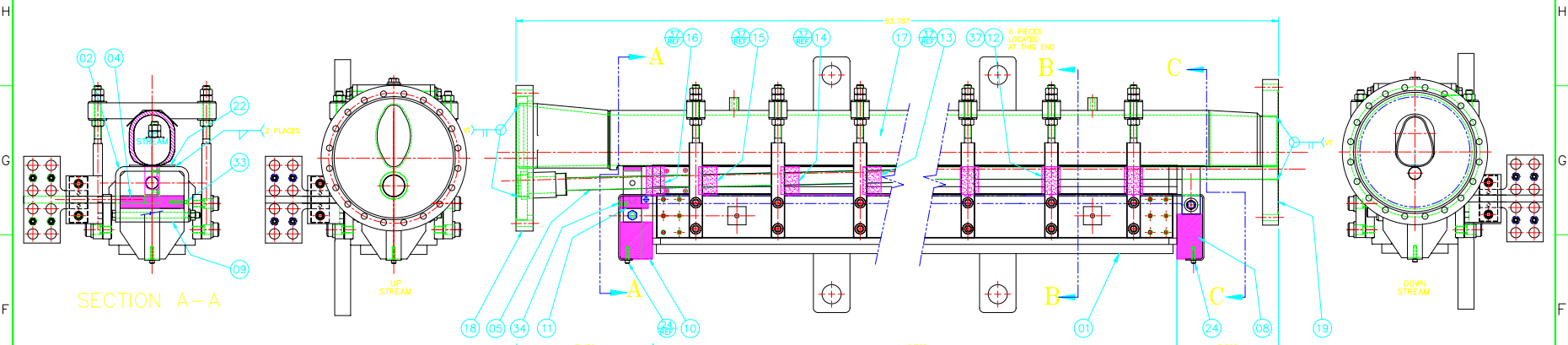


REVISIONS				
REV.	DATE	DESCRIPTION	BY	APP'D.
01		SEE DCN NO. 960305-01	CRP	WBM
02		SEE DCN NO. 960515-01	CRP	WBM

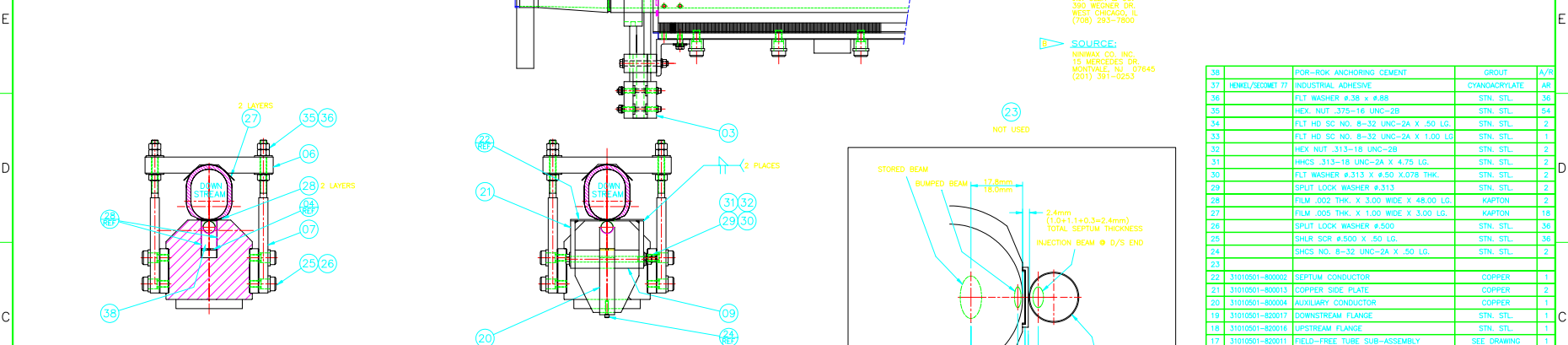
BEAM DIRECTION →



SECTION A-A

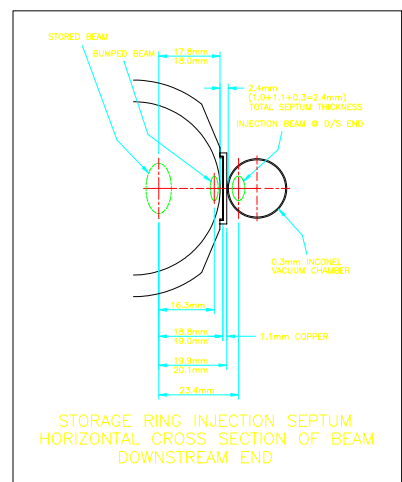
▲ SOURCE:
J.J. GLEN & CO.
350 WEGNER DR.
WEST CHICAGO, IL
(708) 293-7800

▲ SOURCE:
NINWAX CO. INC.
15 MERCEDES DR.
MONTVALE, NJ 07645
(201) 391-0253



SECTION B-B

SECTION C-C



STORAGE RING INJECTION SEPTUM HORIZONTAL CROSS SECTION DOWNSTREAM END

QTY	DESCRIPTION	MATERIAL	A/R
38	POR-BOK ANCHORING CEMENT	GROUT	A/R
37	HENSL/SEDMET 77 INDUSTRIAL ADHESIVE	CYANOACRYLATE	AR
36	FLT WASHER #36 X #48	STN. STL.	36
35	HEX NUT #375-18 UNC-2B	STN. STL.	34
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	HMCS #313-18 UNC-2A X 4.75 LG.	STN. STL.	2
30	FLT WASHER #313 X #.50 X.078 THK.	STN. STL.	2
29	SPLIT LOOK WASHER #.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 LOOK WASHER #.500	STN. STL.	36
25	SHLR SCR #.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	31010501-800017 DOWNSTREAM FLANGE	STN. STL.	1
18	31010501-800016 UPSTREAM FLANGE	STN. STL.	1
17	31010501-800011 FIELD-FREE TUBE SUB-ASSEMBLY	SEE DRAWING	1
16	31010501-800020 INCONEL TUBE SUPPORT NO. 1	CERAMIC	1
15	31010501-800023 INCONEL TUBE SUPPORT NO. 2	CERAMIC	1
14	31010501-800024 INCONEL TUBE SUPPORT NO. 3	CERAMIC	1
13	31010501-800025 INCONEL TUBE SUPPORT NO. 4	CERAMIC	1
12	31010501-800026 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	31010501-800004 TIE ROD	STN. STL.	18
06	31010501-800005 THE BAR	STN. STL.	9
05	31010501-800200 HET BEAM TUBE ASSEMBLY	SEE DRAWING	1
04	31010501-800110 BACK LEG CONDUCTOR ASSEMBLY	SEE DRAWING	1
03	31010501-800100 FLAG INSULATOR ASSEMBLY	SEE DRAWING	1
02	31010501-800109 YOKE ASSEMBLY	SEE DRAWING	1
01	31010501-810000 CORE ASSEMBLY	SEE DRAWING	1

ASSEMBLY PROCEDURE

- INSTALL .002 THK. KAPTON FILM ITEM 28 ON BOTH SIDES OF CORE ITEM 01 (4" HIGH) BEFORE INSERTING BACK LEG CONDUCTOR ITEM 04.
- INSTALL BACK LEG CONDUCTOR ITEM 04 AND INSTALL AUXILIARY CONDUCTOR ITEM 20.
- INSTALL CERAMIC TUBE SUPPORTS ITEM 12 THRU 16 ON TO AUXILIARY CONDUCTOR ITEM 20 AND CEMENT IN PLACE USING ITEM 37.
- INSTALL HET BEAM TUBE ITEM 05, UP STREAM INSULATOR BAR ITEM 11, AND DOWN STREAM GUIDE BLOCK ITEM 08.
- INSTALL YOKE ASSEMBLY ITEM 02 AND COPPER PLATES ITEM 21.
- 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 ITEM 18, 19.
- INSTALL POR-BOK CEMENT ITEM 38 INTO CORE CAVITY ITEM 01. MIX IN A RATIO OF 42.0g_m H₂O AND 200.0g_m OF POR-BOK.
- RE-INSTALL SEPTUM CONDUCTOR ITEM 22, FIELD FREE TUBE ITEM 17 AND CLAMP IN PLACE USING THE BAR ITEM 06, HEX NUT ITEM 32, AND FLAT WASHERS ITEM 30 BEFORE POR-BOK CURES.
- RE-INSTALL FLANGES ITEMS 18 & 19 AND CLAMP IN PLACE. LET POR-BOK ITEM 38 CURE FOR 24 HOURS.
- REMOVE FIELD-FREE TUBE ITEM 17 AND FLANGES ITEMS 18 & 19.
- CLEAN UP CORE ASSEMBLY.
- RE-INSTALL SEPTUM CONDUCTOR ITEM 22 AND WELD TO YOKE ASSEMBLY ITEM 02 AND COPPER SIDE PLATE ITEM 21.
- INSTALL TWO LAYERS OF KAPTON FILM ITEM 28 ON TO FIELD FREE TUBE ITEM 17.
- INSTALL TWO LAYERS OF KAPTON FILM ITEM 27 UNDER THE BAR ITEM 06 AND CLAMP IN PLACE USING HEX NUTS ITEM 32, AND FLAT WASHERS ITEM 30. TORQUE TO 125 INCH-LBS.
- RE-INSTALL END FLANGES ITEMS 18 & 19 AND WELD IN PLACE.
- 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 X 10⁻¹⁰ ATM CC/SEC. HELIUM.

ELECTRICAL RESISTANCE VALUES FOR
Ls = 2.76 μH
R = .211 mΩ
Q = 11.8
Cp = 12.65nF
HI POT AT 1.0 KVDC ± 5.0μA

ESTIMATED WT. 355 LBS.

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

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
12/05/94	TOM CRAIN	REVISED	06/07/95	J. HUMBERT	REVISED
06/07/95	CHIEF PLOTS		06/07/95	J. JAGGER	REVISED
06/07/95	TOM CRAIN		06/07/95	J. JAGGER	REVISED
06/07/95	J. HUMBERT		06/07/95	J. JAGGER	REVISED
06/07/95	J. JAGGER				

SEE PART LIST A1969502

ARCONTE NATIONAL LABORATORY
ADVANCED PHOTON SOURCE
STORAGE RING
TECHNICAL COMPONENTS
AC THIN INJECTION MAGNET
GENERAL ASSEMBLY
OHRHS 31010501-800000 02
SCALE: 1:2