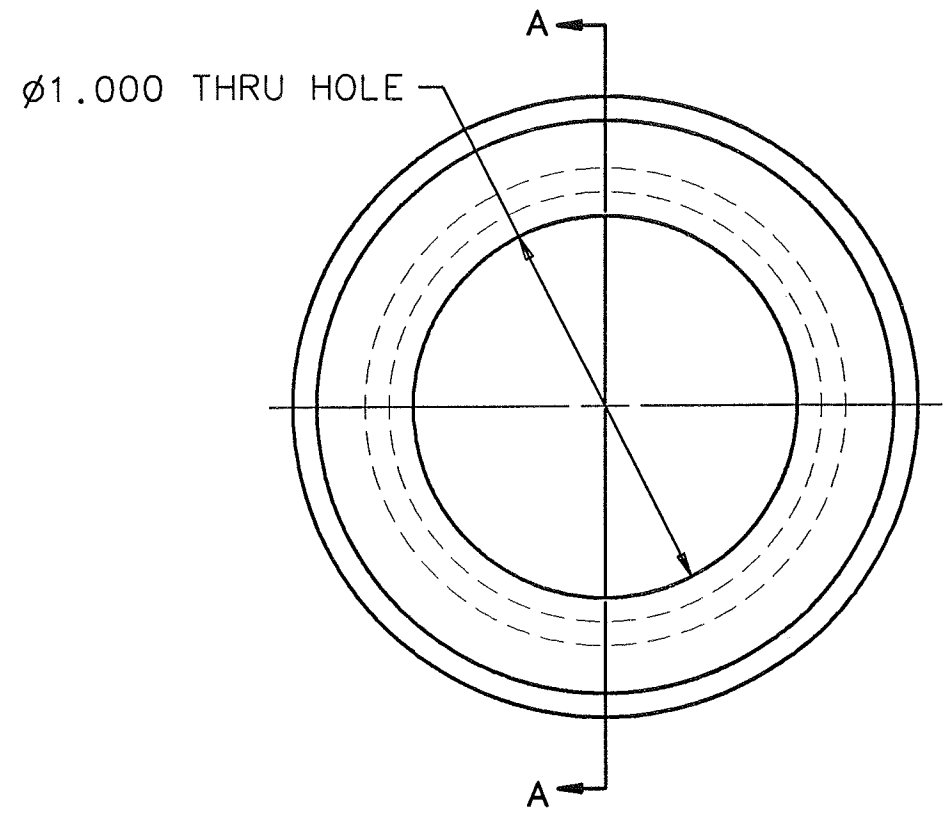
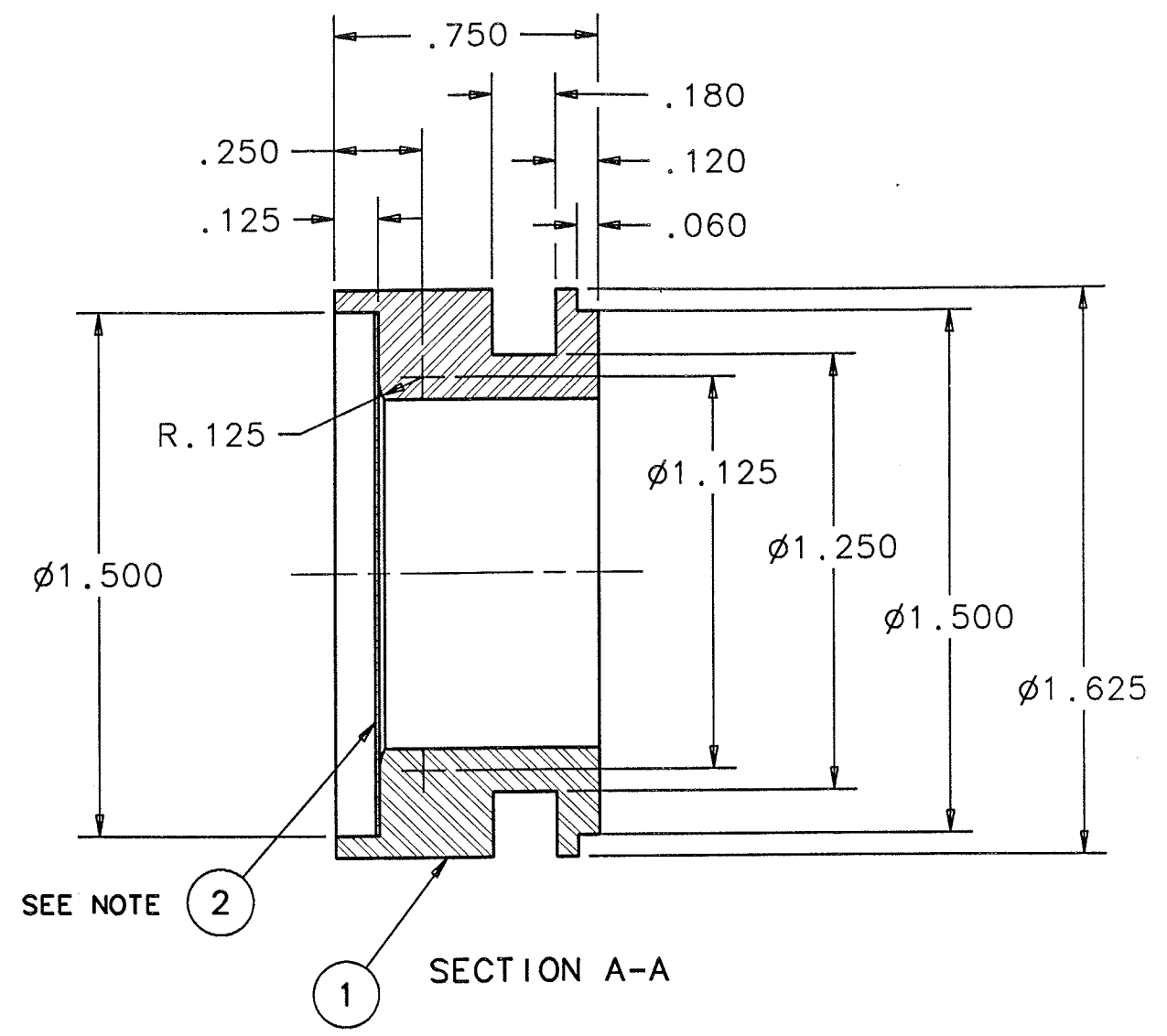


REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE




SEE NOTE 2

2		BE FOIL PF60, .010 THICK Ø1.500 NOM.	1
1		304 STAINLESS STEEL	
ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.

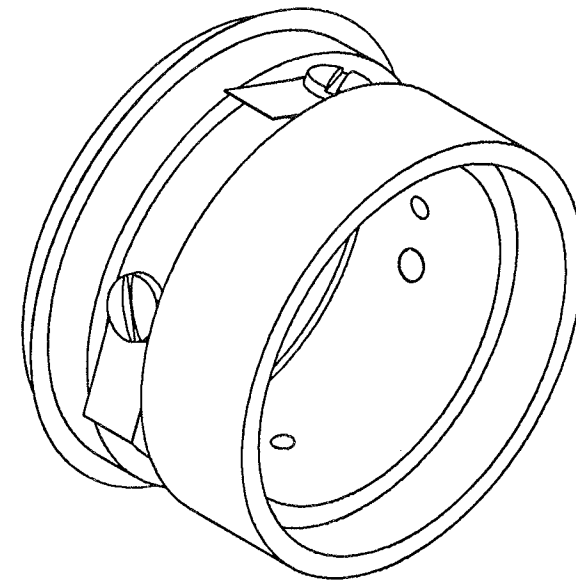
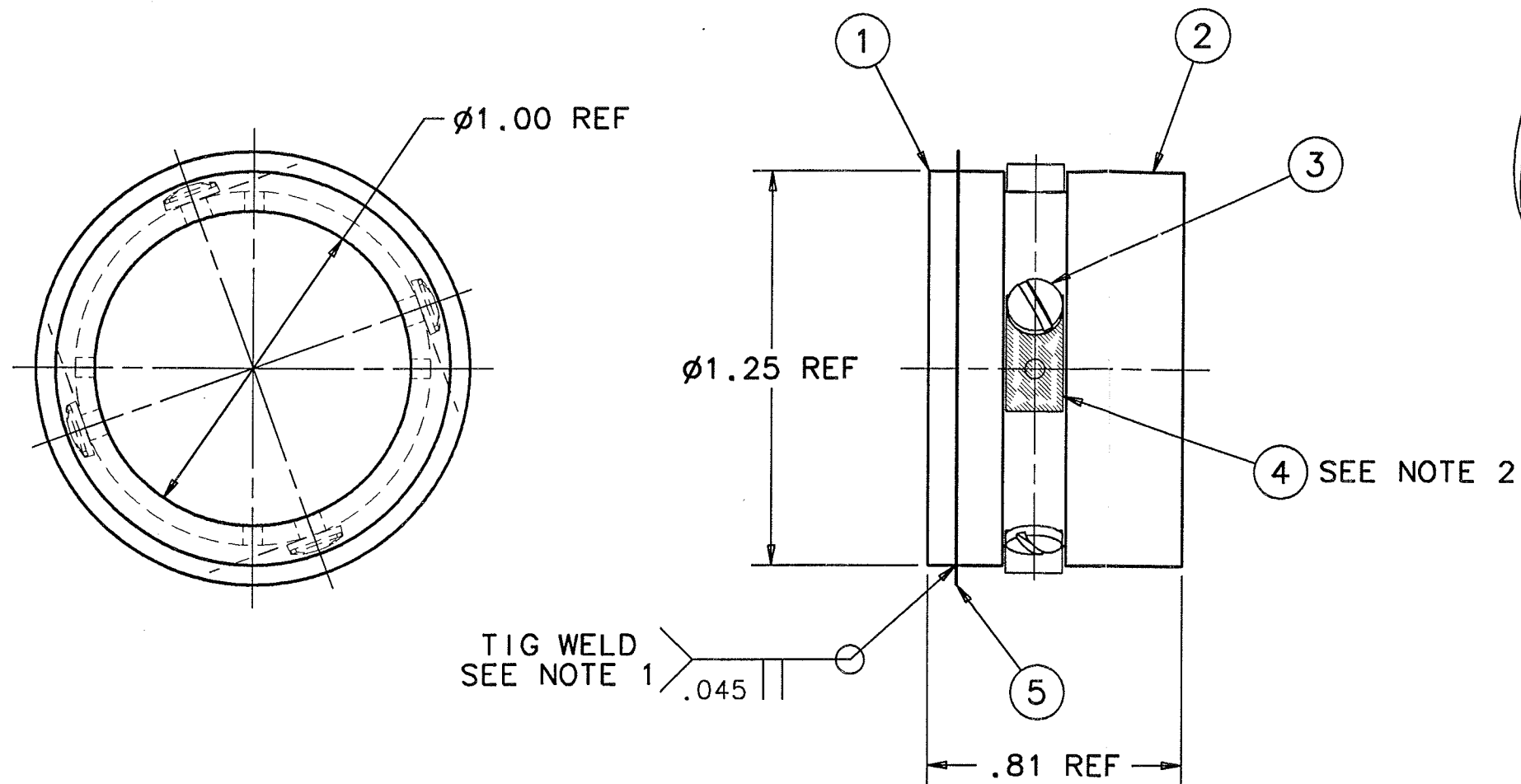
PARTS LIST					
UNLESS OTHERWISE SPECIFIED		ORIGINATOR	J. MISEK	30-MAR-2004	
FRACTIONS	DECIMALS	ANGLES	DRAWN	R. STEWART	
± 1/16	± .005	± 1°	CHECKED	<i>[Signature]</i>	
1. BREAK ALL SHARP EDGES .015 MAX.			APPROVED	<i>[Signature]</i>	
2. DO NOT SCALE DRAWING.			USED ON		
3. DIMENSIONS BASED UPON ANSI Y14.5M-1982			MATERIAL		
4. MAX. ALL MACH. SURFACES			SEE PARTS LIST		

NOTES: 1. BRAZE MATERIAL COPPER/SILVER/TIN IS ACCEPTABLE
 2. BRAZE TO BE VACUUM LEAK TIGHT- NO LEAK DETECTABLE ON MOST SENSITIVE SCALE OF A HELIUM LEAK DETECTOR WITH A MINIMUM SENSITIVITY OF 10E-9 ATM.CC/SEC.


FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

NUMI
VACUUM BEAMLINE
BERYLLIUM WINDOW ASSEMBLY

SCALE	DRAWING NUMBER	SHEET	REV
2:1	8875.114-MB-422562	1 OF 1	
CREATED WITH : Ideas9m3		GROUP: BEAMS DIV. MECH. SUPPT.	



NOTES:

1. TIG WELD WITH FULL ARGON PURGE INTERNALLY AND EXTERNALLY. OPTION 1: TIG WELD IN ARGON ATMOSPHERE GLOVE BOX. OPTION 2: ELECTRON BEAM WELD.
2. HAND FORM TO MAINTAIN .050 GAP BETWEEN TIP OF FOIL AND MAIN BODY.

5	MB-422643	WINDOW FOIL	1
4	MB-422636	VENT HOLE FOIL	4
3		#2-56 UNC 2A X 1/16" LONG BINDER HEAD SCREW	4
2	MB-422637	MAIN BODY	1
1	MB-422644	BACKUP RING	1
ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.

PARTS LIST				
UNLESS OTHERWISE SPECIFIED		ORIGINATOR	J.MISEK	29-JUN-2004
FRACTIONS	DECIMALS	ANGLES	DRAWN	P.CRATON 15-JUL-2004
±	±	±	CHECKED	<i>J. Misk</i> 7/26/04
1. BREAK ALL SHARP EDGES .015 MAX.		APPROVED	<i>J. Misk</i>	7/26/04
2. DO NOT SCALE DRAWING.		USED ON	MC-422641	
3. DIMENSIONS BASED UPON ANSI Y14.5M-1982		MATERIAL	SEE PARTS LIST	
4. MAX. ALL MACH. SURFACES				

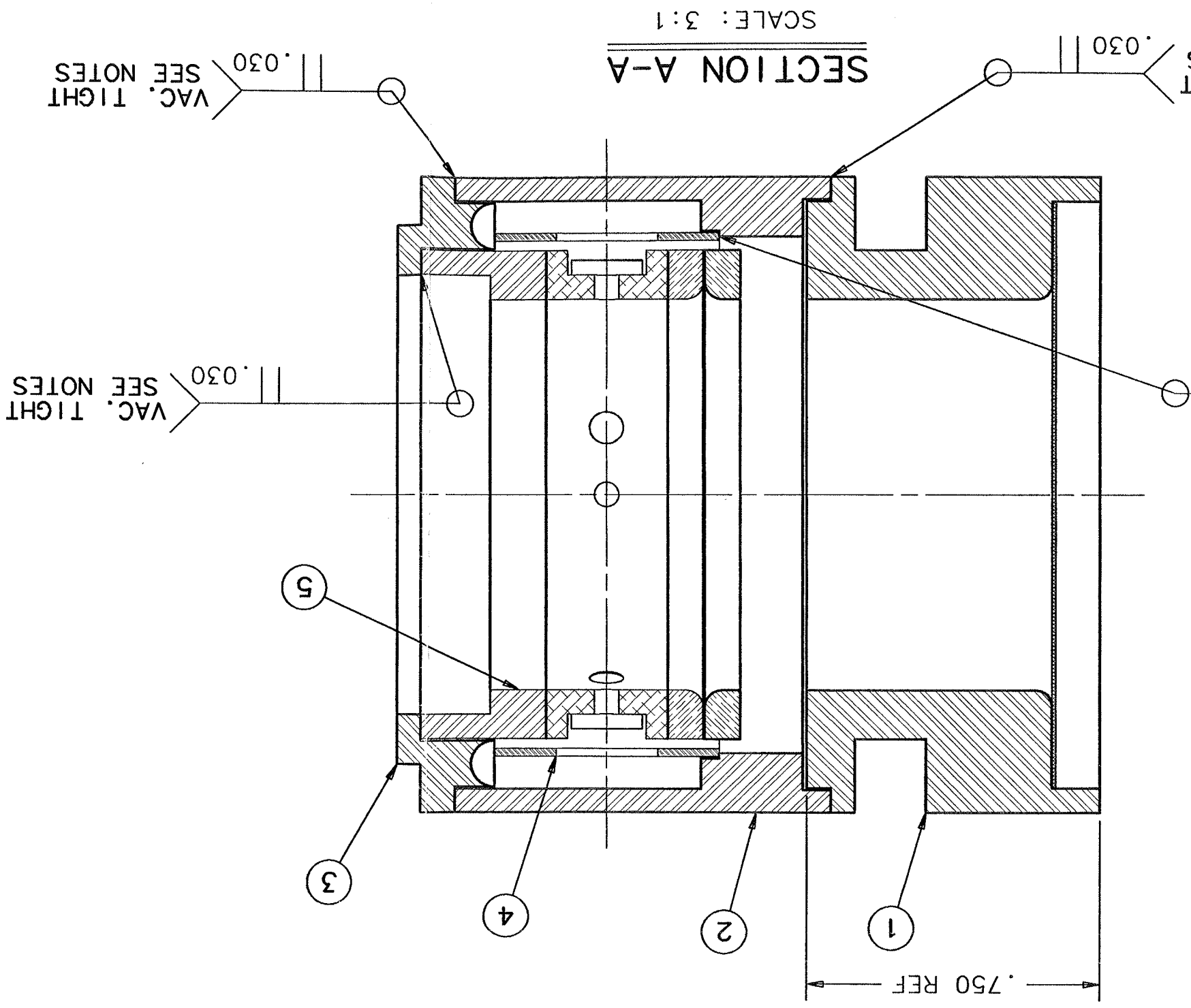
 FERMILAB NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

NUMI BEAMLINE
WINDOW VACUUM TUBE
TITANIUM WINDOW SUB-ASSY

SCALE	DRAWING NUMBER	SHEET	REV
2:1	8875.114-MB-422640	1 OF 1	
CREATED WITH : ldeas9m3		GROUP: BEAMS DIV. MECH. SUPPT.	

CREATED WITH : Ideas95		GROUP : BEAMS DIV. MECH. SUPPT.	
SCALE	DRAWING NUMBER	SHEET	REV
2:1	8875.114-MC-422641	1 OF 1	1
NUMI BEAMLINE WINDOW VACUUM TUBE WINDOW SUB-ASSEMBLY			
FERMI NATIONAL ACCELERATOR LABORATORY		UNITED STATES DEPARTMENT OF ENERGY	
5. DRAWING UNITS: U.S. INCH		MATERIAL	
4. MAX. ALL MACH. SURFACES		SEE PARTS LIST	
3. DO NOT SCALE DRAWING. DIMENSIONS BASED UPON ASME Y14.5M-1994		USED ON	
2. BREAK ALL SHARP EDGES MAX.		APPROVED	
1. BREAK ALL SHARP EDGES MAX.		7/26/04	
FRACTIONS DECIMALS ANGLES		CHECKED	
UNLESS OTHERWISE SPECIFIED		7/26/04	
ORIGINATOR		DRAWN	
J. MISEK		P. CRAYTON	
29-JUN-2004		16-JUL-2004	
PARTS LIST			
ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.
1	MB-422562	BERYLLIUM WINDOW ASSEMBLY	1
2	MB-422639	DOWNSTREAM TRANSITION	1
3	MB-422638	UPSTREAM TRANSITION	1
4	MB-422636	SLOTTED BAFFLE	1
5	MB-422643	TITANIUM WINDOW SUB-ASSY	1

- NOTES:
- 1.) ALL DESIGN, ASSEMBLY, AND HANDLING IS TO CONFORM TO STANDARD HIGH VACUUM PRACTICE.
 - 2.) ALL VACUUM WELDS TO BE MINIMUM PENETRATION, USING A MINIMUM OF FILLER ROD, AS REQUIRED, TO ASSURE LEAK TIGHTNESS.
 - 3.) ASSEMBLY TO BE VACUUM TIGHT. NO LEAK SHALL BE DETECTABLE ON THE MOST SENSITIVE SCALE OF A HELIUM MASS SECTROMETER LEAK DETECTOR WITH A MINIMUM SENSITIVITY OF 2×10^{-10} ATM-CC/SEC FOR HELIUM.
 - 4.) ASSEMBLY TO BE ASSEMBLED AND PACKAGED SO AS TO ASSURE NO CONTAMINATION FROM FOREIGN MATERIALS, METAL CHIPS OR OTHER CONTAMINATES. CLEANING PROCEDURE TO BE APPROVED BY FERMILAB.



A

B

C

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