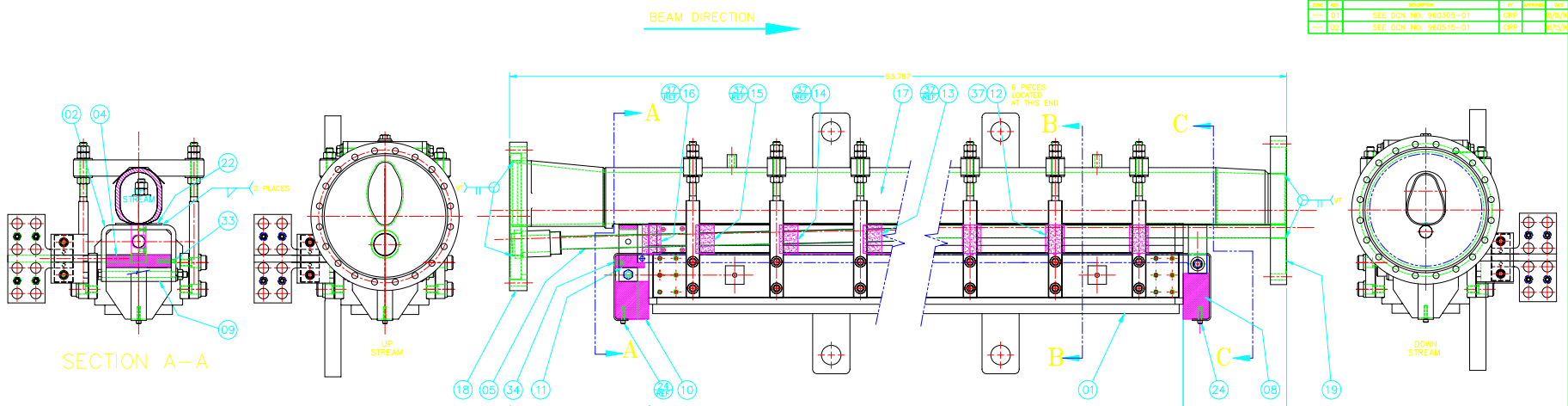
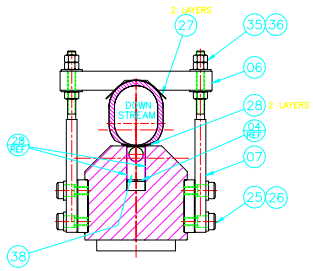
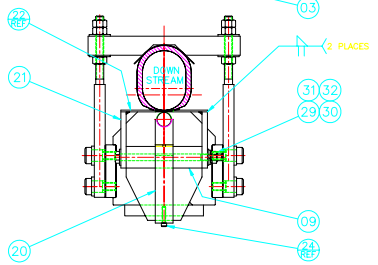
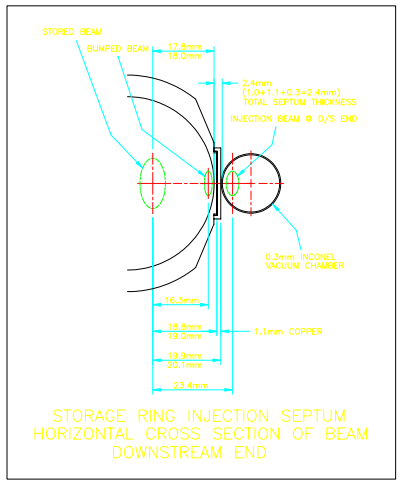
(E) | PLOT SCALE: 1=2.0 | DWG. SCALE: 2.0 | A1969502

REVISIONS					
LTR	NO.	DESCRIPTION	BY	APPROVED	DATE
—	01	SEE DCN NO. 960305-01	CRP		03/96
—	02	SEE DCN NO. 960515-01	CRP		05/96









ASSEMBLY PROCEDURE

1. INSTALL .002 THK. KAPTON FILM ITEM 28 ON BOTH SIDES OF CORE ITEM 01 (4"HIGH) BEFORE INSERTING BACK LEG CONDUCTOR ITEM 04.
2. INSTALL BACK LEG CONDUCTOR ITEM 04 AND INSTALL AUXILIARY CONDUCTOR ITEM 20.
3. INSTALL CERAMIC TUBE SUPPORTS ITEM 12 THRU. 16 ON TO AUXILIARY CONDUCTOR ITEM 20 AND CEMENT IN PLACE USING ITEM 37.
4. INSTALL HET BEAM TUBE ITEM 05, UP STREAM INSULATOR BAR ITEM 11, AND DOWN STREAM GUIDE BLOCK ITEM 08.
5. INSTALL YOKE ASSEMBLY ITEM 02 AND COPPER PLATES ITEM 21
6. INSTALL SEPTUM CONDUCTOR ITEM 22, FIELD FREE TUBE ITEM 17 AND CHECK FOR FIT WITH FLANGES ITEM 18, 19, AND BEAM TUBE ITEM 05. THEN REMOVE SEPTUM CONDUCTOR ITEM 22, FIELD FREE TUBE ITEM 17, AND FLANGES ITEMS 18, 19.
7. INSTALL POR-ROK CEMENT ITEM 38 INTO CORE CAVITY ITEM 01. MIX IN A RATIO OF 42.0gm H_2O AND 200.0gm OF POR-ROK.
8. RE-INSTALL SEPTUM CONDUCTOR ITEM 22, FREE FIELD TUBE ITEM 17 AND CLAMP IN PLACE USING TIE BAR ITEM 06, HEX NUT ITEM 32, AND FLAT WASHERS ITEM 30 BEFORE POR-ROK CURES.
9. RE-INSTALL FLANGES ITEMS 18 & 19 AND CLAMP IN PLACE. LET POR-ROK ITEM 38 CURE FOR 24 HOURS.
10. REMOVE FIELD-FREE TUBE ITEM 17 AND FLANGES ITEMS 18 & 19.
11. CLEAN UP CORE ASSEMBLY.
12. RE-INSTALL SEPTUM CONDUCTOR ITEM 22 AND WELD TO YOKE ASSEMBLY ITEM 02 AND COPPER SIDE PLATE ITEM 21.
13. INSTALL TWO LAYERS OF KAPTON FILM ITEM 28 ON TO FIELD FREE TUBE ITEM 17
14. INSTALL TWO LAYERS OF KAPTON FILM ITEM 27 UNDER TIE BAR ITEM 06 AND CLAMP IN PLACE USING HEX NUTS ITEM 32, AND FLAT WASHERS ITEM 30. TORQUE TO 125 INCH-LBS.
15. RE-INSTALL END FLANGES ITEMS 18 & 19 AND WELD IN PLACE.
16. VACUUM LEAK CHECK TO VACUUM SPECIFICATIONS.

VACUUM SPECIFICATIONS REQUIREMENTS

ALL WELD JOINTS TO BE LEAK TIGHT. LEAK TEST USING A LEAK DETECTOR HAVING A SENSITIVITY OF 1×10^{-10} ATM. CC/SEC. HELIUM.

ELECTRICAL RESISTANCE VALUES FOR
Ls = 2.76 μH
R = .911 mΩ
Q = 11.8
Cp = 12.65nF
HI POT AT 1.0 KVDC ≤ 5.0μA

ESTIMATED WT. 355 LBS.

ITEM	DRAWING / PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
38		POR-ROK ANCHORING CEMENT	GROUT	A/R
37	HENKEL/SECOMET 77	INDUSTRIAL ADHESIVE	CYANOACRYLATE	AR
36		FLT WASHER ø.38 x ø.88	STN. STL.	36
35		HEX. NUT .375-16 UNC-2B	STN. STL.	54
34		FLT HD SC NO. 8-32 UNC-2A X .50 LG.	STN. STL.	2
33		FLT HD SC NO. 8-32 UNC-2A X 1.00 LG	STN. STL.	1
32		HEX NUT .313-18 UNC-2B	STN. STL.	2
31		HHCS .313-18 UNC-2A X 4.75 LG.	STN. STL.	2
30		FLT WASHER ø.313 X ø.50 X.078 THK.	STN. STL.	2
29		SPLIT LOCK WASHER ø.313	STN. STL.	2
28		FILM .002 THK. X 3.00 WIDE X 48.00 LG.	KAPTON	2
27		FILM .005 THK. X 1.00 WIDE X 3.00 LG.	KAPTON	18
26		SPLIT LOCK WASHER ø.500	STN. STL.	36
25		SHLR SCR ø.500 X .50 LG.	STN. STL.	36
24		SHCS NO. 8-32 UNC-2A X .50 LG.	STN. STL.	2
23				
22	31010501-800002	SEPTUM CONDUCTOR	COPPER	1
21	31010501-800013	COPPER SIDE PLATE	COPPER	2
20	31010501-800004	AUXILIARY CONDUCTOR	COPPER	1
19	31010501-820017	DOWNSTREAM FLANGE	STN. STL.	1
18	31010501-820016	UPSTREAM FLANGE	STN. STL.	1
17	31010501-820011	FIELD-FREE TUBE SUB-ASSEMBLY	SEE DRAWING	1
16	31010501-820022	INCONEL TUBE SUPPORT NO. 1	CERAMIC	1
15	31010501-820023	INCONEL TUBE SUPPORT NO. 2	CERAMIC	1
14	31010501-820024	INCONEL TUBE SUPPORT NO. 3	CERAMIC	1
13	31010501-820025	INCONEL TUBE SUPPORT NO. 4	CERAMIC	1
12	31010501-820026	INCONEL TUBE SUPPORT NO. 5	CERAMIC	6
11	31010501-800009	UP STREAM INSULATOR BAR	G10	1
10	31010501-800008	UP STREAM GUIDE BLOCK	G10	1
09	31010501-800015	UP STREAM CONDUCTOR BAR	G10	1
08	31010501-800007	DOWN STREAM GUIDE BLOCK	G10	1
07	31010501-820004	TIE ROD	STN. STL.	18
06	31010501-820005	TIE BAR	STN. STL.	9
05	31010501-820200	HET BEAM TUBE ASSEMBLY	SEE DRAWING	1
04	31010501-820110	BACK LEG CONDUCTOR ASSEMBLY	SEE DRAWING	1
03	31010501-820100	FLAG INSULATOR ASSEMBLY	SEE DRAWING	1
02	31010501-820109	YOKE ASSEMBLY	SEE DRAWING	1
01	31010501-810000	CORE ASSEMBLY	SEE DRAWING	1

PARTS LIST / BILL of MATERIALS

DRAWN BY	TOM CRAIN	12/05/94
CHECKED BY	CLIFF PITTS	06/07/95
ENGINEER APPROVAL	TOM CRAIN	06/07/95
QUALITY ASSURANCE	J. HUMBERT	06/07/95
APPROVED BY	J. JAGGER	06/07/95
RELEASED BY		
SEE PART LIST		
A1969502		

THE DRAWING IS THE PROPERTY OF ARGONNE NATIONAL LABORATORY ADVANCED PHOTON SOURCE

TITLE: STORAGE RING TECHNICAL COMPONENTS AC THIN INJECTION MAGNET GENERAL ASSEMBLY

SIZE	CAGE CODE	DRAWING NUMBER	REV
E	0HRH5	31010501-800000	02

SCALE: 1:2 | DO NOT SCALE DRAWING | SHEET 1 of 1

STORAGE RING
TECHNICAL COMPONENTS
AC THIN INJECTION MAGNETS
GENERAL ASSEMBLY
31010501-800000-01 A1969501