOTES:

300K HELIUM FROM ERL COMPRESSOR

300K LOOP  
1G/S-10 G/S,  
PIN 191 PSI, 293K,  
POUT, CHOKED, 96 PSI, 293K  
MAWP: 300 PSI  
Cv=0.5, EQ%

90K LOOP  
1G/S-10 G/S,  
PIN 191 PSI, 293K,  
POUT, CHOKED, 96 PSI, 293K  
MAWP: 300 PSI  
Cv=0.5, EQ%

LN2 BAYONET TAP ON LN2 FEED TO 1660

- TEMPERATURE SENSORS:
- HT?? LAKESHORE PLATINUM RTD PT103. @ SOLENOID SHIELD OUTLET
  - HT?? LAKESHORE DT-470 @ VALVEBOX RESERVOIR
  - HT?? LAKESHORE DT-470 @ VALVEBOX RESERVOIR
  - HTCLA THERMOCOUPLE. @ CURRENT LEAD FLOW EXIT
  - HXCLB THERMOCOUPLE @ CURRENT LEAD FLOW EXIT
  - CT01 CYLINDER 180 L.U. CLTS-2B @ SOLENOID
  - CT02 CYLINDER 180 L.U. CLTS-2B @ SOLENOID
  - CT03 CYLINDER 90 CENTER CLTS-2B @ SOLENOID
  - CT04 CYLINDER 270 CENTER CLTS-2B @ SOLENOID
  - CT05 CYLINDER 0 L.O.U., CLTS-2B @ SOLENOID
  - CT06 CYLINDER 0 L.U., CLTS-2B @ SOLENOID
  - CT07 CYLINDER INTERNAL JOIN, CARBON GLASS, CGR1200. @ SOLENOID
  - CT09 CYLINDER 180 L.U. CARBON GLASS, CGR1200. @ SOLENOID
  - MT01 COIL 180 L.O.U. CARBON GLASS, CGR1200. @ SOLENOID
  - MT07 COIL INTERNAL JOINT, CARBON GLASS, CGR1200. @ SOLENOID
  - MT08 COIL END JOINT A, CARBON GLASS, CGR1200. @ SOLENOID
  - MT09 COIL END JOINT B, CARBON GLASS, CGR1200. @ SOLENOID
  - HT01 VALVEBOX INLET CLTS-2B @ VALVEBOX
  - HT02 HELIUM MIX CLTS-2B @ VALVEBOX
  - HT03 COIL INLET CLTS-2B @ SOLENOID
  - HT04 COIL OUTLET CLTS-2B @ SOLENOID
  - HT05 FROM COIL TO VALVEBOX CLTS-2B @ CHIMNEY- VALVEBOX
  - HT06 HELIUM BATH CARBON GLASS, CGR1200 @ VALVEBOX
  - HT07 DEWAR WALL CLTS-2B @ VALVEBOX
  - HT08 SHIELD INLET CLTS-2B @ SOLENOID
  - HT09 SHIELD OUTLET CLTS-2B @ VALVEBOX
  - HT10 SHIELD TO VALVEBOX CLTS-2B @ CHIMNEY=VALVEBOX
  - HT91 VALVEBOX INLET, CARBON GLASS, CGR1200 @ VALVEBOX
  - HT94 COIL OUTLET, CARBON GLASS, CGR1200 @ SOLENOID
  - ST01 SHIELD, INT 180 L.U. CLTS-2B, @ SOLENOID
  - ST02 SHIELD, INT 270 L.U. CLTS-2B @ SOLENOID
  - ST03 SHIELD, INT 90 L.U. CLTS-2B @ SOLENOID
  - ST04 SHIELD, INT 0 L.U. CLTS-2B @ SOLENOID
  - ST05 SHIELD, EXT 180 L.O.U. CLTS-2B @ SOLENOID
  - ST06 SHIELD, EXT 270 L.O.U. CLTS-2B @ SOLENOID
  - ST07 SHIELD, EXT 90 L.O.U. CLTS-2B @ SOLENOID
  - ST08 SHIELD, EXT 0 L.O.U. CLTS-2B @ SOLENOID
  - ST09 SHIELD, CHIMNEY CLTS-2B @ SOLENOID
  - ST10 SHIELD, VALVEBOX CLTS-2B @ VALVEBOX
  - ST11 SHIELD, VALVEBOX CLTS-2B @ VALVEBOX
  - ST12 SHIELD, VALVEBOX CLTS-2B @ VALVEBOX
  - TT01 TEMPERATURE AXIAL TIE ROD L.O.U. 315
  - TT02 TEMPERATURE AXIAL TIE ROD L.O.U. 315
  - TT03 TEMPERATURE RADIAL TIE ROD L.O.U. 315.

- STRAIN GAGES  
MICRO MEASUREMENTS WK--06-250-BG-350: QTY 28, QTY 21 OPERATIONAL
- TS01 STRAIN-GAGE RADIAL TIE ROD L.U. 22.5.
  - TS02 STRAIN-GAGE RADIAL TIE ROD L.U. 67.5.
  - TS03 STRAIN-GAGE RADIAL TIE ROD L.U. 112.5.
  - TS04 STRAIN-GAGE RADIAL TIE ROD L.U. 157.5.
  - TS05 STRAIN-GAGE RADIAL TIE ROD L.U. 202.5.
  - TS06 STRAIN-GAGE RADIAL TIE ROD L.U. 247.5.
  - TS07 STRAIN-GAGE RADIAL TIE ROD L.U. 292.5.
  - TS08 STRAIN-GAGE RADIAL TIE ROD L.U. 337.5.
  - TS11 STRAIN-GAGE RADIAL TIE ROD L.O.U. 22.5.
  - TS12 STRAIN-GAGE RADIAL TIE ROD L.O.U. 67.5.
  - TS13 STRAIN-GAGE RADIAL TIE ROD L.O.U. 113.5.
  - TS14 STRAIN-GAGE RADIAL TIE ROD L.O.U. 157.5.
  - TS15 STRAIN-GAGE RADIAL TIE ROD L.O.U. 202.5.
  - TS16 STRAIN-GAGE RADIAL TIE ROD L.O.U. 247.5.
  - TS17 STRAIN-GAGE RADIAL TIE ROD L.O.U. 292.5.
  - TS18 STRAIN-GAGE RADIAL TIE ROD L.O.U. 337.5.
  - TS20 STRAIN-GAGE AXIAL TIE ROD L.U. 75.
  - TS80 STRAIN-GAGE AXIAL TIE ROD L.U. 75
  - TS21 STRAIN-GAGE AXIAL TIE ROD L.U. 195
  - TS81 STRAIN-GAGE AXIAL TIE ROD L.U. 195
  - TS22 STRAIN-GAGE AXIAL TIE ROD L.U. 315
  - TS82 STRAIN-GAGE AXIAL TIE ROD L.U. 315
  - TS23 STRAIN-GAGE AXIAL TIE ROD L.O.U. 75
  - TS90 STRAIN-GAGE AXIAL TIE ROD L.O.U. 75
  - TS25 STRAIN-GAGE AXIAL TIE ROD L.O.U. 195
  - TS91 STRAIN-GAGE AXIAL TIE ROD L.O.U. 195
  - TS27 STRAIN-GAGE AXIAL TIE ROD L.O.U. 315
  - TS32 STRAIN-GAGE AXIAL TIE ROD L.O.U. 315
  - TS92 STRAIN-GAGE AXIAL TIE ROD L.O.U. 315

LEVEL PROBES:  
HL01 AMI SC LEVEL PROBE. QTY 1 @ VALVEBOX RESERVOIR

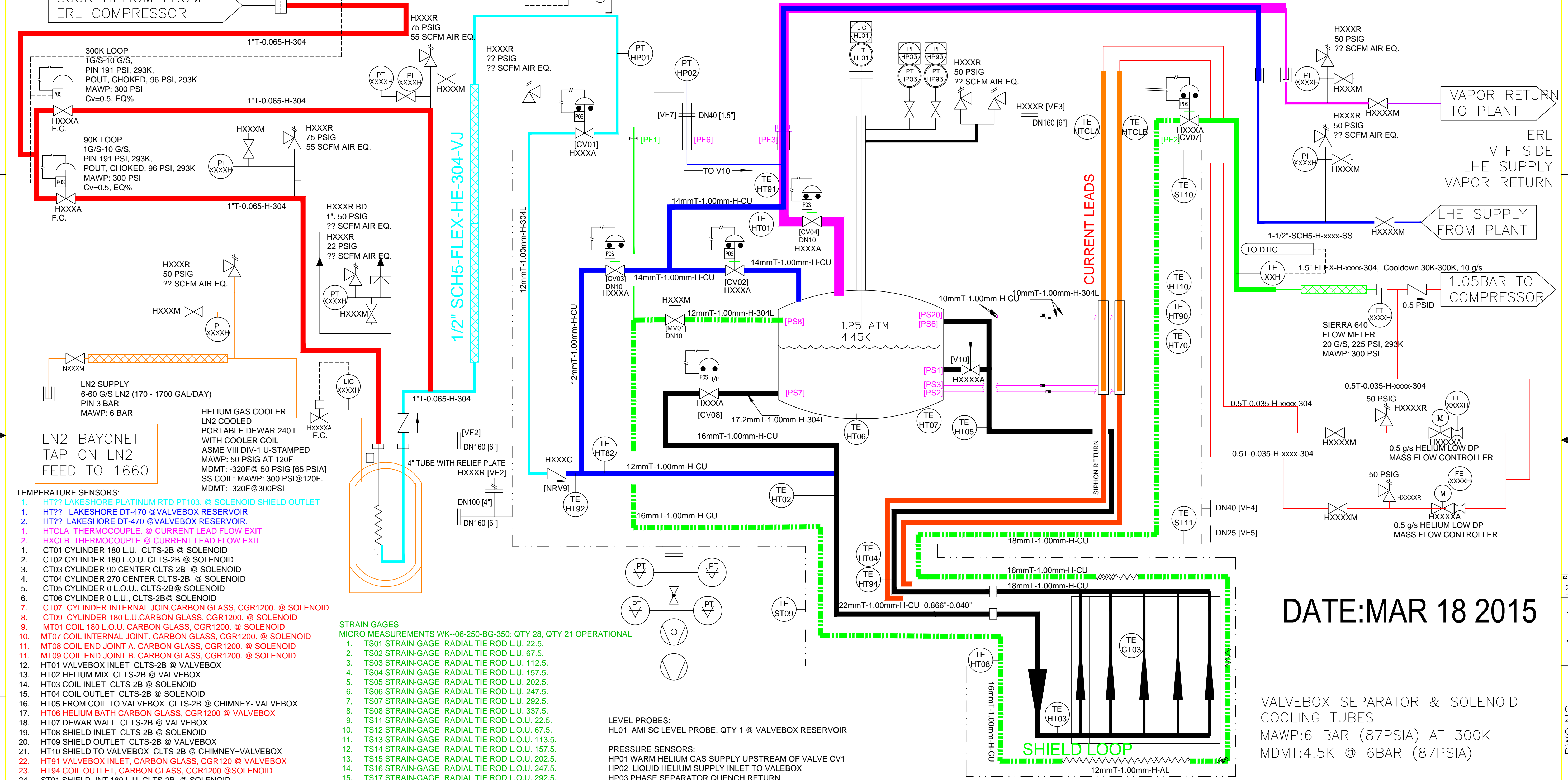
PRESSURE SENSORS:  
HP01 WARM HELIUM GAS SUPPLY UPSTREAM OF VALVE CV1  
HP02 LIQUID HELIUM SUPPLY INLET TO VALVEBOX  
HP03 PHASE SEPARATOR QUENCH RETURN  
HP93 PHASE SEPARATOR QUENCH RETURN VALCOM: QTY. 3 @ SOLENOID VALVEBOX  
KPSI/MODEL27. QTY 1 @ SOLENOID VALVEBOX

HELIUM MASS FLOW METERS  
F164 SIERRA INSTRUMENTS 600 SERIES SOLENOID SHIELD RETURN FLOW  
HF06 BRONKHURST CURRENT LEADS HELIUM FLOW CONTROL  
HF07 BRONKHURST CURRENT LEADS HELIUM FLOW CONTROL

CURRENT METER:  
DYNAPOWER ZFCT QTY 2 @ CURRENT LEADS

REVISION		APPROVALS						
REV	ECN NO.	DESCRIPTION	DATE	BY	CHK	DES	ENG	SUPV
P0		PRELIMINARY REVIEW						

SLAC COAXIAL VJ LINE WITH NEW BAYONETS TO INTERFACE TO ERL CRYO SYSTEM



DATE: MAR 18 2015

VALVEBOX SEPARATOR & SOLENOID COOLING TUBES  
MAWP: 6 BAR (87PSIA) AT 300K  
MDMT: 4.5K @ 6BAR (87PSIA)

INTERPRET IN GENERAL ACCORDANCE WITH ANSI/ASME Y14.5M-1994		DRAWN BY: R. THAN		OCT 2014		TITLE: SPHENIX-CRYOGENICS COLD TEST BLDG 912 PIPING & INSTRUMENTATION DIAGRAM	
UNLESS OTHERWISE SPECIFIED		DESIGNED BY:		APPROVED BY:		SIZE: D	
DIMENSIONS ARE IN INCHES		CHECKED BY:		SUPERVISOR APPROVAL:		DRAWING NUMBER: XXXXXXXXX	
.X ± .030						REV. P5	
.XX ± .015						Q.A. CATEGORY: A-3	
.XXX ± .005						SCALE: —	
ANGULAR TOLERANCE ± 1°						WEIGHT: —	
USED ON DRAWING NO. QTY. PER ASSY.		125 ✓		BREAK SHARP EDGES		SHEET 1 OF 1	
APPLICATION		FINISH		MAX. .03 MIN. .015		AutoCAD	

DWG. NO. P551 or 1