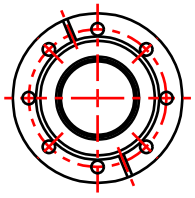
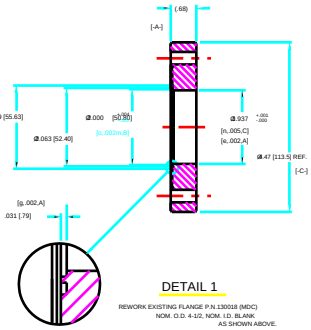
(E)	PLOT SCALE: 1=1	DWG. SCALE: 1	A14432

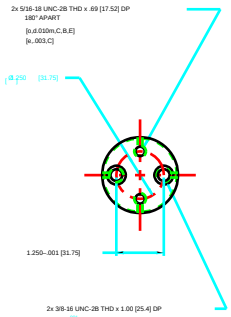


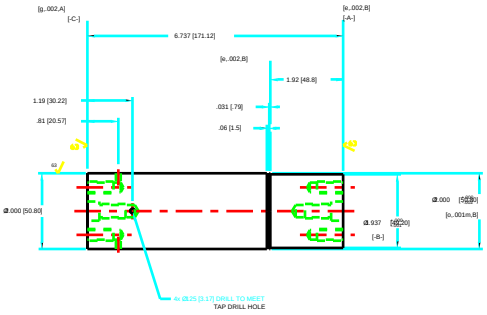


DETAIL 1

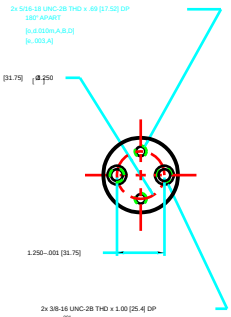
REWORK EXISTING FLANGE P.N.130018 (MDC)
NOM. O.D. 4-1/2, NOM. I.D. BLANK
AS SHOWN ABOVE.

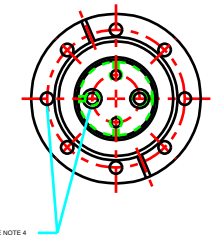
SCALE 5:1



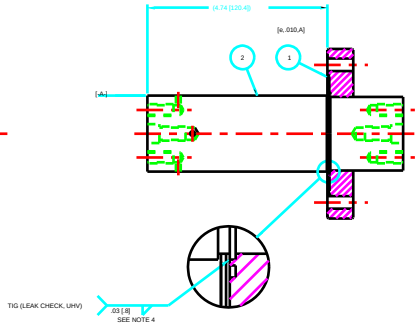


DETAIL 2





SEE NOTE 4



SCALE 5:1

NOTES:

1. THIS IS A UHV PART. A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOW DOWN IS NEEDED BEFORE WELDING. ELECTRO-POLISHING FOR ROD IS NEEDED AFTER CLEANING AND BEFORE WELDING.

2. KEEP THE PART CLEAN, AND WRAP FOR UHV PACKING WITH ALUMINUM FOIL.

3. DEVICE SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUN SENSITIVITY FOR HELIUM OF 2X 10 -10 STANDARD CC/SEC PER LEAK METER DIVISION, SUCH AS:

   ALCATEL ASM-11OTCL
   VARIAN NCR 925 OR 936
   VEECO MS-9, MS-90 OR MS-18
   Du PONT CEC 24-120B

   CALIBRATION OF THE LEAK DETECTOR SENSITIVITY SHALL BE PERFORMED JUST PRIOR TO TESTING.
   FINAL TEST WILL CONSIST OF SURROUNDING THE CHAMBER (BAGGING) WITH HELIUM. THE CHAMBER WILL BE REJECTED IF A 2% DEFLECTION IN THE MOST SENSITIVE RANGE OF THE LEAK DETECTOR IS SENSED WITHIN 1 MIN.

4. FLANGE HOLE HAS TO LINE UP WITH SHOULDER SCREW HOLES ON BOTH SIDES WITHIN ~ 5°

5. ALL DIMENSIONS WITH ARE IN MILLIMETERS

ITEM	CHANGE DESCRIPTION	BY	CHKD	DATE

REVISIONS

ITEM	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
2	DETAIL 2 — ROD	SST 304	1
1	DETAIL 1 — 4-1/2" NOM. O.D. FLANGE (MDC)	SST 303	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES

DIMENSIONS

.X ± .01	.XX ± .005
.XX ± .005	.XXX ± .002
.XXX ± .005	ANGLE ± 1°

SURFACE FINISHES: 63 √

BREAKS ALL SHARP AND FINISH ALL OVER

SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST ANSI RMS

DIMENSIONAL & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5

GROUP EDGE FINISH

DRAWN BY: J.GOGOL	DATE: 10/19/93	DESIGN ENGINEER: D. SHU	DATE: 3/29/94
CHECKED BY: J.CHANG	DATE: 3/29/94	CHIEF DESIGNER: T.M.KUZAY	DATE: 4/1/94
DRAWN BY: J.GOGOL	DATE: 10/19/93	PROJECT MGR:	
PROGRAMMER ENGINEER: J.CHANG	DATE: 3/29/94	APPROVED/RELEASED:	

MATERIAL:

CAGE NUMBER: A14432

THIS DRAWING IS THE PROPERTY OF: ARGONNE NATIONAL LABORATORY

TITLE: ADVANCED PHOTON SOURCE
A4 HEAVY LOAD PNEUMATIC
35 mm-8" LINEAR ACTUATOR
BELLOWS & ROD
ROD WELDMENT

SCALE: 1:1 | SHEET: 1-4 | SIZE: E | DRAWING NUMBER: P4105090104-820201-00