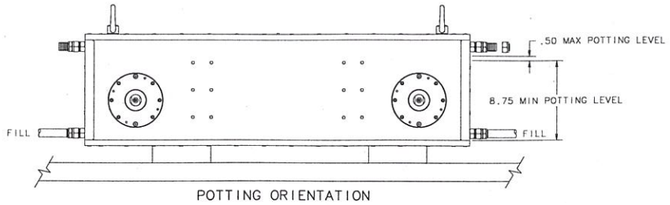
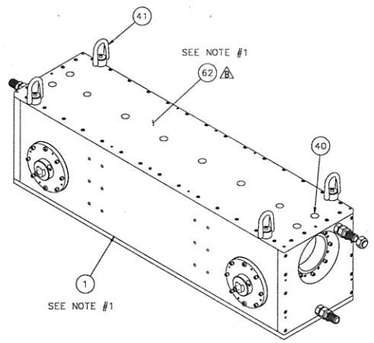
OK for Production	
Magnet Series	RKD
Magnet Numbers	RKD002 - RKD006
Comments	
Approved	Date
	6-14-12

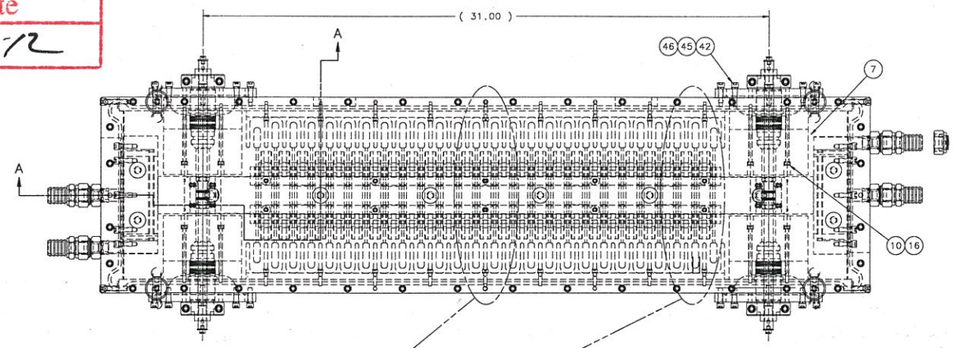
ORIGINAL

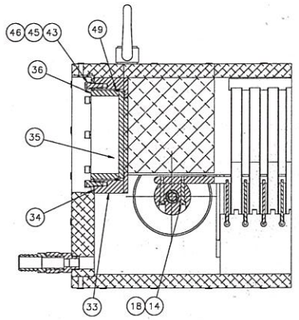
REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE
--	ERF 10016 NEW RELEASE		
A	ADDED FERMILAB PART NUMBERS FOR COMMONLY PURCHASED HARDWARE AS PER ECO# 10158	DGH	13-SEP-2011
		R.REILLY	21-SEP-2011
B	ECO #10321 ITEM 62 WAS ITEM 25 ADDED NEW ITEM 25, QTY OF ITEMS 13 & 17 WAS 6, DIM P.25 WAS 8.75	J. KURNAT W. ROBOTHAM	23FEB2012 04MAY2012



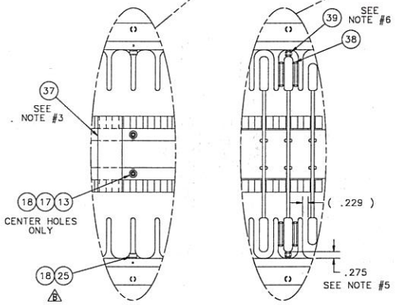
POTTING ORIENTATION





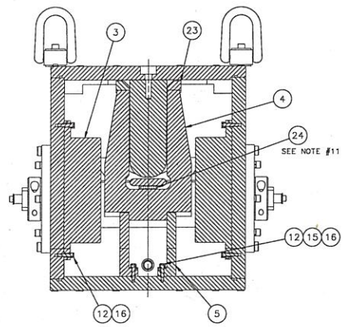


SECTION A-A

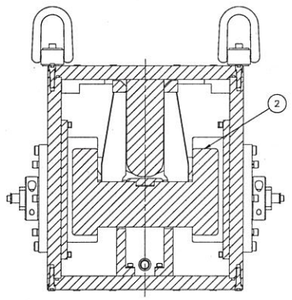


DETAIL 1
SCALE: 1/2

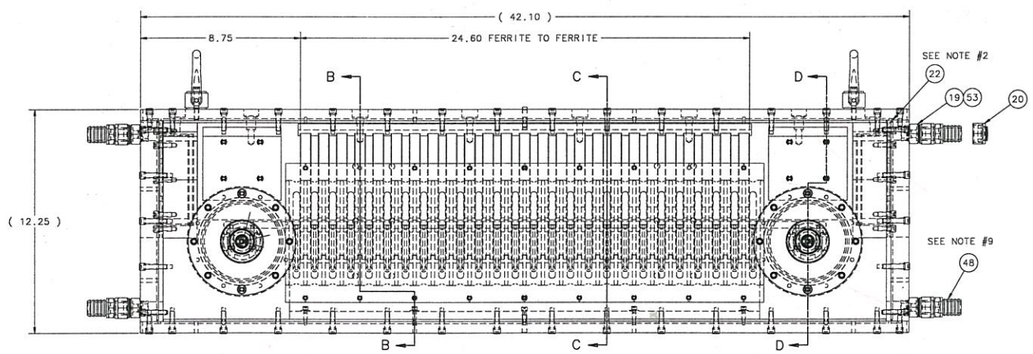
DETAIL 2
SCALE: 1/2

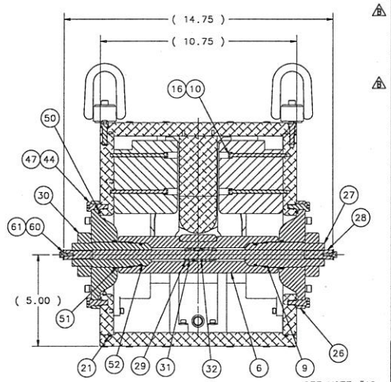


SECTION B-B



SECTION C-C





SECTION D-D

⚠B	62	MD-482514	POTTING PLATE - MANDREL ASSEMBLY	(1)
	61	MA-458202	#10 FLAT WASHER, BRASS	(4)
	60	MA-458201	BHCS #10-32 UNF X .25" LG, BRASS	(4)
	59	MA-459259	DOW CORNING 1200 OS PRIMER CLEAR	AS REQ'D
	58	MA-459090	MANN 2508 MOLD CLEANER	AS REQ'D
G	57	MA-459089	MANN ER200 MOLD RELEASE AGENT	AS REQ'D
	56	MA-318765	GENERAL ELECTRIC RTV-157	AS REQ'D
	55	MA-459088	DOW CORNING SILICONE HIGH VACUUM GREASE COMPOUND #976V	AS REQ'D
	54	MA-393599	DOW CORNING SILICONE ELASTOMER SYLGARD 184	9-KITS
	53	MA-459092	O-RING ø.644 OD X .087 NOM. VITON 75	(4)
	52	MA-459447	O-RING ø1.046 OD X .139 NOM. VITON 75	(4)
	51	MA-459080	O-RING ø1.359 OD X .139 NOM. VITON 75	(4)
	50	MA-459079	O-RING ø4.484 OD X .139 NOM. VITON 75	(4)
	49	MA-459078	O-RING ø4.734 OD X .139 NOM. VITON 75	(2)
	48	MA-459217	MALE ADAPTOR 3/4" TUBE	(4)
	47	MA-459103	SHOULDER SCREW SHIM ø.438 OD X .314 ID X .020 THK, S.S.	(8)
	46	MA-457666	BEARING SHIM ø.373 OD X .253 ID X .020 THK, S.S.	(40)
F	45	MA-457664	1/4" LOCK WASHER FOR SHCS, S.S.	(40)
	44	MA-457893	SHOULDER SCREW ø.312 X .50" LG. S.S.	(8)
	43	MA-212579	SHCS #1/4-20 UNC X .75" LG, S.S.	(16)
	42	MA-457709	SHCS #1/4-20 UNC X .88" LG, S.S.	(24)
	41	MA-459451	HOIST RING .25-20	(4)
	40	MA-459082	SELF SEALING HHCS 3/8-16 X 1.00" LG. S.S.	(4)
	39	MB-460870	CAPACITOR END SPACER BLOCK	(6)
	38	MB-460869	CAPACITOR SIDE SPACER BLOCK	(12)
	37	MB-458193	FERRITE STOP SPACER BLOCK	(2)
	36	MB-460970	POTTING WINDOW SPACER	(2)
	35	MB-458254	WINDOW	(2)
E	34	MB-458243	WASHER, SPACER (RUBBER)	(2)
	33	MD-460914	POTTING END SPACER	(2)
	32	MA-459027	.544 I.D. CANTED COIL SPRING	(4)
	31	MB-457785	SPACER, SLEEVE	(2)
	30	MA-459083	SHAFT COLLAR	(4)
	29	MB-457981	SPECIAL NUT ø.500-13	(4)
	28	MB-460728	THREADED ROD	(2)
	27	MB-457783	NUT, POSITIONING ø.50-13 I.D.	(4)
	26	MC-458063	OUTER MOLD	(4)
			TOOLING LISTED ABOVE	
⚠B	25	MA-485022	SHLDR SCR-SH .188DIA X .626LG, #8-32 X .188LG, 18-8 SS	4
D	24	MB-482096	SYLGARD CAPACITOR SPACER	5
	23	MC-482511	FERRITE TOP SPACER BLOCK	2
	22	MA-459076	SQUARE O-RING CORD STOCK 4 PIECES 13" LONG	(4)
	21	MA-460071	VITON O-RING CORD STOCK ø1/8 NOM. CROSS-SECTION, 146.54" LG.	(2)
	20	MA-459449	SWAGELOK PLUG SS-1210-P (REMOVE NUT FERRULES, FITS 3/4" HOSE SEAL PORT)	4
	19	MA-459077	MALE CONNECTOR 3/4" TUBE	4
	18	MA-457663	#10 LOCK WASHER FOR SHCS, S.S.	14
⚠B	17	MA-457665	BEARING SHIM ø.310 OD X .206 ID X .020 THK, S.S.	2
	16	MA-457662	#8 LOCK WASHER FOR SHCS, S.S.	66
	15	MA-400631	#8 FLAT WASHER, S.S.	8
	14	MA-457880	SHOULDER SCREW ø.188 X 1.00" LG. S.S.	8
C	13	MA-457653	SHOULDER SCREW ø.188 X .50" LG. S.S.	2
	12	MA-457199	SHCS #8-32 UNC X .75" LG, S.S.	36
	11	MA-458721	SHCS #8-32 UNC X 1.00" LG, S.S.	14
	10	MA-482763	SHCS #8-32 UNC X 3.00" LG, S.S.	16
	9	MB-458198	CONTACT BAND MALE	4
	8	MD-482510	LOW VOLTAGE BUS	1
	7	MB-459742	END FILLER BLOCK	4
	6	MC-459741	LOAD RECEPTACLE	2
	5	MD-482509	FERRITE STOP	2
	4	MC-459739	KICKER FERRITE	25
	3	MD-482508	CAPACITOR DIVIDER	2
B	2	MD-482504	HIGH VOLTAGE BUS ASSEMBLY	1
	1	MD-482500	MAGNET CASE PROCUREMENT ASSEMBLY	1
ITEM	PART NO.		DESCRIPTION OR SIZE	QTY.

PARTS LIST

NOTES:
1. REMOVE ONE SIDE PLATE FROM MD-482500 (ITEM #1). THIS PLATE HAS THE LOW VOLTAGE BUS (ITEM #8) ATTACHED. REPLACE WITH POTTING MANDREL ASSEMBLY MD-460106 (ITEM #24). THIS PART IS USED FOR POTTING ONLY.
2. APPLY SYLGARD 184 (ITEM #54) TO AREA WHERE O-RINGS (ITEMS #21 & #22) CROSS OVER. (8 PLACES) LEAVE TO CURE FOR 24 HOURS.
3. FERRITE STOP SPACER BLOCK (ITEM #37) IS USED TO INSURE CORRECT SPACING BETWEEN FERRITE STOPS (ITEM #5) SO THAT KICKER FERRITES (ITEM #4) FIT WHEN INSTALLED.
4. ASSEMBLE SPECIAL NUT, SPACER SLEEVE AND CANTED COIL SPRING (ITEMS #29, #31 & #32) TO CENTER OF THREADED ROD (ITEM #28) AND TIGHTEN. INSTALL THAT SUB-ASSEMBLY INTO POSITIONING NUT (ITEM #27), SLIDE INTO LOAD RECEPTACLE (ITEM #6).
5. CENTER HIGH VOLTAGE BUS ASSEMBLY (ITEM #2) BETWEEN CAPACITOR DIVIDERS (ITEM #3) SO THAT THERE IS A .275 GAP ON BOTH SIDES. LOCK IN PLACE WITH FOUR (4) SHAFT COLLARS (ITEM #30).
6. INSERT FOUR (4) CAPACITOR SIDE SPACER BLOCKS (ITEM #38) AND TWO (2) CAPACITOR END SPACER BLOCKS (ITEM #39) AT EACH END AS SHOWN. THEN TEST THAT THE CAPACITOR SPACER BLOCKS (ITEM #38 & #39) FIT INTO REMAINING GAPS.
7. FOR DETAILED ASSEMBLY PROCEDURE SEE ENGINEERING SPEC# 1303.000-ES-296436
8. FOR DETAILED POTTING PROCEDURE SEE ENGINEERING SPEC #1303.000-ES-296437.POTTING MANDREL ASSEMBLY, OUTER MOLD AND SPACER (ITEMS #23, #26 & #33) TO BE COATED WITH MANN ER200 MOLD RELEASE AGENT (ITEM #57) BEFORE POTTING.
9. AFTER POTTING, REMOVE MALE ADAPTOR (ITEM #48) AND REPLACE WITH PLUG (ITEM #20) AT ALL 4 LOCATIONS. MAKE SURE FERRULES ARE IN PLACE BEFORE ASSEMBLY.
10. INSTALL MALE CONTACT BAND (ITEM #9) IN FOUR (4) PLACES AFTER POTTING AND ELECTRICAL TESTING IS COMPLETE. REMOVE ANY SYLGARD FROM GROOVE IN LOAD RECEPTACLE (ITEM #6) BEFORE INSERTING MALE CONTACT BAND (ITEM #9).
11. PLACE SYLGARD CAPACITOR SPACER (ITEM #24) ON EVERY FEW FERRITES (ITEM #4) TO SUPPORT HIGH VOLTAGE BUS ASSEMBLY (ITEM #2) DURING POTTING. ATTACH SYLGARD CAPACITOR SPACER TO FERRITE USING A SMALL DAB OF SYLGARD.

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	C.JENSEN	28-FEB-2011
.XX	.XXX	ANGLES	DRAWN	D.HURD	03-MAR-2011
± .02	± .005	± 1°	CHECKED	R.REILLY	18-APR-2011
1. BREAK ALL SHARP EDGES .02 MAX.			APPROVED	C.JENSEN	18-APR-2011
2. DO NOT SCALE DRAWING. 3. DIMENSIONS & TOLERANCES APPLY AFTER PLATING.			USED ON	ME-482563 ME-482564	
4. MAX. ALL MACH. SURFACES 125			MATERIAL	SEE PARTS LIST	
5. DRAWING UNITS: U.S. INCH					

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

RECYCLER NOVA UPGRADE (ANU)
RKD - 25 OHM HORIZONTAL KICKER POTTING ASSEMBLY

SCALE	DRAWING NUMBER	SHEET	REV
3/8	5520.000-ME-482515	1 OF 2	B
CREATED WITH : Ideas12NXSeries	GROUP: TD/DOCIS-DESIGN-COMPUTING		

Created: 08:28:42 on 07-05-12 (D-M-Y) By: kurnat State: 1-INITIAL