

4 PARALLEL HELIUM  
OUTLET COOLING TUBES  
(OFHC)(@85M 1/2"ID)

4 PARALLEL HELIUM  
INLET COOLING TUBES  
(OFHC)(@85M 1/2"ID)

COLD MASS


77K SHIELD

VACUUM VESSEL

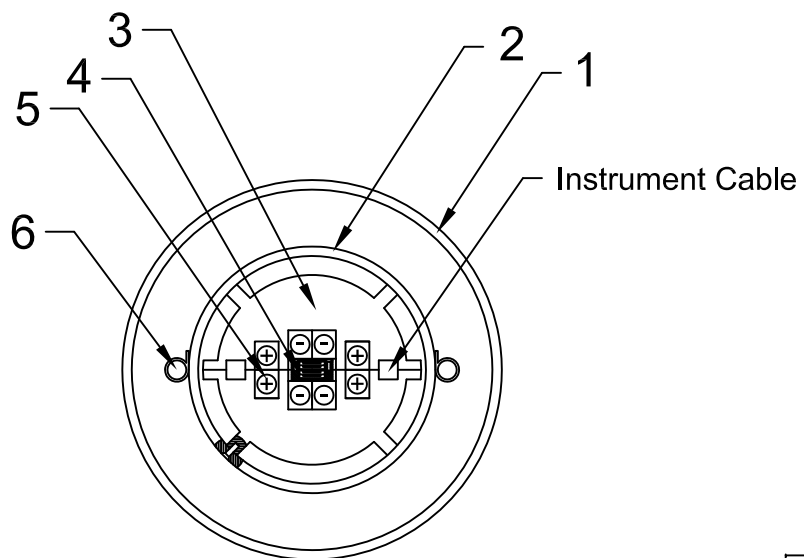
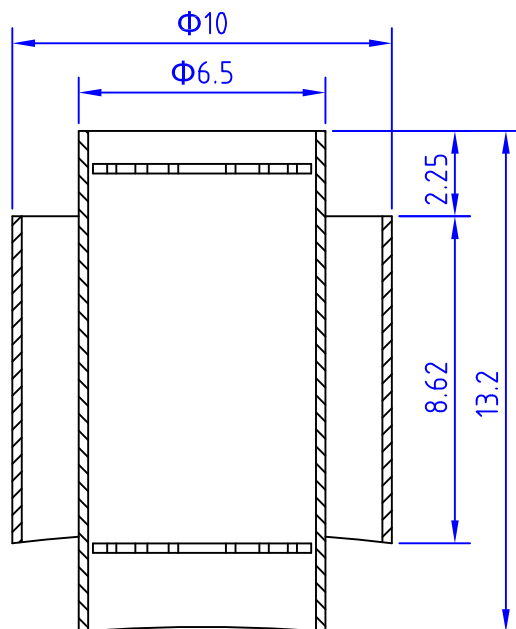
COILS

Cold Mass  
 $W_{CU} = 10749.42\text{kg}$   
 $W_{AL} = 8508.41\text{kg}$

QA: *Lian Xu*  
Date: 02-28-2010

UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± .05 X ± .1		CONTRACT NO.		 <b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
DRAWN	<i>Leven</i>	DATE	02/10/2011		
CHECK	<i>Best</i>	DATE	02/28/2011		
TREATMENT	DESIGN	TITLE CLASS12 SOLENOID MAGNET SECTION VIEW			
FINISH	DESIGN ACTIVITY	SIZE	D		
ACT. WT.	CALC. WT.	CUSTOMER	DWG NO. CLAS12-S-001		
		SCALE	DO NOT SCALE		
		RELEASE DATE			
		SHEET			

B-125-FC



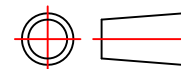
QA: *Pian Xu*  
Date: 03-10-2011

ALL DIMENSIONS ARE IN INCHES

6	2		LN <sub>2</sub> Cooling Tube	
5	8		LHe Cooling Tube	
4	1	Clas12-S-A-003	Conductor Box	
3	2	Clas12-S-A-0017	4.5K Supports 13.6" Spaced	G-10
2	1	Clas12-S-A-0014	80 K Shield 6.5"OD X ¼" Wall	6061T6
1	1	Clas12-S-A-0011	300 K 10" ODX ¼" Wall	304 S.S.
ITEM	QTY	DWG #	DESCRIPTION	NOTE

#### PART LIST

THIRD ANGLE PROJECTION



**WANG NMR INC**

550 N CANYONS PARKWAY, LIVERMORE, CA 94551

NAME: Adapter Assembly

DWG #: Clas12 - S - A - 001

SHT 1 OF 1

MATERIAL:

QTY 1

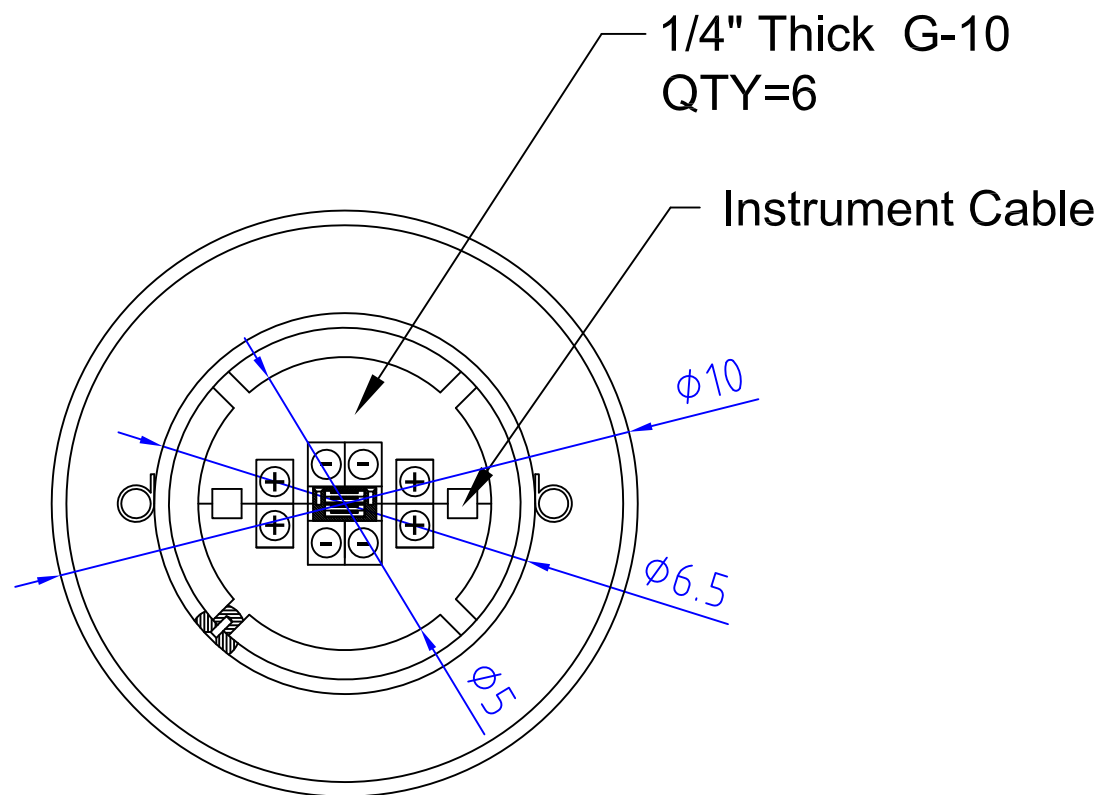
DWN BY: *Seven* DATE: 03/08/2011

SCALE: TO FIT DWG SIZE:

1ST CHK: *Best* DATE: 03/10/2011

2ND CHK: DATE:

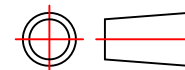
**B-139-FC**



QA: *Lian Xu*  
Date: 03-10-2011

ALL DIMENSIONS ARE IN INCHES

THIRD ANGLE PROJECTION



**WANG NMR INC**

550 N CANYONS PARKWAY, LIVERMORE, CA 94551

NAME: 4.5K Connecting Adapter

DWG #: Clas12 - S - A - 002

SHT 1 OF 1

MATERIAL:

QTY 1

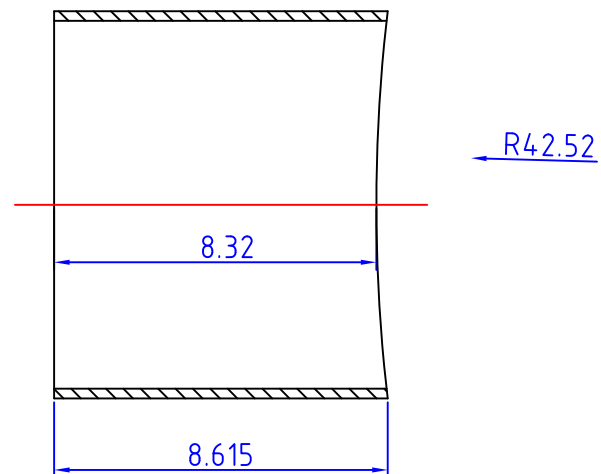
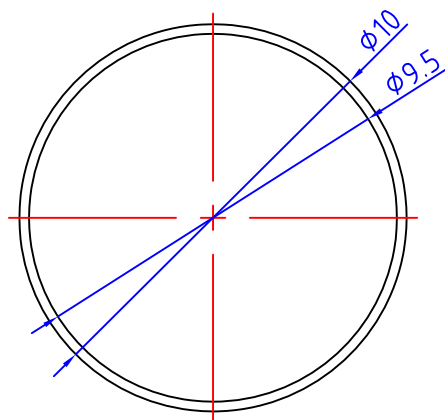
DWN BY: *Leven* DATE: 03/08/2011

SCALE: TO FIT DWG SIZE:

1ST CHK: *Best* DATE: 03/10/2011

2ND CHK: DATE:

**B-140-FC**



NOTE:

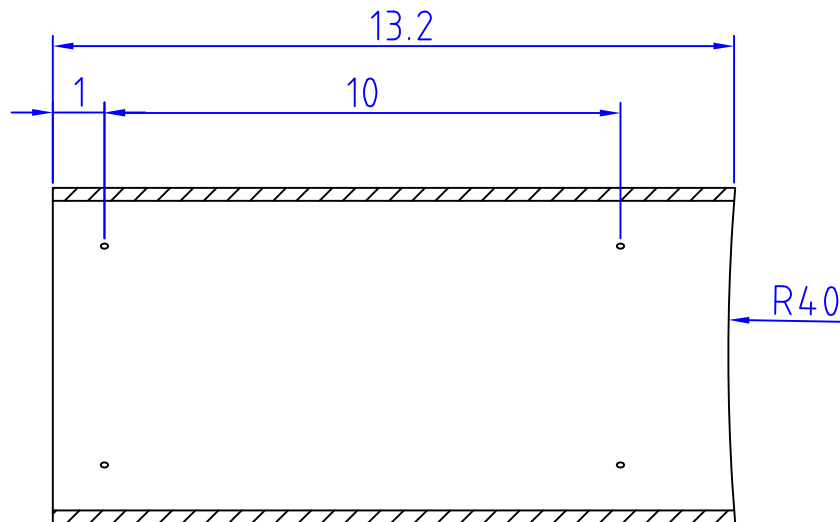
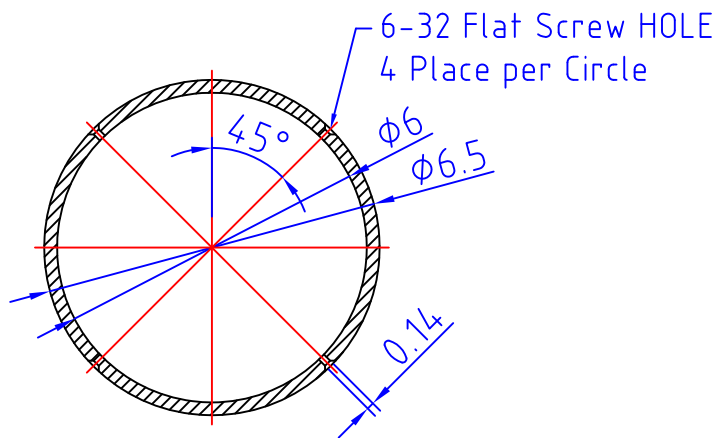
- 1) Material is 10" ODX 1/4" Wall 304 S.S. Tube
- 2) QTY = 1

QA: *Lian Xu*  
Date: 03-10-2011

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES: FRACTIONS  $\pm 1/64$  DECIMALS  $XXX=\pm 0.005$   $XX=\pm 0.01$   $X=\pm 0.1$   
ANGLES  $\pm 5^\circ$   
CONCENTRICITY  $\pm 0.005$  TOTAL INDICATION RUN OUT  
PERPENDICULAR  $\pm 0.002$  (UNLESS OTHERWISE SPECIFIED)

THIRD ANGLE PROJECTION				<b>WANG NMR INC</b> 550 N CANYONS PARKWAY, LIVERMORE, CA 94551	
NAME: Torus Adapter 300K Vacuum Tube					
DWG #: Solenoid - S - A - 0011				SHT	1 OF 1
MATERIAL:				QTY	1
DWN BY: <i>Leven</i>		DATE: 03/08/2011		SCALE: TO FIT DWG SIZE:	
1ST CHK: <i>Best</i>		DATE: 03/10/2011		2ND CHK: DATE:	

**B-142-FC**

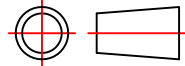


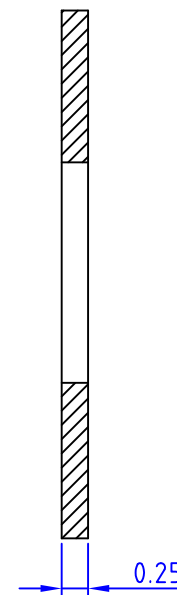
NOTE:

- 1) Material is 6.5" ODX 1/4" Wall 6061T6 Aluminum Tube
- 2) QTY = 1

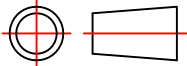
QA: *Lian Xu*  
Date: 03-10-2011

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES: FRACTIONS  $\pm 1/64$  DECIMALS  $XXX=\pm 0.005$   $XX=\pm 0.01$   $X=\pm 0.1$   
ANGLES  $\pm 0.5^\circ$   
CONCENTRICITY  $\pm 0.005$  TOTAL INDICATION RUN OUT  
PERPENDICULAR  $\pm 0.002$   
(UNLESS OTHERWISE SPECIFIED)

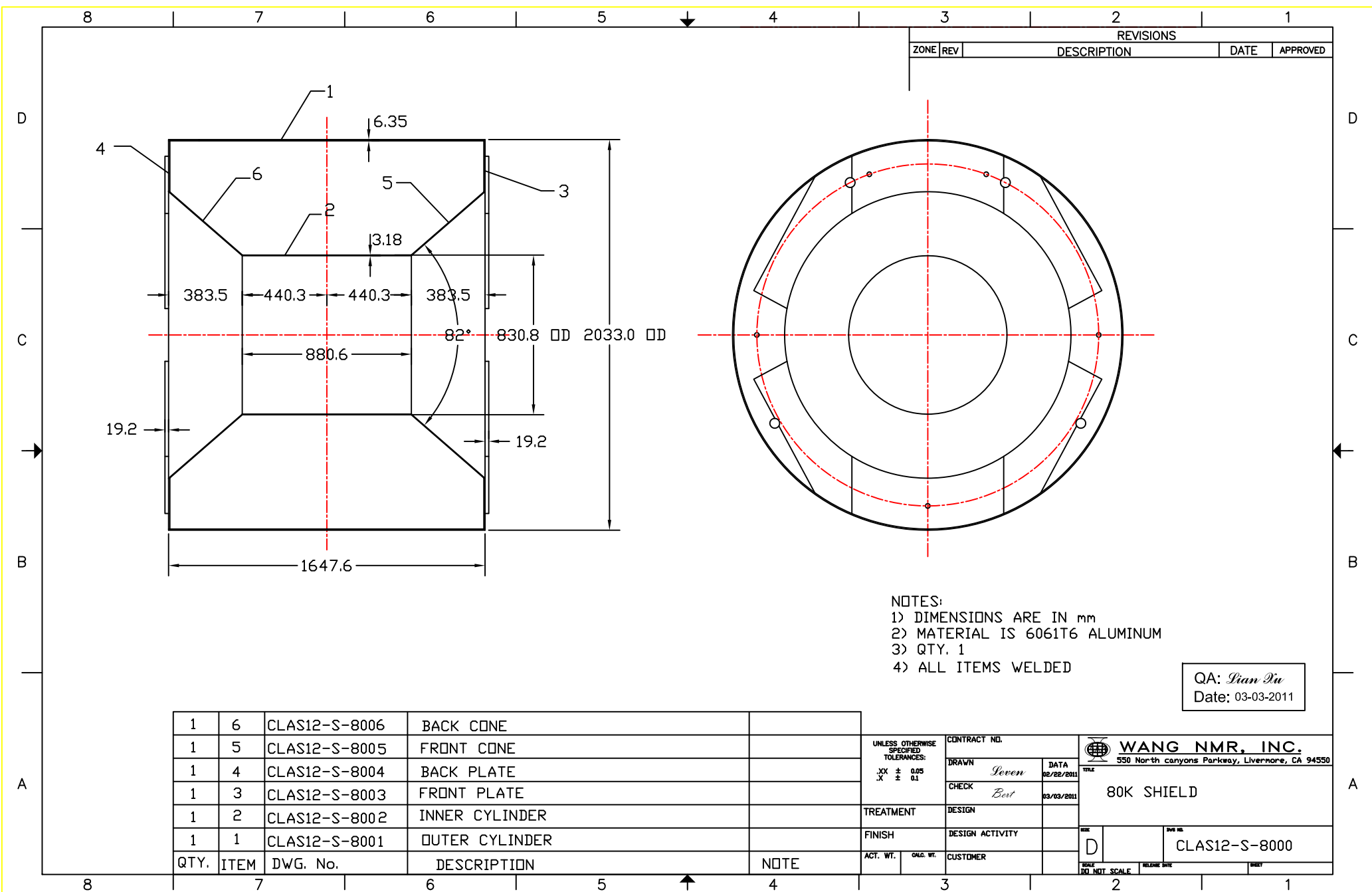
THIRD ANGLE PROJECTION				<b>WANG NMR INC</b> 550 N CANYONS PARKWAY, LIVERMORE, CA 94551	
NAME: Solenoid Adapter 80K Tube					
DWG #: Solenoid - S - A - 0014				SHT	1 OF 1
MATERIAL:				QTY	1
DWN BY: <i>Leven</i>		DATE: 03/08/2011		SCALE: TO FIT	DWG SIZE:
1ST CHK: <i>Best</i>		DATE: 03/10/2011		2ND CHK: <i>B-145-FC</i> DATE:	

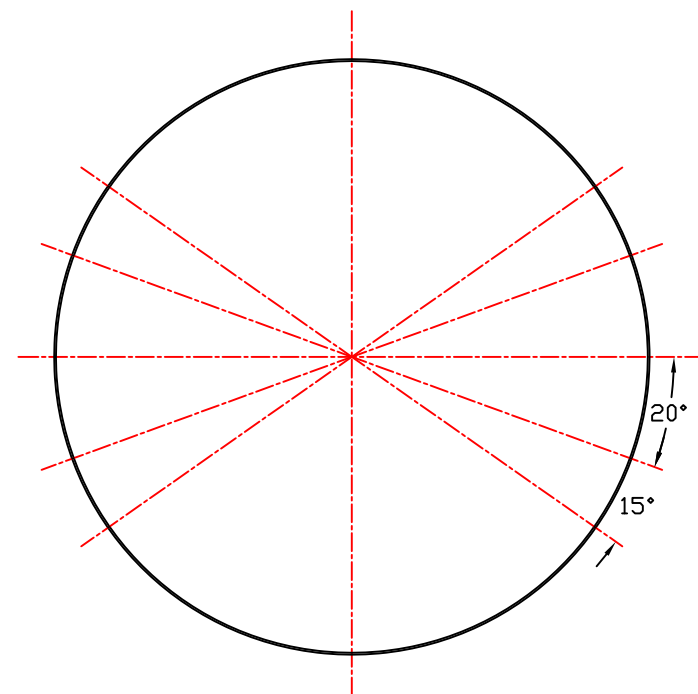
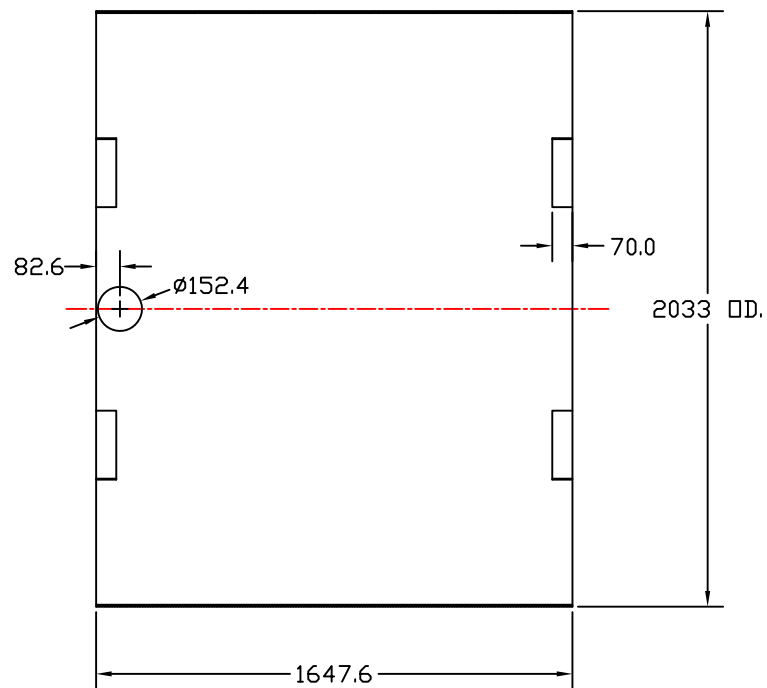


- 1) Material is 1/4" Thick G-10
- 2) Cut to 2 half and screw together after installed
- 3) QTY =2

THIRD ANGLE PROJECTION				<b>WANG NMR INC</b> 550 N CANYONS PARKWAY, LIVERMORE, CA 94551	
NAME: Solenoid Adapter 4.5K Support					
DWG #: Clas12 - S - A - 0017				SHT 1 OF 1	
MATERIAL:				QTY	2
DWN BY: <i>Joven</i>			DATE: 03/08/2011	SCALE: TO FIT	DWG SIZE: <b>B-148-FC</b>
1ST CHK: <i>Best</i>		DATE: 03/10/2011		2ND CHK: DATE:	



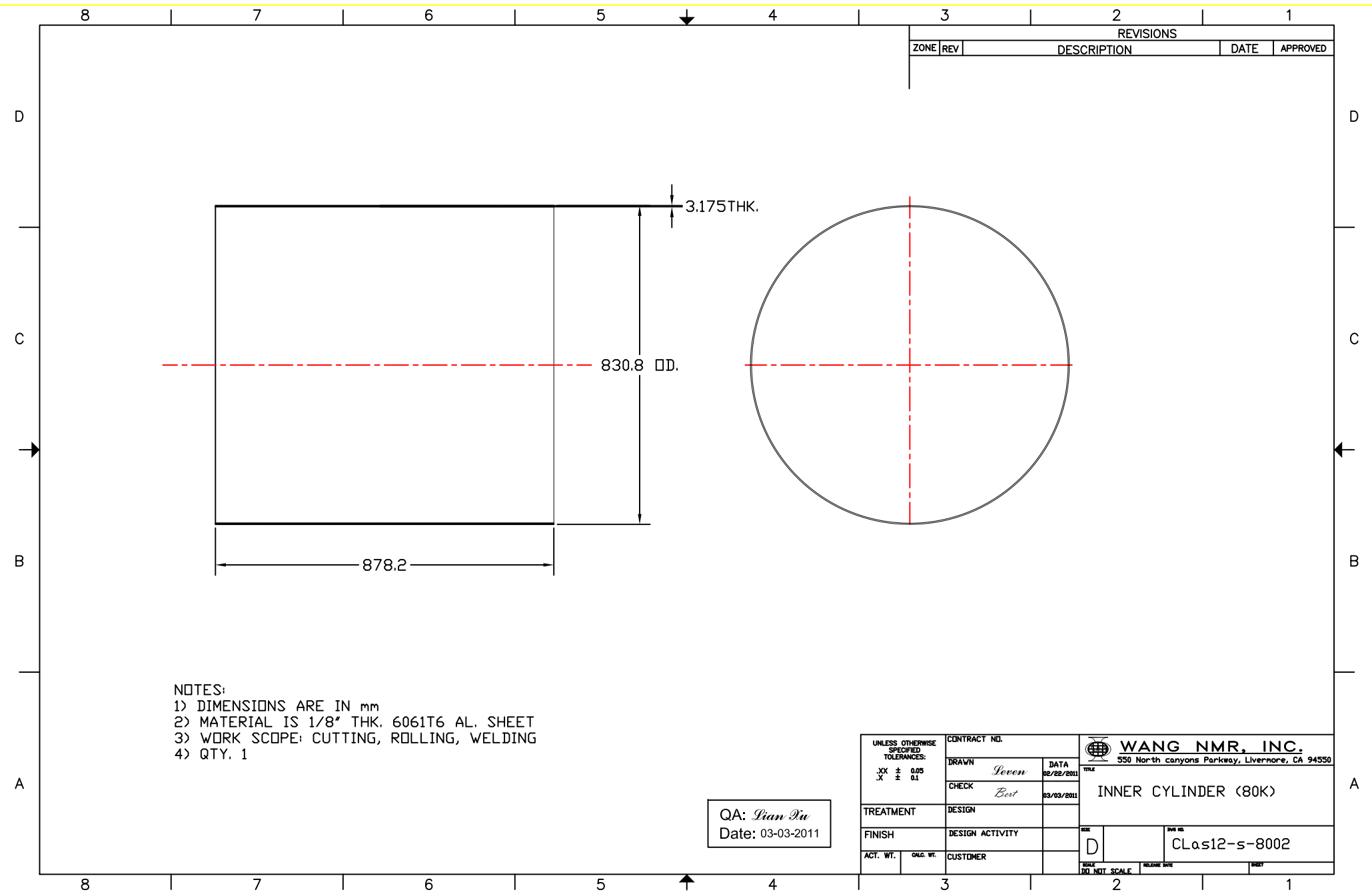


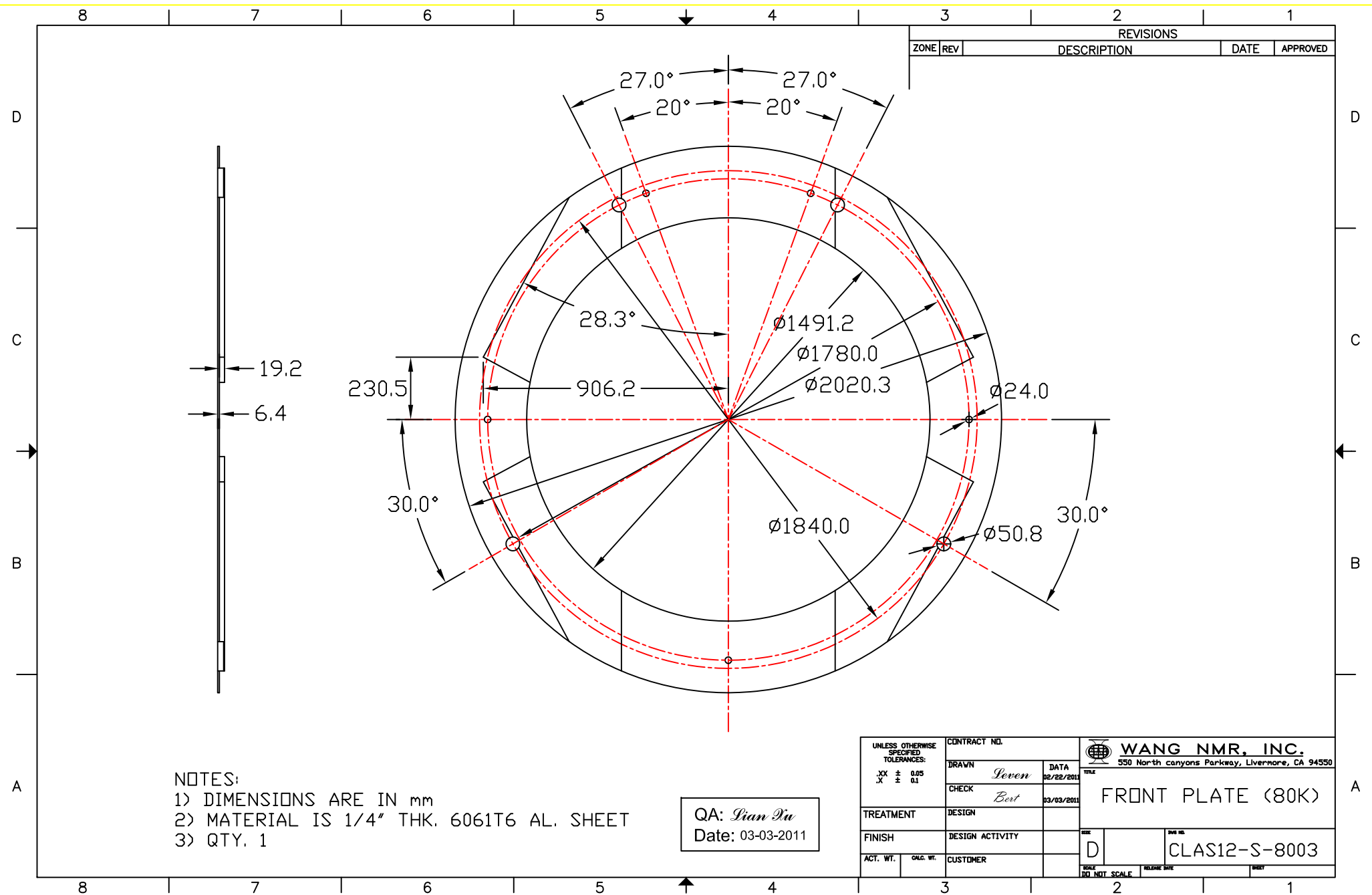


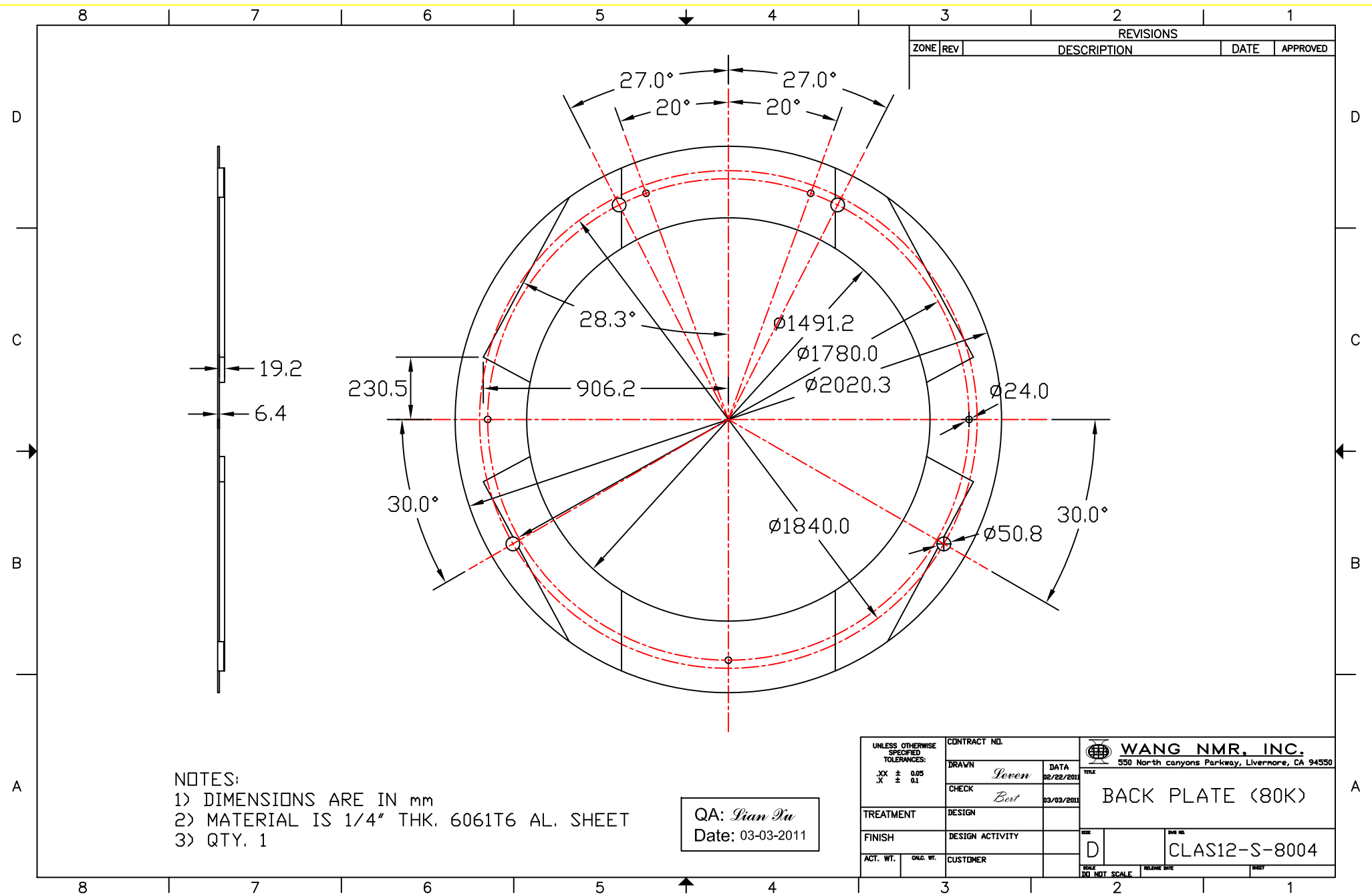
- NOTES:
- 1) DIMENSIONS ARE IN mm
  - 2) MATERIAL IS 1/4" THK. 6061T6 AL. SHEET
  - 3) WORK SCOPE: CUTTING, ROLLING, WELDING AND REROLLING
  - 4) QTY. 1

QA: *Lian Xu*  
Date: 03-03-2011

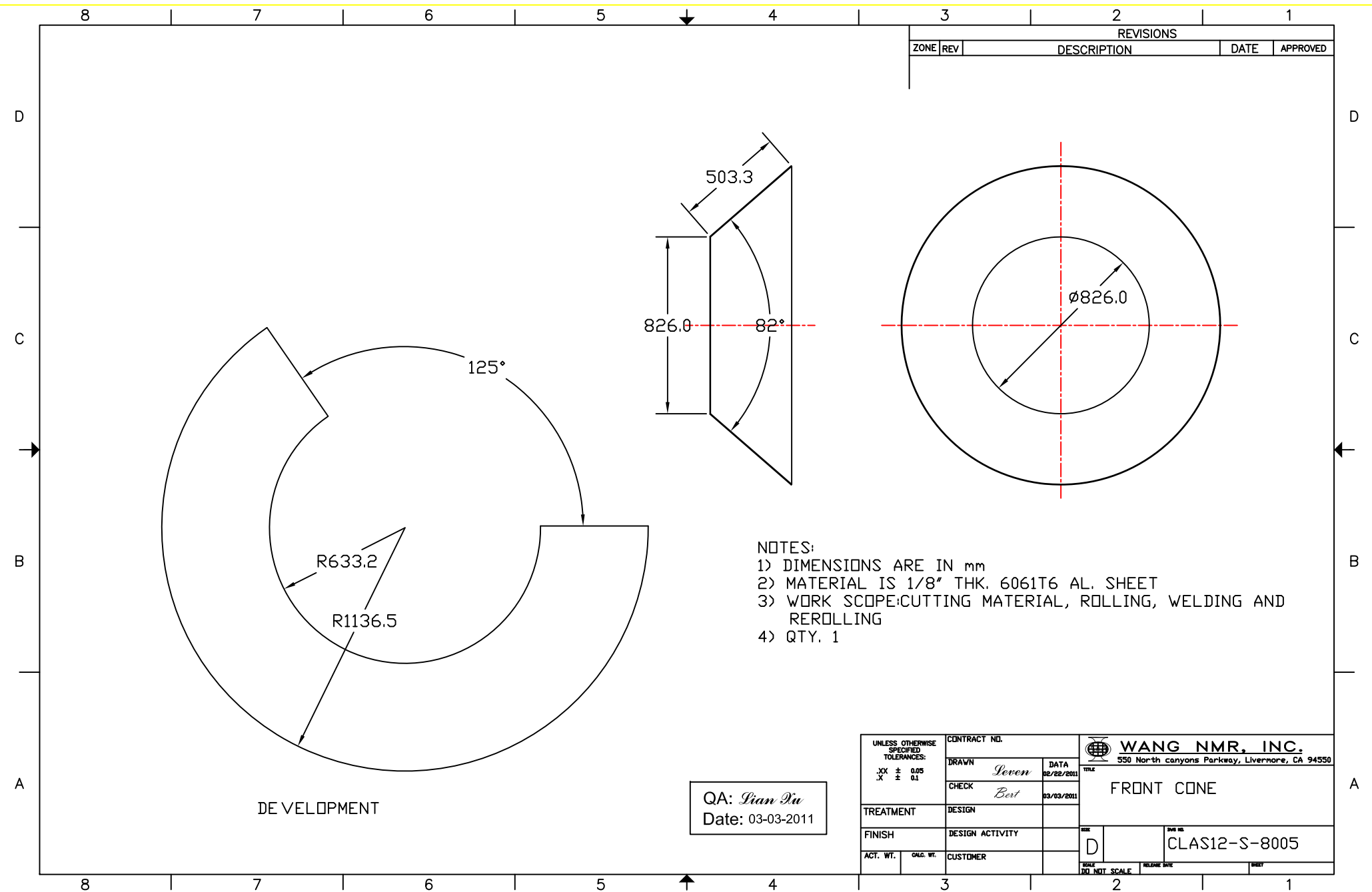
UNLESS OTHERWISE SPECIFIED TOLERANCES:		CONTRACT NO.		<b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
XX ± 0.05	XX ± 0.1	DRAWN	<i>Leven</i>	DATE	02/22/2011
		CHECK	<i>Best</i>	DATE	03/03/2011
TREATMENT		DESIGN		TITLE	
				OUTER CYLINDER (80K)	
FINISH		DESIGN ACTIVITY		SIZE	D
ACT. WT.		CUST. WT.		QTY	1
		CUSTOMER		CLAS12-S-8001	
				SCALE	DO NOT SCALE
				RELEASE DATE	
				SHEET	

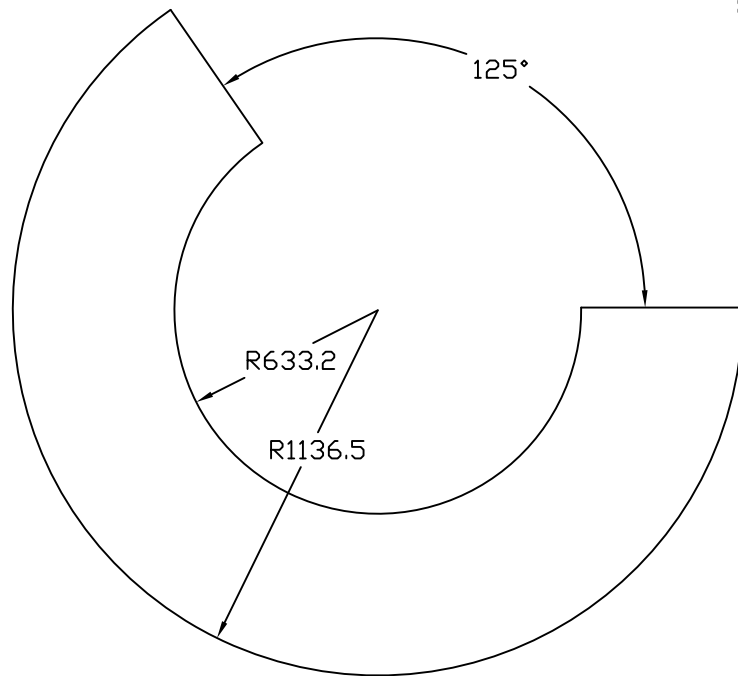




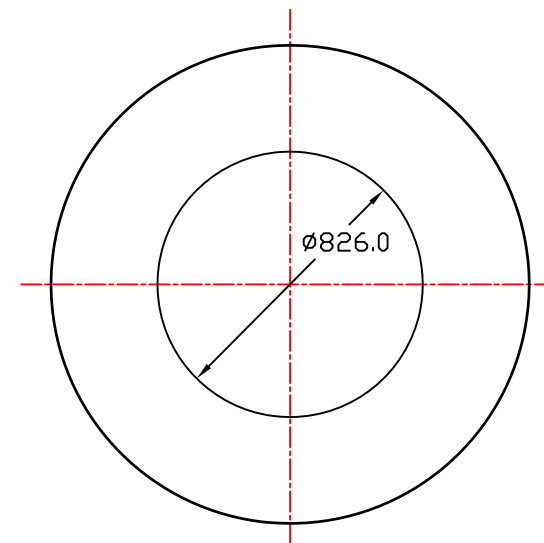
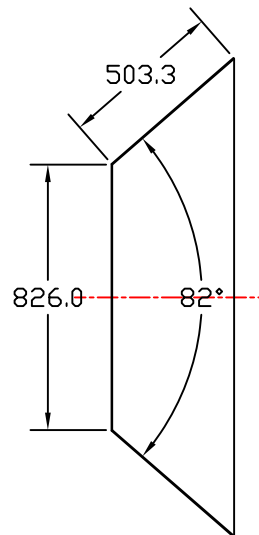


UNLESS OTHERWISE SPECIFIED TOLERANCES:		CONTRACT NO.		WANG NMR, INC.	
.XX	± 0.05	DRAWN	Leven	DATA	02/22/2011
.X	± 0.1	CHECK	Bert	DATE	03/03/2011
TREATMENT		DESIGN		TITLE	
FINISH		DESIGN ACTIVITY		BACK PLATE (80K)	
ACT. WT.	CALC. WT.	CUSTOMER		SIZE	D
				DATE	CLAS12-S-8004
				SCALE	DO NOT SCALE
				RELEASE DATE	
				SHEET	





DEVELOPMENT

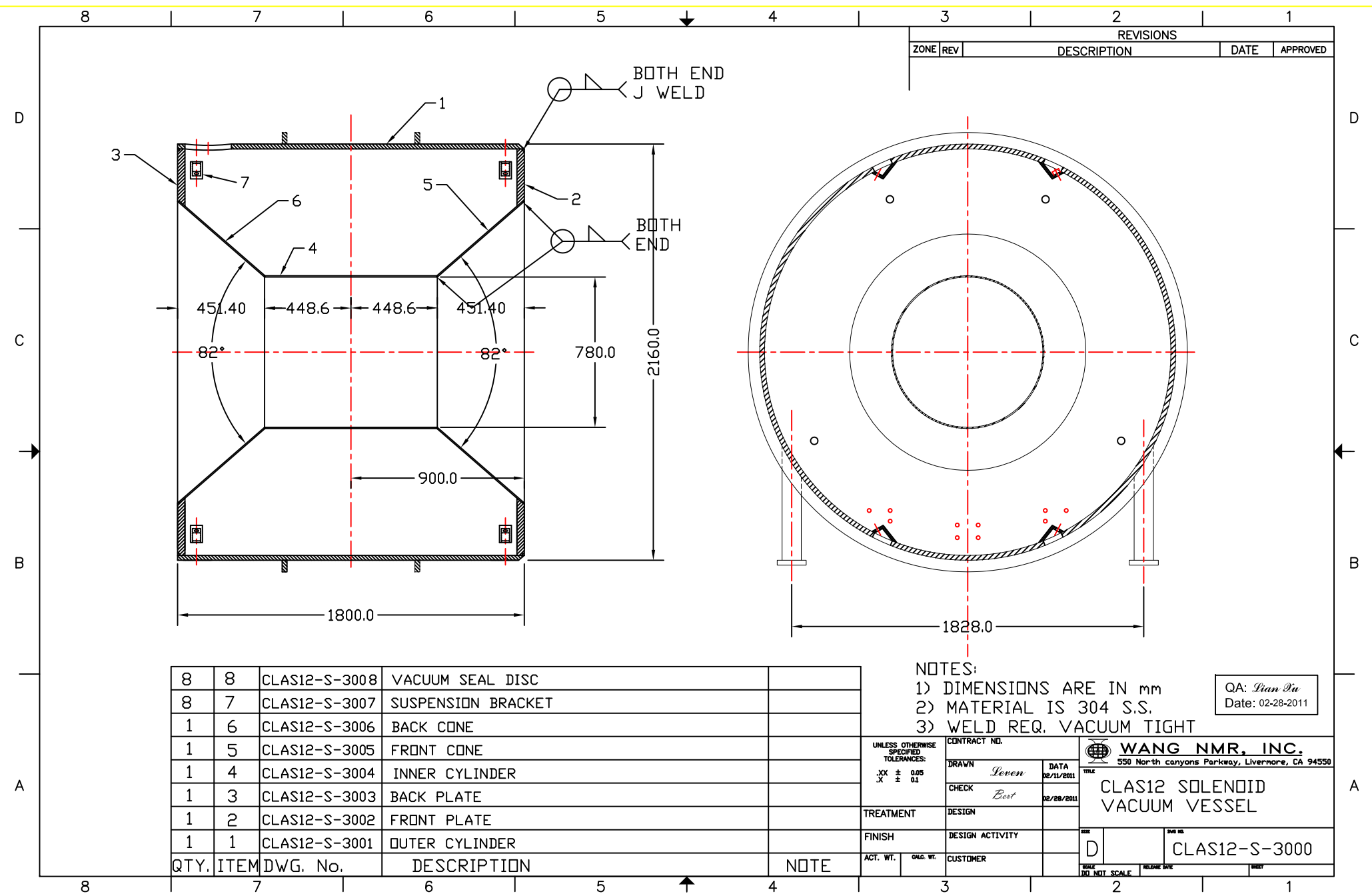


NOTES:

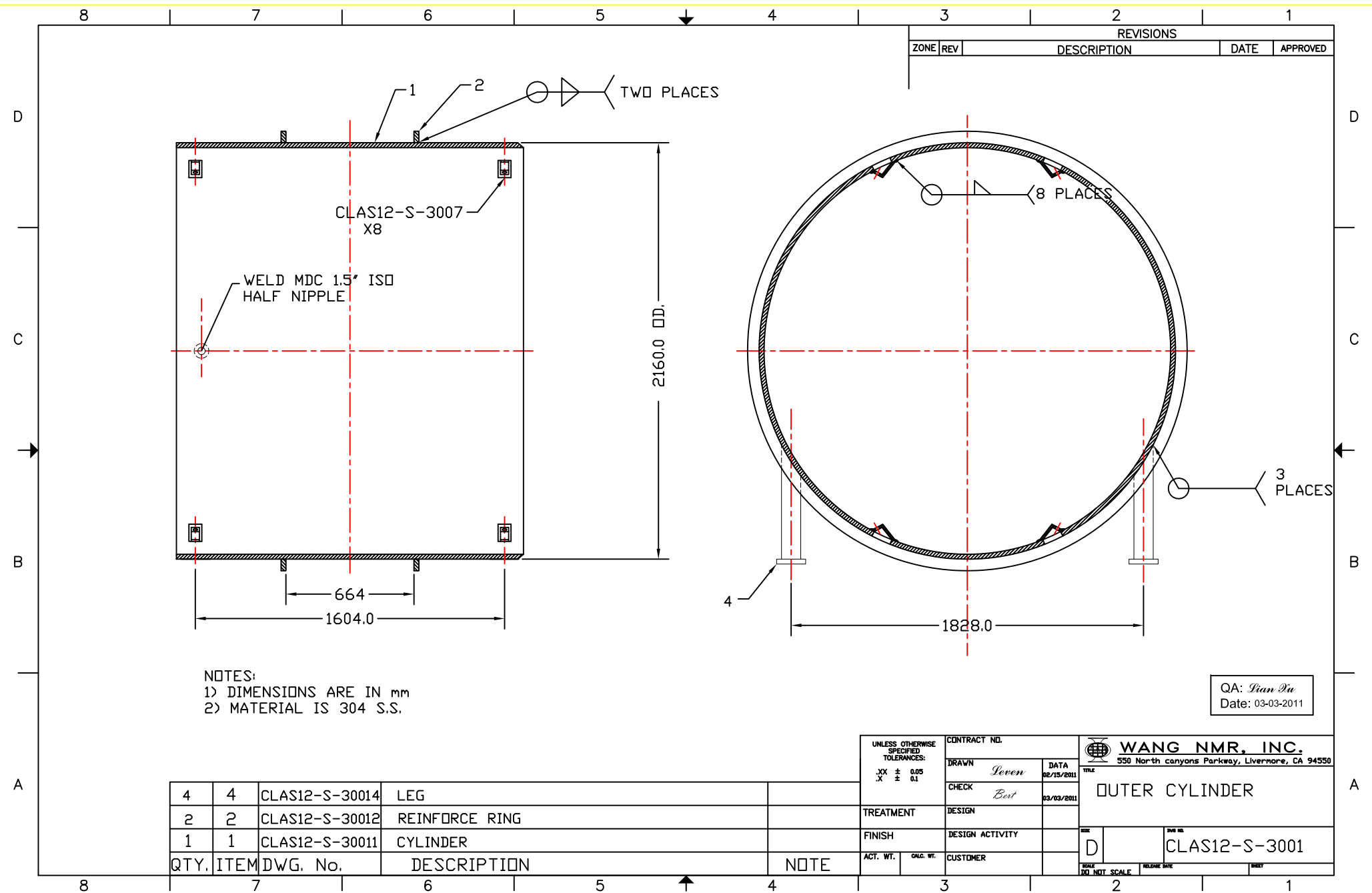
- 1) DIMENSIONS ARE IN mm
- 2) MATERIAL IS 1/8" THK. 6061T6 AL. SHEET
- 3) WORK SCOPE: CUTTING MATERIAL, ROLLING, WELDING AND REROLLING
- 4) QTY. 1

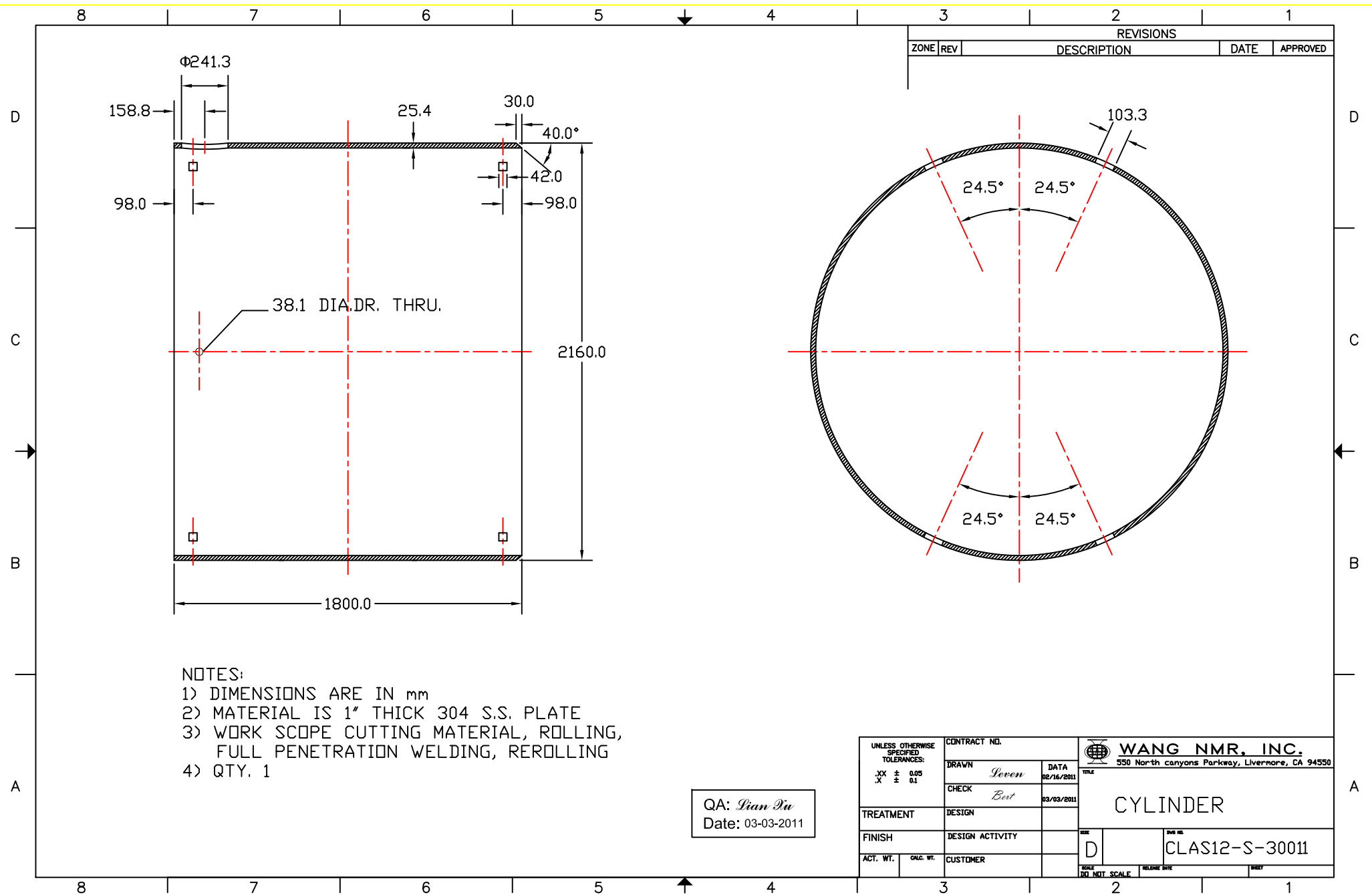
QA: *Lian Xu*  
Date: 03-03-2011

UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.05 X ± 0.1		CONTRACT NO.		<b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
DRAWN	<i>Leven</i>	DATE	02/22/2011	TITLE	
CHECK	<i>Best</i>	DATE	03/03/2011	BACK CONE	
TREATMENT	DESIGN				
FINISH	DESIGN ACTIVITY				
ACT. WT.	CALC. WT.	CUSTOMER	D <b>CLAS12-S-8006</b>		
		SCALE		SHEET	

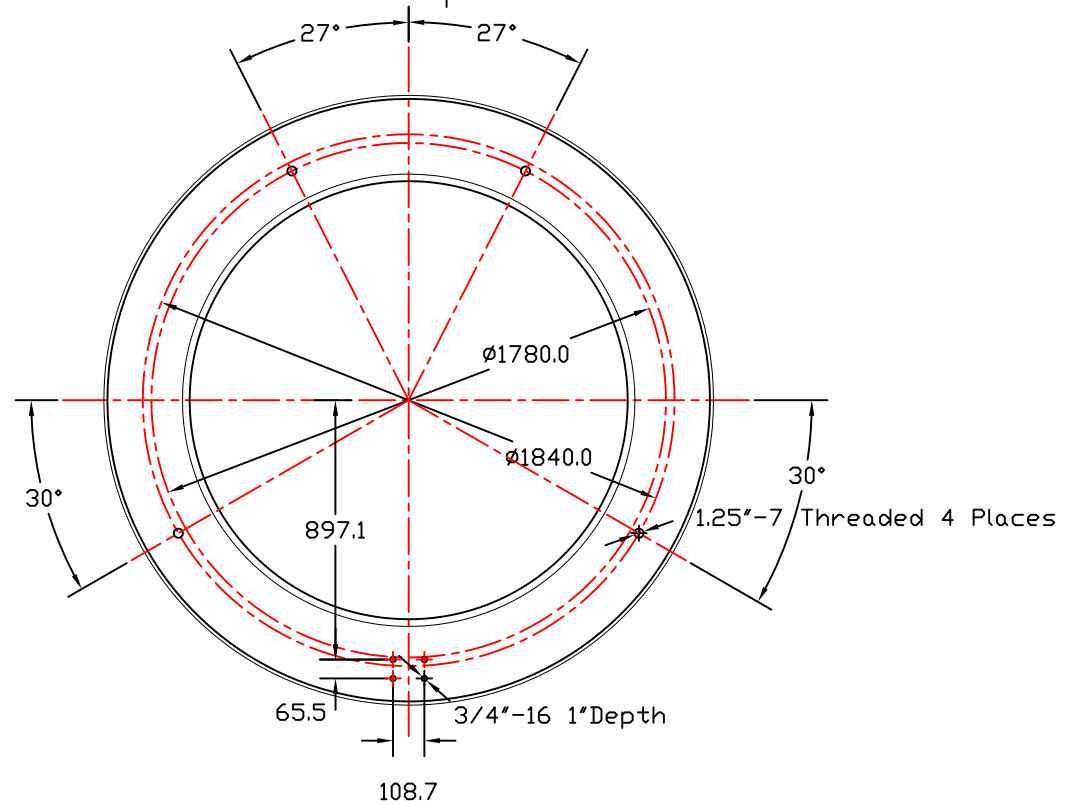
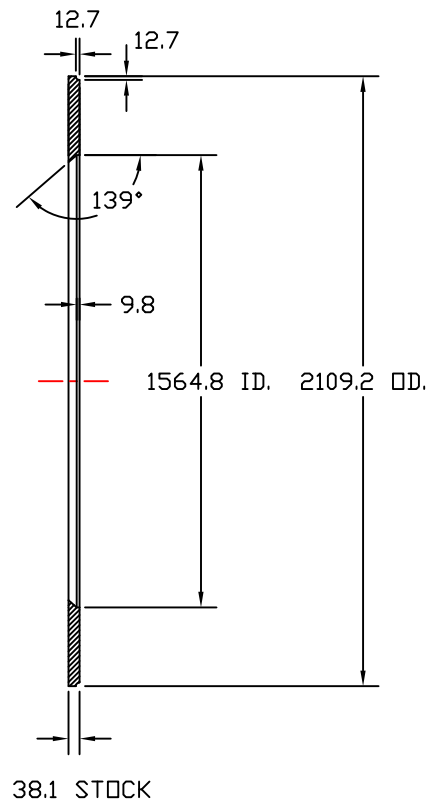








D  
C  
B  
A

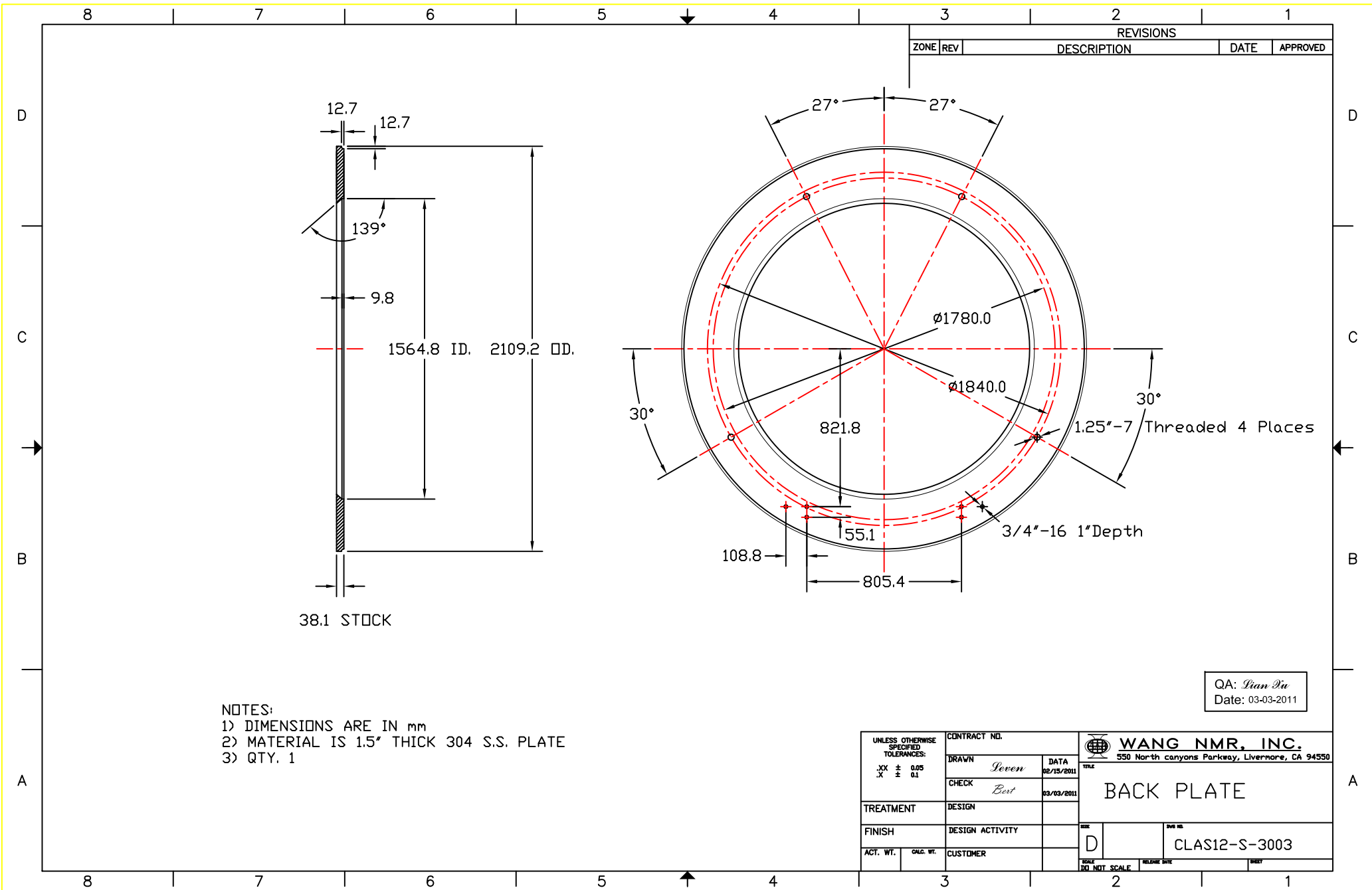


- NOTES:  
1) DIMENSIONS ARE IN mm  
2) MATERIAL IS 1.5" THICK 304 S.S. PLATE  
3) QTY. 1

QA: *Lian Du*  
Date: 03-03-2011

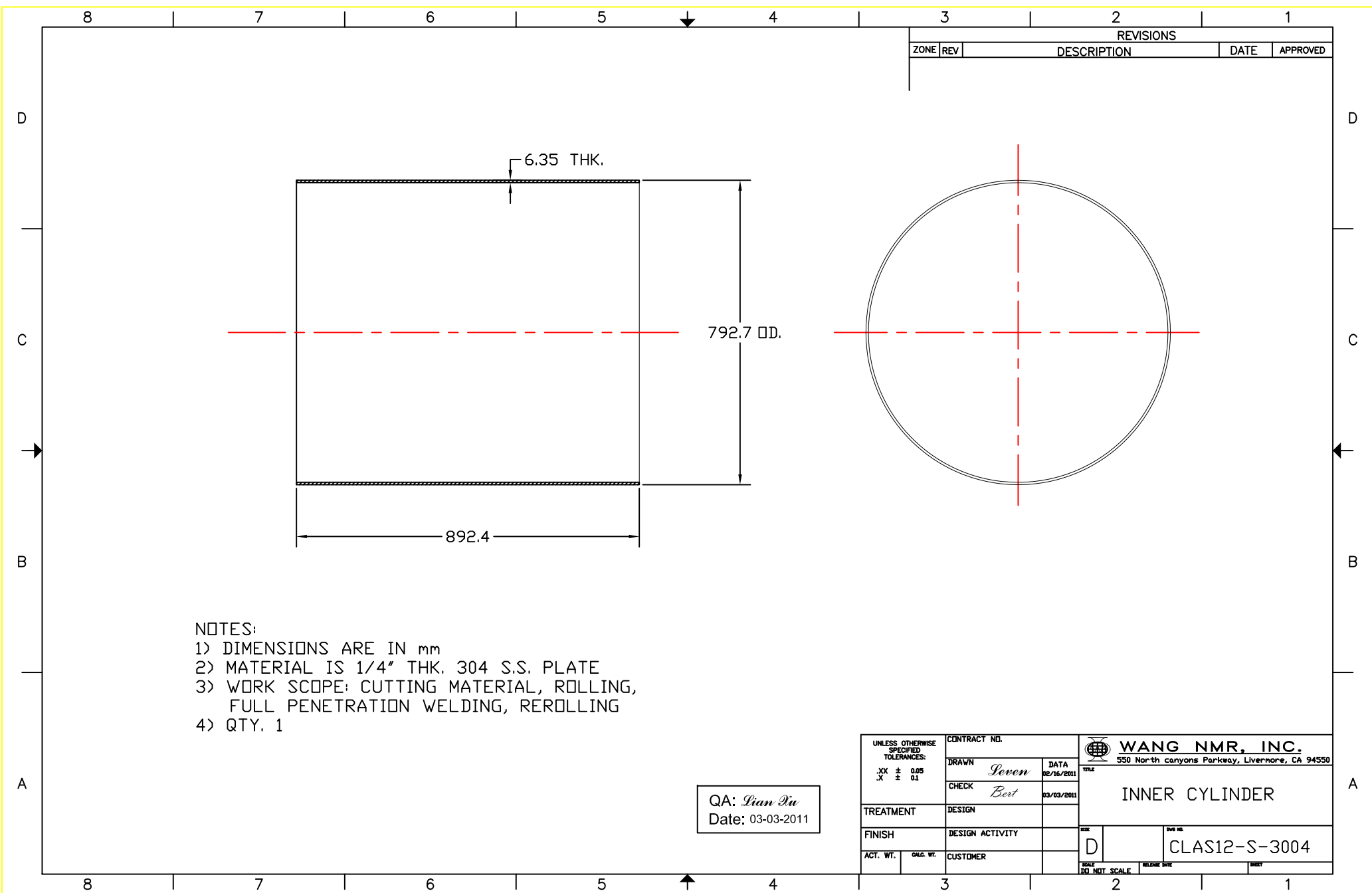
UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.05 X ± 0.1		CONTRACT NO.		<b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
DRAWN <i>Leven</i>		DATE 02/15/2011		TITLE <b>FRONT PLATE</b>	
CHECK <i>Bert</i>		03/03/2011			
TREATMENT		DESIGN		REV. NO.	
FINISH		DESIGN ACTIVITY		REV. NO.	
ACT. WT.	CALC. WT.	CUSTOMER		D CLAS12-S-3002	
				SCALE: 100 NOT SCALE RELEASE DATE: _____ SHEET: _____	

B-168-FC



QA: *Lian Du*  
Date: 03-03-2011

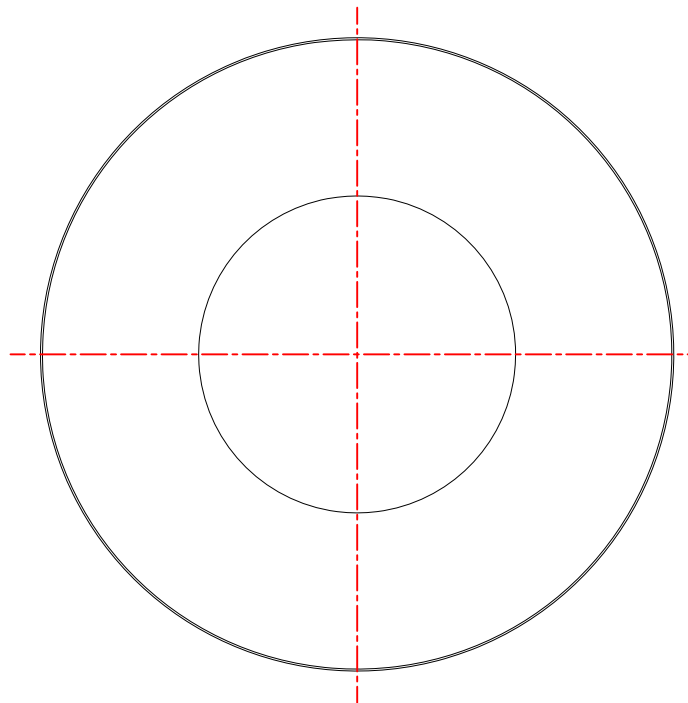
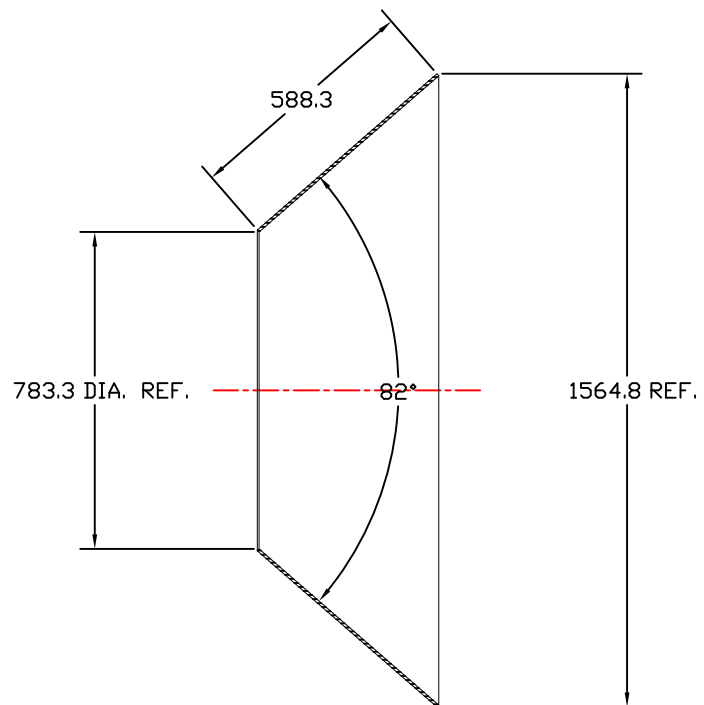
UNLESS OTHERWISE SPECIFIED TOLERANCES:		CONTRACT NO.		WANG NMR, INC.	
XX ± 0.05		DRAWN <i>Leven</i>		550 North canyons Parkway, Livermore, CA 94550	
X ± 0.1		CHECK <i>Bert</i>		TITLE	
TREATMENT		DESIGN		BACK PLATE	
FINISH		DESIGN ACTIVITY		REV. NO.	
ACT. WT.		CUSTOMER		D	
CALC. WT.				CLAS12-S-3003	
				SCALE	
				DATE	
				SHEET	



- NOTES:
- 1) DIMENSIONS ARE IN mm
  - 2) MATERIAL IS 1/4" THK. 304 S.S. PLATE
  - 3) WORK SCOPE: CUTTING MATERIAL, ROLLING, FULL PENETRATION WELDING, REROLLING
  - 4) QTY. 1

QA: *Lian Xu*  
Date: 03-03-2011

UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.05 X ± 0.1		CONTRACT NO.		WANG NMR, INC. 550 North canyons Parkway, Livermore, CA 94550	
DRAWN <i>Leven</i>		DATA 02/16/2011		TITLE	
CHECK <i>Bert</i>		03/03/2011		INNER CYLINDER	
TREATMENT		DESIGN		REV. NO.	
FINISH		DESIGN ACTIVITY		D	
ACT. WT.		CUST. WT.		CLAS12-S-3004	
CUSTOMER		SCALE 1:1		RELEASE DATE	

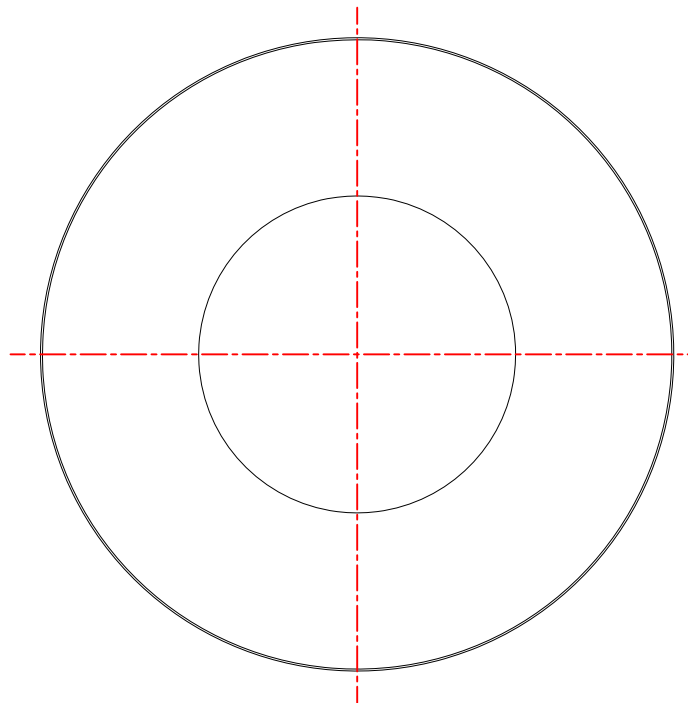
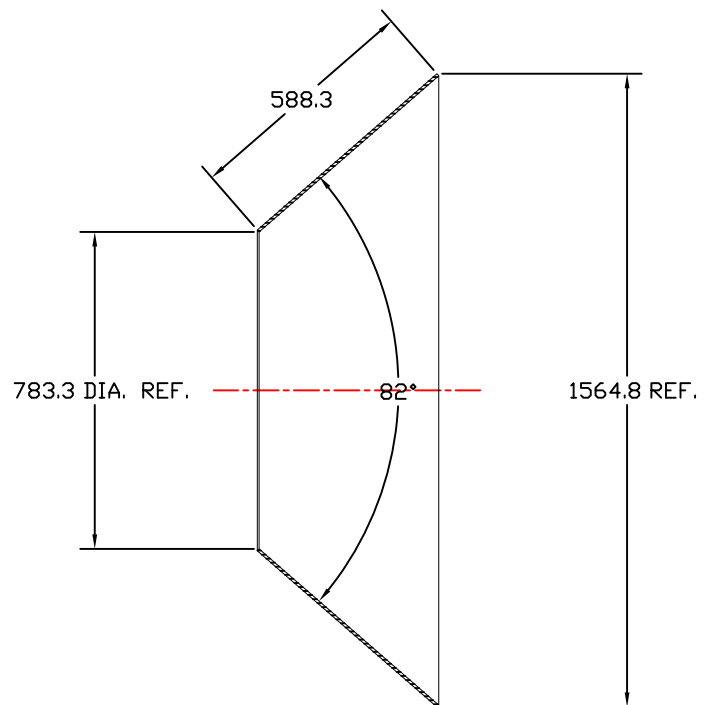


NOTES:

- 1) DIMENSIONS ARE IN mm
- 2) MATERIAL IS 1/4" THK. 304 S.S. PLATE
- 3) WORK SCOPE: CUTTING MATERIAL, ROLLING, FULL PENETRATION WELDING
- 4) QTY. 1

QA: *Lian Xu*  
Date: 03-03-2011

UNLESS OTHERWISE SPECIFIED TOLERANCES: XX ± 0.05 X ± 0.1		CONTRACT NO.		<b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
DRAWN	<i>Leven</i>	DATA	02/16/2011	TITLE	
CHECK	<i>Best</i>		03/03/2011	FRONT CONE	
TREATMENT	DESIGN			SIZE	D
FINISH	DESIGN ACTIVITY			DWG NO.	CLAS12-S-3005
ACT. WT.	CALC. WT.	CUSTOMER		SCALE	DO NOT SCALE
				RELEASE DATE	
				SHEET	

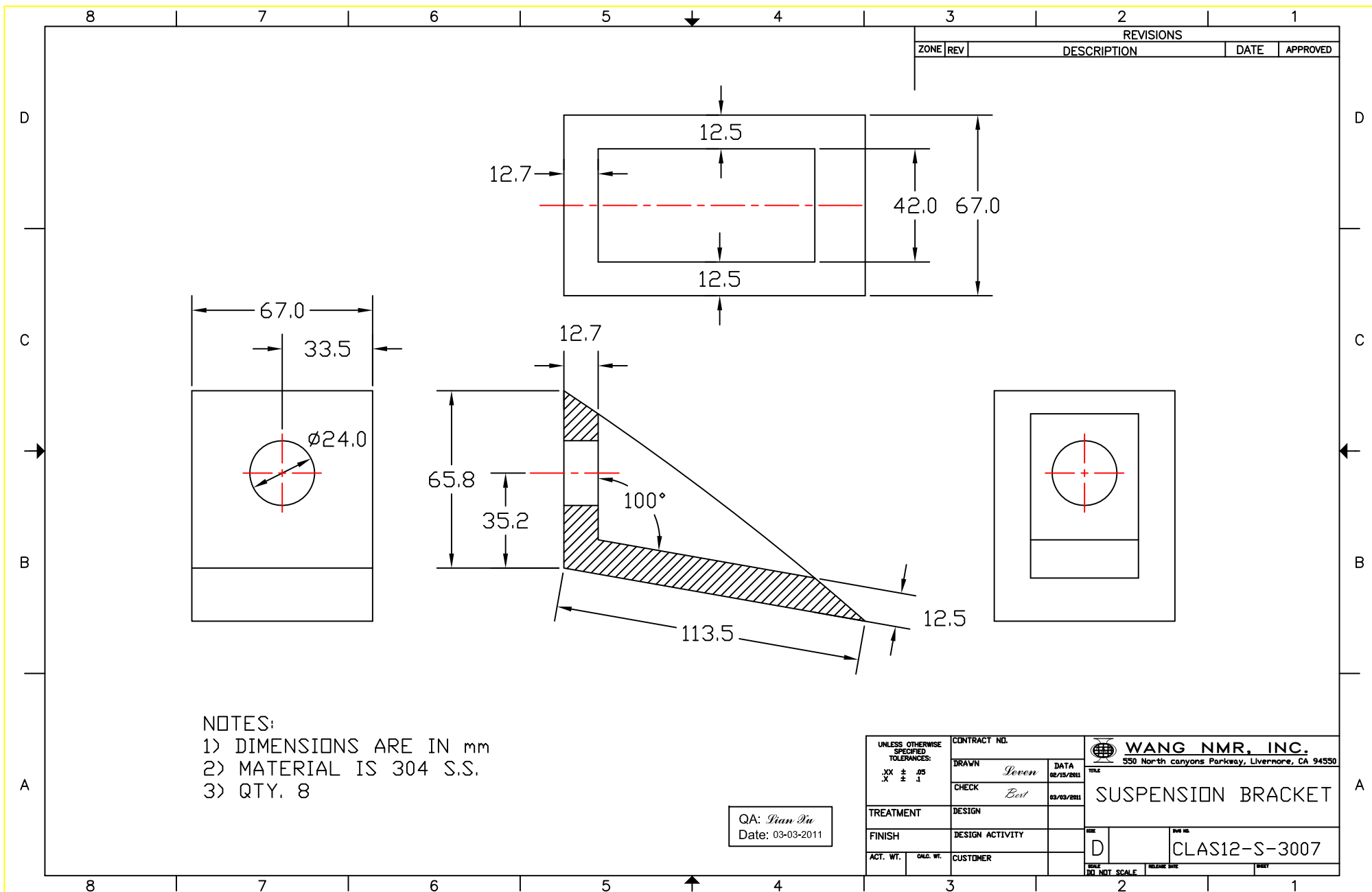


NOTES:

- 1) DIMENSIONS ARE IN mm
- 2) MATERIAL IS 1/4" THK. 304 S.S. PLATE
- 3) WORK SCOPE: CUTTING MATERIAL, ROLLING, FULL PENETRATION WELDING
- 4) QTY. 1

QA: *Lian Xu*  
Date: 03-03-2011

UNLESS OTHERWISE SPECIFIED TOLERANCES:		CONTRACT NO.		<b>WANG NMR, INC.</b> 550 North canyons Parkway, Livermore, CA 94550	
XX ± 0.05 X ± 0.1	DRAWN	Leven	DATA	02/16/2011	
	CHECK	Best		03/03/2011	
TREATMENT	DESIGN		TITLE		
FINISH	DESIGN ACTIVITY		BACK CONE		
ACT. WT.	CALC. WT.	CUSTOMER	SIZE	D	DWG NO.
			CLAS12-S-3006		
SCALE		DO NOT SCALE		RELEASE DATE	
				SHEET	



B-173-FC



