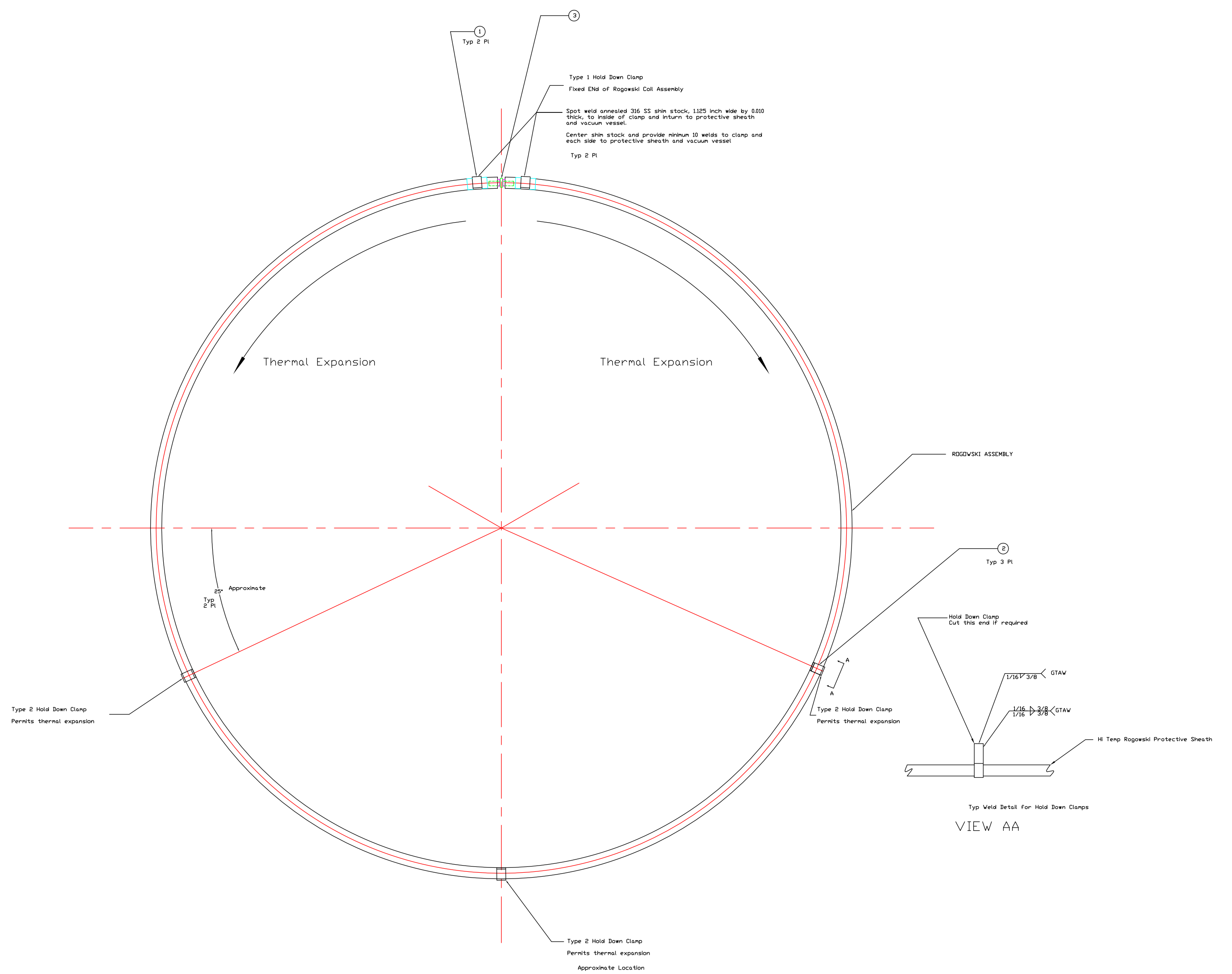
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



NOTES :

1. Install three Rogowski Coil Assembllies, 120 degrees apart, one on each of the 3 VV segments on the outer surface and at the weld joint. The orientation is : standing outside the machine field periods, looking at the NB port, with the vacuum vessel port 12 oriented vertically, top flange up, install on the left weld flange.

2. Add 0.010 inch thick shim stock between the Rogowski protective sheath and crossed external flux loops and spot weld to the vacuum vessel. This will act to protect the co axial cable.

3. Mandrel end fixture , one Rogowski Coil on VV1 to use Inconel with Lectrofluor PG coating (0.001 inch) by General Magnaplate and two Rogowski coils on VV2 and VV3 to use Zirconia.

4. Position mandrel ends against the dielectric end fitting

5. Per project requirements, Rogowski Coil Components, magnetic permeability <1.02

Weld Notes:

Welding shall be performed in accordance with the requirements of PPPL Procedure ENG 037.

Visual inspection shall be performed in accordance with the acceptance criteria of AWS D1.6

RELEASED FOR FABRICATION / INSTALLATION

PPPL Drafting:

03	02	01	PART NO.	NOMENCLATURE OR DESCRIPTION	DRAWING NO.	MATERIAL
		1		ROGOWSKI COIL ASSEMBLY	THIS DWG SH 1	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES:
AutoCAD2000	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES MACHINE SURFACES 125
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020
SCALE:	TOLERANCES NON-CUMULATIVE
NEXT ASSEMBLY	DECIMAL-INCH: .X ± .100; .XX ± .030; .XXX ± .005; ANGULAR ±0°-15' — FRACTIONS: 0"-12" ±1/16; 12"-72" ±1/8; 72"-120" ±1/4; OVER 120" ±1/2

WELDING ENGINEER

APPVD: ______ DATE ______

APPVD: L. DUDEK DATE 3JUNE2008

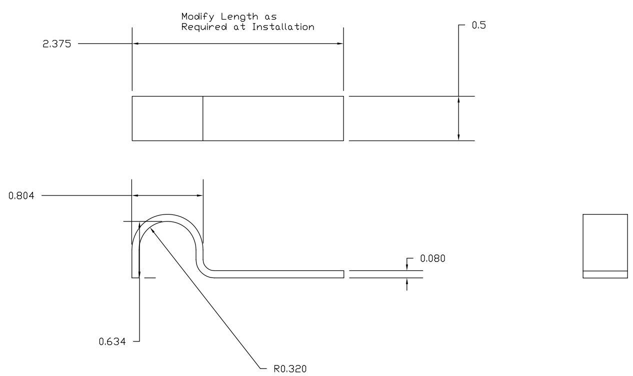
PRINCETON PLASMA PHYSICS LABORATORY
PRINCETON UNIVERSITY
NATIONAL COMPACT STELLARATOR EXPERIMENT

HIGH TEMPERATURE ROGOWSKI COIL

DIV: FOM	DATE: 3JUNE2008	CADD FILE:
ENG: G.LABIK	APPROVED G.LABIK	se 310-050
DWN: G.LABIK	CHK LG / SUPV JS	
CHK: L.GUTTADORA		SHEET 1 OF 2 / REV 0

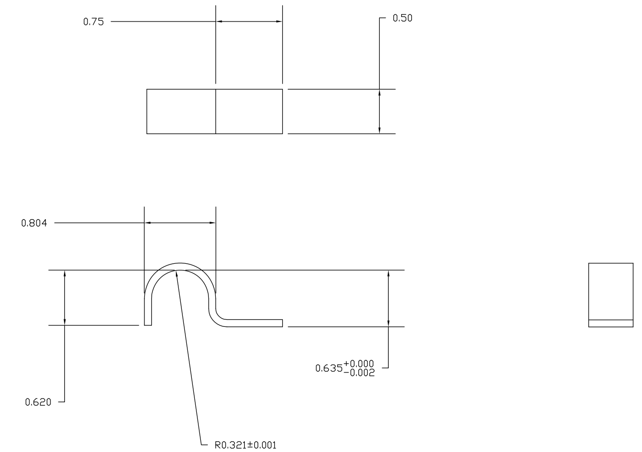
MechEsize1

NO.	REVISION	BY	CH	SUP	APPROVED	DATE



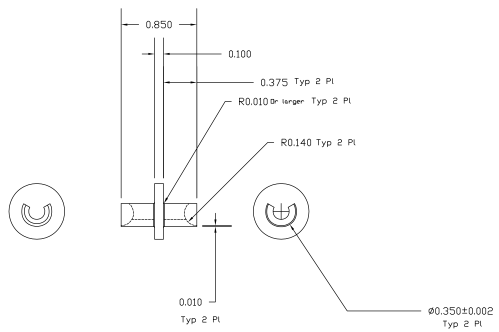
Type 2
Middle Supports

2



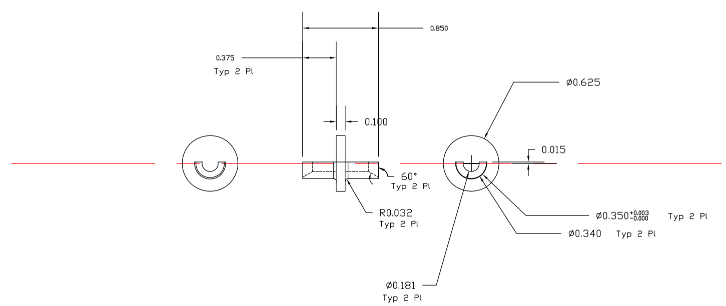
Type 1
Mandrel Ends

1



Inconel Detail

3a



Zirconia Detail

3b

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting:

03	02	01	PART NO.	NOMENCLATURE OR DESCRIPTION	DRAWING NO.	MATERIAL
		1	3a,3b	MANDREL END ALIGNING FITTING Note 3	THIS DWG SH 2	Note 3.
		3	2	HOLD DOWN CLAMP TYPE 2	THIS DWG SH 2	INCONEL 625
		2	1	FIXED END HOLD DOWN CLAMP TYPE 1	THIS DWG SH 2	INCONEL 625
		1		SUB ASSEMBLY	THIS DWG SH 2	

WELDING ENGINEER
APPVD: ______ DATE ______
APPVD: ______ DATE ______

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED
AutoCAD2000
DO NOT VERIFY INFORMATION BY SCALING DRAWING
SCALE:
NEXT ASSEMBLY

CENTRAL FILES:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES MACHINE SURFACES 125/
BREAK SHARP EDGES .005/.020
TOLERANCES NON-CUMULATIVE

DECIMAL-INCH		FRACTIONS	
.X	± .100	0"-12"	±1/16
.XX	± .030	12"-72"	±1/8
.XXX	± .005	72"-120"	±1/4
ANGULAR	±0°-15'	OVER 120"	±1/2

PRINCETON PLASMA PHYSICS LABORATORY
PRINCETON UNIVERSITY
NATIONAL COMPACT STELLARATOR EXPERIMENT

HIGH TEMPERATURE ROGOWSKI COIL

DIV: FOM
DATE: 3JUNE2008
CADD FILE:
ENG: G.LABIK
DWN: G.LABIK
CHK: L.GUTTADORA
APPROVED G.LABIK
CHK LG
SUPV JS

se 310-050
SHEET 2 OF 3
REV 0
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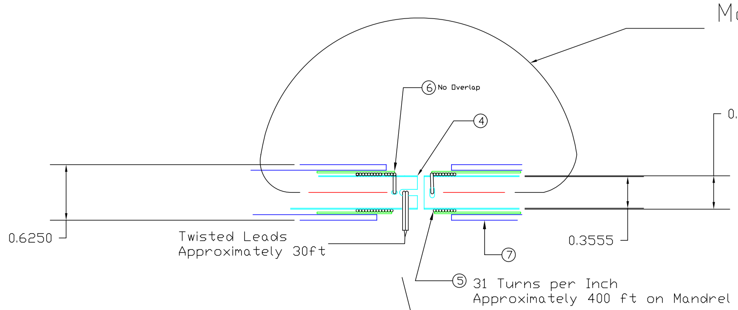
NO.	REVISION	BY	CH	SUP	APPROVED	DATE

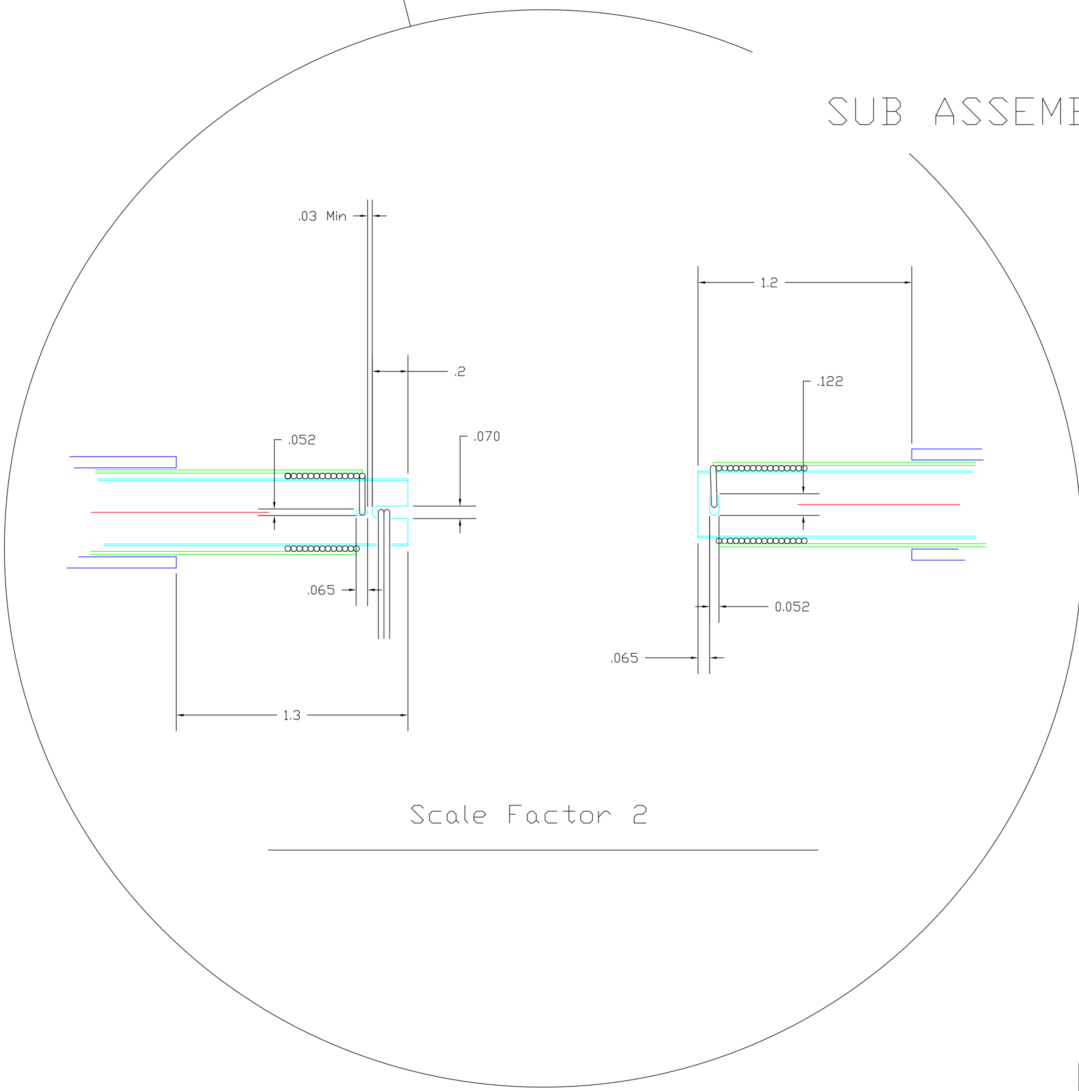
Mandrel Length 119.75 inches



CROSS SECTION THRU ASSEMBLY

Total co ax cable = 460 ft

SUB ASSEMBLY



Scale Factor 2

RELEASED FOR FABRICATION / INSTALLATION

PPPL Drafting:

03	02	01	PART NO.	NOMENCLATURE OR DESCRIPTION	DRAWING NO.	MATERIAL
		1	7	PROTECTIVE SHEATH , ⅝ OD X ½ ID STOCK- 117.25 INCHES	THIS DWG SH 2	316 SS-ANNEALED
		1	6	NON ADHESIVE TAPE, 1 BY 0.018-20 FT	THIS DWG SH 2	NEXTEL
		1	5	ARI CO AXIAL CABLE, 0.032 OD , 0.008 CONDUCTOR, MgO INSULATOR - 460 FT	THIS DWG SH 2	316 SS-ANNEALED
		1	4	MANDREL , 0.375 OD BY 0.010 WALL STOCK-119.75 INCHES	THIS DWG SH 2	316 SS-ANNEALED
		1		SUB ASSEMBLY	THIS DWG SH 2	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED

CENTRAL FILES:

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES MACHINE SURFACES 125

AutoCAD2000

DO NOT VERIFY INFORMATION BY SCALING DRAWING

BREAK SHARP EDGES .005/.020

PRINCETON PLASMA PHYSICS LABORATORY
PRINCETON UNIVERSITY
NATIONAL COMPACT STELLARATOR EXPERIMENT

HIGH TEMPERATURE ROGOWSKI COIL

SCALE:

TOLERANCES NON-CUMULATIVE

DECIMAL-INCH		FRACTIONS	
.X	± .100	0"-12"	±1/16
.XX	± .030	12"-72"	±1/8
.XXX	± .005	72"-120"	±1/4
ANGULAR	±0°-15'	OVER 120"	±1/2

NEXT ASSEMBLY

DIV: FOM

DATE: 3JUNE2008

CADD FILE:

ENG: G.LABIK

DWN: G.LABIK

CHK: L.GUTTADORA

APPROVED G.LABIK

CHK LG

SUPV JS

se 310-050

SHEET 3 OF 3

REV 0

WELDING ENGINEER

APPVD: ______ DATE ______

APPVD: ______ DATE ______

MechEsize1