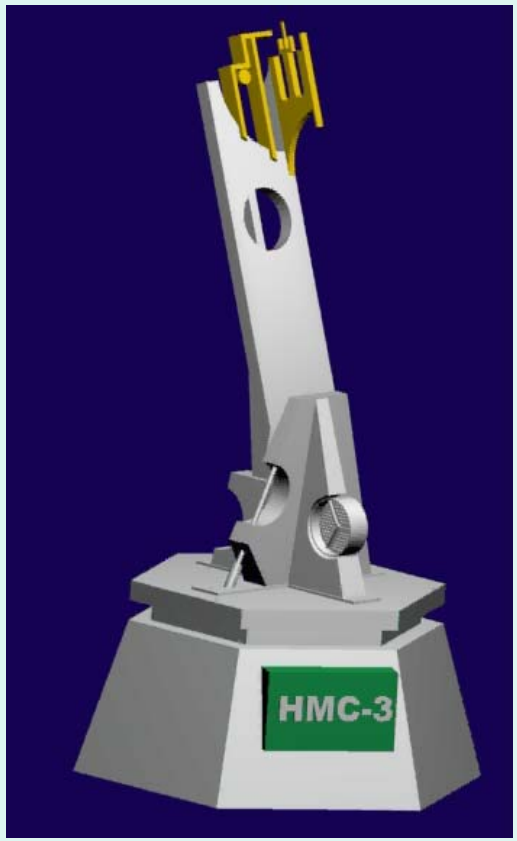


Pakistan – CLIC Collaboration

by

Azhar Nawaz, HMC-3 Taxila

MAIN AGENDA:

1- Present ongoing Collaboration in Design.

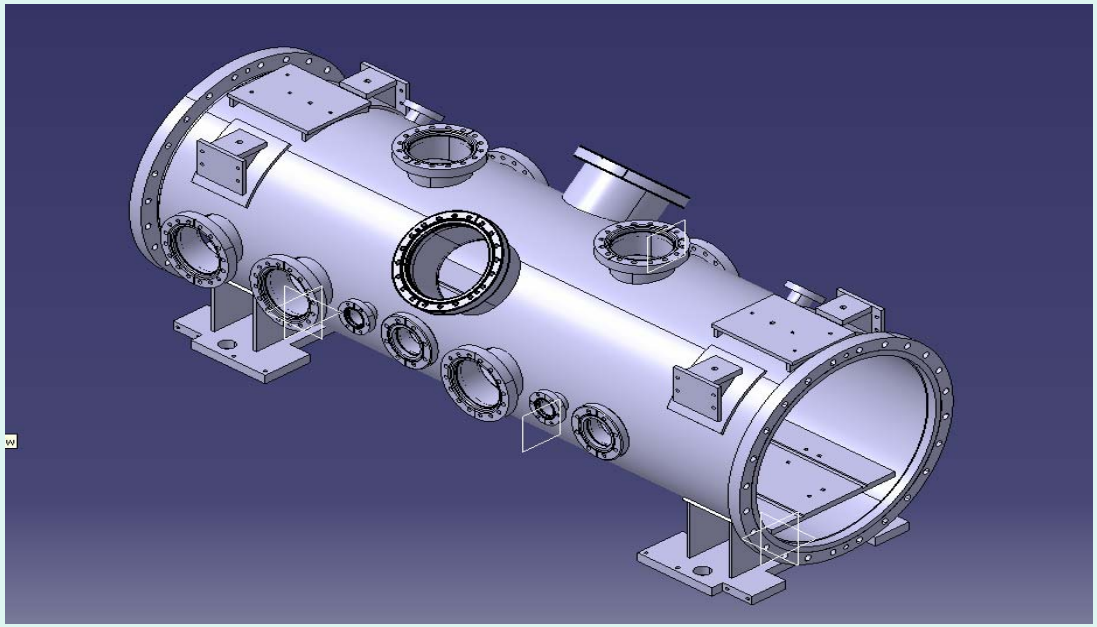
2- Production Jobs done for CLIC.

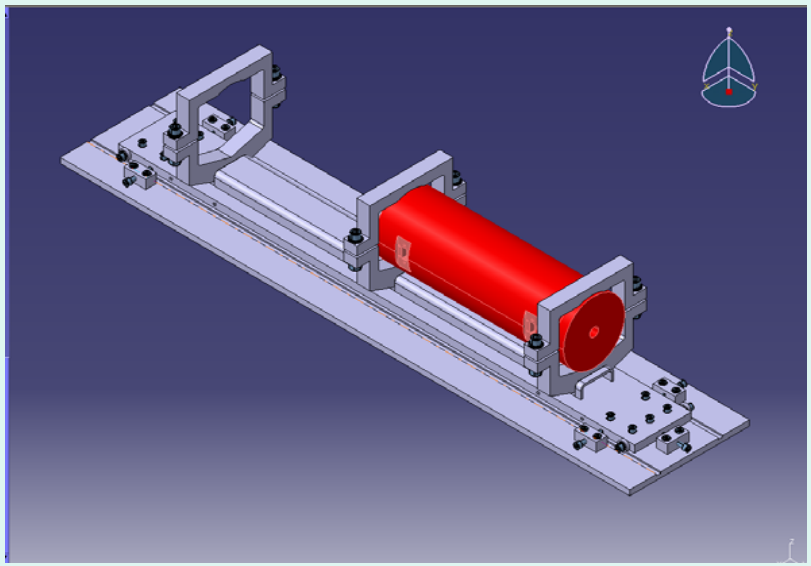
3- Possible Production of RF Structures.

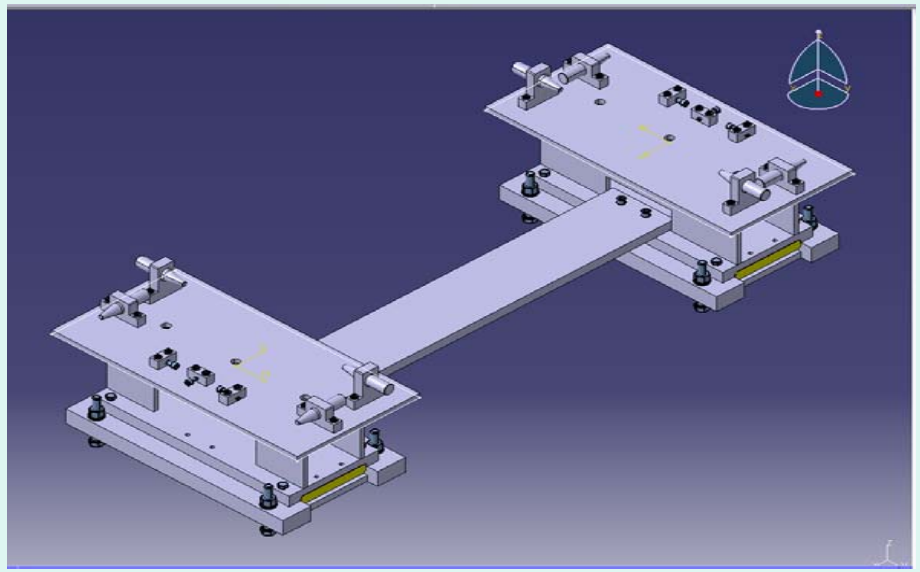
Present on going collaboration in Design.

Present on going collaboration in Design.

a) Design of ACS Tank, Support & Alignment System

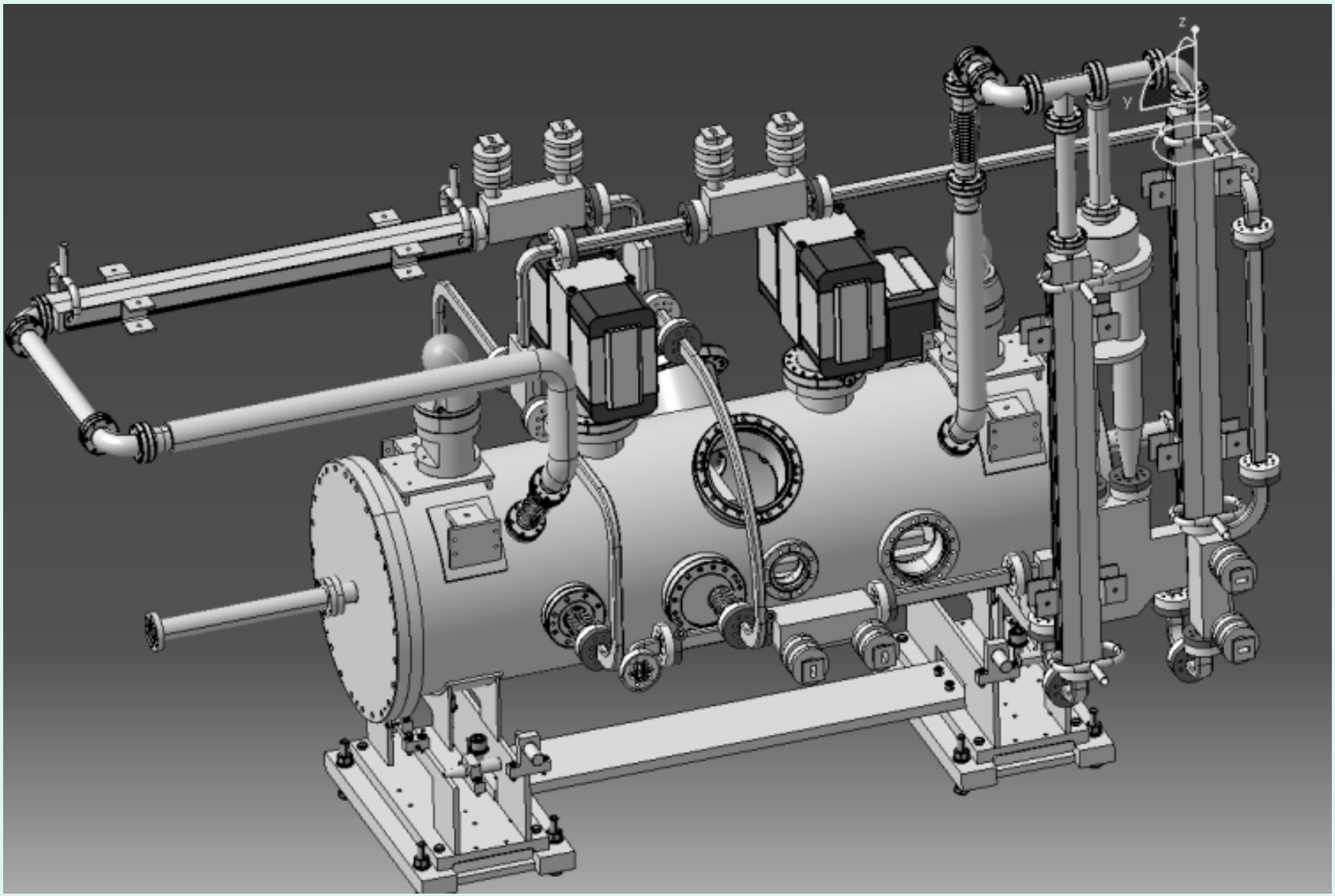






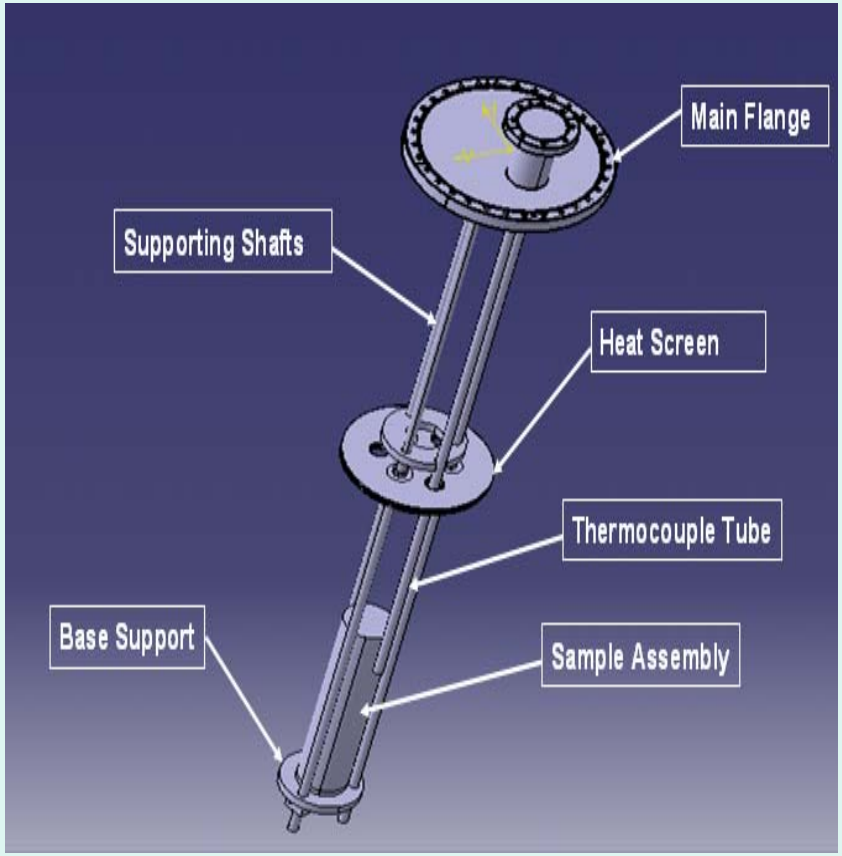
Present on going collaboration in Design.

b) RF Piping & Vacuum Connection Layout



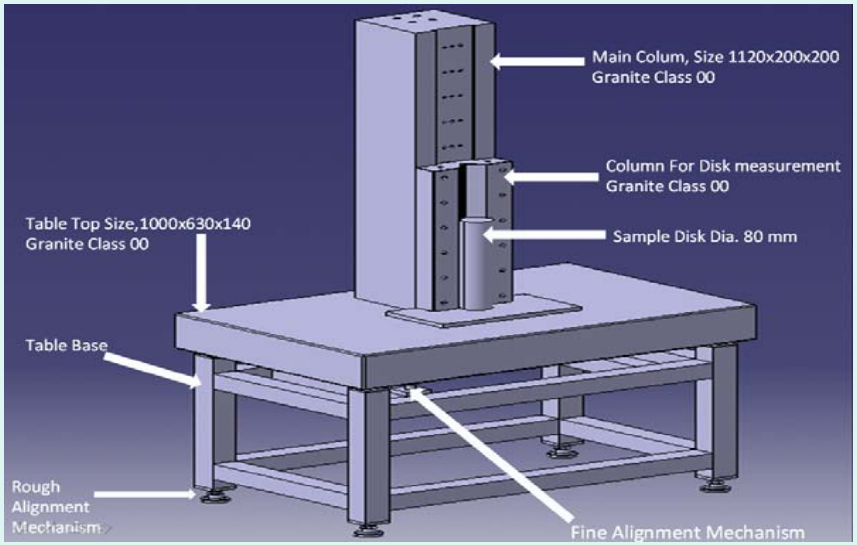
Present on going collaboration in Design.

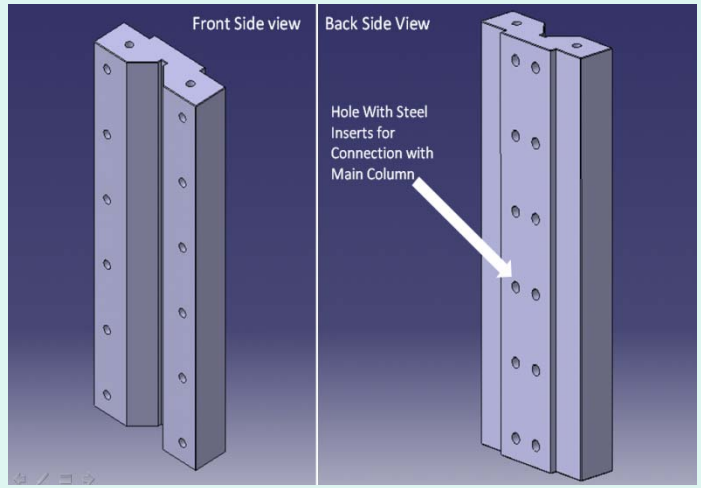
c) Baking Support for RF Assembly

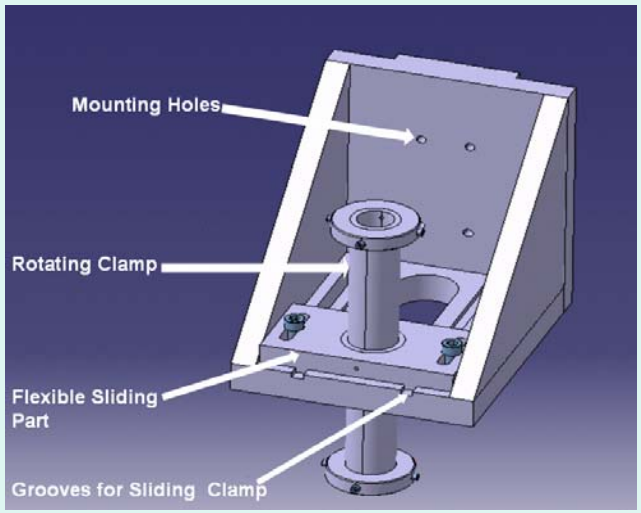


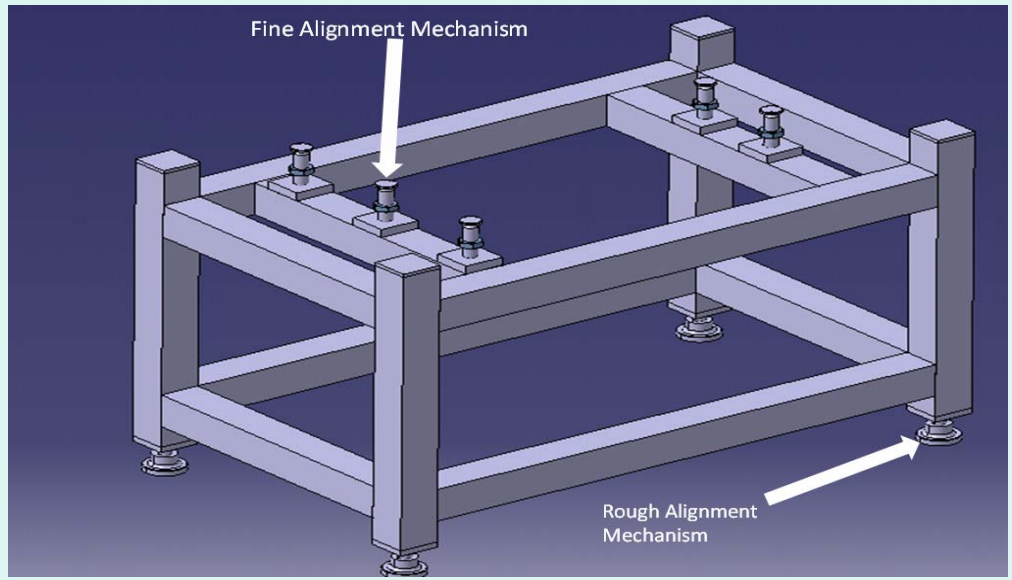
Present on going collaboration in Design.

d) Measuring Table for RF Components



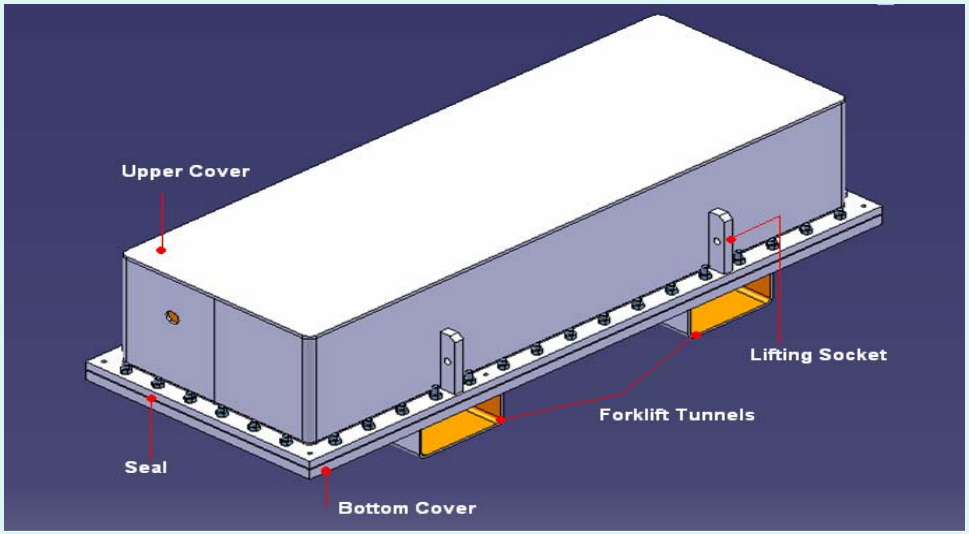


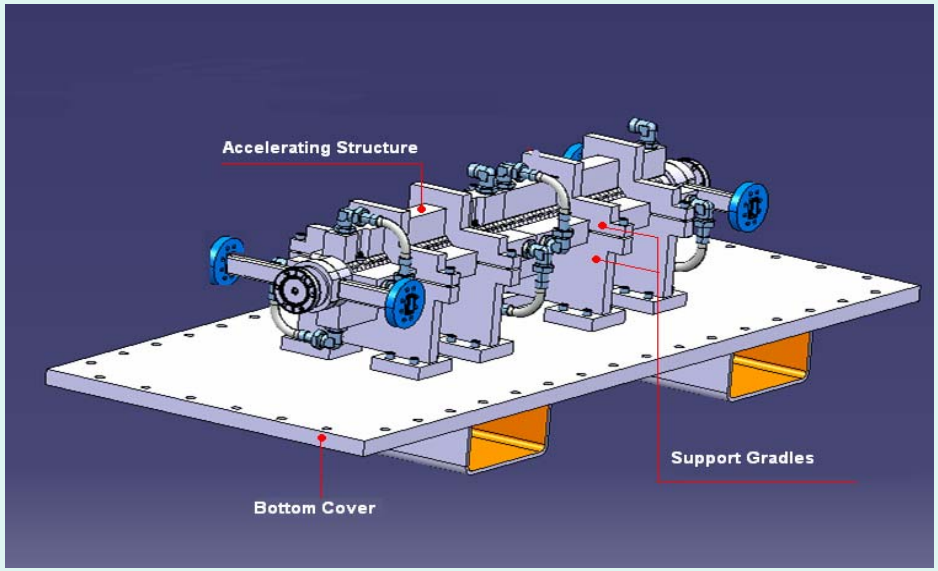




Present on going collaboration in Design.

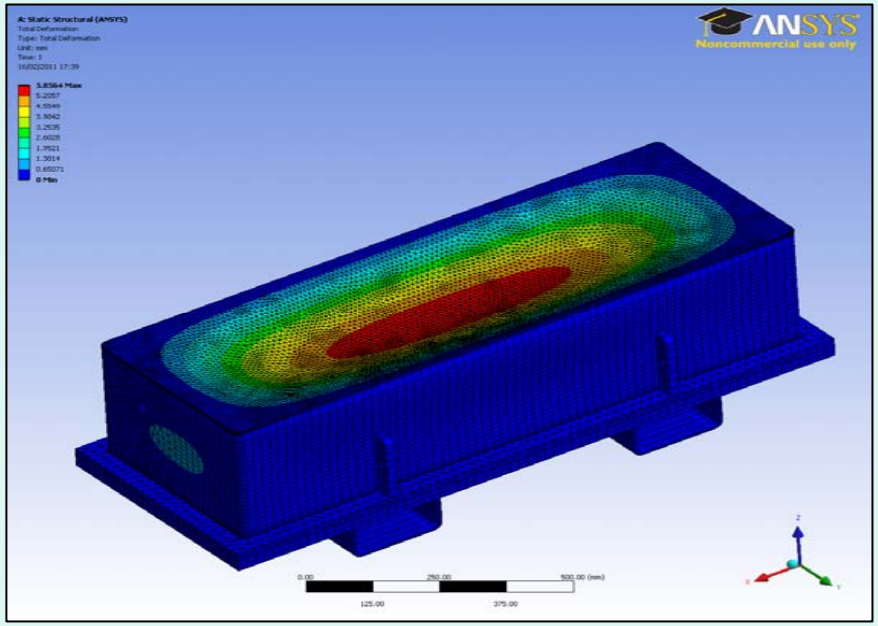
e) Transport Tank for Accelerating Structure.

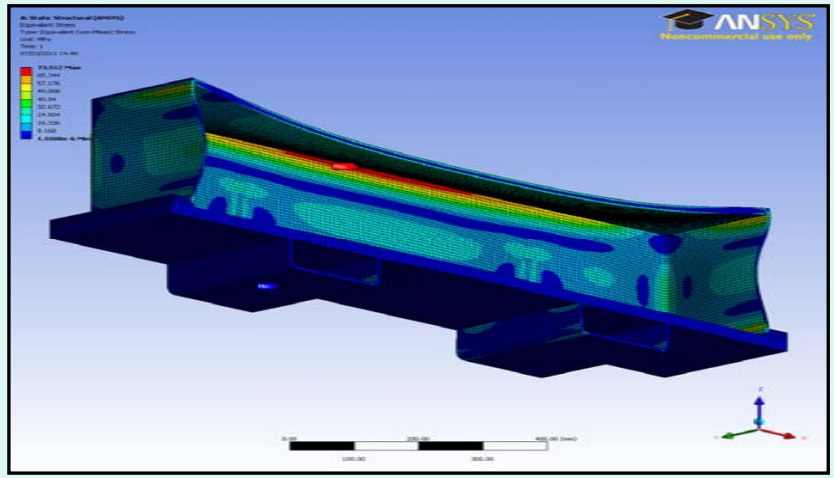


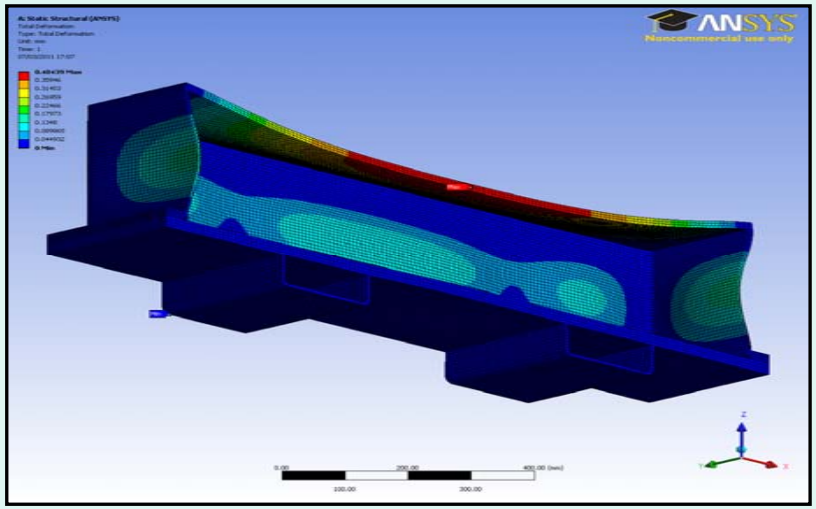


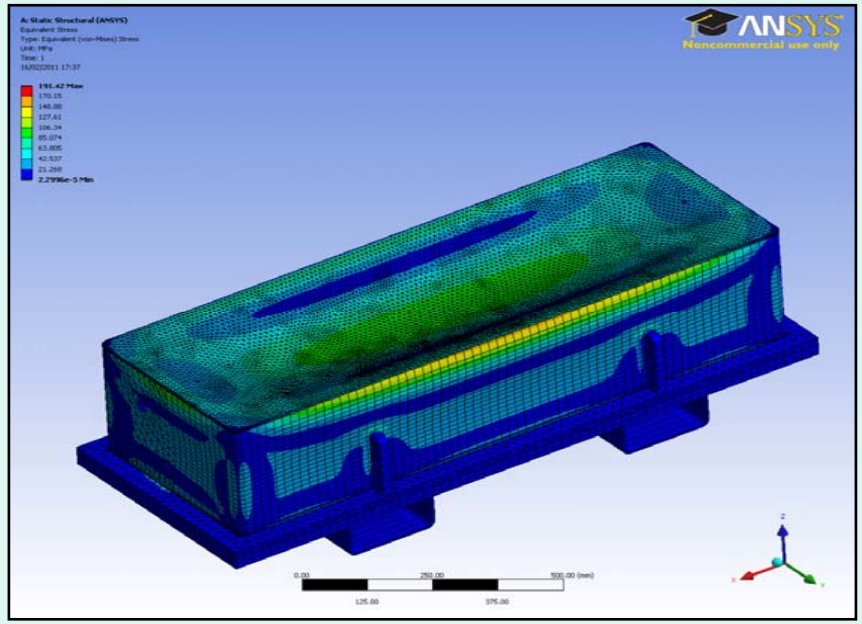
Present on going collaboration in Design.

f) Analysis of Transportation Tank for PSI Structure



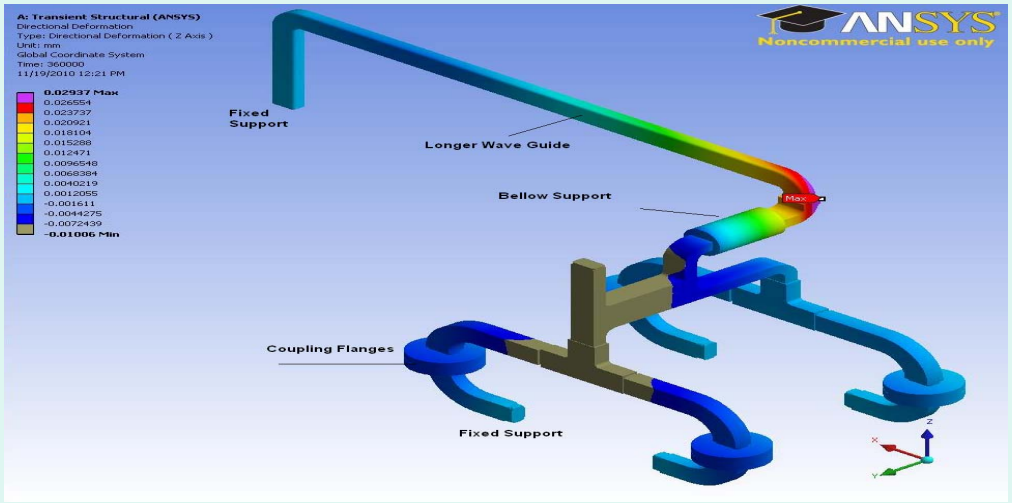


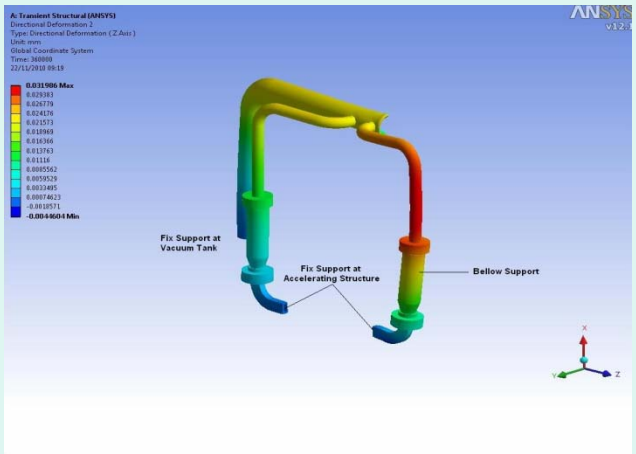


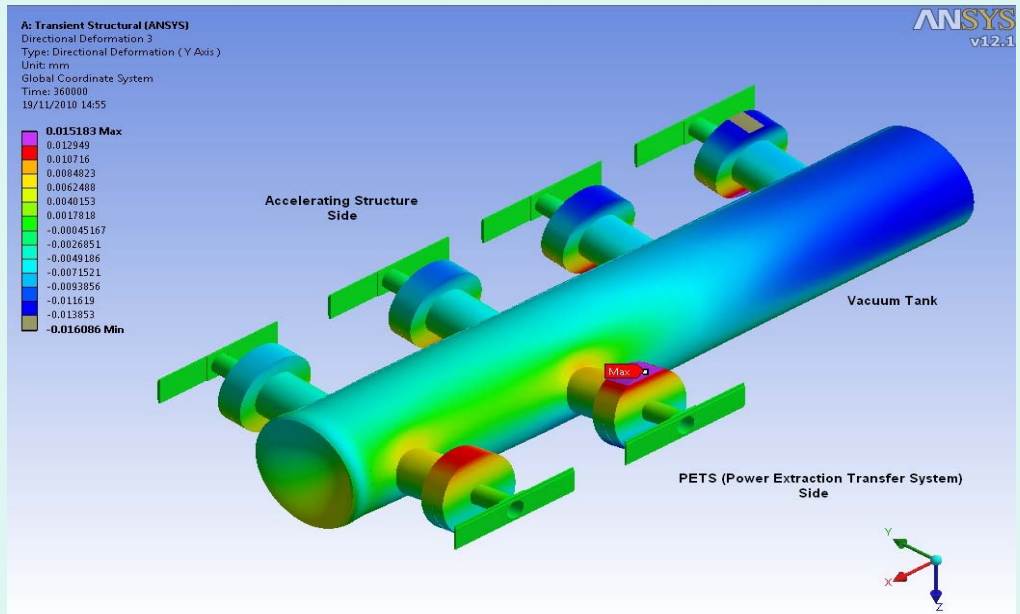


Present on going collaboration in Design.

g) Finite Element Analysis of Vacuum Components

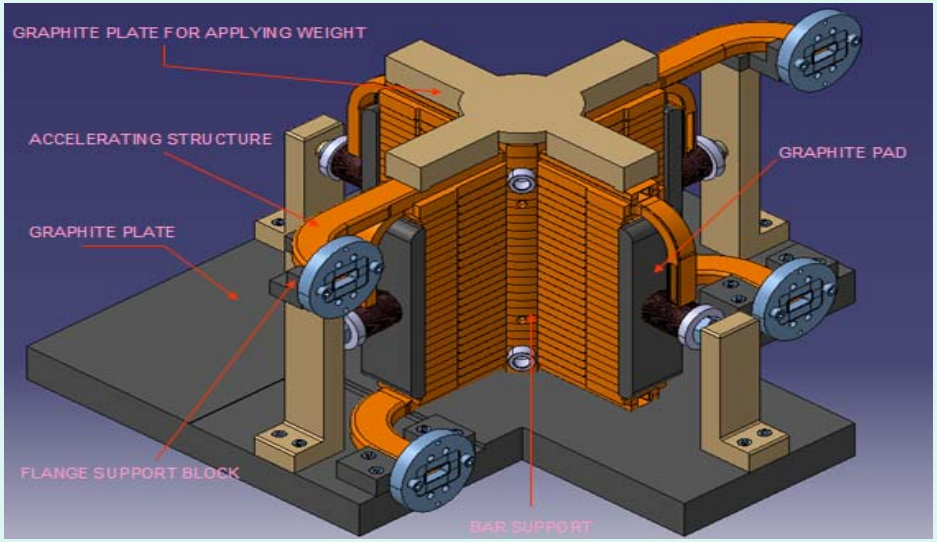


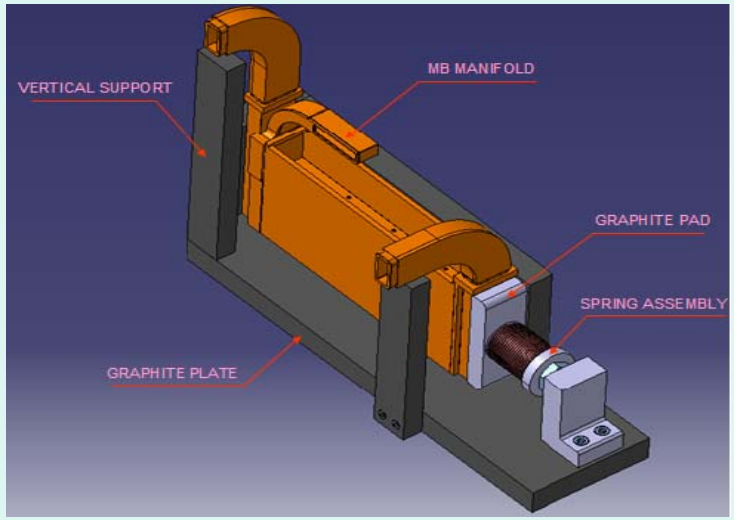


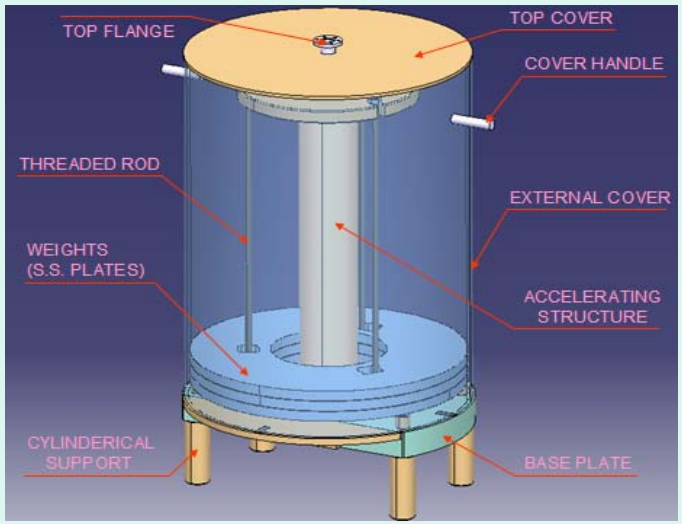


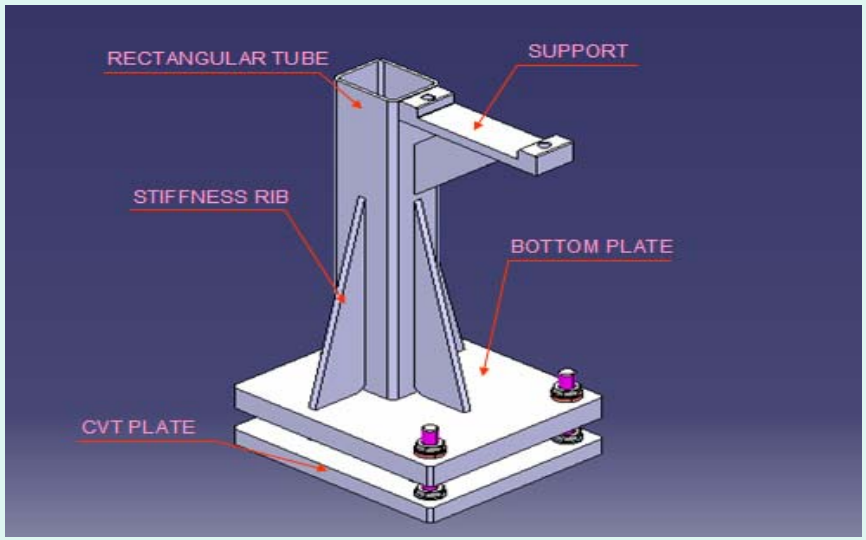
Present on going collaboration in Design.

h) Design of Jigs and Fixtures for Holding Different Components of Accelerating Structure during Brazing.



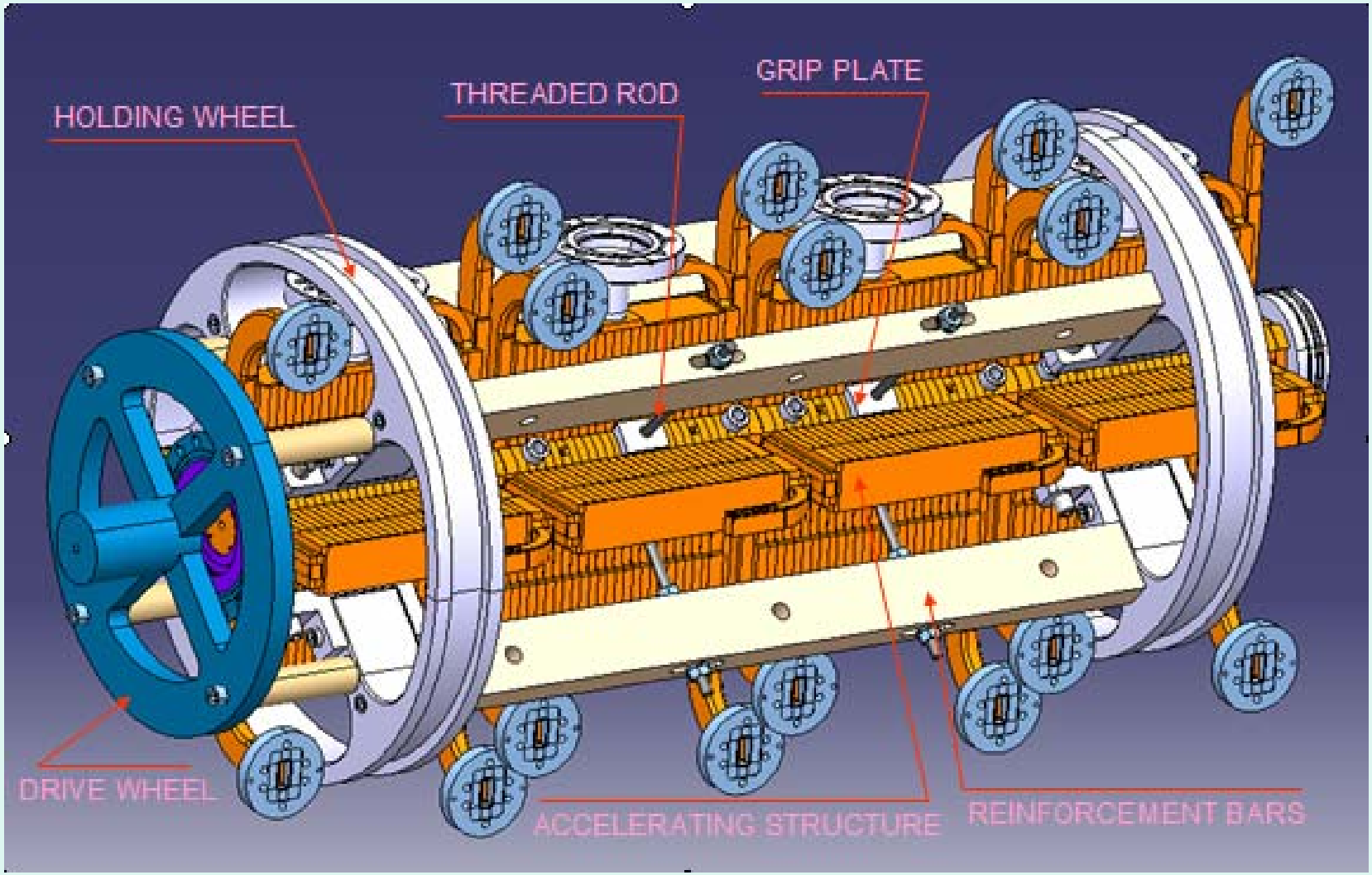






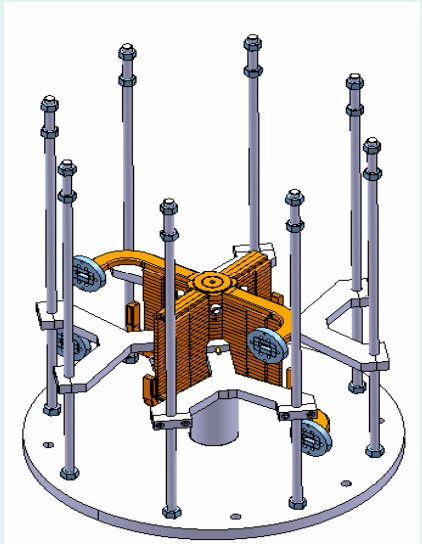
Present on going collaboration in Design.

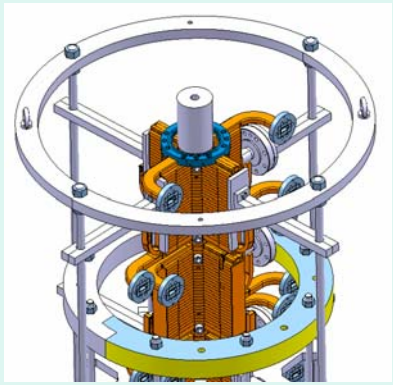
i) Design of Tooling for Electron Beam Welding of Accelerating Structure.

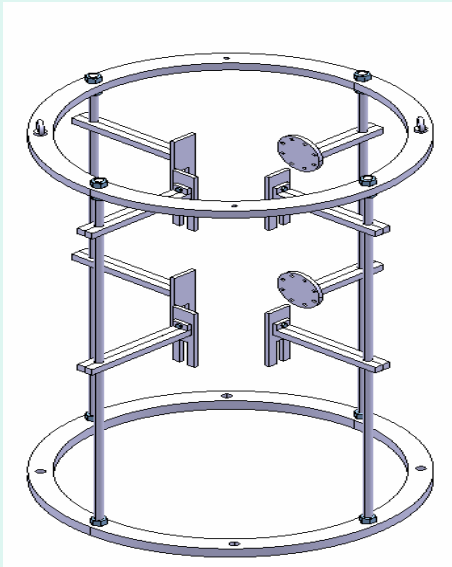


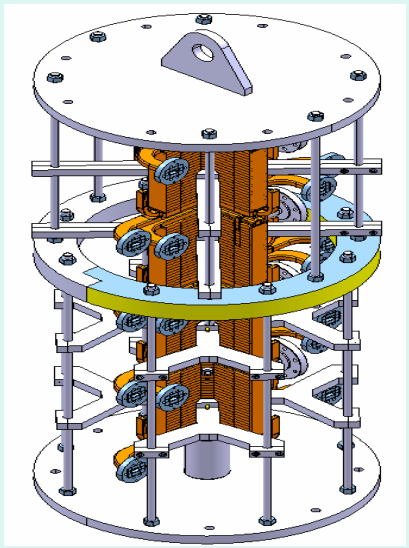
Present on going collaboration in Design.

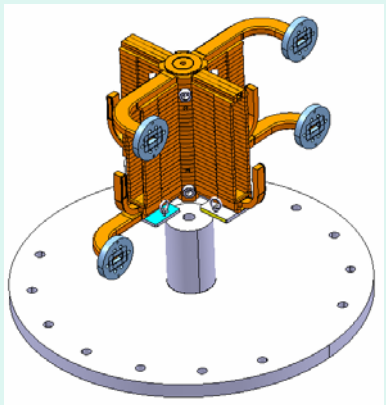
j) Super-AS Stack Tooling Design for Brazing & Handling .

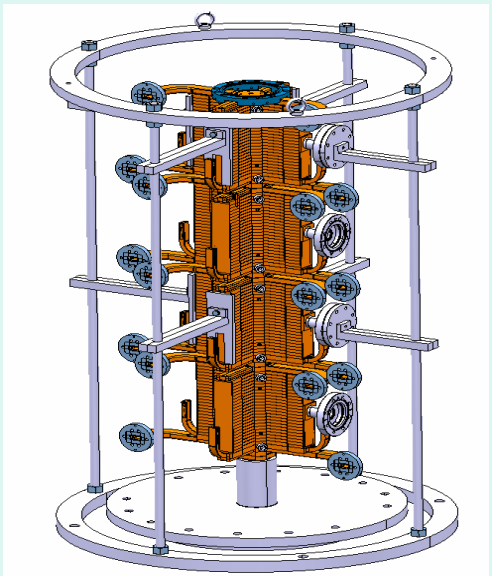






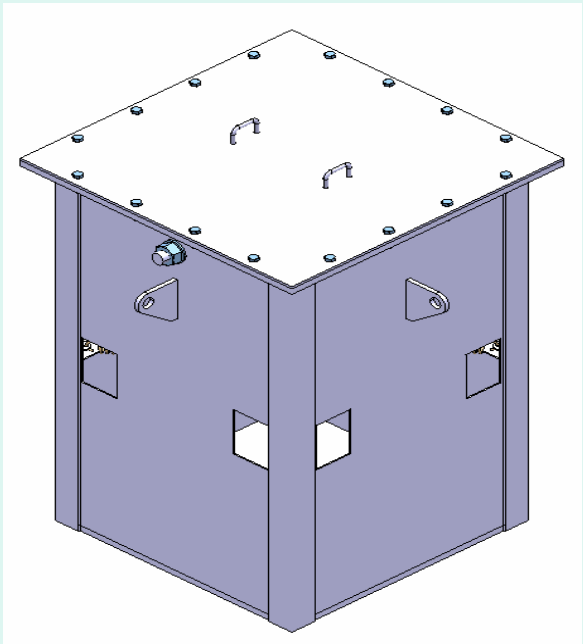


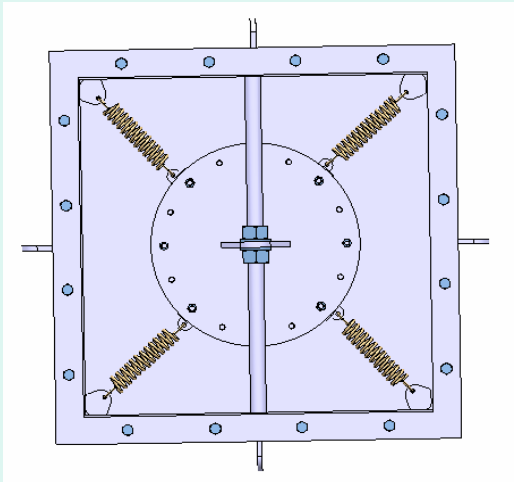


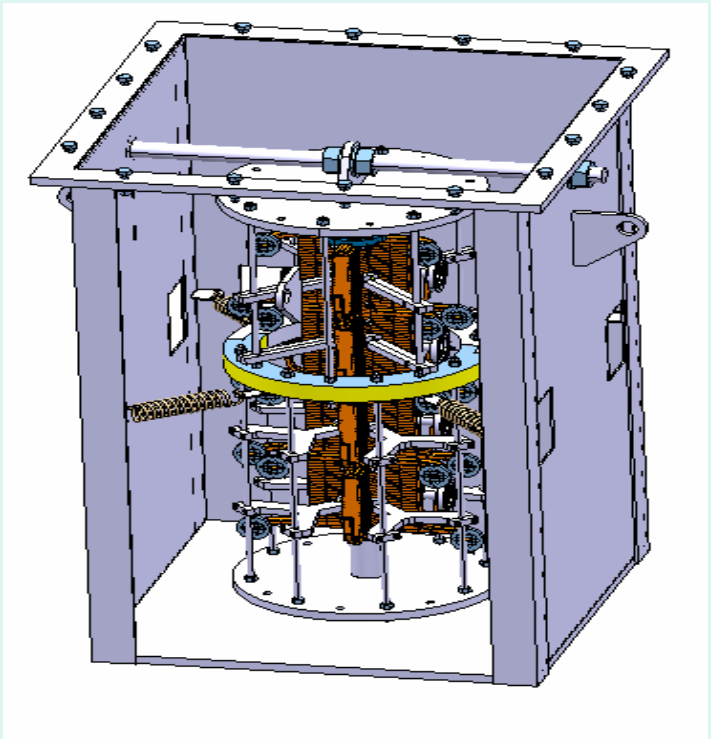


Present on going collaboration in Design.

k) Transport Chamber for Super-AS Stack.

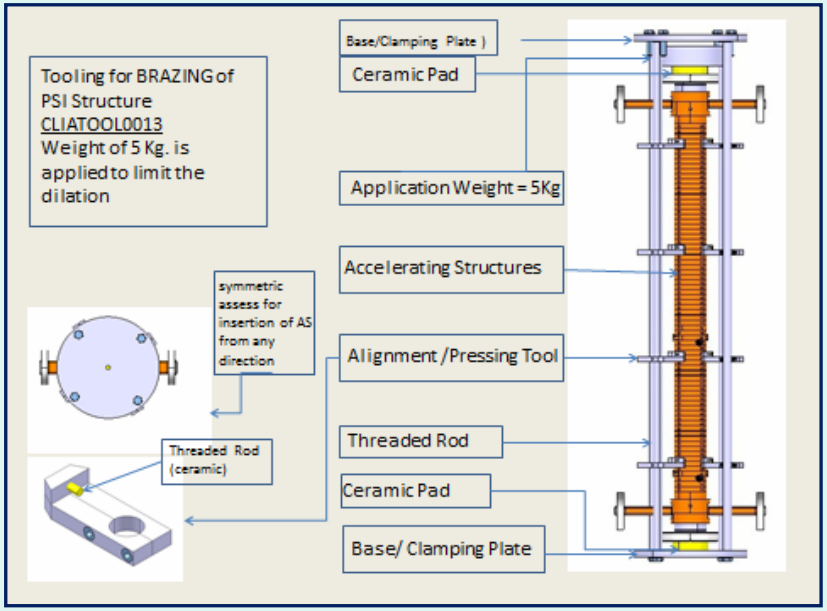


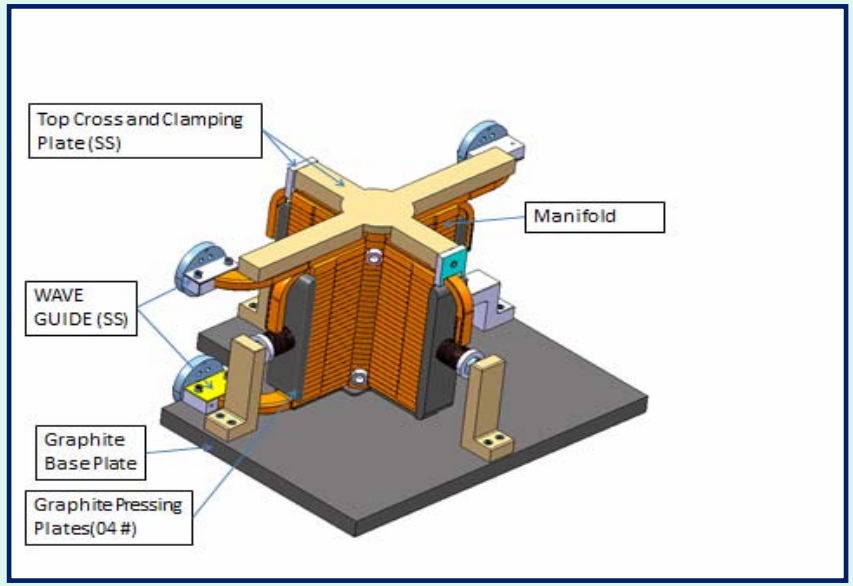


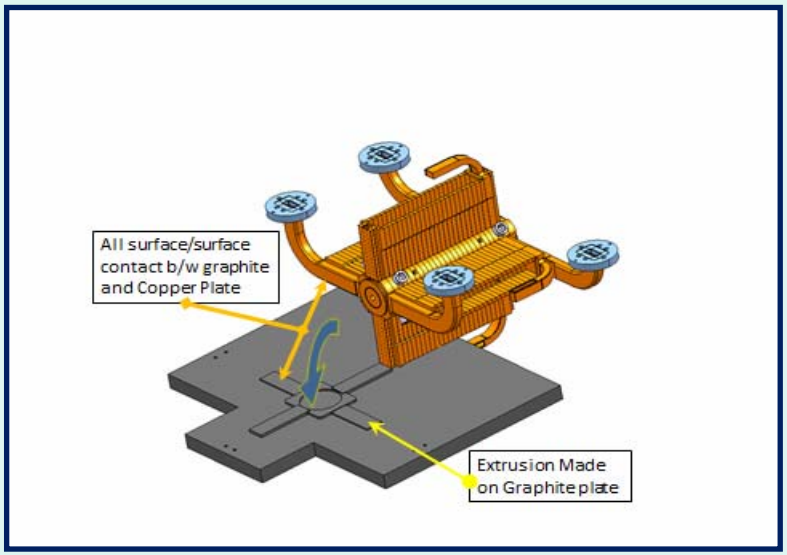


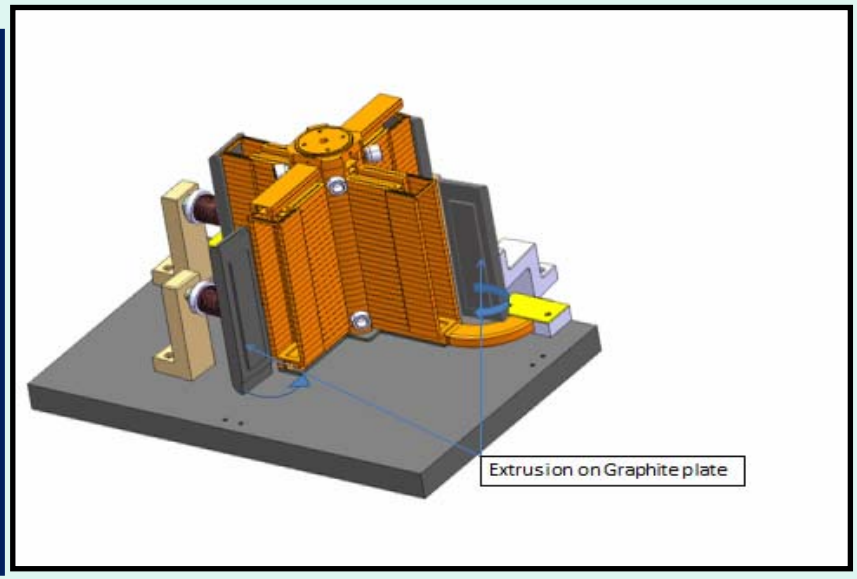
Present on going collaboration in Design.

l) Tooling for Brazing of PSI Structure & Manifold.









Present on going collaboration in Design.

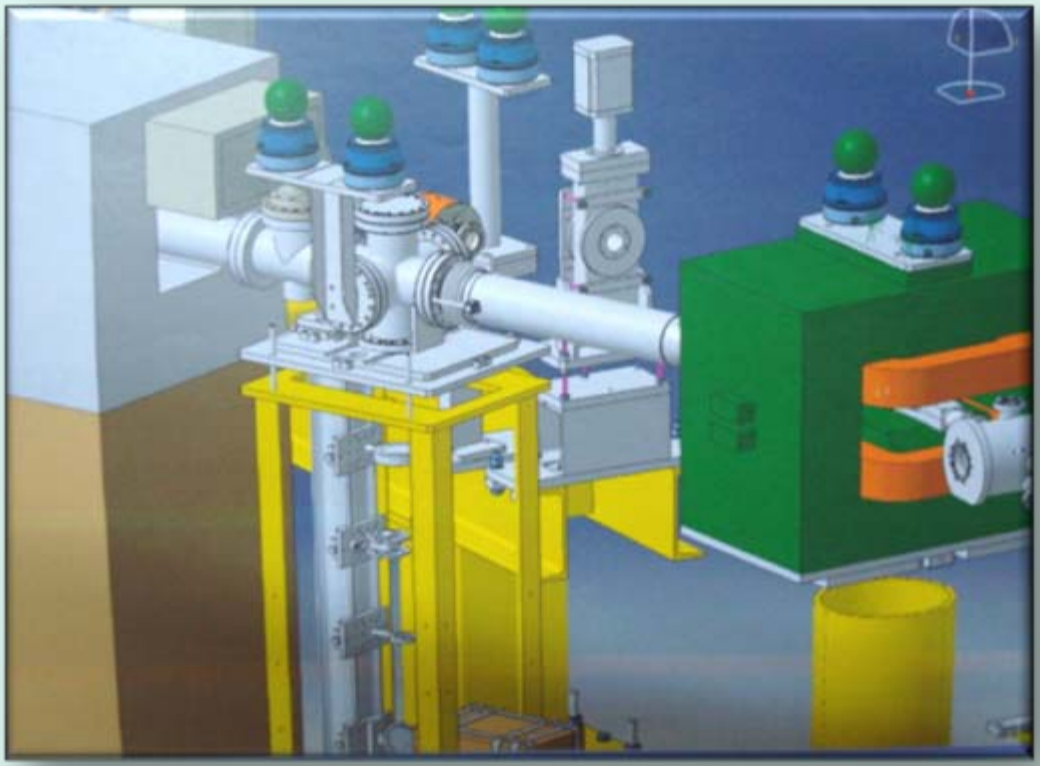
1. Participation in Design, assembly and installation of High frequency CLIC proto-type structure: (from June, 2007 to Nov., 2009.

2. **Collaboration for Phase 3 &4 of CLIC:** (from Aug., 2010 to Dec., 2012).

Production Jobs done for CLIC.

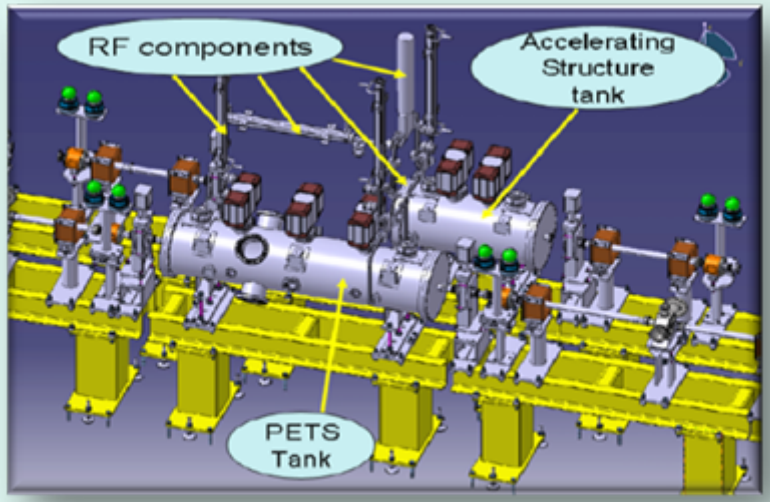
Production Jobs done for CLIC.

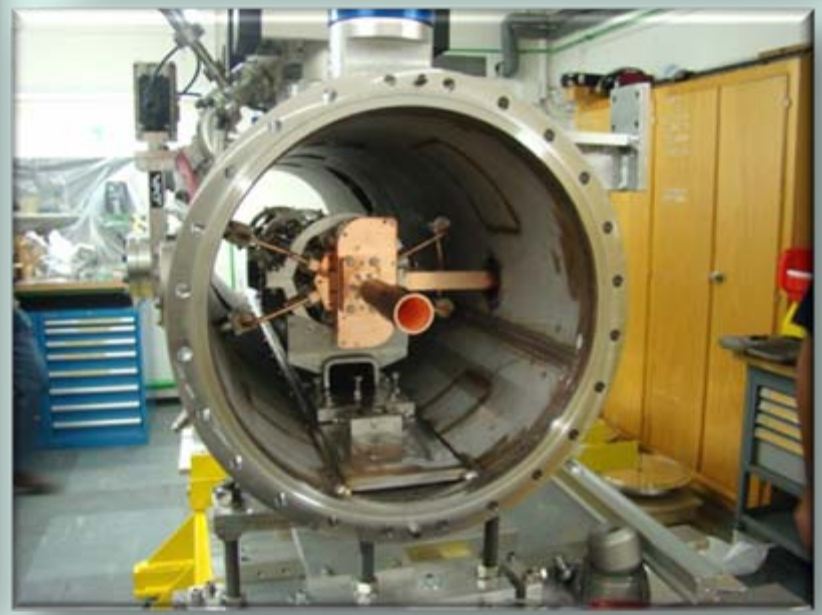
a) TL2-MTV Assy – Optical Monitors for CLIC: Mechanical structures of 4Nos. of Optical Transition Radiation Monitors (OTRM) were manufactured for CTF-3 project of CLIC.



Production Jobs done for CLIC.

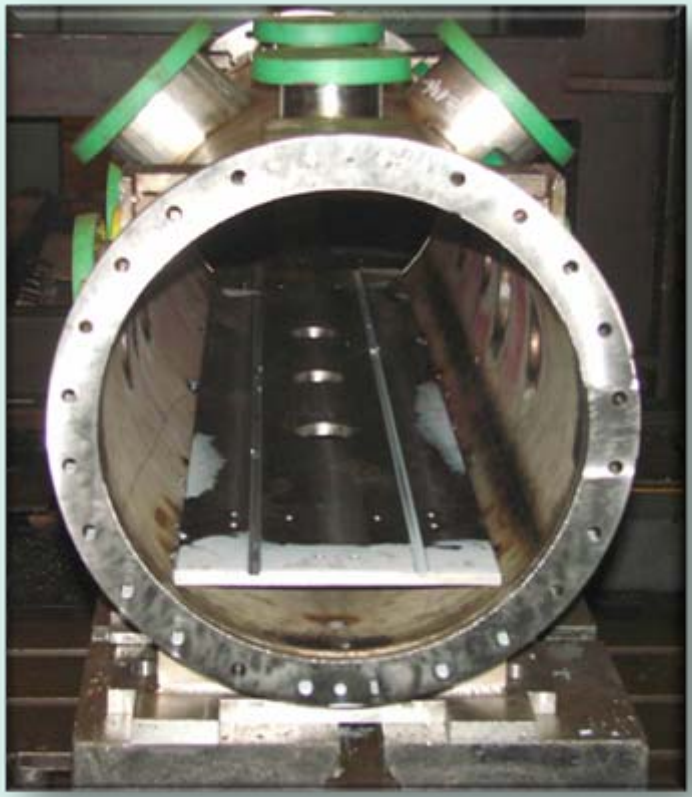
b) 02Nos. of Vacuum Vessels (PETS) for CLIC:





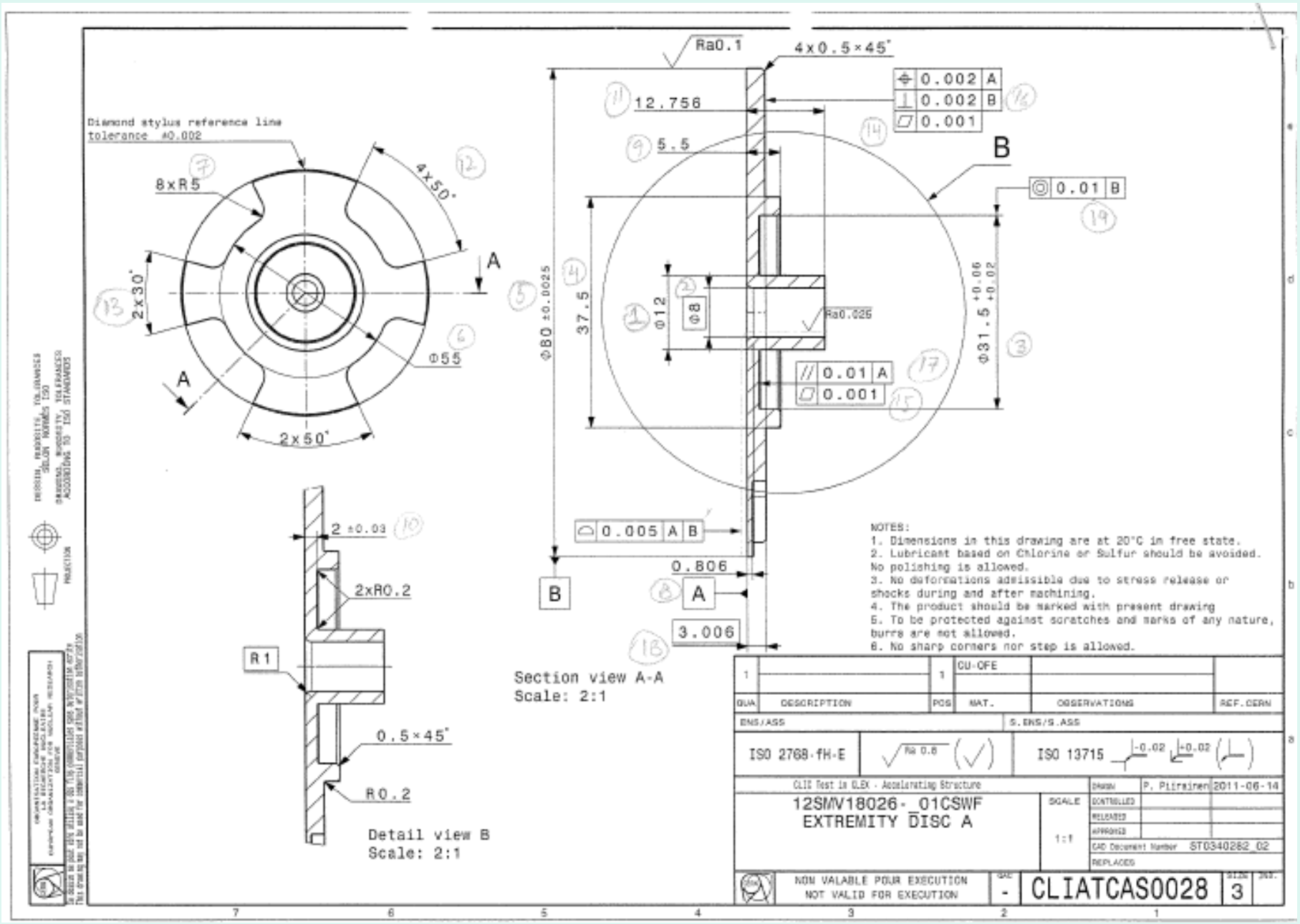
Production Jobs done for CLIC.

c) 02Nos. of Vacuum Vessels (AS) and Internal support Structures for ACS Tanks for CLIC:



Possible Production of RF Structures.

Possible Production of RF Structures.



COMPANY NAME :
PART NAME : Extremity Disc (Al)
PART NO : 01
CMM NO : 500323
Proj : CERN
Drwg.No :
Date : 27-10-2011

	Nom	Act	Dev	upTol	LoTol	OTol
Dim #01	DIAM DIA29 FEAT(CR1) MM					
Diam	12.000	11.974	-0.026	0.100	-0.100	--*-|++++
Dim #03	DIAM DIA31 FEAT(CR4) MM					
Diam	31.500	31.526	0.026	0.060	0.020	----|+*++
Dim #04	DIAM DIA32 FEAT(CR5) MM					
Diam	37.500	37.469	-0.031	0.200	-0.200	---*|++++
Dim #05	DIAM DIA33 FEAT(CR14) MM					
Diam	80.000	80.009	0.009	0.003	-0.003	0.006
Dim #06	DIAM DIA34 FEAT(CR15) MM					
Diam	55.000	54.979	-0.021	0.200	-0.200	---*|++++
Dim #07	RAD RAD3 FEAT(CR6) MM					
Rad	5.000	5.025	0.025	0.050	-0.050	----|++*+
	RAD RAD5 FEAT(CR8) MM					
Rad	5.000	5.032	0.032	0.050	-0.050	----|++*+
	RAD RAD6 FEAT(CR9) MM					
Rad	5.000	4.994	-0.006	0.050	-0.050	---*|++++
	RAD RAD7 FEAT(CR10) MM					
Rad	5.000	5.023	0.023	0.050	-0.050	----|+*++
	RAD RAD8 FEAT(CR11) MM					
Rad	5.000	4.999	-0.001	0.050	-0.050	---*|++++
	RAD RAD10 FEAT(CR12) MM					
Rad	5.000	5.022	0.022	0.050	-0.050	----|+*++
	RAD RAD11 FEAT(CR13) MM					
Rad	5.000	4.988	-0.012	0.050	-0.050	---*|++++
Dim #09	DISTB DTB92 FEAT(PL4) FEAT(PL5) MM					
Distb	5.500	5.534	0.034	0.050	-0.050	----|++*+
Dim #10	DISTB DTB93 FEAT(PL4) FEAT(PL6) MM					
Distb	2.000	2.036	0.036	0.030	-0.030	0.006
Dim #11	DISTB DTB94 FEAT(PL4) FEAT(PL7) MM					
Distb	12.756	12.774	0.018	0.100	-0.100	----|*+++
Dim #12	ANGLB AB86 FEAT(LN9) FEAT(LN8) ANGDEC					
Anglb	50.000	50.007				

	ANGLB AB87 FEAT(LN8) FEAT(LN7) ANGDEC					
Anglb	50.000	50.243				
Dim #13	ANGLB AB88 FEAT(LN6) FEAT(LN7) ANGDEC					
Anglb	30.000	29.767				
	ANGLB AB89 FEAT(LN6) FEAT(LN5) ANGDEC					
Anglb	50.000	49.959				
	ANGLB AB810 FEAT(LN4) FEAT(LN5) ANGDEC					
Anglb	50.000	50.029				
	ANGLB AB814 FEAT(LN3) FEAT(LN4) ANGDEC					
Anglb	50.000	50.182				
	ANGLB AB812 FEAT(LN2) FEAT(LN3) ANGDEC					
Anglb	30.000	29.506				
	ANGLB AB813 FEAT(LN9) FEAT(LN8) ANGDEC					
Anglb	50.000	50.007				
Dim #14	FLAT FLT1 FEAT(PL2) MM					
Flat		0.033	0.033	0.001		0.032
Dim #15	FLAT FLT2 FEAT(PL6) MM					
Flat		0.007	0.009	0.001		0.006
Dim #16	PERP PER1D FA(PL2) FA(CY2) MM					
Perp		0.086	0.086	0.002		0.084
Dim #17	PARLEL PAR4 FA(PL4) FA(PL2) MM					
Parlel		0.032	0.032	0.000		0.032
Dim #19	CONCEN CNN5 FA(CR4) FA(CR14) MM					
Concen		0.006	0.006	0.000		0.006

Dim #08	0.806	0.781-0.788 (through micrometer)
Dim #18	3.006	2.982-2.985 (through micrometer)

Inspected By: _____ (Lubna Latif)

Checked By: _____ (Shahida Khatoon)

COMPANY NAME : [illegible]
PART NAME : Extremity Disc (Copper)
PART NO : 01
CMM NO : 500323
Proj : CERN
Drwg.No :
Date : 27-10-2011

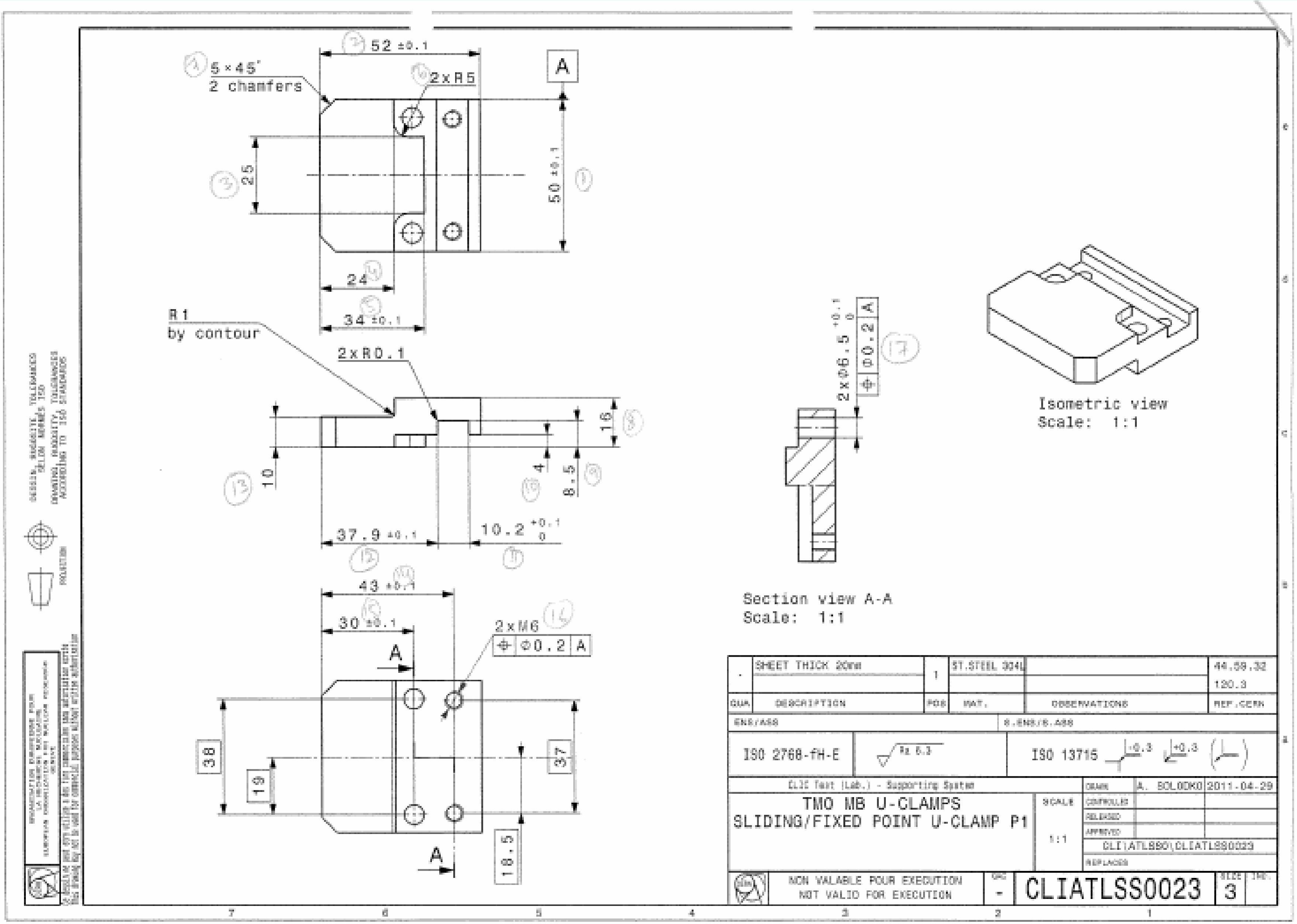
	Nom	Act	Dev	UpTol	LoTol	OTol
Dim #01	DIAM DIA29 FEAT(CR1) MM					
Diam	12.000	11.921	-0.079	0.100	-0.100	*---|++++
Dim #02	DIAM DIA30 FEAT(CR3) MM					
Diam	8.000	8.019	0.019	0.100	-0.100	----|*+++
Dim #03	DIAM DIA31 FEAT(CR4) MM					
Diam	31.500	31.576	0.076	0.060	0.020	0.016
Dim #04	DIAM DIA32 FEAT(CR5) MM					
Diam	37.500	37.435	-0.065	0.200	-0.200	--*-|++++
Dim #05	DIAM DIA33 FEAT(CR14) MM					
Diam	80.000	79.982	-0.018	0.003	-0.003	-0.015
Dim #06	DIAM DIA34 FEAT(CR15) MM					
Diam	55.000	54.922	-0.078	0.200	-0.200	--*-|++++
Dim #07	RAD RAD3 FEAT(CR6) MM					
Rad	5.000	5.048	0.048	0.050	-0.050	----|+++*
	RAD RAD4 FEAT(CR7) MM					
Rad	5.000	5.030	0.030	0.050	-0.050	----|++*+
	RAD RAD5 FEAT(CR8) MM					
Rad	5.000	5.022	0.022	0.050	-0.050	----|+*++
	RAD RAD6 FEAT(CR9) MM					
Rad	5.000	5.039	0.039	0.050	-0.050	----|+++*
	RAD RAD7 FEAT(CR10) MM					
Rad	5.000	5.033	0.033	0.050	-0.050	----|++*+
	RAD RAD8 FEAT(CR11) MM					
Rad	5.000	5.037	0.037	0.050	-0.050	----|++*+
	RAD RAD10 FEAT(CR12) MM					
Rad	5.000	5.018	0.018	0.050	-0.050	----|+*++
	RAD RAD11 FEAT(CR13) MM					
Rad	5.000	5.028	0.028	0.050	-0.050	----|++*+
Dim #09	DISTB DTB92 FEAT(PL4) FEAT(PL5) MM					
Distb	5.500	5.534	0.034	0.050	-0.050	----|++*+
Dim #10	DISTB DTB93 FEAT(PL4) FEAT(PL6) MM					
Distb	2.000	2.036	0.036	0.030	-0.030	0.006

Dim #11	DISTB DTB94 FEAT(PL4) FEAT(PL7) MM					
Distb	12.756	12.774	0.018	0.100	-0.100	----|*+++
Dim #12	ANGLB ABB6 FEAT(LN9) FEAT(LN8) ANGDEC					
Anglb	50.000	50.125				
	ANGLB ABB7 FEAT(LN8) FEAT(LN7) ANGDEC					
Anglb	50.000	49.959				
Dim #13	ANGLB ABB8 FEAT(LN6) FEAT(LN7) ANGDEC					
Anglb	30.000	29.897				
	ANGLB ABB9 FEAT(LN6) FEAT(LN5) ANGDEC					
Anglb	50.000	50.135				
	ANGLB ABB10 FEAT(LN4) FEAT(LN5) ANGDEC					
Anglb	50.000	50.275				
	ANGLB ABB14 FEAT(LN3) FEAT(LN4) ANGDEC					
Anglb	50.000	50.118				
	ANGLB ABB12 FEAT(LN2) FEAT(LN3) ANGDEC					
Anglb	30.000	29.723				
	ANGLB ABB13 FEAT(LN9) FEAT(LN8) ANGDEC					
Anglb	50.000	50.125				
Dim #14	FLAT FLT1 FEAT(PL2) MM					
Flat		0.031	0.031	0.001		0.030
Dim #15	FLAT FLT2 FEAT(PL6) MM					
Flat		0.003	0.003	0.001		0.002
Dim #16	PERP PER10 FA(PL2) FA(CY2) MM					
Perp		0.109	0.109	0.002		0.107
Dim #17	PARLEL PAR2 FA(PL6) FA(PL4) MM					
Parlel		0.029	0.029	0.001		0.028
Dim #19	CONCEN CNN5 FA(CR4) FA(CR14) MM					
Concen		0.007	0.007	0.000		0.007

Dim #08: 0.806 0.810-0.816(through Micrometer)
Dim #18: 3.006 2.999-3.001(through Micrometer)

Inspected By: _____ (Lubna Latif)

Checked By: _____ (Shahida Khatoon)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2 chamfers
52 ±0.1
2xR5
A
25
50 ±0.1
24
34 ±0.1
R1
by contour
2xR0.1
10
16
4
8.5
37.9 ±0.1
10.2 +0.1 0
43 ±0.1
30 ±0.1
2xM6
⌖ Φ0.2 A
A
38
19
37
18.5
2xΦ6.5 +0.1 0
⌖ Φ0.2 A
Section view A-A
Scale: 1:1
Isometric view
Scale: 1:1
SHEET THICK 20mm
1
ST.STEEL 304L
44.59.32
120.3
QUA
DESCRIPTION
POS
MAT.
OBSERVATIONS
REF.CERN
ENS/ASS
S.ENS/S.ASS
ISO 2768-fH-E
Rz 6.3
ISO 13715
-0.3
+0.3
CLIC Test (Lab.) - Supporting System
TMO MB U-CLAMPS
SLIDING/FIXED POINT U-CLAMP P1
SCALE
1:1
DRAWN
A. SOLODKO
2011-04-29
CONTROLLED
RELEASED
APPROVED
CLI\ATLSS0\CLIATLSS0023
REPLACES
NON VALABLE POUR EXECUTION
NOT VALID FOR EXECUTION
-
CLIATLSS0023
SIZE
3
IND.
7
6
5
4
3
2
1

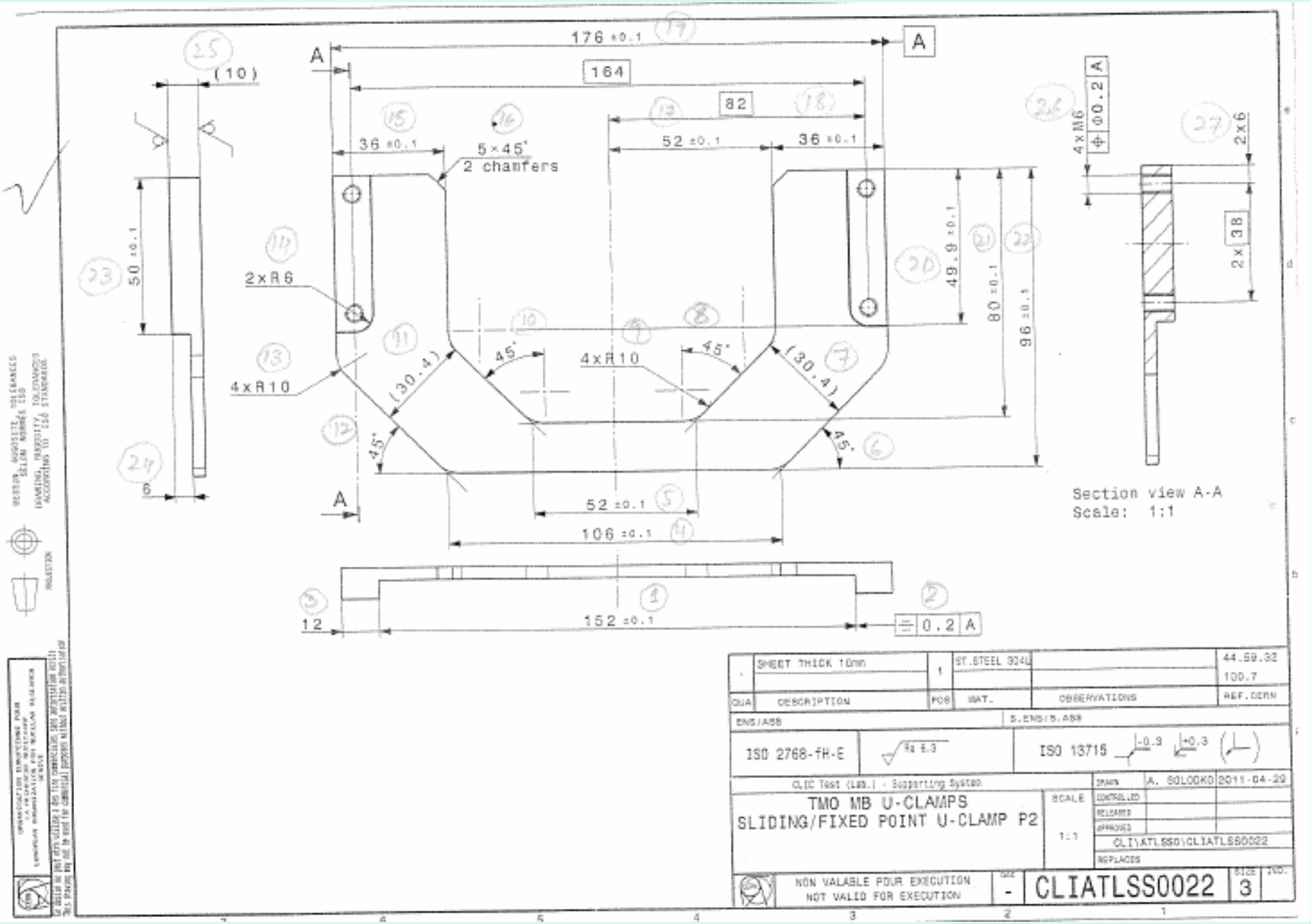
COMPANY NAME :
PART NAME : sliding/Fixed Point U-Clamp P1
PART NO : 01
CMM NO : 500323
Proj : CERN
Drwg.No :
Date : 02-11-2011

	Nom	Act	Dev	UpTol	LoTol	OTol
Dim # 01						
	DISTB DTB98 FEAT(LN5) FEAT(LN3) MM					
Distb	50.000	50.003	0.003	0.100	-0.100	----|*+++
Dim # 02						
	DISTB DTB99 FEAT(LN1) FEAT(LN4) MM					
Distb	52.000	52.000	-0.000	0.100	-0.100	---*|++++
Dim # 03						
	DISTB DTB100 FEAT(LN8) FEAT(LN10) MM					
Distb	25.000	25.013	0.013	0.100	-0.100	----|*+++
Dim # 04						
	DISTB DTB101 FEAT(LN18) FEAT(LN1) MM					
Distb	24.000	24.015	0.015	0.100	-0.100	----|*+++
Dim # 05						
	DISTB DTB102 FEAT(LN9) FEAT(LN1) MM					
Distb	34.000	34.003	0.003	0.100	-0.100	----|*+++
Dim # 06						
	RAD RAD12 FEAT(CR1) MM					
Rad	5.000	5.006	0.006	0.050	-0.050	----|*+++
	RAD RAD13 FEAT(CR2) MM					
Rad	5.000	5.000	-0.000	0.050	-0.050	---*|++++
Dim # 07						
	DISTB DTB103 FEAT(PT2) FEAT(PT3) MM					
Distb	5.000	5.005	0.005	0.050	-0.050	----|*+++
	DISTB DTB104 FEAT(PT4) FEAT(PT5) MM					
Distb	5.000	4.998	-0.002	0.050	-0.050	---*|++++
	ANGLB A8816 FEAT(LN5) FEAT(LN6) AMGDEC					
Anglb	45.000	44.949	-0.051	1.000	-1.000	---*|++++
	ANGLB A8817 FEAT(LN1) FEAT(LN2) AMGDEC					
Anglb	45.000	45.005	0.005	1.000	-1.000	----|*+++
Dim # 08						
	DISTB DTB105 FEAT(PL1) FEAT(PL6) MM					
Distb	16.000	15.992	-0.008	0.100	-0.100	---*|++++
Dim # 09						
	DISTB DTB106 FEAT(PL1) FEAT(PL5) MM					
Distb	8.500	8.481	-0.019	0.100	-0.100	---*|++++
Dim # 10						
	DISTB DTB109 FEAT(PL1) FEAT(PL4) MM					
Distb	4.000	3.976	-0.024	0.050	-0.050	--*-|++++
Dim # 11						
	DISTB DTB110 FEAT(LN12) FEAT(LN14) MM					
Distb	10.200	10.189	-0.011	0.100	-0.100	---*|++++
Dim # 12						

	DISTB DTB123 FEAT(LN1) FEAT(LN21) MM					
Distb	37.900	37.907	0.007	0.100	-0.100	----|*+++
Dim # 13						
	DISTB DTB113 FEAT(PL1) FEAT(PL3) MM					
Distb	10.000	9.934	-0.066	0.100	-0.100	-*--|++++
Dim # 14						
	DISTB DTB114 FEAT(LN1) FEAT(LN22) MM					
Distb	43.000	42.997	-0.003	0.100	-0.100	---*|++++
Dim # 15						
	DISTB DTB116 FEAT(LN24) FEAT(LN1) MM					
Distb	30.000	30.007	0.007	0.100	-0.100	----|*+++
Dim # 16						
	2D P2D2 FA(CR3),RFS MM					
Tpos2d		0.015	0.015	0.200		|*+++
Dim # 17						
	2D P2D3 FA(CR5),RFS MM					
Tpos2d		0.015	0.015	0.200		|*+++

Inspected By: (Lubna Latif)

Checked By: (Shahida Khatoon)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164
82
36 ±0.1
5×45°
2 chamfers
52 ±0.1
36 ±0.1
(10)
50 ±0.1
2×R6
4×R10
(30.4)
45°
4×R10
(30.4)
45°
45°
49.9 ±0.1
80 ±0.1
96 ±0.1
52 ±0.1
106 ±0.1
12
152 ±0.1
0.2 A
4×M6 Ø0.2 A
2×6
2×38
Section view A-A
Scale: 1:1
SHEET THICK 10mm
ST.STEEL 304L
44.59.32
100.7
DESCRIPTION
OBSERVATIONS
REF.DERN
ISO 2768-fH-E
ISO 13715
CLIC Test (Lab.) - Supporting System
TMO MB U-CLAMPS
SLIDING/FIXED POINT U-CLAMP P2
SCALE 1:1
DRAWN A. BOLODKO 2011-04-29
CONTROLLED
RELEASED
APPROVED
CLI\ATLSS0\CLIATLSS0022
REPLACES
NON VALABLE POUR EXECUTION
NOT VALID FOR EXECUTION
CLIATLSS0022
SIZE 3

COMPANY NAME :
PART NAME : Sliding/Fixed Point U-Clamp
PART NO : 01
CHM NO : 500323
Proj : CERN
Drwg.No :
Date : 01-11-2011

	Nom	Act	Dev	UpTol	LoTol	QTol
Dim #01	DISTB DTB99 FEAT(PL16) FEAT(PL19) MM					
Distb	152.000	151.912	-0.088	0.100	-0.100	*---|++++
Dim #02	SYM SYM1 FA(PT2) FA(PT3) MM					
Sym		0.004	0.004	0.200		|*+++
Dim #03	DISTB DTB100 FEAT(PL16) FEAT(PL4) MM					
Distb	12.000	12.005	0.005	0.100	-0.100	----|*+++
Dim #04	DISTB DTB101 FEAT(LN7) FEAT(LN8) MM					
Distb	106.000	105.989	-0.011	0.100	-0.100	---*|++++
Dim #05	DISTB DTB102 FEAT(LN9) FEAT(LN10) MM					
Distb	52.000	52.002	0.002	0.100	-0.100	----|*+++
Dim #06	ANGLB AB816 FEAT(PL6) FEAT(PL7) ANGDEC					
Anglb	45.000	45.026				
Dim #07	DISTB DTB103 FEAT(PL11) FEAT(PL7) MM					
Distb	30.400	30.407	0.007	0.100	-0.100	----|*+++
Dim #08	ANGLB AB817 FEAT(PL11) FEAT(PL12) ANGDEC					
Anglb	45.000	45.016				
Dim #09	RAD RAD12 FEAT(CR5) MM					
Rad	10.000	10.017	0.017	0.100	-0.100	----|*+++
	RAD RAD13 FEAT(CR6) MM					
Rad	10.000	10.069	0.069	0.100	-0.100	----|++*+
	RAD RAD14 FEAT(CR7) MM					
Rad	10.000	10.046	0.046	0.100	-0.100	----|+*++
	RAD RAD15 FEAT(CR8) MM					
Rad	10.000	10.090	0.090	0.100	-0.100	----|+++*
Dim #10	ANGLB AB818 FEAT(PL13) FEAT(PL12) ANGDEC					
Anglb	45.000	45.037				
Dim #11	DISTB DTB104 FEAT(PL13) FEAT(PL5) MM					
Distb	30.400	30.402	0.002	0.100	-0.100	----|*+++
Dim #12	ANGLB AB819 FEAT(PL5) FEAT(PL6) ANGDEC					
Anglb	45.000	45.024				

Dim #13	RAD RAD16 FEAT(CR1) MM					
Rad	10.000	9.971	-0.029	0.100	-0.100	--*-|++++
	RAD RAD17 FEAT(CR2) MM					
Rad	10.000	10.047	0.047	0.100	-0.100	----|+*++
	RAD RAD18 FEAT(CR3) MM					
Rad	10.000	9.960	-0.040	0.100	-0.100	--*-|++++
	RAD RAD19 FEAT(CR4) MM					
Rad	10.000	10.011	0.011	0.100	-0.100	----|*+++
Dim #14	RAD RAD20 FEAT(CR9) MM					
Rad	6.000	5.997	-0.003	0.100	-0.100	---*|++++
	RAD RAD21 FEAT(CR14) MM					
Rad	6.000	6.018	0.018	0.100	-0.100	----|*+++
Dim #15	DISTB DTB105 FEAT(PL4) FEAT(PL14) MM					
Distb	36.000	35.998	-0.002	0.100	-0.100	---*|++++
Dim #16	DISTB DTB106 FEAT(LN11) FEAT(LN12) MM					
Distb	5.000	5.004	0.004	0.050	-0.050	----|*+++
	ANGLB AB820 FEAT(PL15) FEAT(PL3) ANGDEC					
Anglb	45.000	45.064				
	DISTB DTB3 FEAT(LN14) FEAT(LN15) MM					
Distb	5.000	5.037	0.037	0.050	-0.050	----|++*+
	ANGLB AB81 FEAT(PL3) FEAT(PL9) ANGDEC					
Anglb	45.000	45.042				
Dim #17	DISTB DTB107 FEAT(LN6) FEAT(PL10) MM					
Distb	52.000	51.977	-0.023	0.100	-0.100	---*|++++
Dim #18	DISTB DTB108 FEAT(PL8) FEAT(PL10) MM					
Distb	36.000	35.998	-0.002	0.100	-0.100	---*|++++
Dim #19	DISTB DTB109 FEAT(PL8) FEAT(PL4) MM					
Distb	176.000	175.944	-0.056	0.100	-0.100	-*--|++++
Dim #21	DISTB DTB111 FEAT(PL12) FEAT(PL3) MM					
Distb	80.000	80.025	0.025	0.100	-0.100	----|+*++
Dim #22	DISTB DTB112 FEAT(PL6) FEAT(PL3) MM					
Distb	96.000	96.019	0.019	0.100	-0.100	----|*+++
Dim #23	DISTB DTB4 FEAT(PL20) FEAT(PL3) MM					
Distb	50.000	49.966	-0.034	0.100	-0.100	--*-|++++
Dim #24	DISTB DTB115 FEAT(CR10) FEAT(PL3) MM					
Distb	6.000	5.990	-0.010	0.100	-0.100	---*|++++
Dim #25	DISTB DTB114 FEAT(LN13) FEAT(PL22) MM					
Distb	10.000	10.029	0.029	0.100	-0.100	----|+*++

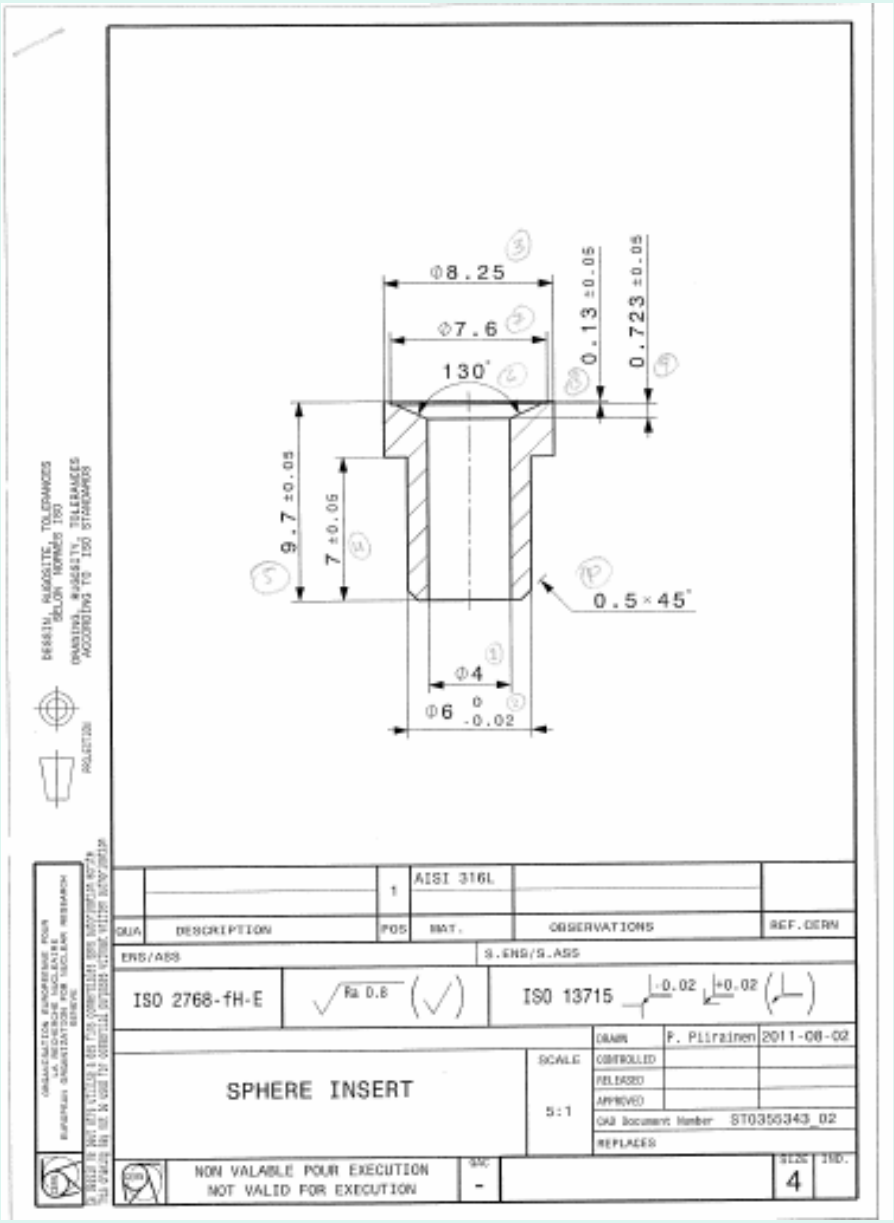
Sliding U-Clamp.1Rep

Dim #26						
	2D P2D1 FA(CR13),RFS MM					
Tpos2d		0.061	0.061	0.200		|+*++
Dim #27						
	DISTB DTB1 FEAT(PL3) FEAT(CR10) MM					
Distb	6.000	5.990	-0.010	0.050	-0.050	---*|++++
	DISTB DTB2 FEAT(PL3) FEAT(CR13) MM					
Distb	6.000	6.030	0.030	0.050	-0.050	----|++*+

Dim #20 Can't measured

Inspected By:_____ (Lubna Latif)

Checked By:_____ (Shahida Khatoon)



Sphere Insert.txt

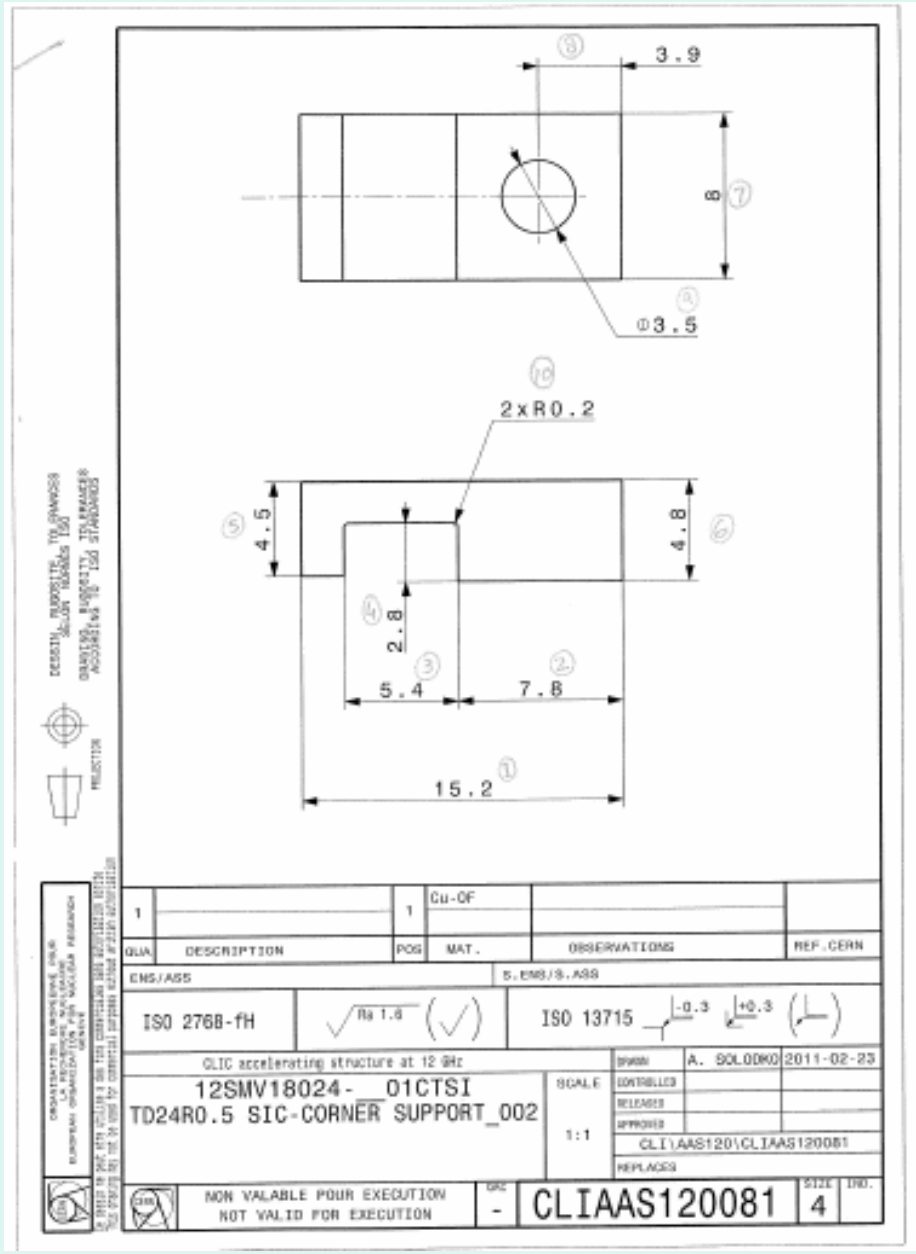
COMPANY NAME :
PART NAME : Sphere Insert
PART NO : 01
CMM NO : 500323
Proj : CERN
Drwg.No :
Date : 28-10-2011

	Nom	Act	Dev	UpTol	LoTol	OTol
Dim #01	DIAM DIA16 FEAT(CY1) MM					
Diam	4.000	4.025	0.025	0.050	-0.050	----|++*+
Dim #02	DIAM DIA17 FEAT(CY2) MM					
Diam	6.000	6.008	0.008	0.020	0.000	----|+*++
Dim #03	DIAM DIA18 FEAT(CR8) MM					
Diam	8.250	8.276	0.026	0.100	-0.100	----|+*++
Dim #04	DISTB DTB32 FEAT(PT15) FEAT(PT16) MM					
Distb	7.000	7.015	0.015	0.050	-0.050	----|+*++
Dim #05	DISTB DTB33 FEAT(PT16) FEAT(PL1) MM					
Distb	9.700	9.720	0.020	0.050	-0.050	----|+*++

Dim #06 Can't Measured
Dim #07 Can't Measured
Dim #08 Can't Measured
Dim #09 Can't Measured
Dim #10 Can't Measured

Inspected By: (Lubna Latif)

Checked By: (Shahida Khatoon)



Corner Support.1Rep

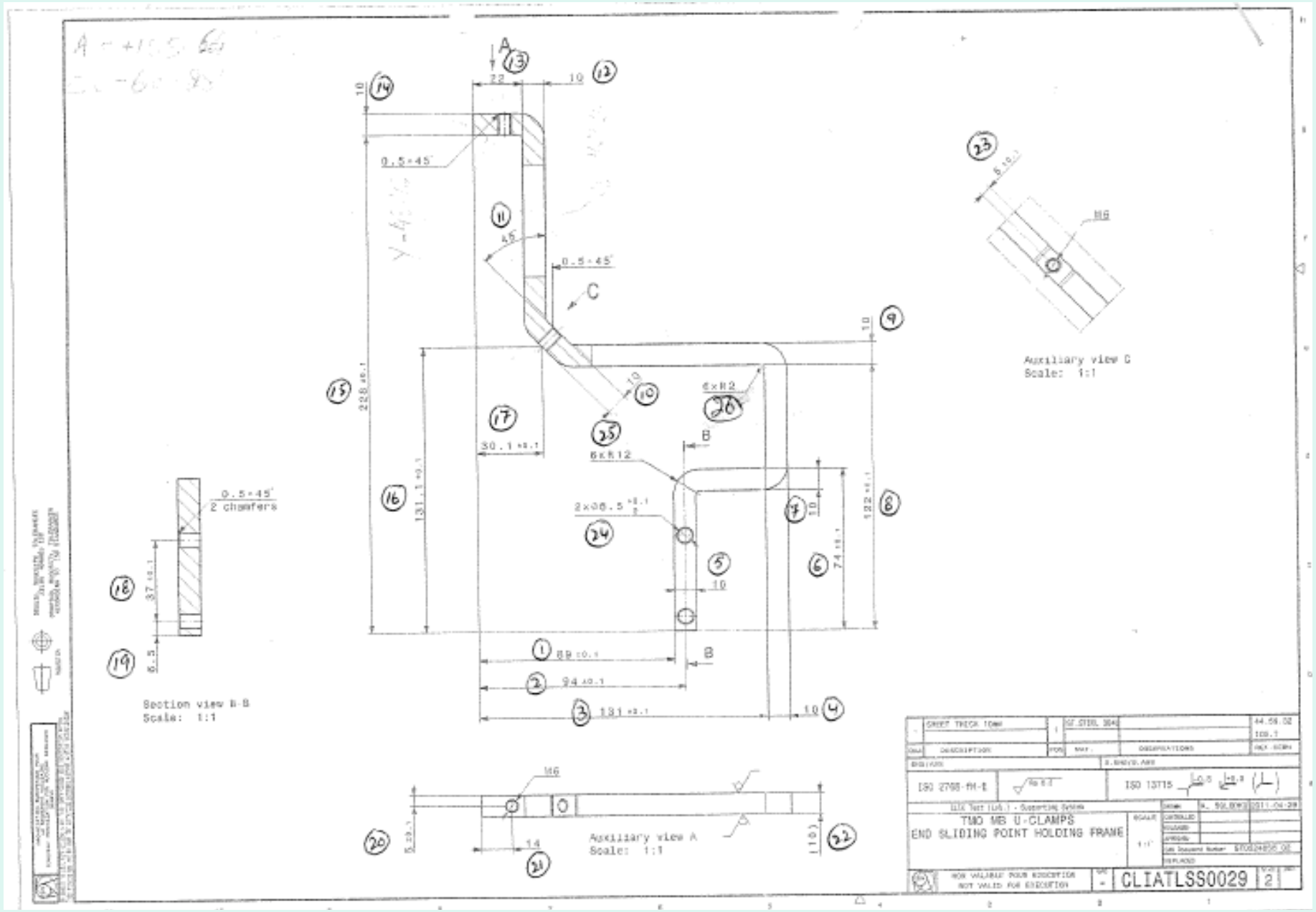
COMPANY NAME :
PART NAME : Corner Support
PART NO : 01
CMM NO : 500323
Proj : CERN
Date : 31-10-2011

	Nom	Act	Dev	UpTol	LoTol	OTol
Dim #01	DISTB DTB82 FEAT(PL4) FEAT(PL10) MM					
Distb	15.200	15.196	-0.004	0.100	-0.100	---*|++++
Dim #02	DISTB DTB83 FEAT(PL4) FEAT(PL6) MM					
Distb	7.800	7.784	-0.016	0.100	-0.100	---*|++++
Dim #03	DISTB DTB84 FEAT(PL8) FEAT(PL6) MM					
Distb	5.400	5.376	-0.024	0.050	-0.050	--*-|++++
Dim #04	DISTB DTB85 FEAT(PL5) FEAT(PL7) MM					
Distb	2.800	2.796	-0.004	0.050	-0.050	---*|++++
Dim #05	DISTB DTB86 FEAT(PL9) FEAT(PL3) MM					
Distb	4.500	4.525	0.025	0.050	-0.050	----|+*++
Dim #06	DISTB DTB87 FEAT(PL5) FEAT(PL3) MM					
Distb	4.800	4.828	0.028	0.050	-0.050	----|++*+
Dim #07	DISTB DTB88 FEAT(PL1) FEAT(PL2) MM					
Distb	8.000	8.094	0.094	0.100	-0.100	----|+++*
Dim #08	DISTB DTB89 FEAT(PL4) FEAT(CR1) MM					
Distb	3.900	3.931	0.031	0.050	-0.050	----|++*+
Dim #09	DIAM DIA1 FEAT(CY1) MM					
Diam	3.500	3.519	0.019	0.050	-0.050	----|+*++

Dim #10 Can't Measured

Inspected By:_____ (Lubna Latif)

Checked By:_____ (Shahida Khatoon)


A
B
C
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2 chamfers
6xR12
2x06.5 +0.1
Section view B-B
Scale: 1:1
Auxiliary view A
Scale: 1:1
Auxiliary view C
Scale: 1:1
M6
TMO MB U-CLAMPS
END SLIDING POINT HOLDING FRAME
CLIATLSS0029
NOT VALID FOR EXECUTION

Workpiece: 199 / TMO MB U-CLAMPS END SLIDING POINT HOLDING FRAME

Job Title: Holding Frame Control No: Sample
Dwg No: CLIATLSS0029 Temperature: 20°C
Equipment : CMM other wise mentioned
Inspected by: Salman Khan and Saleem Ahmed

no.	element / characteristic / nominal value	tol.	upper tol.	no.	ref. / work. / lower tol.	PP / length	range / actual value	name / name / deviation	Tolerance utilisation
1									
1	1 Vectorial position [X]								
1	X -89.000		0.000		-0.100	X	-89.007	X -0.007	85%
2									
2	2 Vectorial position [X]								
1	X -94.000		0.100		-0.100	X	-93.995	X 0.005	5%
3									
3	3 Vectorial position [X]								
1	X -131.000		0.100		-0.100	X	-130.966	X 0.035	35%
4									
4	4 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.963	r -0.037	-37%
5									
5	5 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.973	r -0.027	-27%
6									
6	6 Vectorial position [Y]								
1	Y 74.000		0.100		-0.100	Y	73.952	Y -0.048	-48%
7									
7	7 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.939	r -0.061	-61%
8									
8	8 Vectorial position [Y]								
1	Y 122.000		0.100		-0.100	Y	122.003	Y 0.003	3%
9									
9	9 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.959	r -0.041	-41%
10									
10	10 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.980	r -0.020	-20%
11									
11	Angle plane - plane								
1	45°00'0.0		0°30'0.0		-0°30'0.0		44°53'19.1	-0°06'40.9	-22%
12									
12	12 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.968	r -0.032	-32%
13									
13	13 Distance point - plane [R]								
1	r 22.000		0.100		-0.100	r	21.996	r -0.004	-4%
14									
14	14 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.956	r -0.044	-44%
15									
15	15 Vectorial position [Y]								
1	Y 228.000		0.100		-0.100	Y	227.997	Y -0.003	-3%
16									
16	16 Vectorial position [Y]								
1	Y 131.100		0.100		-0.100	Y	131.072	Y -0.028	-28%
17									
17	17 Vectorial position [X]								
1	X -30.100		0.100		-0.100	X	-30.078	X 0.022	22%
18									

Workpiece: 199 / TMO MB U-CLAMPS END SLIDING POINT HOLDING FRAME

no.	element / characteristic / nominal value	tol.	upper tol.	no.	ref. / work. / lower tol.	PP / length	range / actual value	name / name / deviation	Tolerance utilisation
18	18 Distance point - point [Y]								
1	Y 37.000		0.100		-0.100	Y	36.996	Y -0.004	-4%
19									
19	19 Vectorial position [Y]								
1	Y 6.500		0.100		-0.100	Y	6.481	Y -0.019	-19%
20									
20	20 Vectorial position [Z]								
1	Z -5.000		0.100		-0.100	Z	-5.065	Z -0.065	-65%
21									
21	21 Vectorial position [X]								
1	X -14.000		0.100		-0.100	X	-14.014	X -0.014	-14%
22									
22	22 Distance plane - plane [R]								
1	r 10.000		0.100		-0.100	r	9.951	r -0.049	-49%
23									
23	23 Vectorial position [Z]								
1	Z -5.000		0.100		-0.100	Z	-4.997	Z 0.003	3%
24									
24	24 Diameter								
1	D 6.500		0.100		0.000	D	6.552	0.052	4%
25									
25	25 Diameter								
1	D 6.500		0.100		0.000	D	6.533	0.033	-34%

25 Radius
R12 Qualify through Radius Gauge
26 Radius
R2 Qualify through Radius Gauge


PICASSO

Thank you