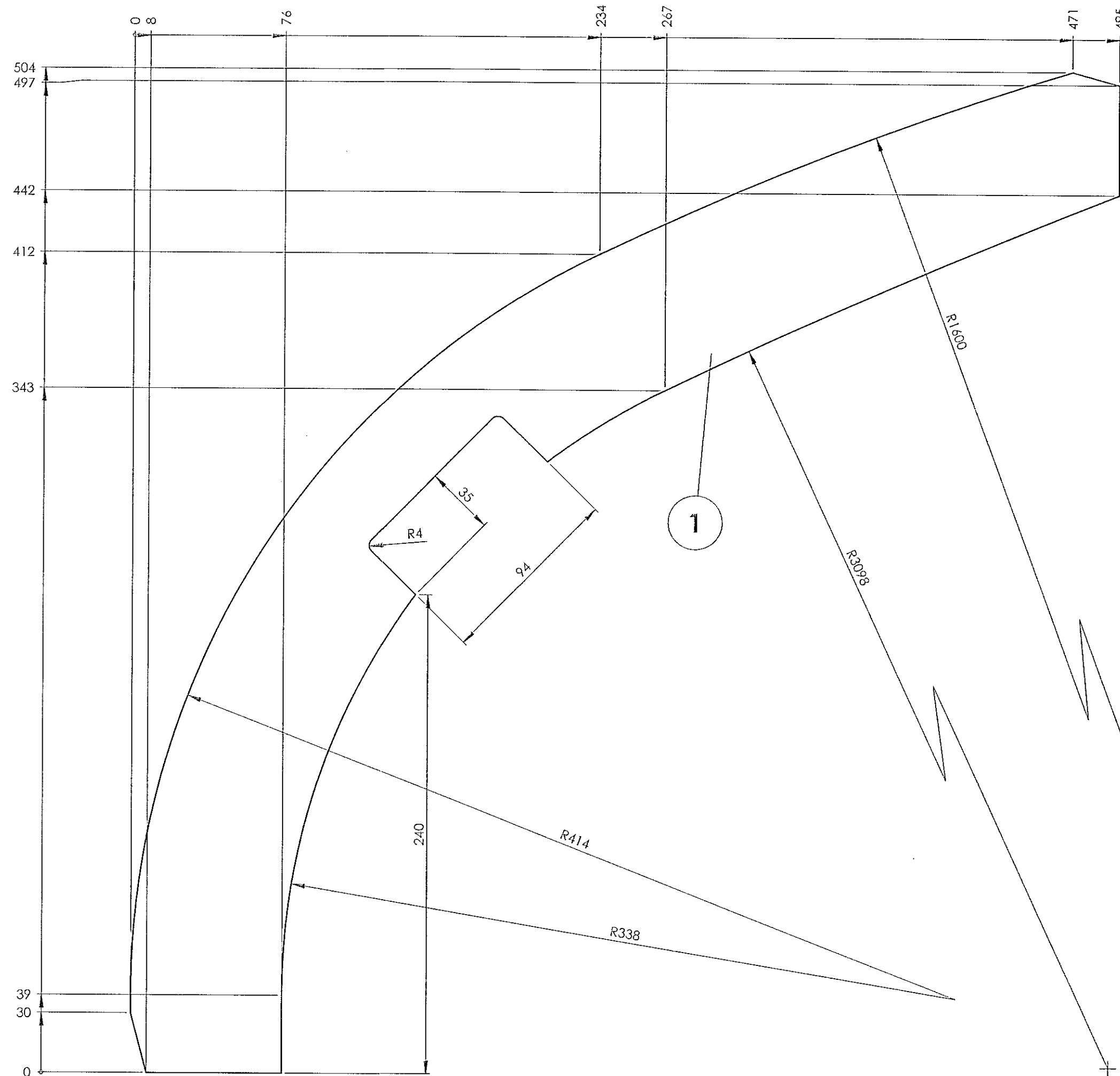


AAF16158

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①③ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

REF.DRG.NO.2 10113.0.20.210.103

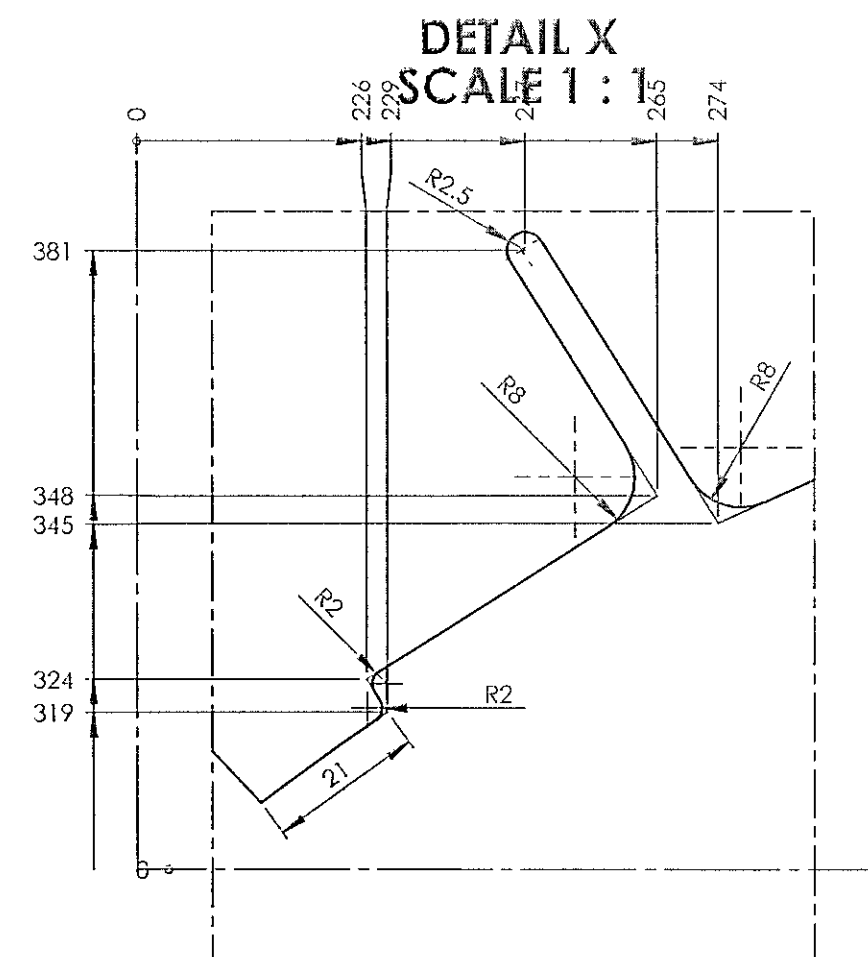
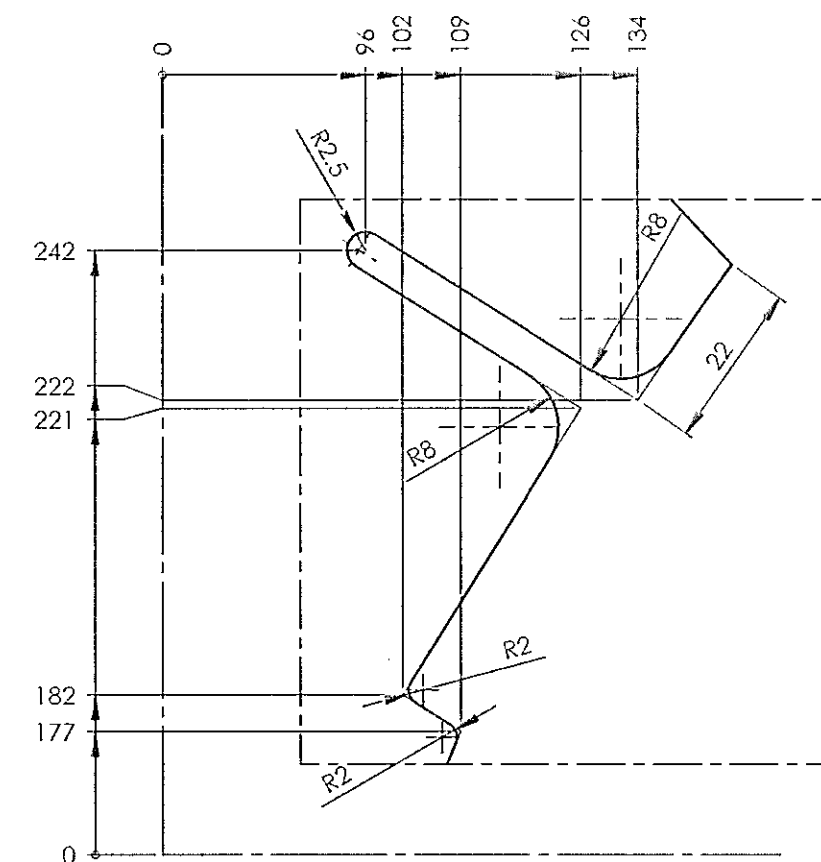
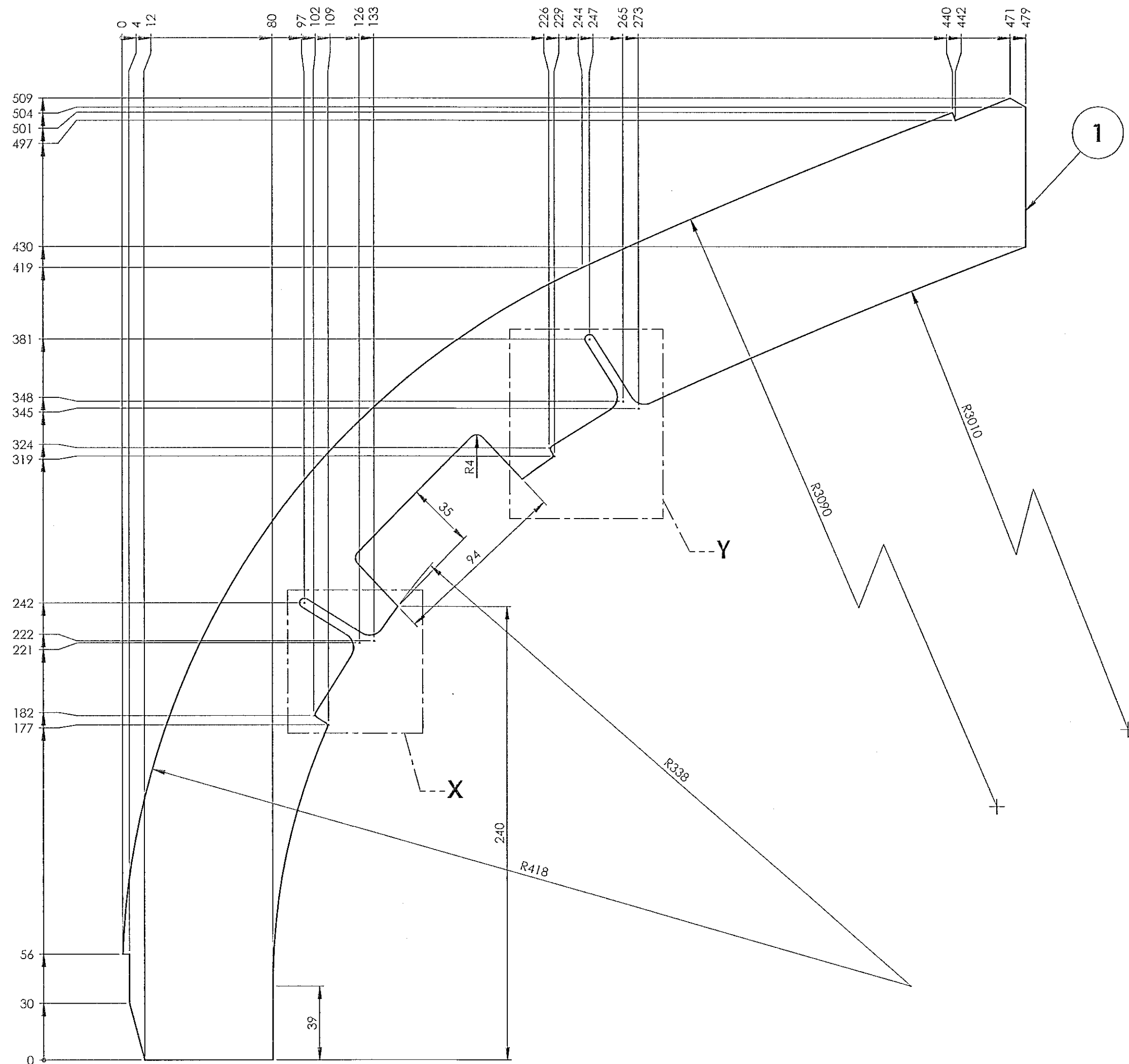
DATE OF LATEST ALT.	04/09/25	AME/SME
---------------------	----------	---------

1	ROOF ARCH	4 x 495 x 505	1		RDSO/SPEC C-K201 X2CrNi12	1.623	
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.: 0.108		WT/ASSY IN Kgs: 1.623	
ROOF ARCH					SCALE 1:2	SSE/D CHD	E.SATHISH KUMAR
					ALT	ALTD	
						DRN	
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAF16158		A2

AAF16159

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01a BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	01b CHAMFERED

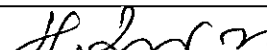
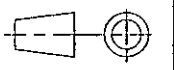
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

REF.DRG.NO.2 10113.0.20.210.112

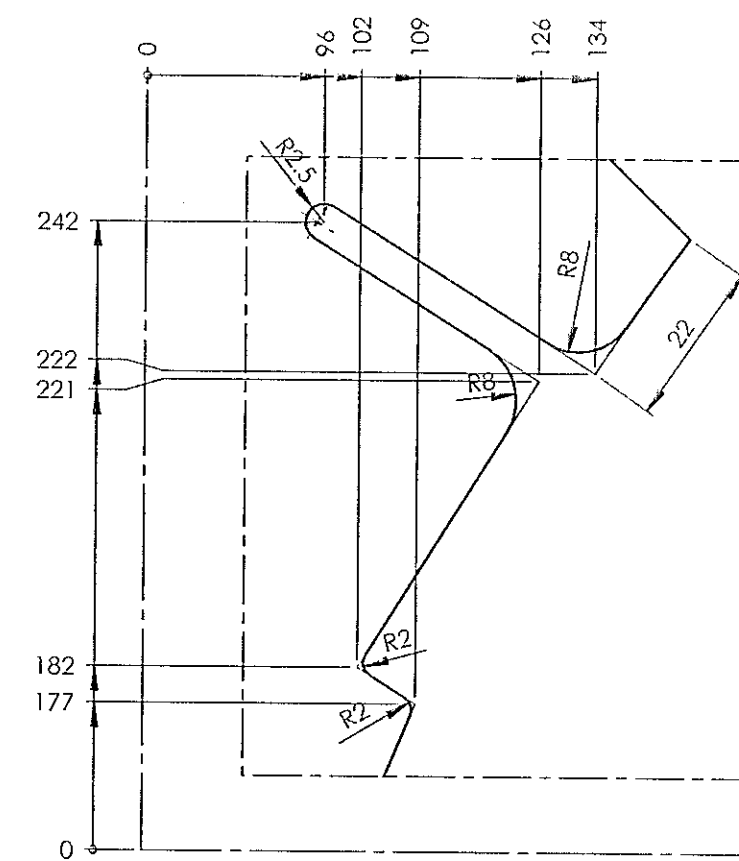
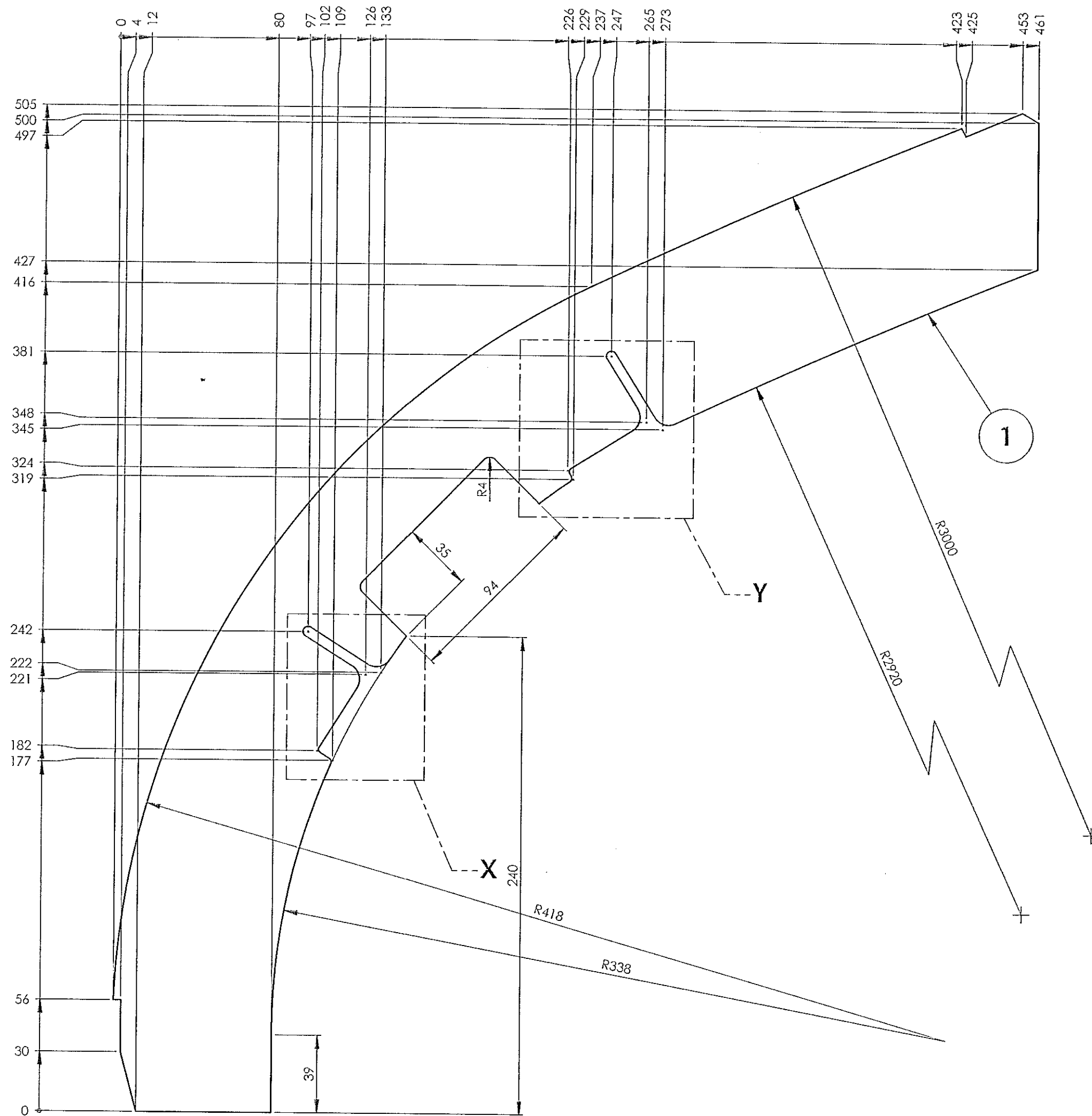
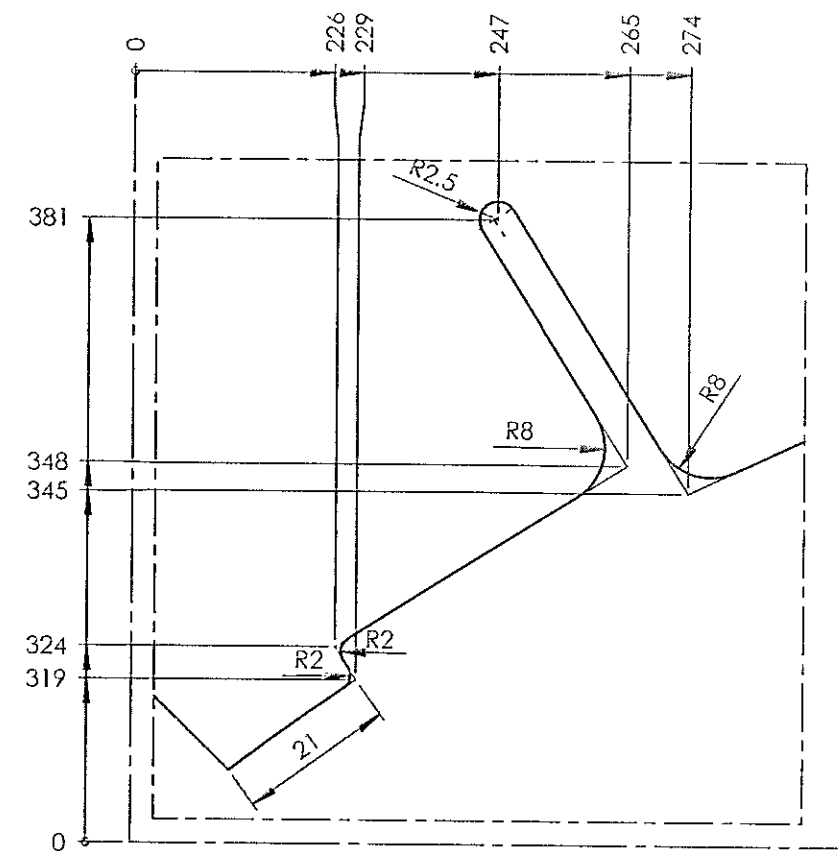
DATE OF LATEST ALT.	04/09/25	AME/SME
---------------------	----------	---------

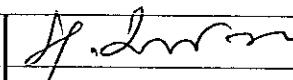
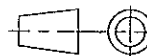
1	ROOF ARCH	4 x 479 x 508.5	1		RDSO/SPEC C-K201 X2CrNi12	1.660			
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS		
GROUP: 1-6 Roof Construction			SURFACE AREA IN Sq.m.: 0.111		WT/ASSY IN Kgs:				
ROOF ARCH					SCALE 1:2		SSE/D		
					CHD				
					ALT'		ALTD		
					DRN		E.SATHISH KUMAR		
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038									
					SHEET 1 OF 1		AAF16159		A2

AAFI16160

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	018 CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

DETAIL X  
SCALE 1 : 1DETAIL Y  
SCALE 1 : 1

1	ROOF ARCH	4 x 462 x 505	1		RDSO/SPEC C-K201 X2CrNi12	1.614		
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.:0.108			WT/ASSY IN Kgs:			
ROOF ARCH					SCALE 1:2	SSE/D		
						CHD		
					ALT	ALTD		
						DRN		E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038								
					SHEET 1 OF 1		AAF16160	A2

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

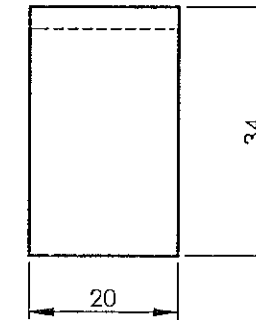
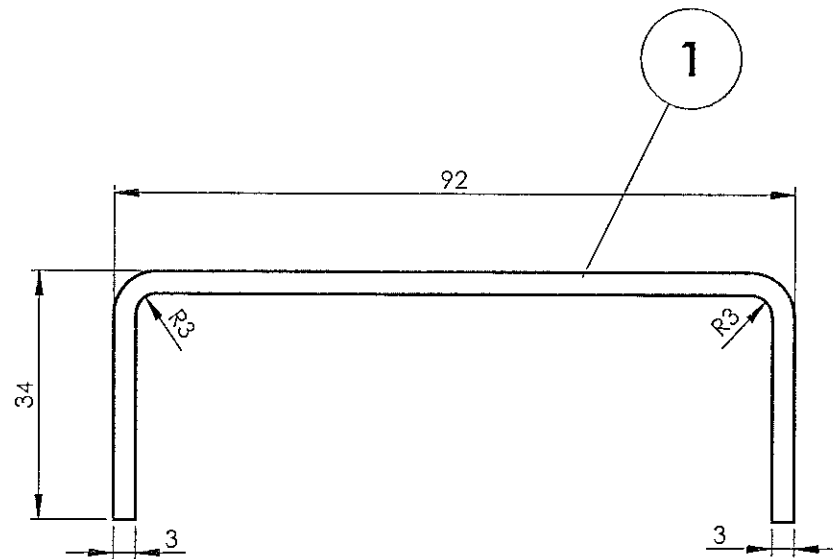
REF.DRG.NO.

DATE OF LATEST ALT.	04/09/25	AME/SME
---------------------	----------	---------

AAAF16161

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①8 CHAMFERED

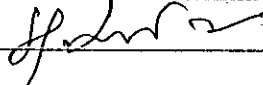
REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			




ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553.  
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

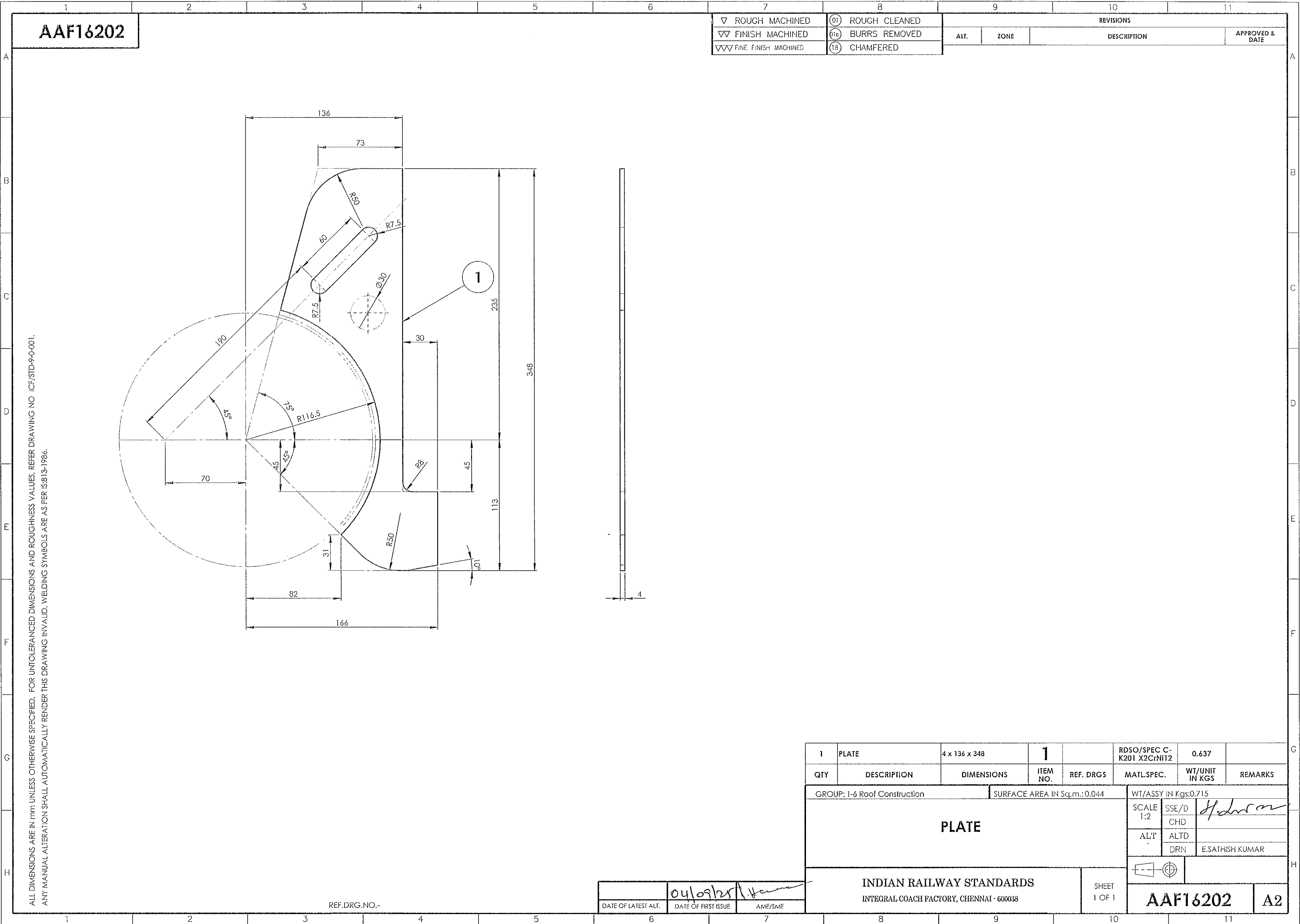
REF.DRG.NO.-

-	04/09/25	H. K. S. S.
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

1	BACK PIECE	3x20x148	1		RDSO SPEC C- K201 X2 Cr NI 12	0.07	
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.:			WT/ASSY IN Kgs:		
BACK PIECE					SCALE 1:1	SSE/D CHD	
					ALT.	ALTD	
						DRN	VIJAYAKUMAR R
					INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038		
					SHEET 1 OF 1	AAF16161	
							A3


[illegible]

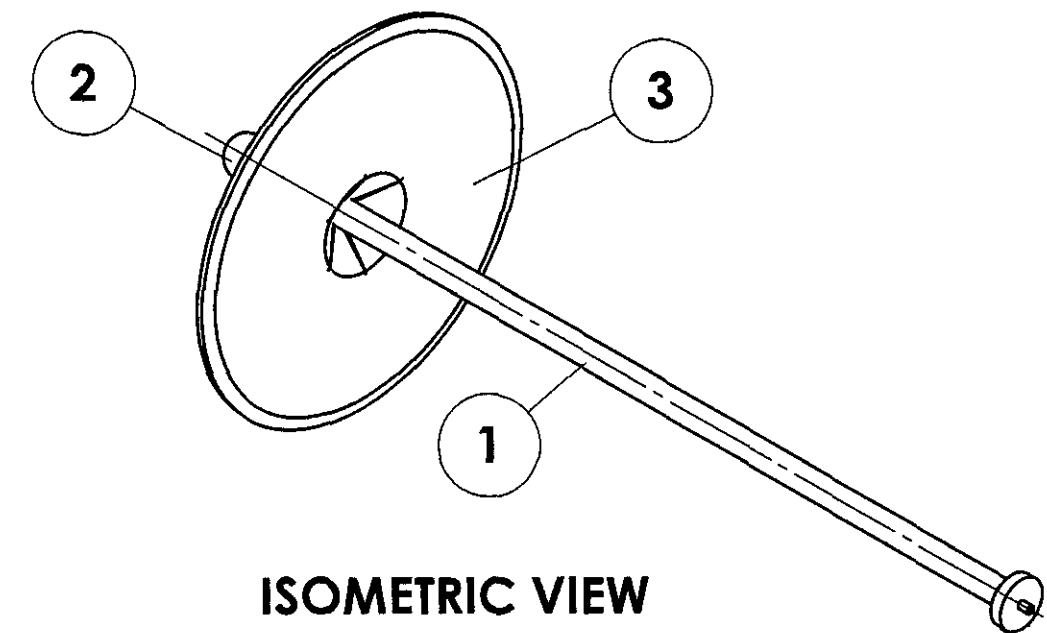
1	PLATE	4 x 136 x 348	1		RDSO/SPEC C- K201 X2CrNi12	0.610		
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 0.043			WT/ASSY IN Kgs:			
PLATE					SCALE 1:2	SSE/D CHD		
					ALT	ALTD		
						DRN	ESATHISH KUMAR	
					INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038			
AAF16201		A2						



49516008

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	18 CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NOTE REVISED. VIEWS UPDATED AS PER DETAIL.	



ISOMETRIC VIEW

NOTE:

- ITEM-1 TO BE RESISTANCE WELDED AS SHOWN IN THE RESPECTIVE DRAWING AND ITEMS-2&3 TO BE SUPPLIED IN LOOSE (TO BE ASSEMBLED IN FURNISHING AFTER INSERTING THERMAL INSULATION).
- 5% EXCESS QTY OF ITEMS-2&3 TO BE SUPPLIED AGAINST THE QTY CALLED FOR IN THE RESPECTIVE ASSEMBLY DRAWINGS.

1	SERRATED SPRING WASHER		3	AAA16495		0.003	
1	CAP		2	AAA16494		0.000	
1	WELDING PIN		1	AAA16493		0.002	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-6 ROOF CONSTRUCTION

SURFACE AREA IN Sq.m.:0.002

WT/ASSY IN Kgs:

WELDING PIN ASSEMBLY

SCALE 1:1	SSE/D CHD	
ALT. a	ALTD DRN	A.Palanichamy 3D:A.Palanichamy 2D:P.Murugan

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET 1 OF 1

LWGSCWAC2

49516008

A3

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.mi005176

06-02-2024	19-07-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

59316017

▽ ROUGH MACHINED  
▽▽ FINISH MACHINED  
▽▽▽ FINE FINISH MACHINED

(01) ROUGH CLEANED  
(01b) BURRS REMOVED  
(18) CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &  
DATE

2

1

510.58

3/7 X 50 (50)

50

5

4

NOTE:

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. ALL BUTT WELDINGS TO BE DONE AT COACH OUTSIDE AND ROUGH GRINDING TO BE DONE ON THE SAME SIDE. PENETRATION SHOULD NOT BE GROUND.

1	FLANGE		2	AAA16936		1.098	
1	ROOF ARCH		1	AAA16935		1.737	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY				SURFACE AREA IN Sq.m.: 0.190		WT/ASSY IN Kgs: 2.835	
ROOF ARCH COMPLETE					SCALE 1:2	SSE/D	Supraled
					CHD		
					ALT	ALTD	
					DRN		K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					SHEET 1 OF 1		LWSCWAC/EOG
							59316017
					A2		

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS 813-1986.

REF.DRG.NO.2 10113.0.20.210.005

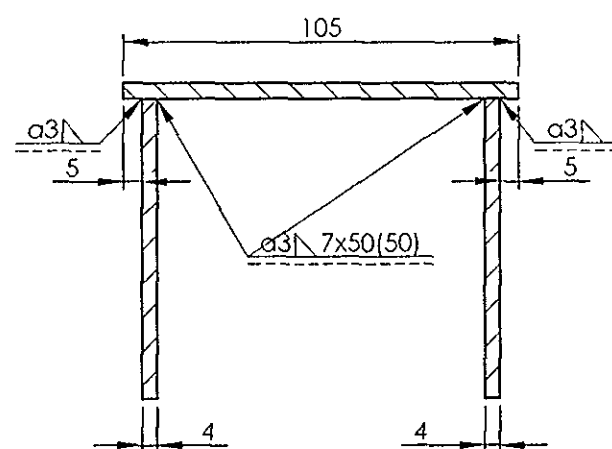
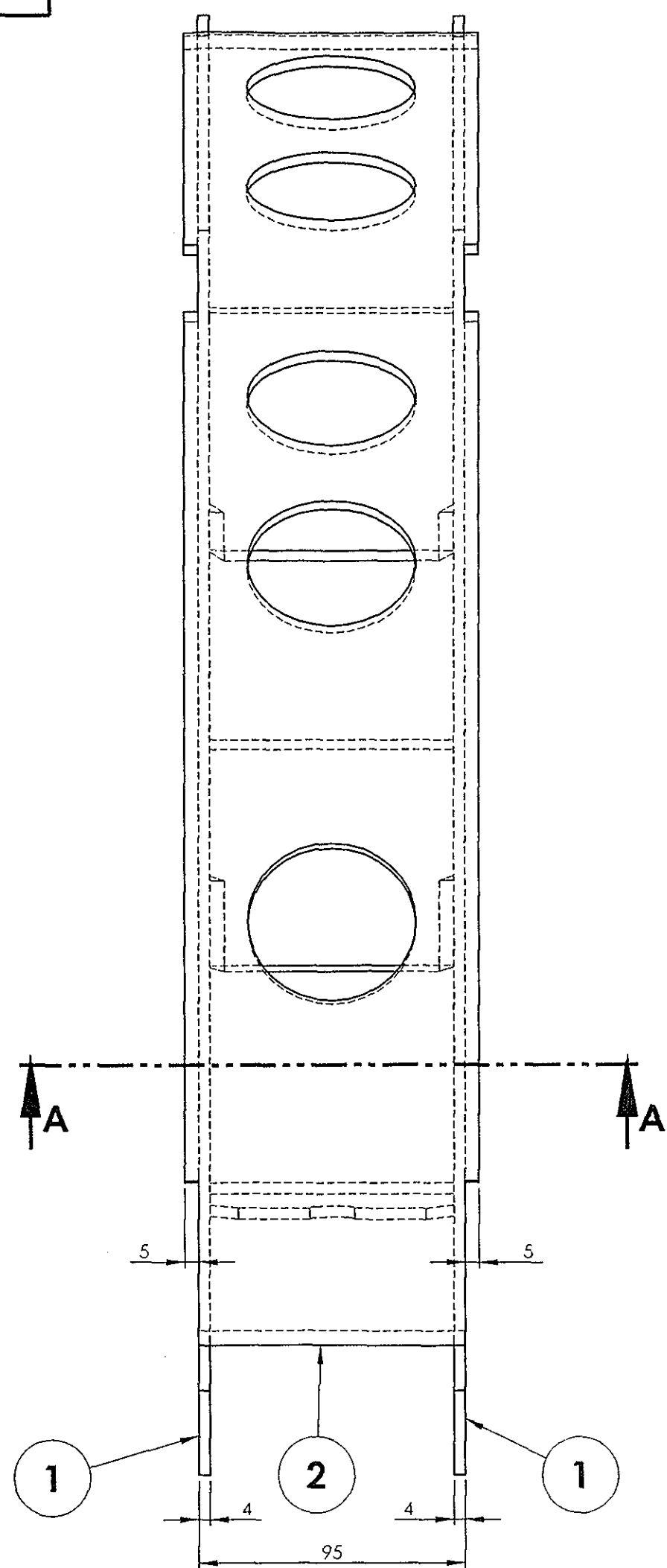
	22-03-2013	AME/SAM
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	



59316018

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	18 CHAMFERED

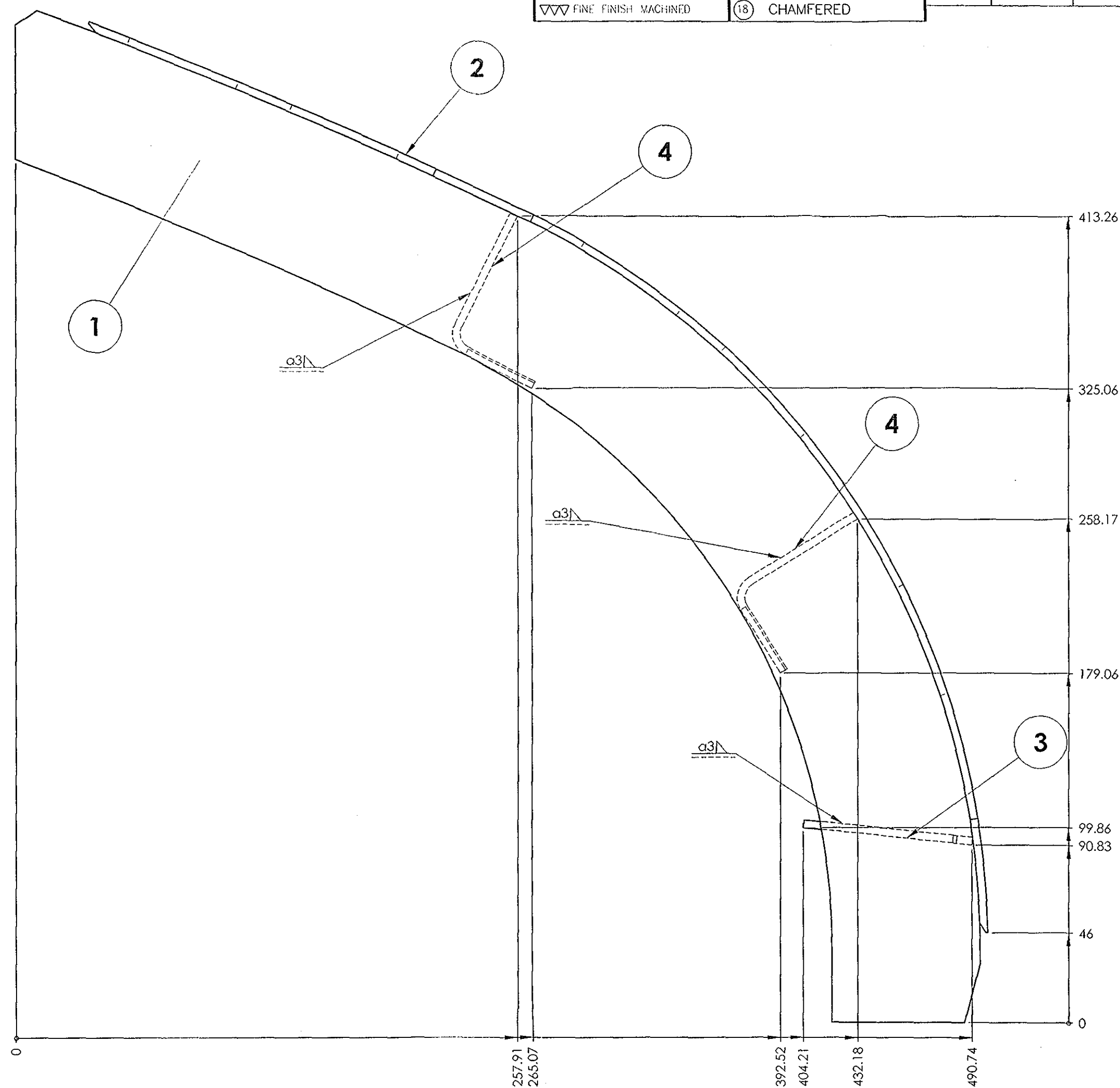
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



SECTION A-A  
SCALE 1 : 2

NOTE:

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. ALL BUTT WELDINGS TO BE DONE AT COACH OUTSIDE AND ROUGH GRINDING TO BE DONE ON THE SAME SIDE. PENETRATION SHOULD NOT BE GROUND.



2	STIFFENING ANGLE		4	AAA16940		0.322	
1	WEB		3	AAA16939		0.236	
1	FLANGE		2	AAA16938		1.864	
2	ROOF ARCH		1	AAA16937		1.758	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.420		WT/ASSY IN Kgs: 6.260	
ROOF ARCH COMPLETE				SCALE 1:5	SSE/D CHD
				ALT	ALTD
				DRN	K.Sriram

INDIAN RAILWAY STANDARDS  
INTEGRAL COACH FACTORY, CHENNAI - 600038

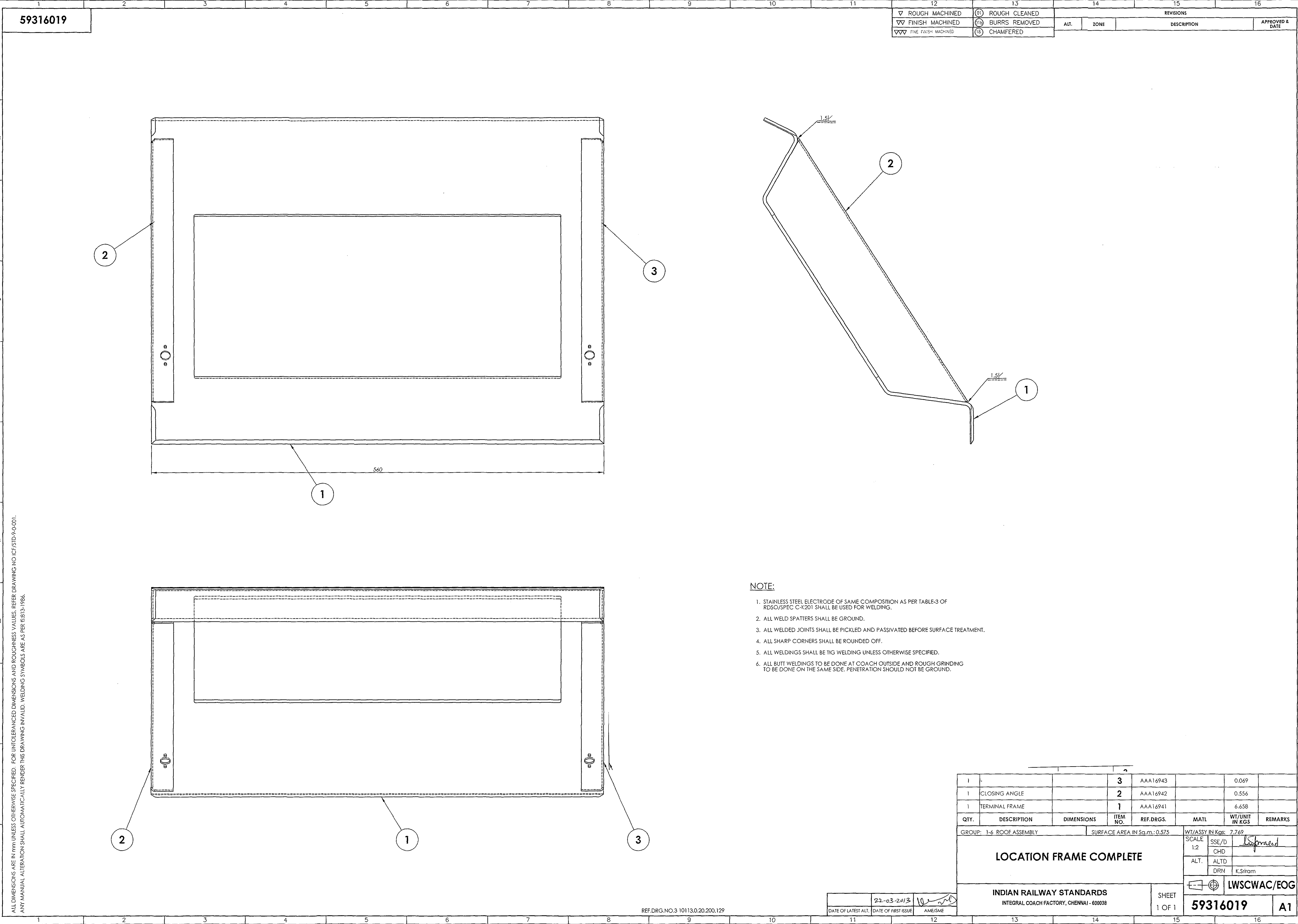
SHEET  
1 OF 1

59316018

A2

REF.DRG.NO.2 10113.0.20.210.006

DATE OF LATEST ALT.	22-03-2013	DATE OF FIRST ISSUE	10-03-2013	AMU/SME
---------------------	------------	---------------------	------------	---------



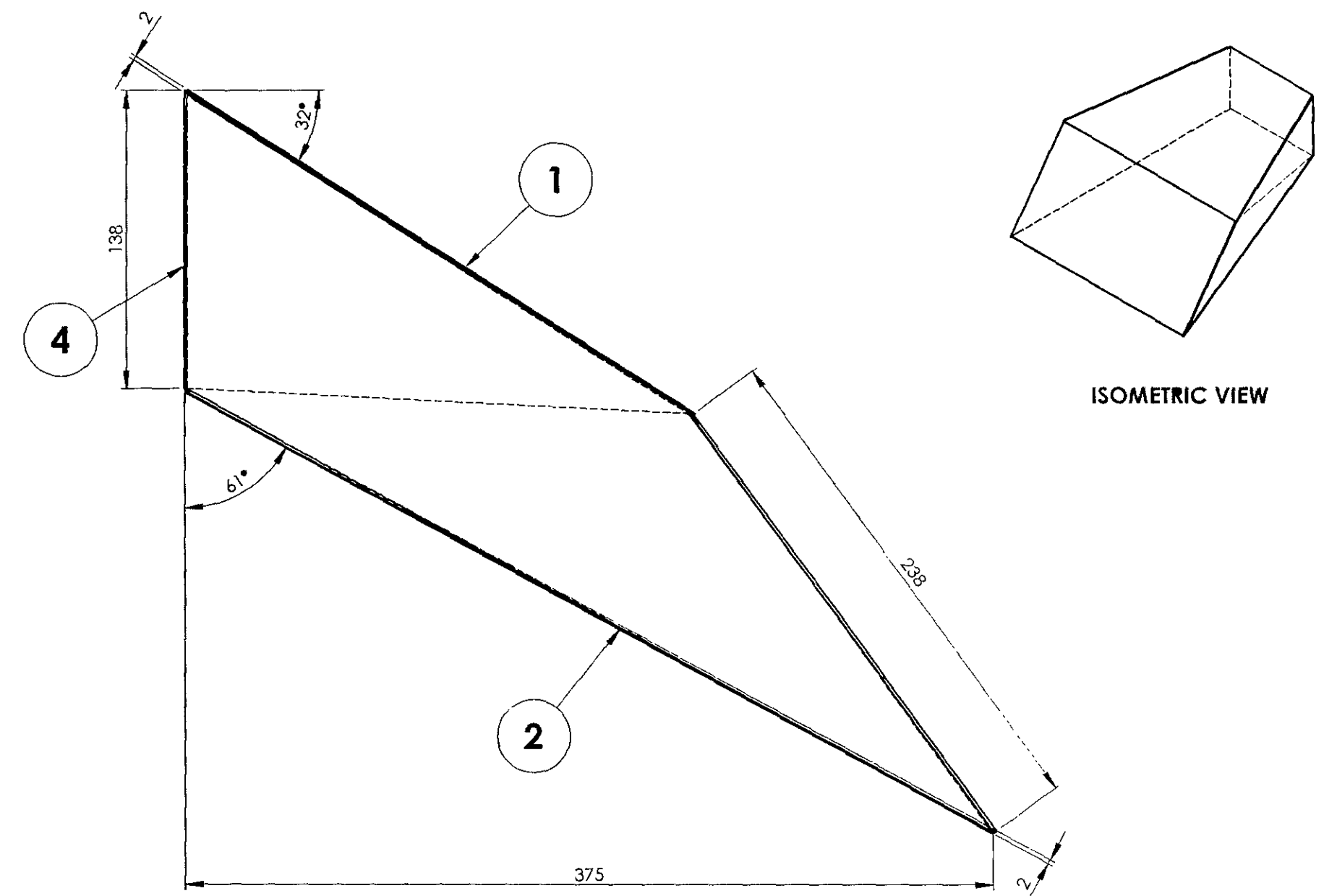
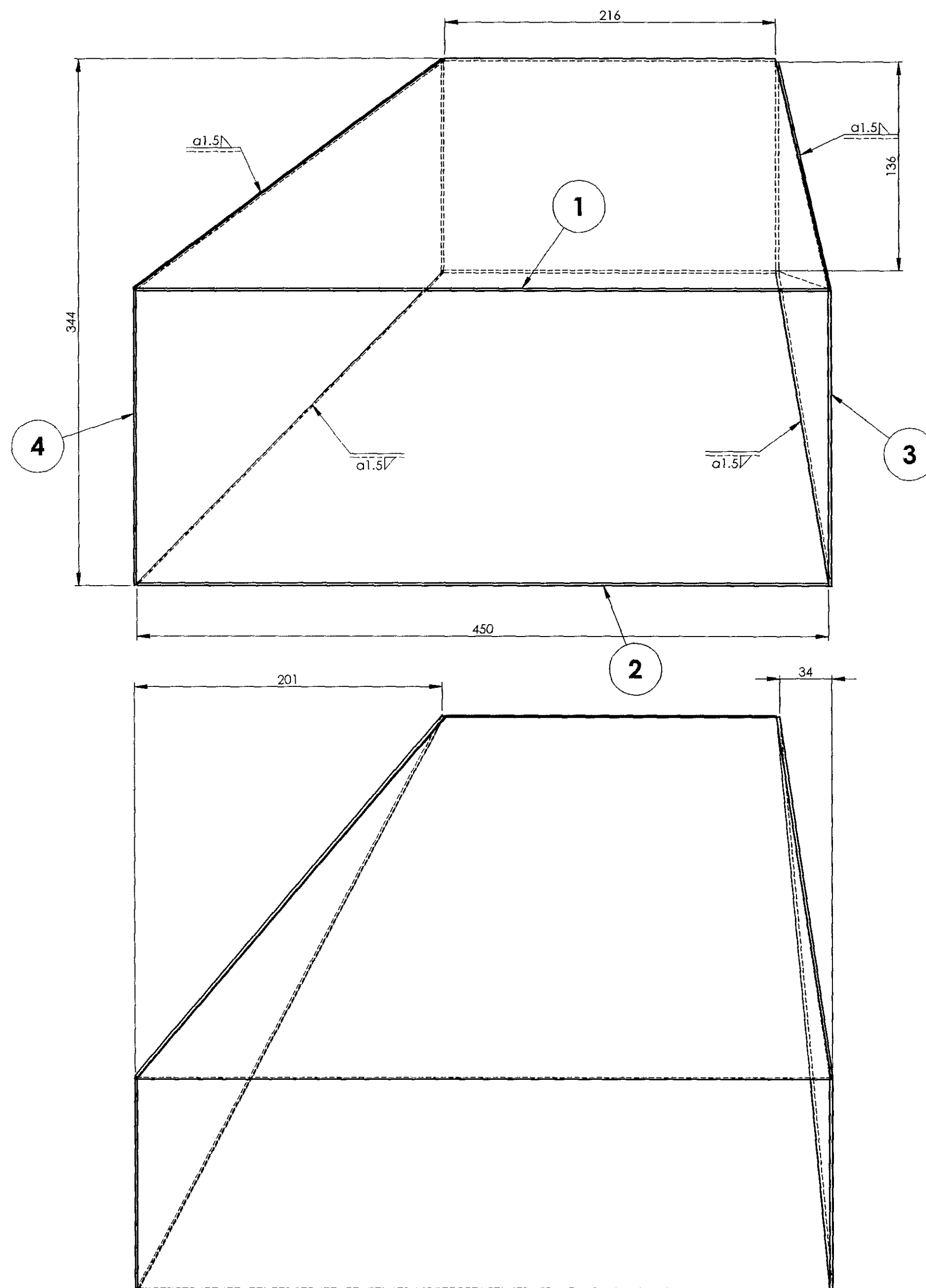
59316056

▽ ROUGH MACHINED  
▽▽ FINISH MACHINED  
▽▽▽ FINE FINISH MACHINED

① ROUGH CLEANED  
② BURRS REMOVED  
③ CHAMFERED

REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		SUCTION PIPE MODIFIED AND VIEWS UPDATED.	V. 14/6/24



ISOMETRIC VIEW

**NOTE:-**

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. CK-201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
4. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
5. ALL WELDING SHALL BE OF TIG UNLESS OTHERWISE SPECIFIED.
6. ALL WELD PERFORMANCE CLASS SHALL BE CP C2 UNLESS OTHERWISE SPECIFIED.
7. FOR WELD TESTING PREFERENCES REFER DRG. No. ICF/STD-9-0-998.
8. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/STD-9-0-999.

1	SIDE SHEET		4	AAE16686		0.845	
1	SIDE SHEET		3	AAE16687		0.613	
1	BOTTOM SHEET		2	AAE16688		2.269	
1	TOP SHEET		1	AAE16689		1.492	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: I-6 Roof Construction		SURFACE AREA IN Sq.m.: 0.665		WT/ASSY IN Kgs: 5.239			
SUCTION PIPE COMPLETE		SCALE 1:2.5	SSE/D	A. Pankaj Singh			
		CHD					
		ALT	ALTD	E.SATHISH KUMAR			
		DRN		E.SATHISH KUMAR			
				LWSCWAC/EOG			
				INDIAN RAILWAY STANDARDS			
				INTEGRAL COACH FACTORY, CHENNAI - 600038			
				SHEET 1 OF 1			
				59316056			
				A2			

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

REF.DRG.NO.2 10113.0.20.200.007


15-03-24	07-06-23	V. 14/6/24
DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SME

Technical drawing of a curved structural component, likely a part of a vehicle body. The drawing includes the following callouts and dimensions:

- 15**: Callout to the upper curved edge.
- 8**: Callout to a central structural feature.
- 7**: Callout to a lower structural feature.
- 2**: Callout to the lower curved edge.
- 17**: Callout to a small rectangular feature at the bottom right.
- 1**: Callout to the right vertical edge.
- Dimensions**:
  - $\alpha 1.5 \sqrt{3 \times 40 (60)}$  (multiple locations)
  - $\alpha 1.5 \sqrt{3 \times 30 (50)}$
  - $\alpha 3 \sqrt{3}$  (multiple locations)
  - $58$  (vertical dimension at the bottom right)
  - $144 \pm 1$  (total vertical dimension at the bottom right)

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

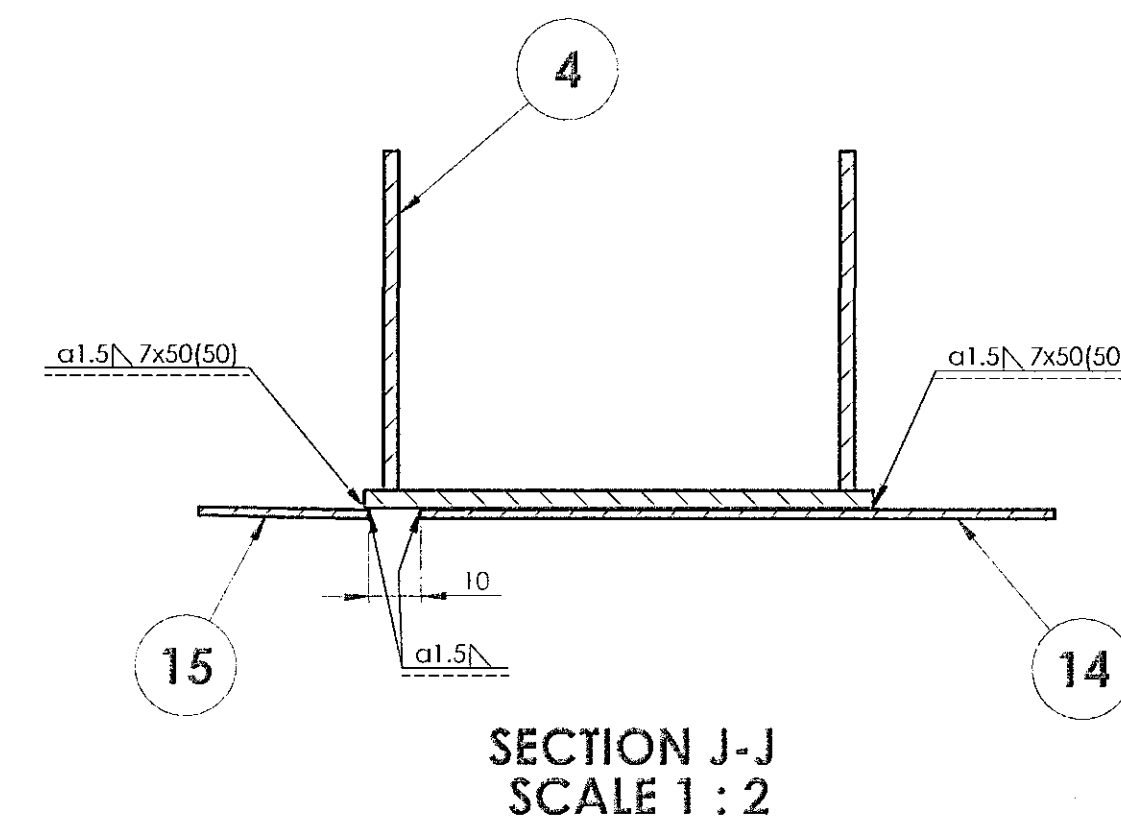
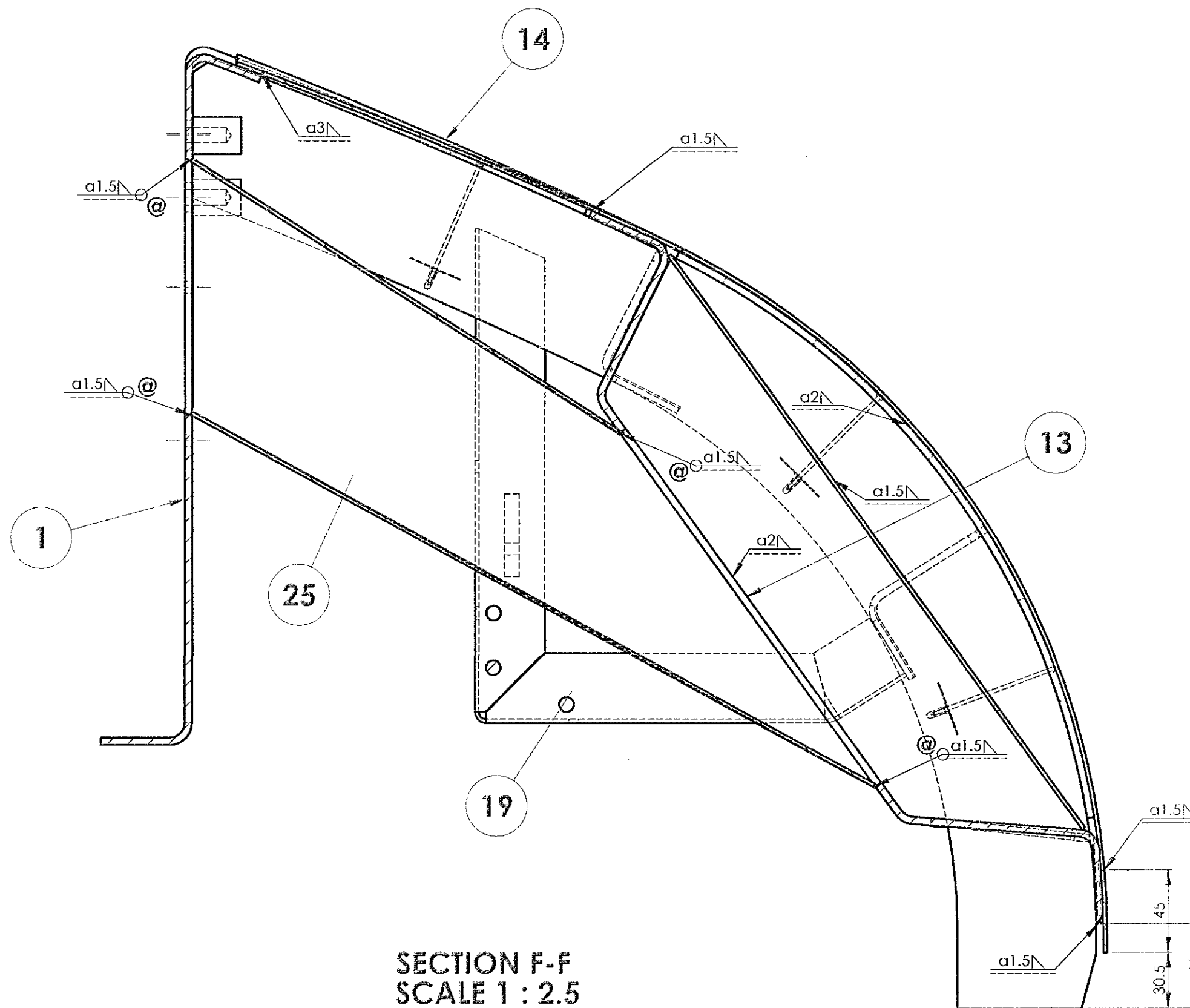
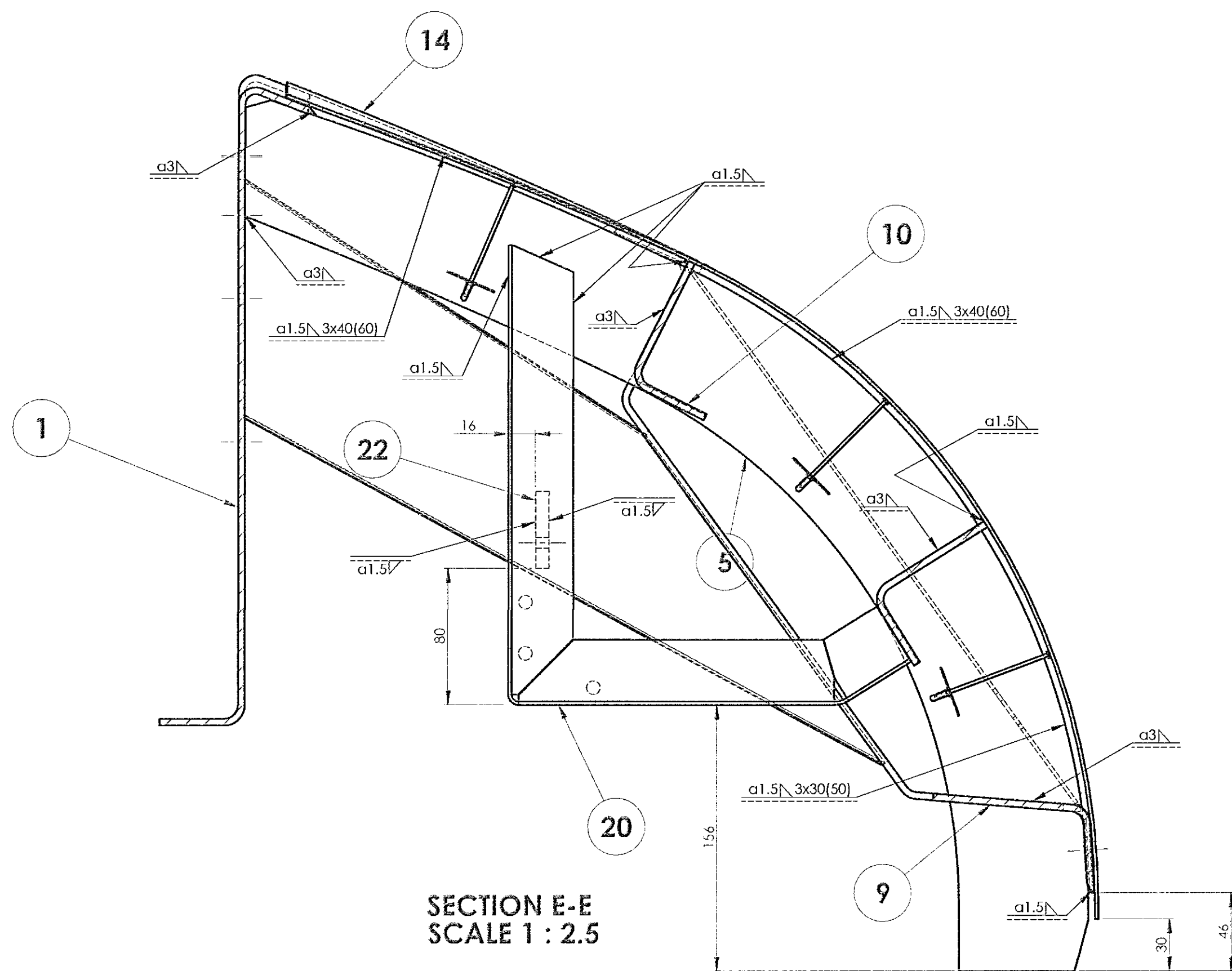
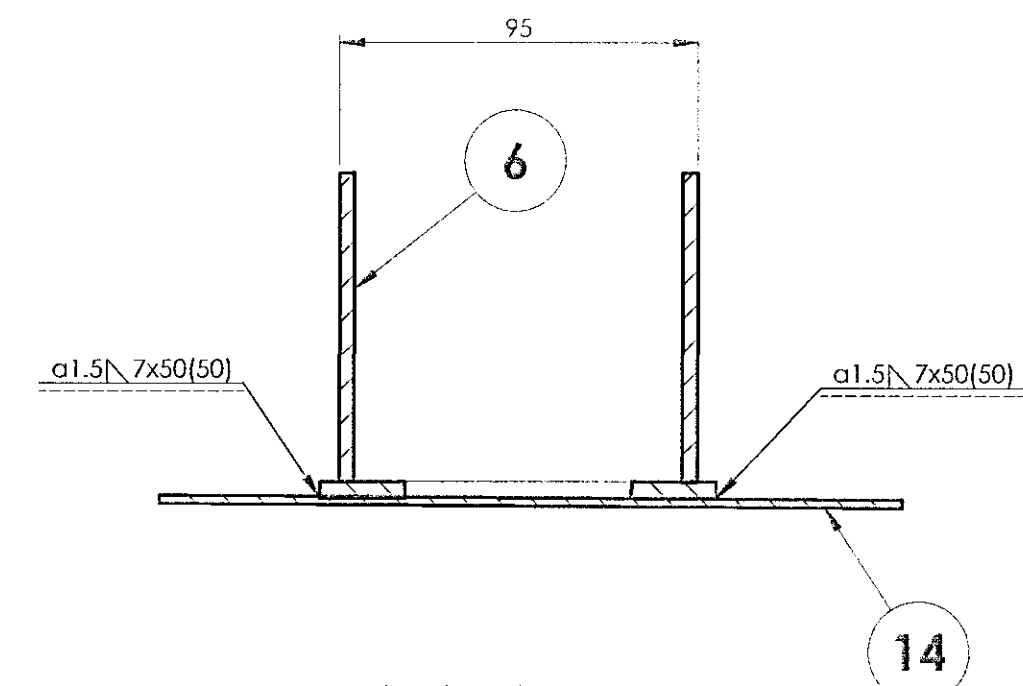
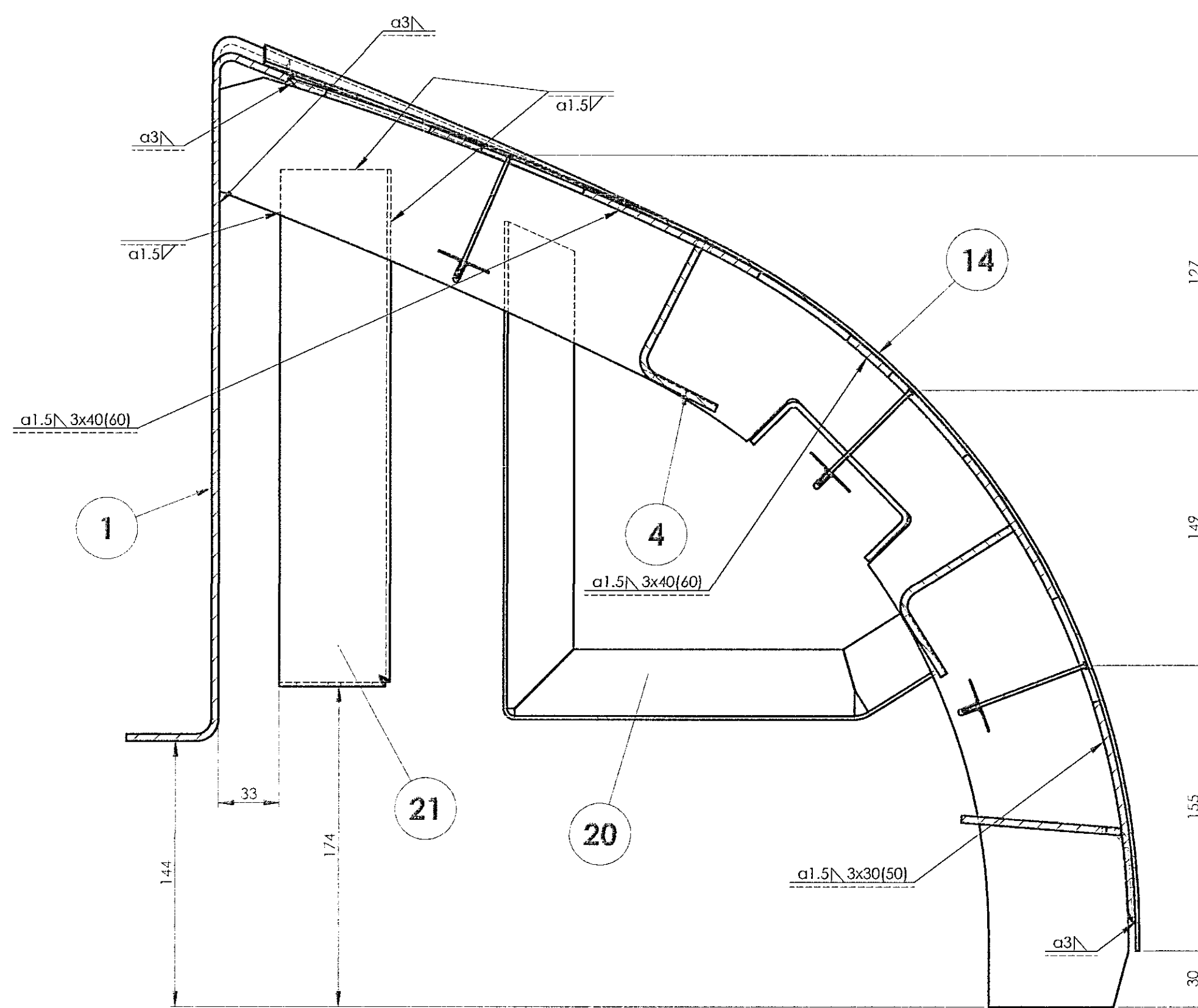
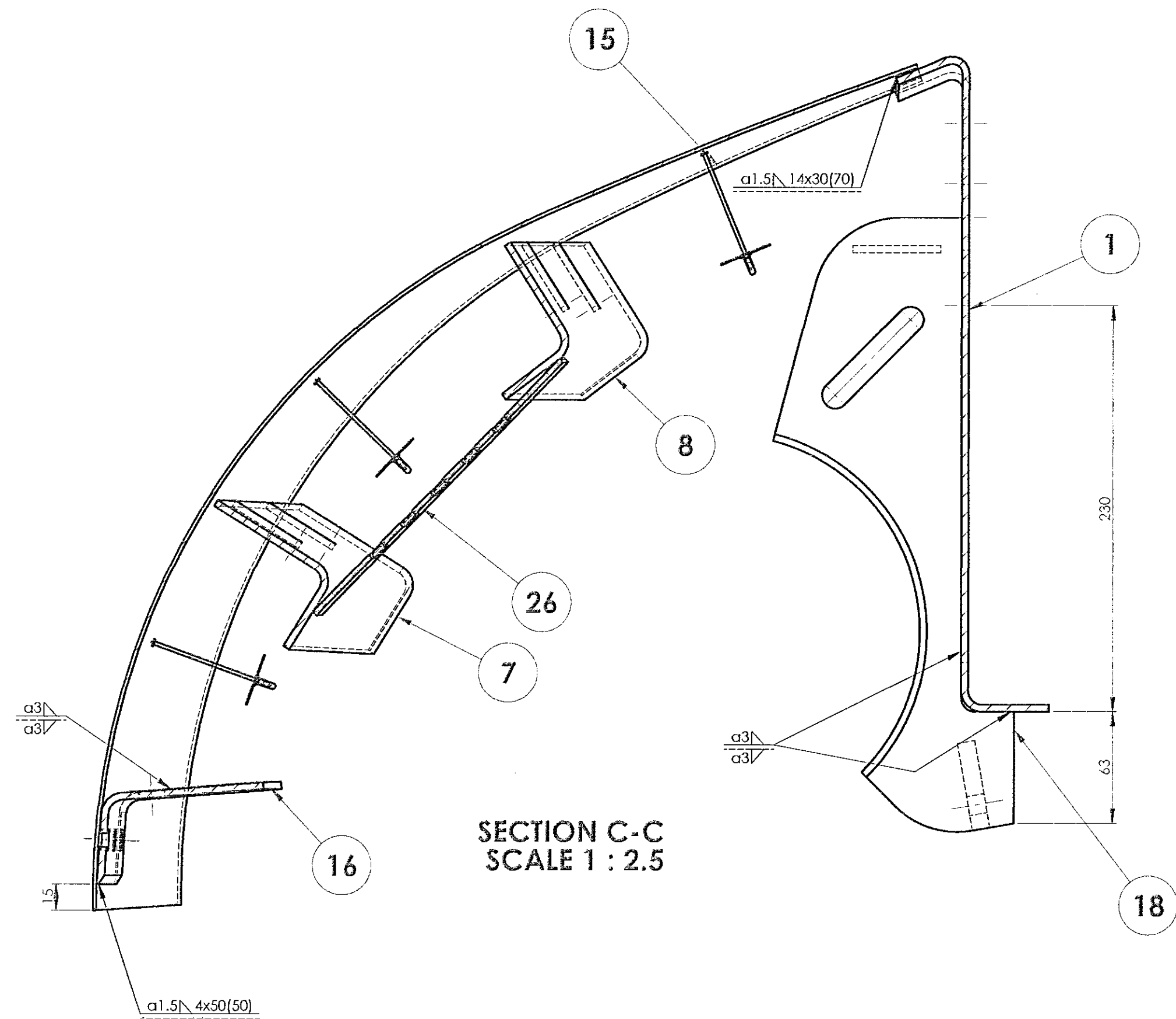
12-2-26		<i>[Signature]</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 9.517		WI/ASSY IN Kgs: 101.872		
<h1 style="text-align: center;">FINAL ROOF ELEMENT COMPLETE</h1>				SCALE: 1:5	SSE/D	
					CHD	
				ALT. b	ALTD	E.SATHISH KUMAR
					DRN	E.SATHISH KUMAR
				INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038		SHEET 1 OF 3
<b>82716011</b>						
<b>A1</b>						



82716011

▽ ROUGH MACHINED	①1 ROUGH CLEANED
▽▽ FINISH MACHINED	①1B BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①1C CHAMFERED




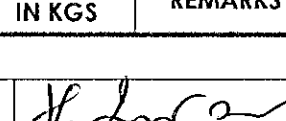
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO CF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:13-1986.

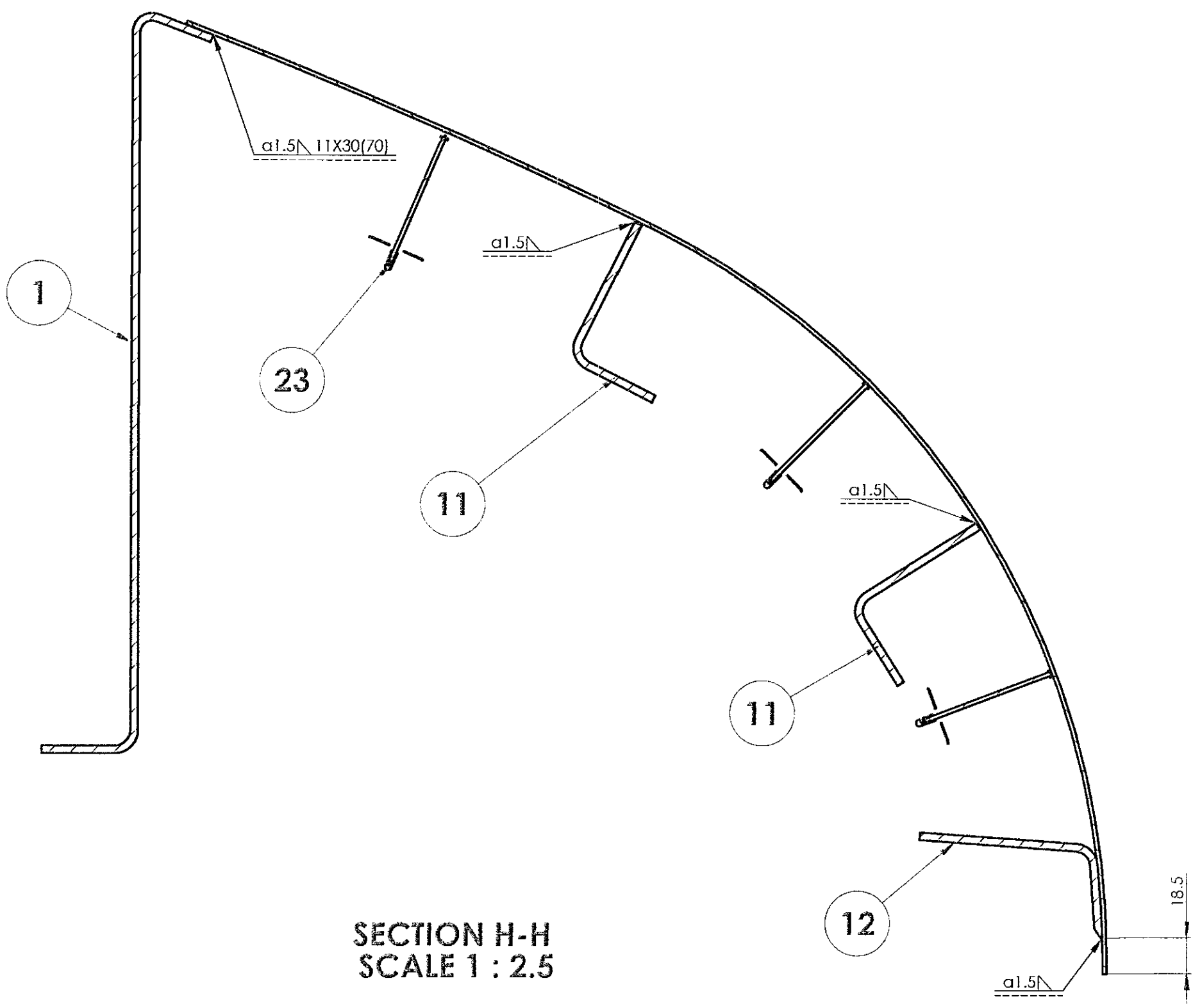
REF.DRG.NO.

12-2-26		
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 9.517		WT/ASSY IN Kgs: 101.872	
FINAL ROOF ELEMENT COMPLETE		SCALE 1:5		SSE/D CHD	
				ALT. b	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600088		SHEET 2 OF 3		E.SATHISH KUMAR	
				E.SATHISH KUMAR	
				LWFAC/PP2	
				82716011	
				A1	

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

							
3	TIE ROD	Ø8 x 657	27		SS-304	0.26	
3	FLAT		26	AA816550		0.33	
1	SUCTION PIPE COMPLETE		25	59316056		5.239	
1	NAME PLATE FOR SUPPLIER IDENTIFICATION		24	AAA51072		0.063	
30	WELDING PIN ASSEMBLY		23	49516008		0.005	
2	GROUNDING FLAP		22	AAA16900		0.084	
1	BRACKET		21	AAA10962		0.615	
1	BRACKET		20	AA810006		0.547	
1	BRACKET		19	AA810005		0.547	
1	AUX. WATER TANK FIXING BRACKET		18	82716017		2.003	
1	AUX. WATER TANK FIXING BRACKET		17	82716016		1.948	
1	STIFFENING ANGLE		16	AAA16920		1.838	
1	ROOF SHEET		15	AAA16918		15.180	
1	ROOF SHEET		14	AAA16917		8.879	
1	LOCATION FRAME COMPLETE		13	59316019		7.283	
1	STIFFENING ANGLE		12	AAA16927		0.573	
2	STIFFENING ANGLE		11	AAA16926		0.544	
2	STIFFENING ANGLE		10	AAA16924		0.644	
1	STIFFENING ANGLE		9	AAA16923		0.631	
1	STIFFENING ANGLE		8	AAA16922		4.841	
1	STIFFENING ANGLE		7	AAA16921		5.224	
1	ROOF ARCH COMPLETE		6	59316018		6.260	
1	ROOF ARCH COMPLETE		5	59316017		2.835	
1	ROOF ARCH COMPLETE		4	82716015		6.945	
1	ROOF ARCH COMPLETE		3	82716019		1.73	
1	ROOF ARCH COMPLETE		2	82716020		1.69	
1	MEMBER COMPLETE		1	82716013		34.324	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction			SURFACE AREA IN Sq.m.: 9.517		WT/ASSY IN Kgs:		
FINAL ROOF ELEMENT COMPLETE					SCALE 1:5	SSE/D CHD 	
					ALT. b	ALTD DRN	E.SATHISH KUMAR
					LWFAC/PP2		
INDIAN RAILWAY STANDARDS				SHEET 3 OF 3	82716011		A1
INTEGRAL COACH FACTORY, CHENNAI - 600038							



1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. CK-201 SHALL BE USED FOR WELDING.
2. ALL WELDED JOINTS SPATERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDING SHALL BE OF TIG UNLESS OTHERWISE SPECIFIED.
6. ALL WELD PERFORMANCE CLASS SHALL BE CP C2 UNLESS OTHERWISE SPECIFIED.
7. FOR WELD TESTING PREFERENCES REFER DRG. No. ICF/SID-9-0-998.
8. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/SID-9-0-999
9. SCHEDULE OF REQUIREMENTS OF MANUFACTURE OF SIDEWALL/ ROOF ASSEMBLY SHALL COMPLY TO ICF/M/D/SPC-200 LATEST REVISION.
10. ITEM-24 (NAME PLATE) SHALL BE WELDED OR RIVETED AT SUITABLE LOCATION AS SHOWN IN THE DRAWING IF PROCURED FROM TRADE.
11. ALL THE THREADED HOLES SHALL BE PROVIDED WITH SUITABLE DUMMY BOLTS TO SAFEGUARD THE THREADS.
12. LEAK PROOF WELDING SHALL BE ENSURED.
13. FINAL ROOF ELEMENT COMPLETE SHALL BE MANUFACTURED USING PROPER FIXTURE.
14. MASKING SHOULD BE DONE AT ALL EARTHING LUG/BOSS/GROUNDING FLAPS WITH SUITABLE MASKING TAPE'S BEFORE PAINTING TO ENSURE PAINLESS EARTHING SURFACE AND THE MASKING TAPE'S SHALL BE REMOVED A FURNISHING STAGE DURING EARTHING CONNECTION OF ELECTRIC EQUIPMENTS.

SECTION M-M  
SCALE 1 : 2.5

12-2-26		<i>J. Heine</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

## FINAL ROOF ELEMENT COMPLETE

INDIAN RAILWAY STANDARDS  
INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET  
3 OF 3

82716011

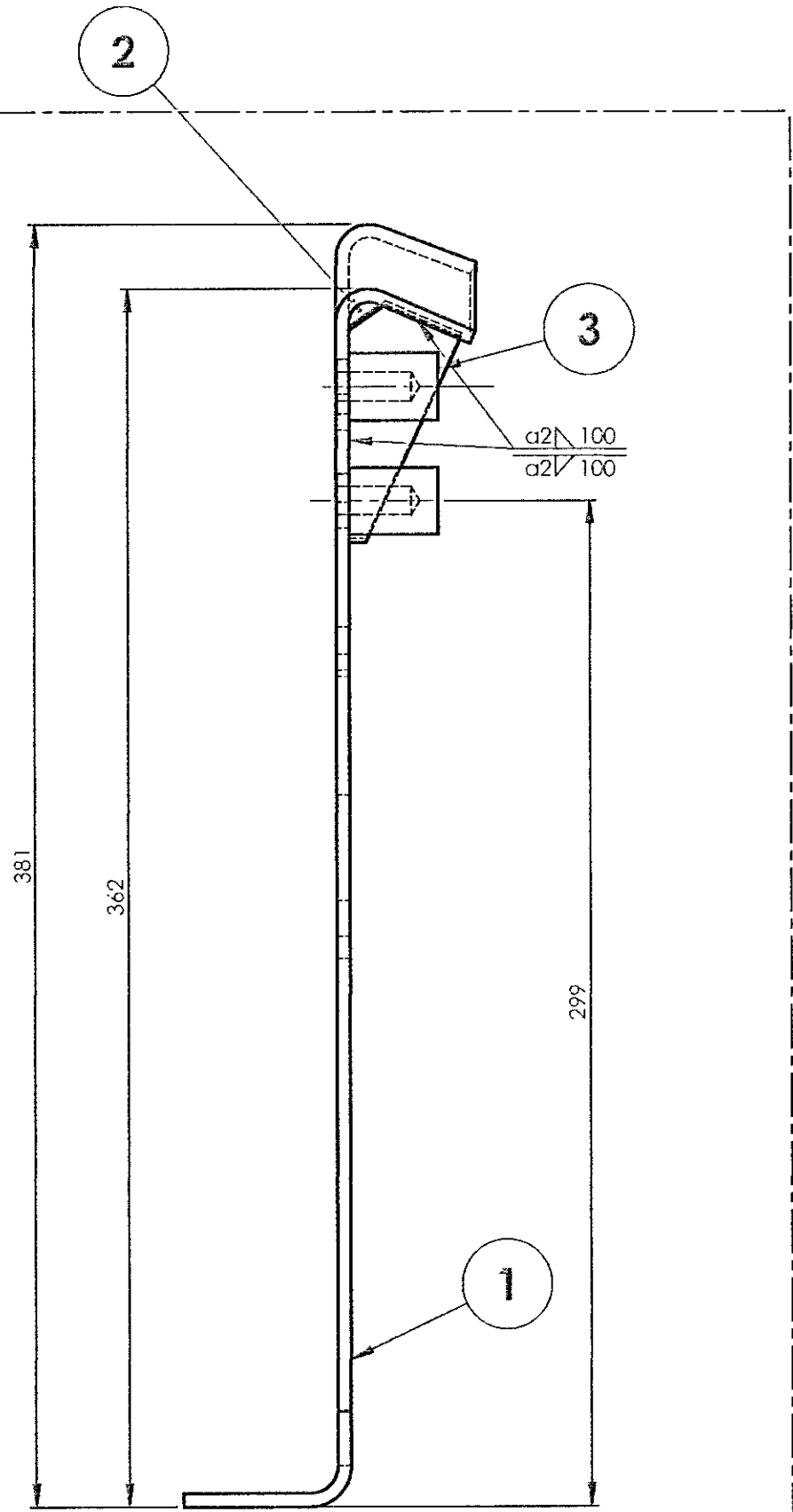
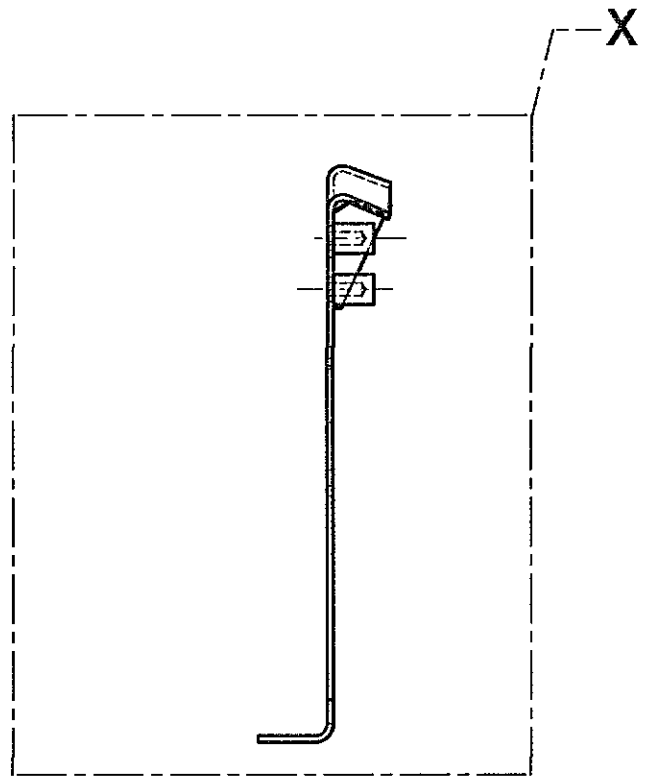
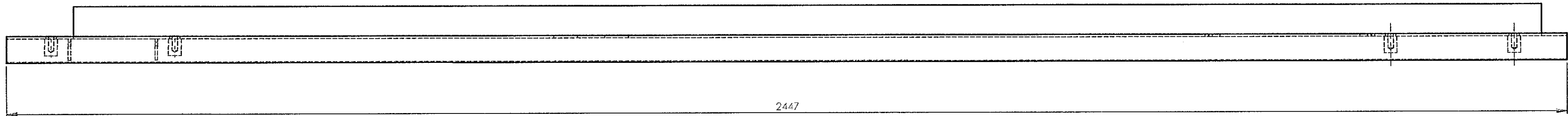
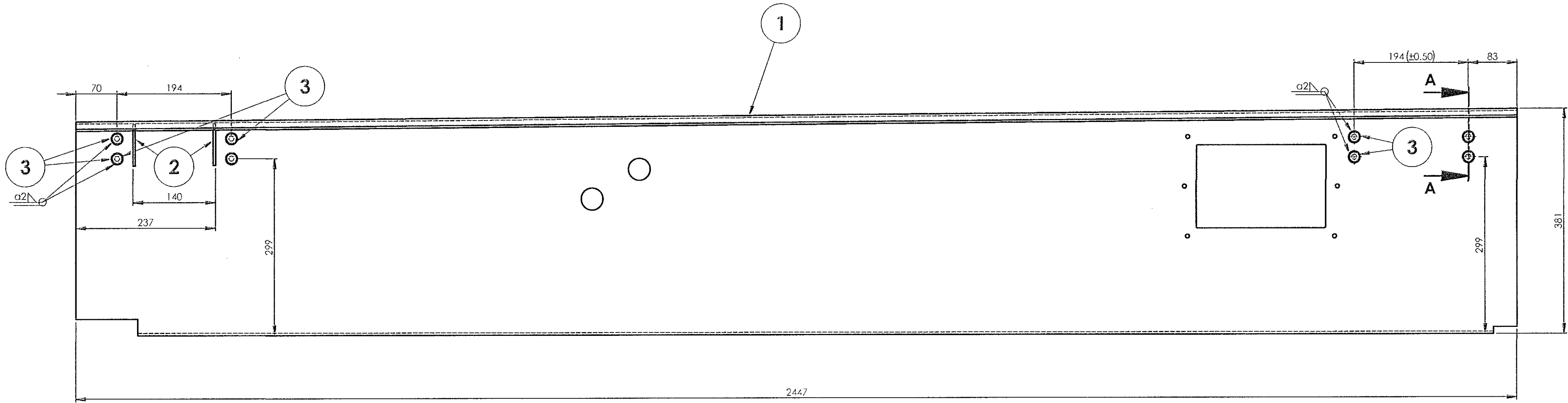
A1

82716013

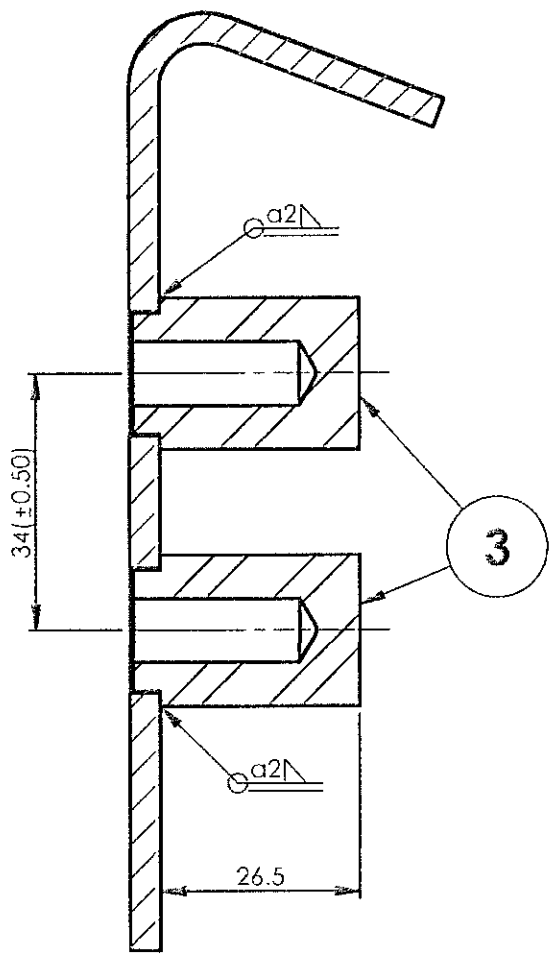
▽ ROUGH MACHINED  
▽▽ FINISH MACHINED  
▽▽▽ FINE FINISH MACHINED

① ROUGH CLEANED  
⑥ BURRS REMOVED  
⑧ CHAMFERED

ALT.		ZONE	REVISIONS	DESCRIPTION	APPROVED & DATE
a			ITEM-1 REVISED VIEWS UPDATED.		



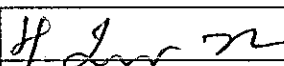
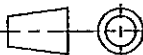
DETAIL X  
SCALE 1 : 2



SECTION A-A  
SCALE 1 : 1

NOTE:

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. FOR WELD TESTING PREFERANCES REFER DRG. No. ICF/STD-9-0-998.
7. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/STD-9-0-999.
8. ITEM - 3 SHOULD BE WELDED WITH ITEM - 1 USING SUITABLE FIXTURE

8	SCREWING PIECE		3	AAD16884		0.06		
2	RIB		2	AAA16929		0.043		
1	MEMBER		1	AAF16122		33.743		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6 Roof Construction			SURFACE AREA IN Sq.m.: 2.170			WT/ASSY IN Kgs:		
MEMBER COMPLETE					SCALE 1:5	SSE/D		
						CHD		
					ALT.	ALTD		E.SATHISH KUMAR
					a	DRN		E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		LWFAC/PP2		
INTEGRAL COACH FACTORY, CHENNAI - 600038						82716013	A1	

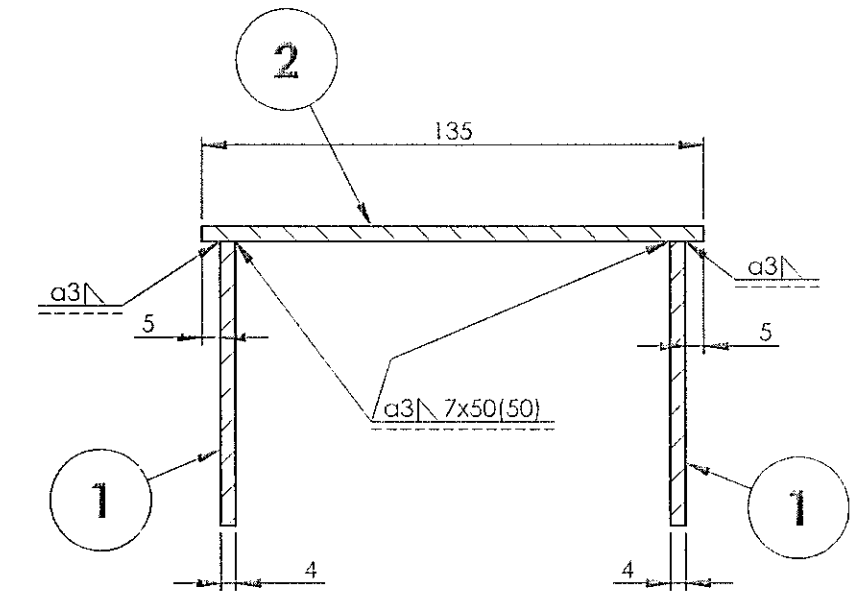
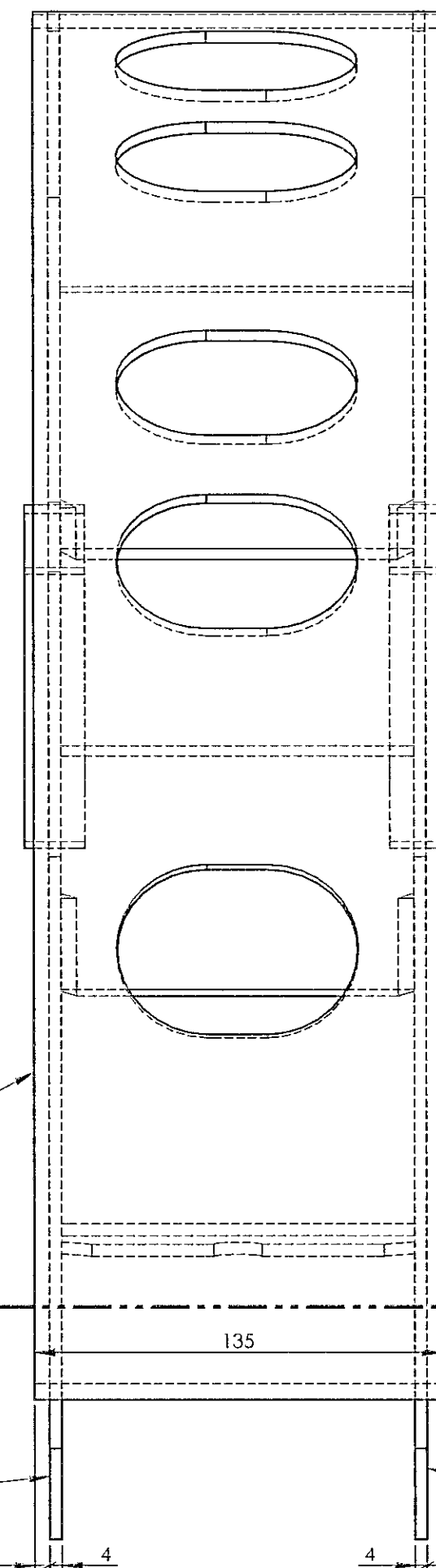
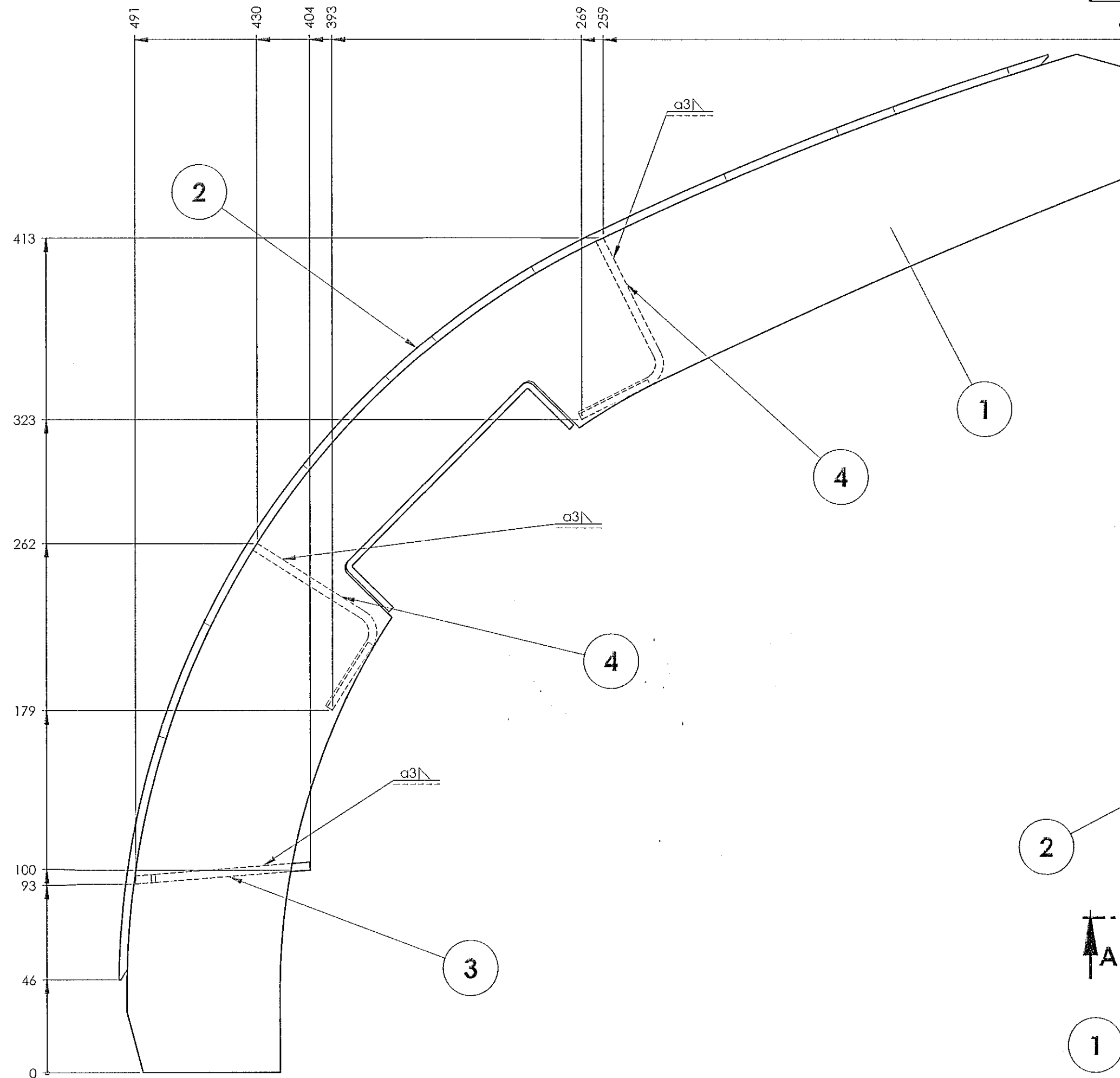
REF.DRG.NO.

18/01/26	04/09/25	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

82716015

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	18 CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A  
SCALE 1 : 2

## NOTE:

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. ALL BUTT WELDINGS TO BE DONE AT COACH OUTSIDE AND ROUGH GRINDING TO BE DONE ON THE SAME SIDE. PENETRATION SHOULD NOT BE GROUND.

2	STIFFENING ANGLE		4	AAA16934		0.434	
1	WEB		3	AAA16933		0.319	
1	FLANGE		2	AAA16932		2.367	
2	ROOF ARCH COMPLETE		1	82716018		1681.75	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-6 Roof Construction

SURFACE AREA IN Sq.m.: 0.469

WT/ASSY IN Kgs: 6.918

## ROOF ARCH COMPLETE

SCALE  
1:5SSE/D  
CHDALT  
DRN

ALTD

E.SATHISH KUMAR

LWFAC/PP2

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET  
1 OF 1

82716015

A2

REF.DRG.NO.

DATE OF LATEST ALT.	04/09/25	AME/SME
---------------------	----------	---------

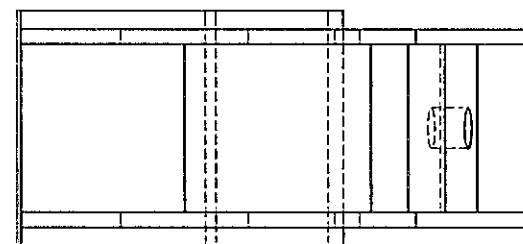
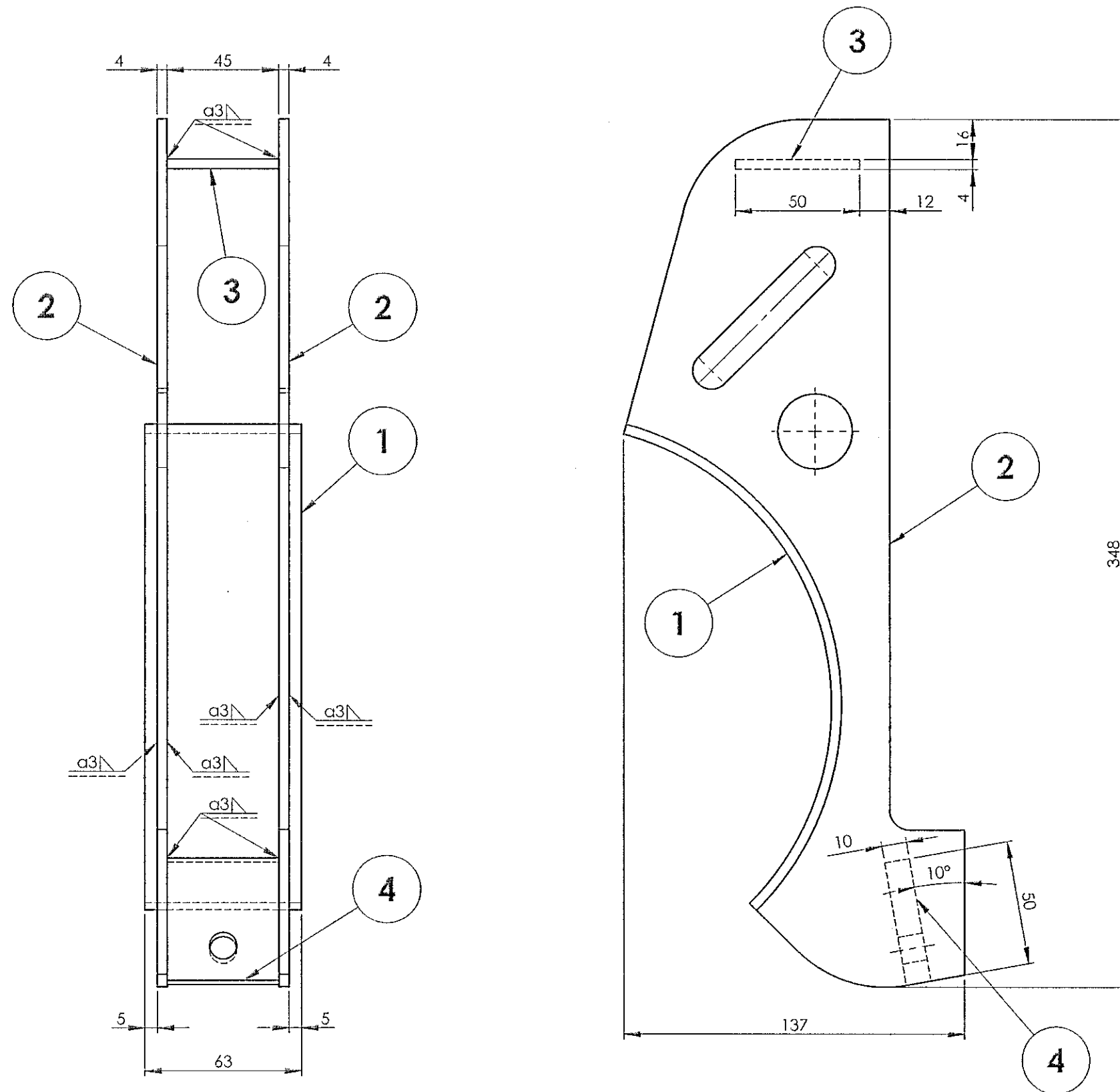
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS813-1986.



82716016

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①a BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①b CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



NOTE:

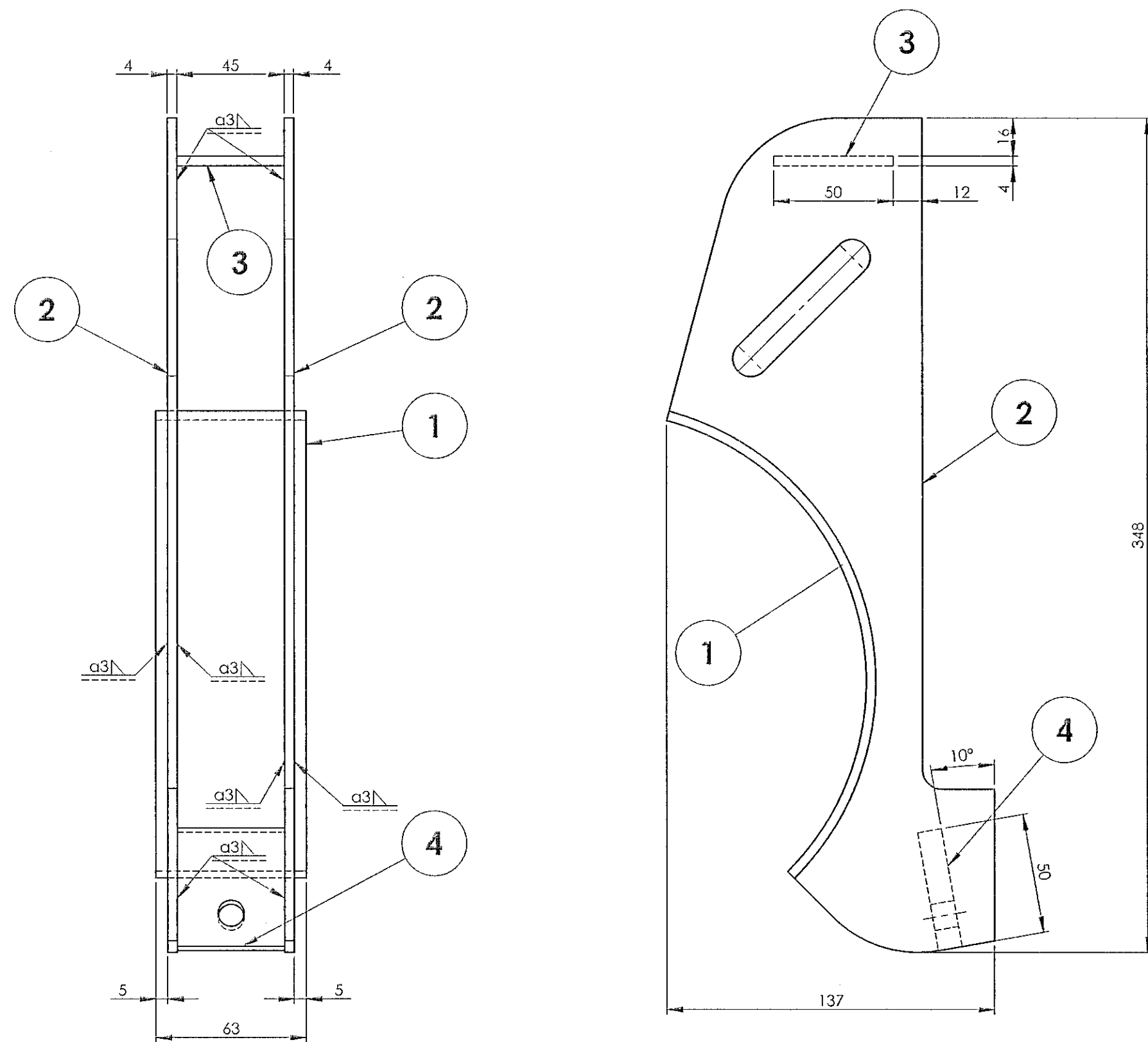
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. FOR WELD TESTING PREFERENCES REFER DRG.NO.ICF/STD-9-0-998.
7. FOR WELD PROCEDURE SPECIFICATION REFER DRG.NO.ICF/STD-9-0-999.

1	PLATE		4	AAB10073		0.172	
1	PLATE		3	AAB10010		0.072	
2	PLATE		2	AAF16201		0.610	
1	RING		1	AAB10008		0.483	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGs.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.: 0.130		WT/ASSY IN Kgs:	
AUX. WATER TANK FIXING BRACKET					SCALE 1:2	SSE/D	E.SATHISH KUMAR
					CHD	CHD	
					ALT	ALTD	
					DRN	DRN	
INDIAN RAILWAY STANDARDS					LWFAC/PP2		
INTEGRAL COACH FACTORY, CHENNAI - 600038					82716016		
SHEET 1 OF 1					A2		

82716017

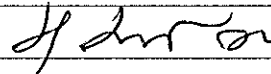
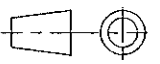
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			



**NOTE:**

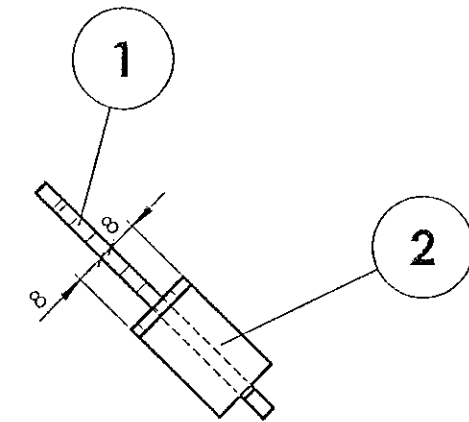
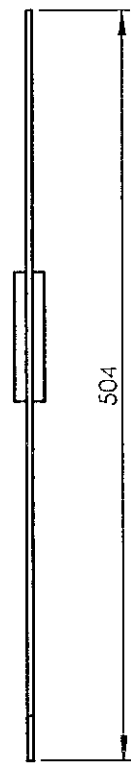
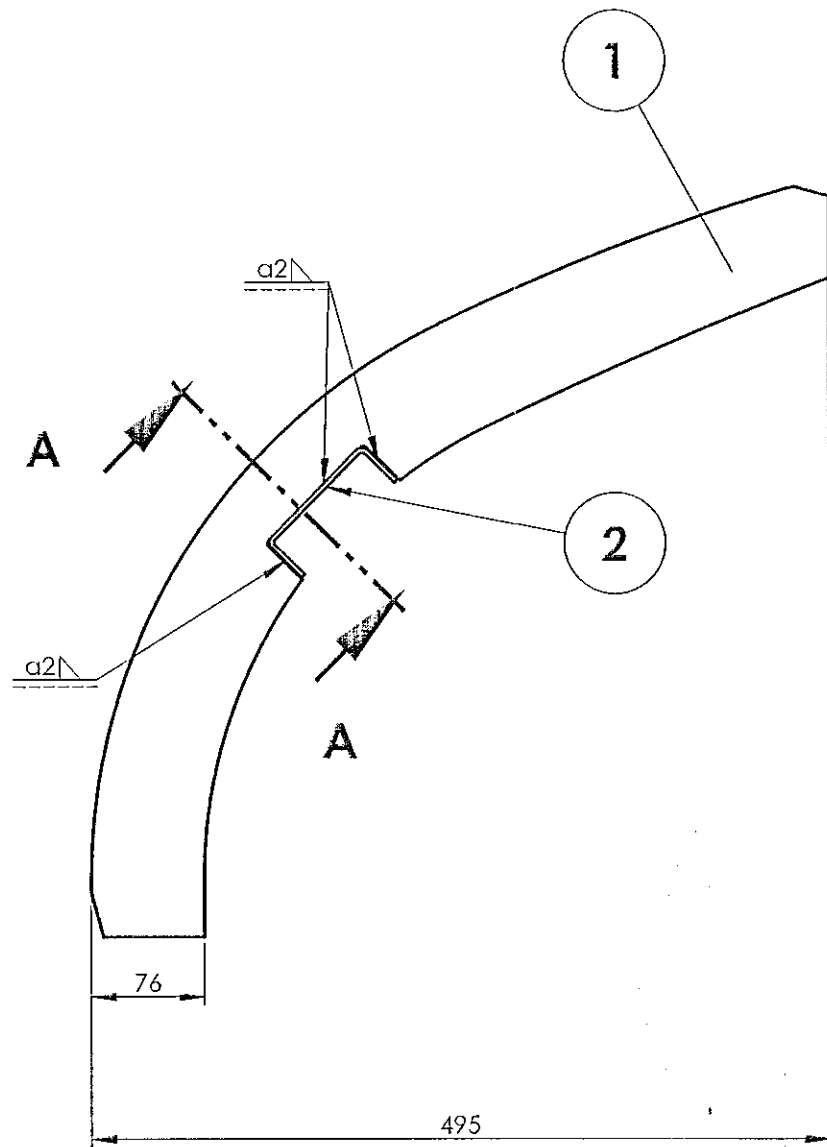
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. FOR WELD TESTING PREFERANCES REFER DRG.NO.ICF/STD-9-0-998.
7. FOR WELD PROCEDURE SPECIFICATION REFER DRG.NO.ICF/STD-9-0-999.

1	PLATE		4	AAB10073		0.172	
1	PLATE		3	AAB10010		0.072	
2	PLATE		2	AAFI6202		0.637	
1	RING		1	AAB10008		0.483	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction			SURFACE AREA IN Sq.m.:0.133		WT/ASSY IN Kgs:2.159		
AUX. WATER TANK FIXING BRACKET					SCALE 1:2	SSE/D	
						CHD	
					ALT	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038						LWFAC/PP2	
						SHEET 1 OF 1	
					82716017		A2

82716018

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	018 CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



SECTION A-A  
SCALE 1 : 2

NOTE:

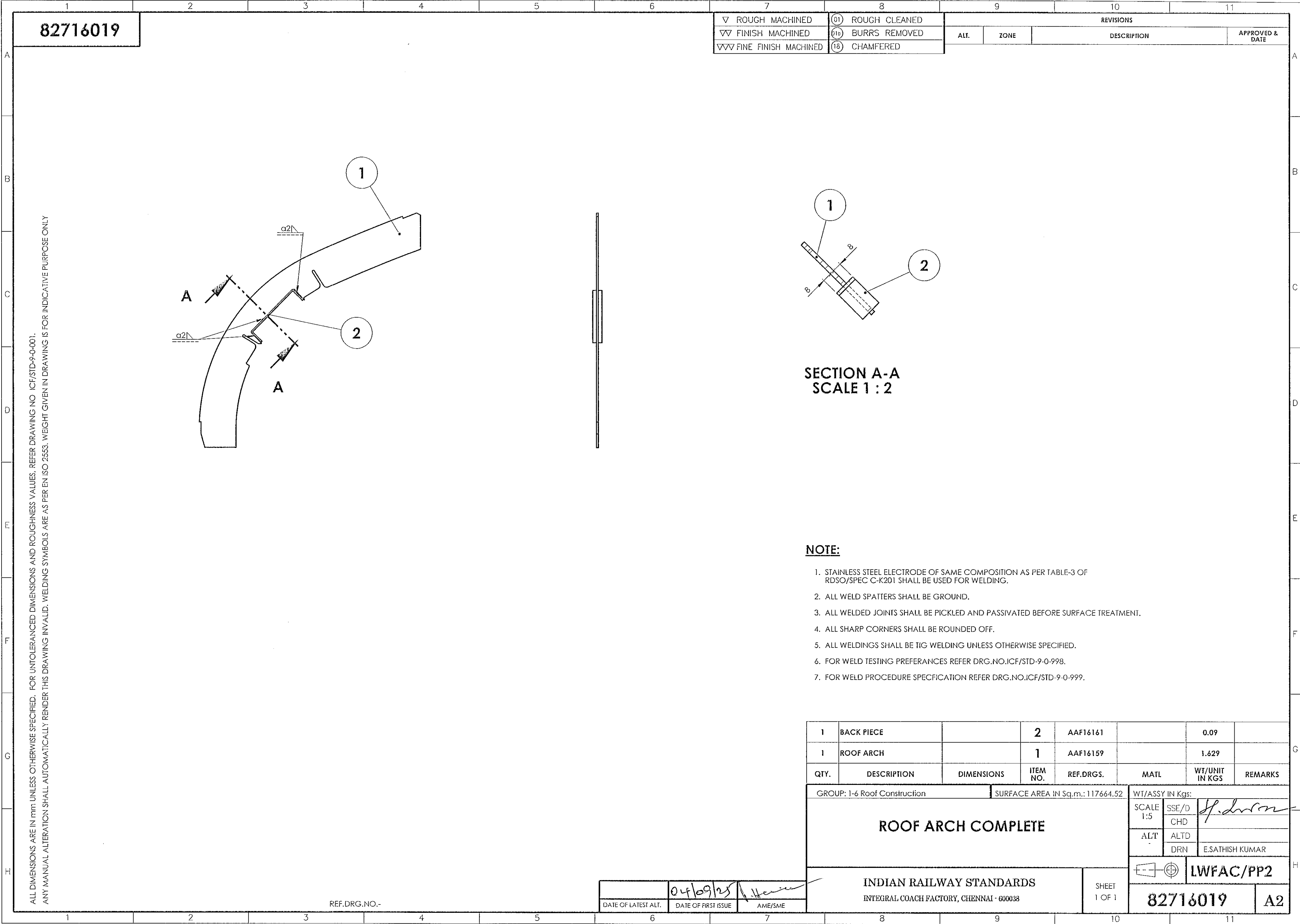
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. FOR WELD TESTING PREFERENCES REFER DRG.NO.ICF/STD-9-0-998.
7. FOR WELD PROCEDURE SPECIFICATION REFER DRG.NO.ICF/STD-9-0-999.

1	BACK PIECE		2	AAF16161		0.07	
1	ROOF ARCH		1	AAF16158		1.623	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: -		SURFACE AREA IN Sq.m.: 114996.21			WT/ASSY IN Kgs:		
ROOF ARCH COMPLETE					SCALE 1:5	SSE/D	H. L. L. L.
						CHD	
					ALT	ALTD	
						DRN	SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		LWFAC/PP2	
						82716018	
						A2	

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

REF.DRG.NO.-

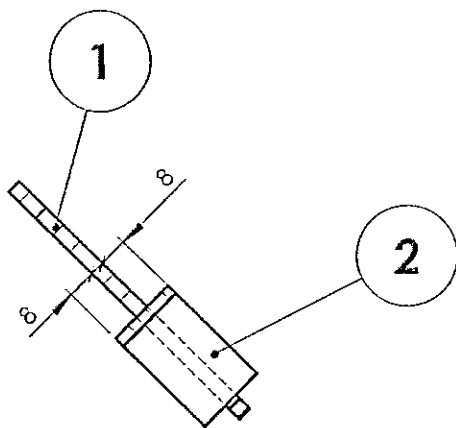
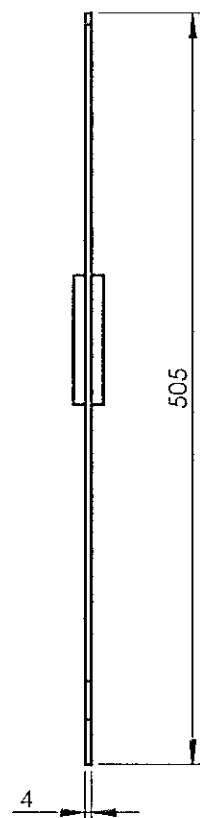
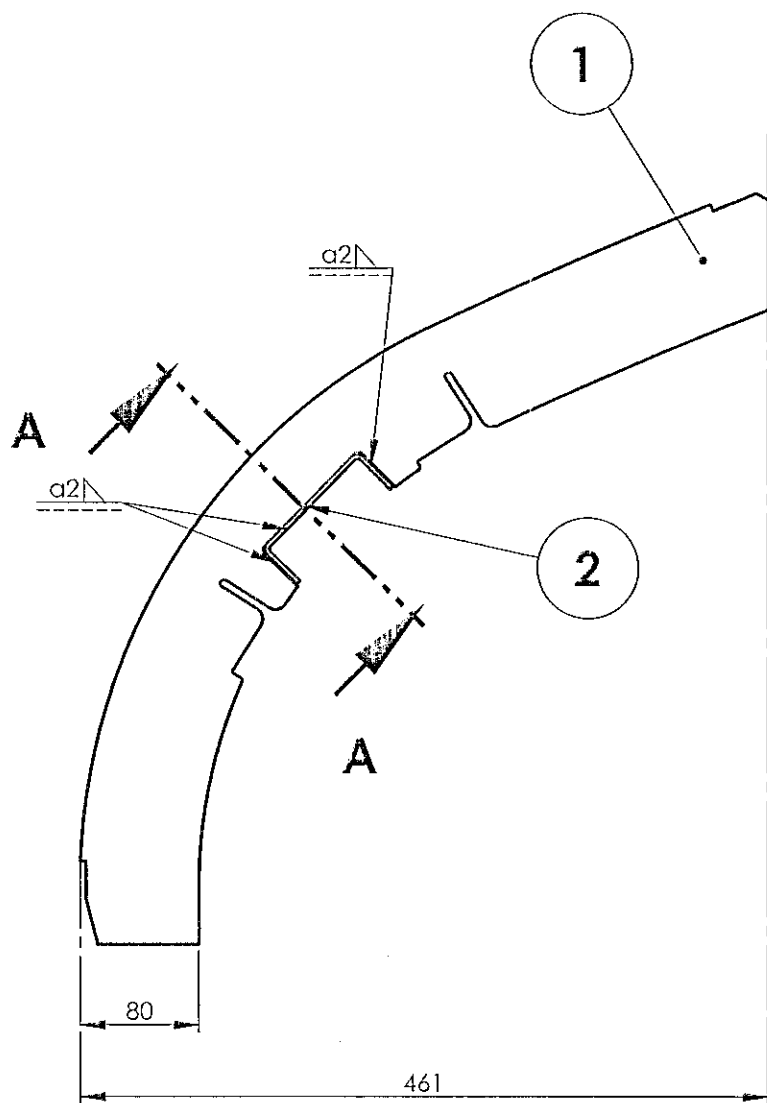
DATE OF LATEST ALT.	04/09/25	AME/SME
---------------------	----------	---------



82716020

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①b CHAMFERED

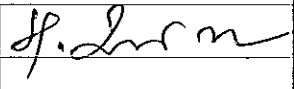
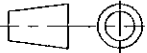
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



SECTION A-A  
SCALE 1 : 2

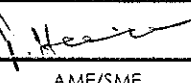
NOTE:

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
3. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
6. FOR WELD TESTING PREFERANCES REFER DRG.NO.ICF/STD-9-0-998.
7. FOR WELD PROCEDURE SPECIFICATION REFER DRG.NO.ICF/STD-9-0-999.

1	BACK PIECE		2	AAF16161		0.07		
1	ROOF ARCH		1	AAF16160		1.614		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 114918.25			WT/ASSY IN Kgs:			
ROOF ARCH COMPLETE					SCALE 1:5	SSE/D		
						CHD		
					ALT	ALTD		
						DRN		E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					 LWFAC/PP2			
					SHEET 1 OF 1			82716020

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

REF.DRG.NO.-

DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME
	04/09/25	

AAA10962

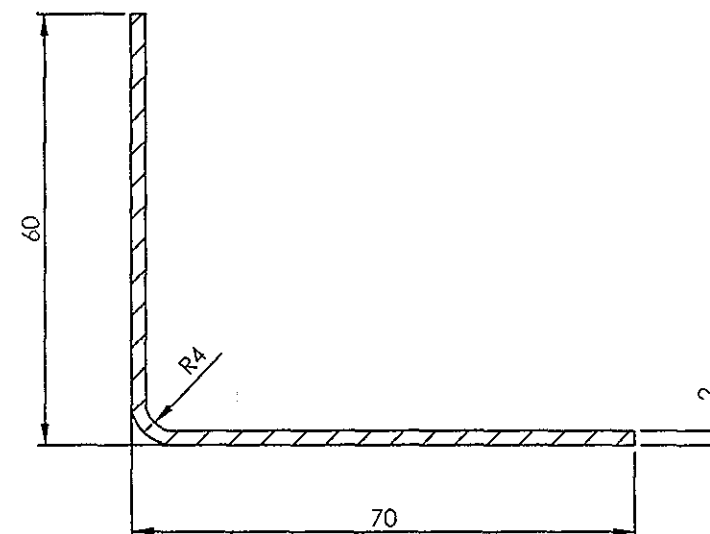
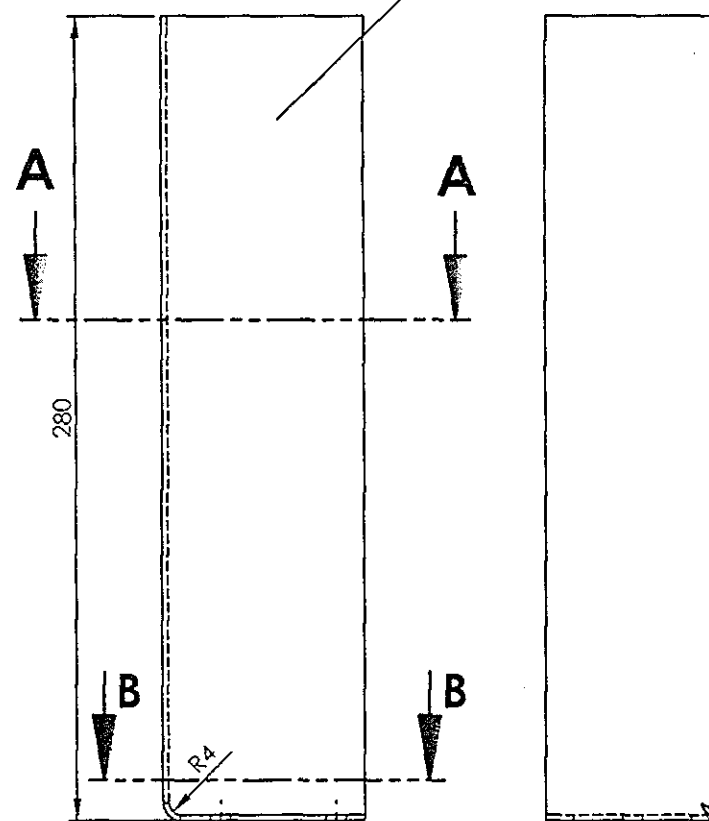
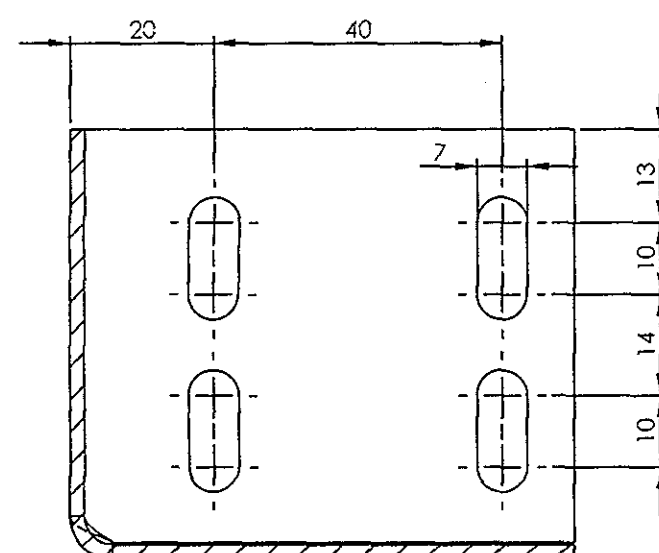
▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖⊖ BURRS REMOVED
▽▽▽ NE FINISH MACHINED	⊖⊖⊖ CHAMFERED

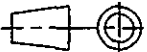
REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &  
DATESECTION A-A  
SCALE 1 : 1SECTION B-B  
SCALE 1 : 1

1	BRACKET	2x126x346	1		RDSO/SPEC C-K201 X2CrNi12	0.615		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	
GROUP: 1-0		SURFACE AREA IN Sq.m.:0.079			WT/ASSY IN Kgs:0.615			
BRACKET					SCALE	SSE/D	L. Panduranga Rao	
					1:2.5	CHD		
					ALT.	ALTD	L.PANDURANGA RAO	
						DRN		
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			AAA10962	A3

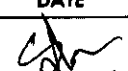
REF.DRG.NO.3 10113.0.20.095.119

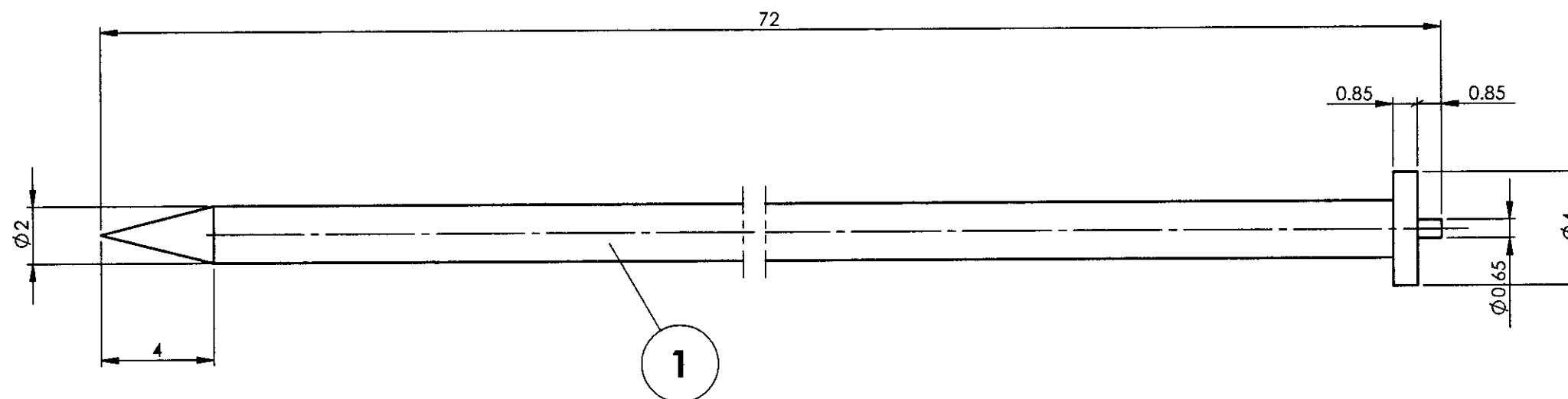
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC/STD 9 0 001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.

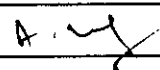
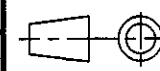
AAA16493

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

## REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		DRAWING REVISED.	



1	WELDING PIN	Ø 4 x 72	1		IS:6528 X04Cr18Ni10	0.002	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF CONSTRUCTION				SURFACE AREA IN Sq.m.: 0.000		WT/ASSY IN Kgs:	
WELDING PIN					SCALE 5:1	SSE/D CHD	
					ALT. a	ALTD DRN	A.Palanichamy
							3D: A.Palanichamy 2D: P.Murugan
							
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAA16493	
INTEGRAL COACH FACTORY, CHENNAI - 600038						A3	


ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553.  
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

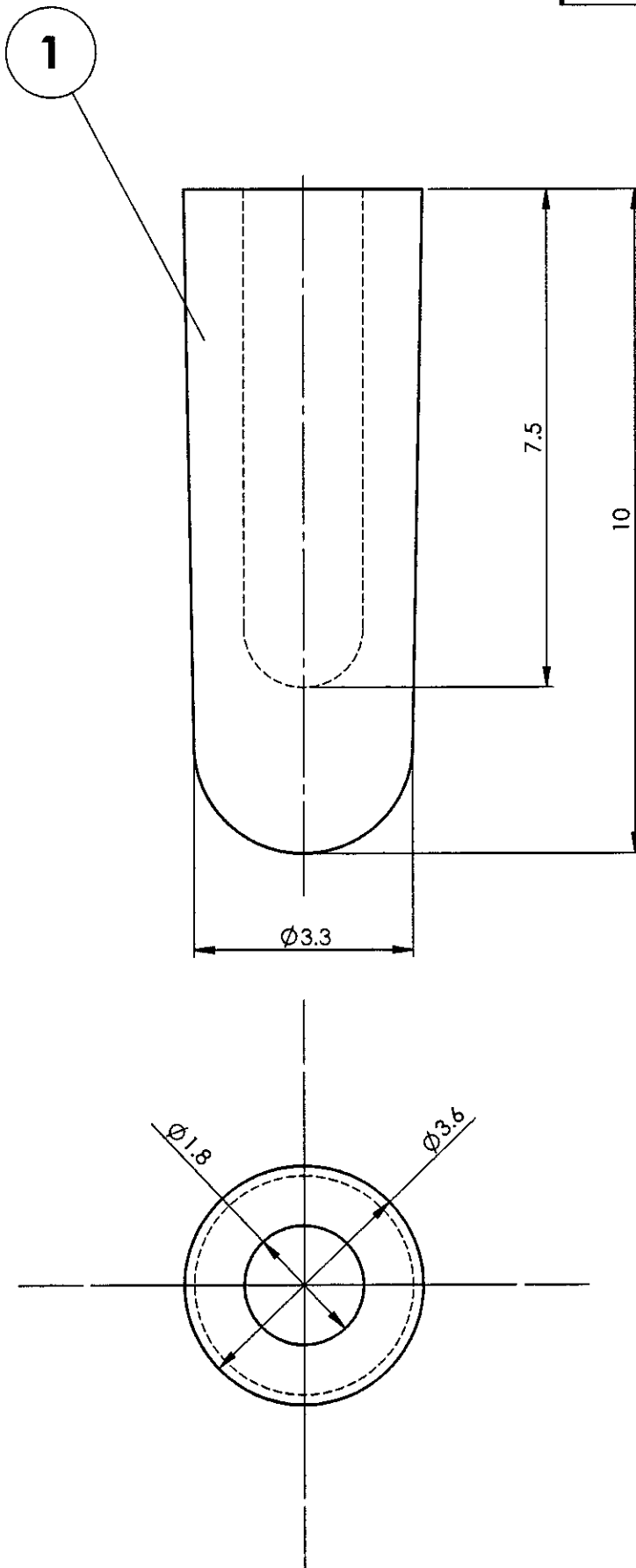
REF.DRG.NO.mi001576, ITEM-1


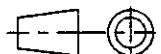
06-02-2024	19-07-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME


AAA16494

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①8 CHAMFERED

REVISIONS				APPROVED & DATE
ALT.	ZONE	DESCRIPTION		
a		DRAWING REVISED.		



1	CAP	Ø3.6x10	1		IS:5831	0.000	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF CONSTRUCTION		SURFACE AREA IN Sq.m.:0.000			WT/ASSY IN Kgs:		
CAP					SCALE	SSE/D	
					10:1	CHD	
					ALT.	ALTD	A.Palanichamy
					a	DRN	3D:A.Palanichamy 2D:P.Murugan
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600036							
					SHEET 1 OF 1	AAA16494	A3

06-02-2024	19-07-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

REF.DRG.NO.mi001576, ITEM-2


ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

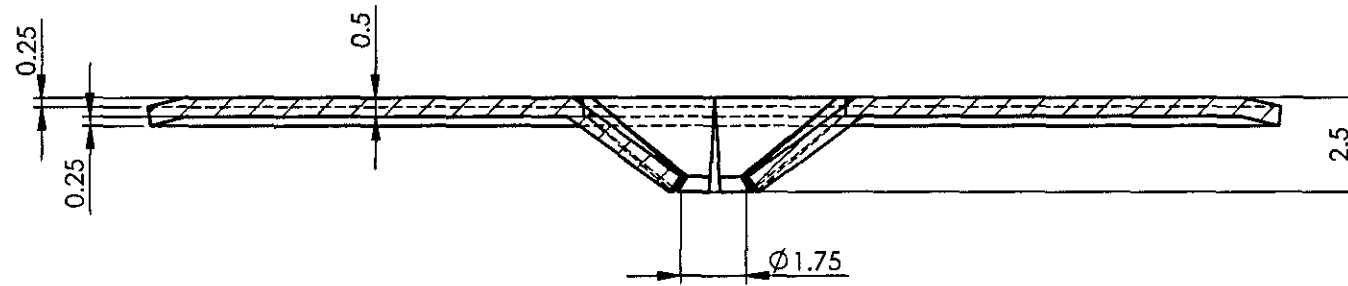
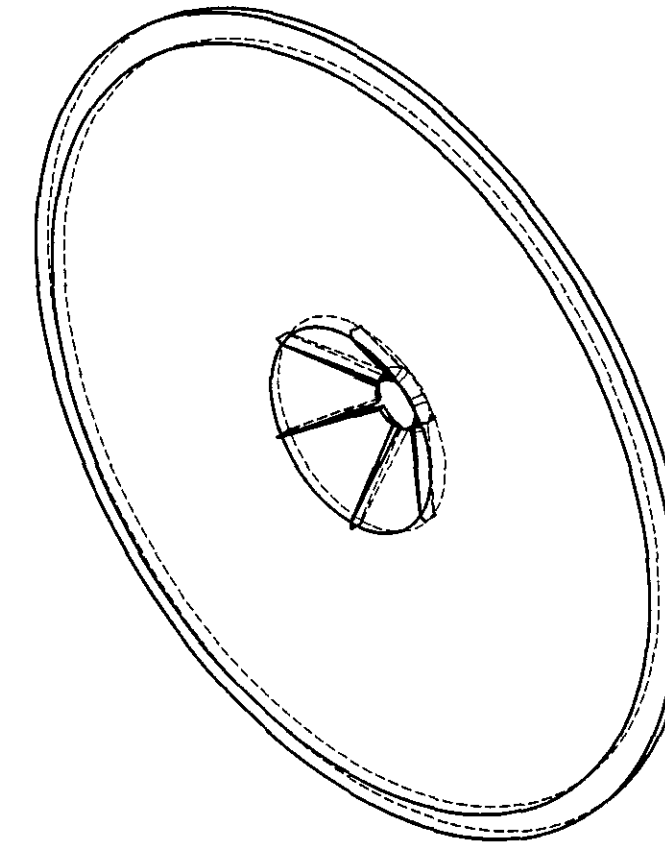
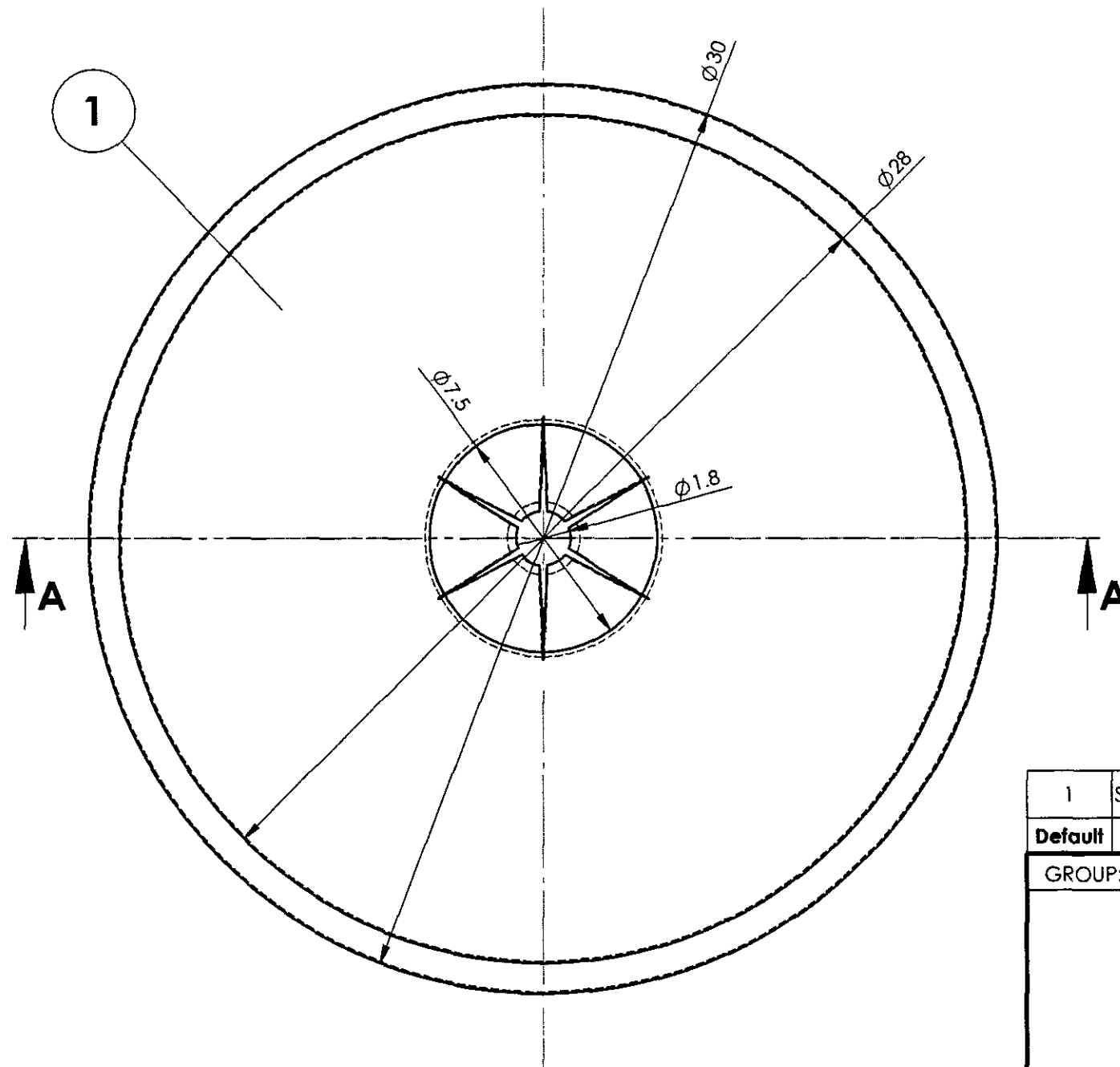


AAA16495

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①B CHAMFERED

## REVISIONS


ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		DRAWING REVISED.	

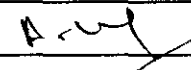
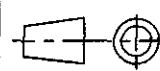
SECTION A-A  
SCALE 5 : 1

ISOMETRIC VIEW

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553.  
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.mi001576, ITEM-3

06-02-2024	19-07-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

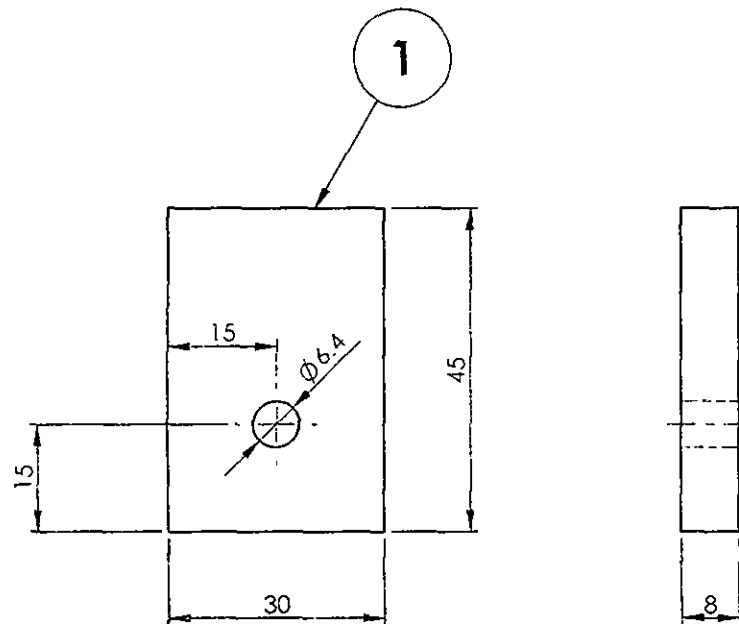
1	SERRATED SPRING WASHER	DIA 30 x 0.5 THICK	1		IS:4072 Gr.65C6	0.003	COATING TO MDT5057
Default	DESCRIPTION	DIMENSIONS	ITEM NO	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF CONSTRUCTION				SURFACE AREA IN Sq.m.:0.001		WT/ASSY IN Kgs:	
SERRATED SPRING WASHER					SCALE 2:1	SSE/D	
						CHD	
					ALT. a	ALTD	A.Palanichamy
						DRN	3D:A.Palanichamy 2D:P.Murugan
INDIAN RAILWAY STANDARDS							
					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16495		A3

AAA16900

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

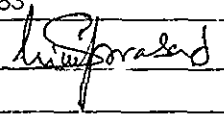
## REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
------	------	-------------	-----------------



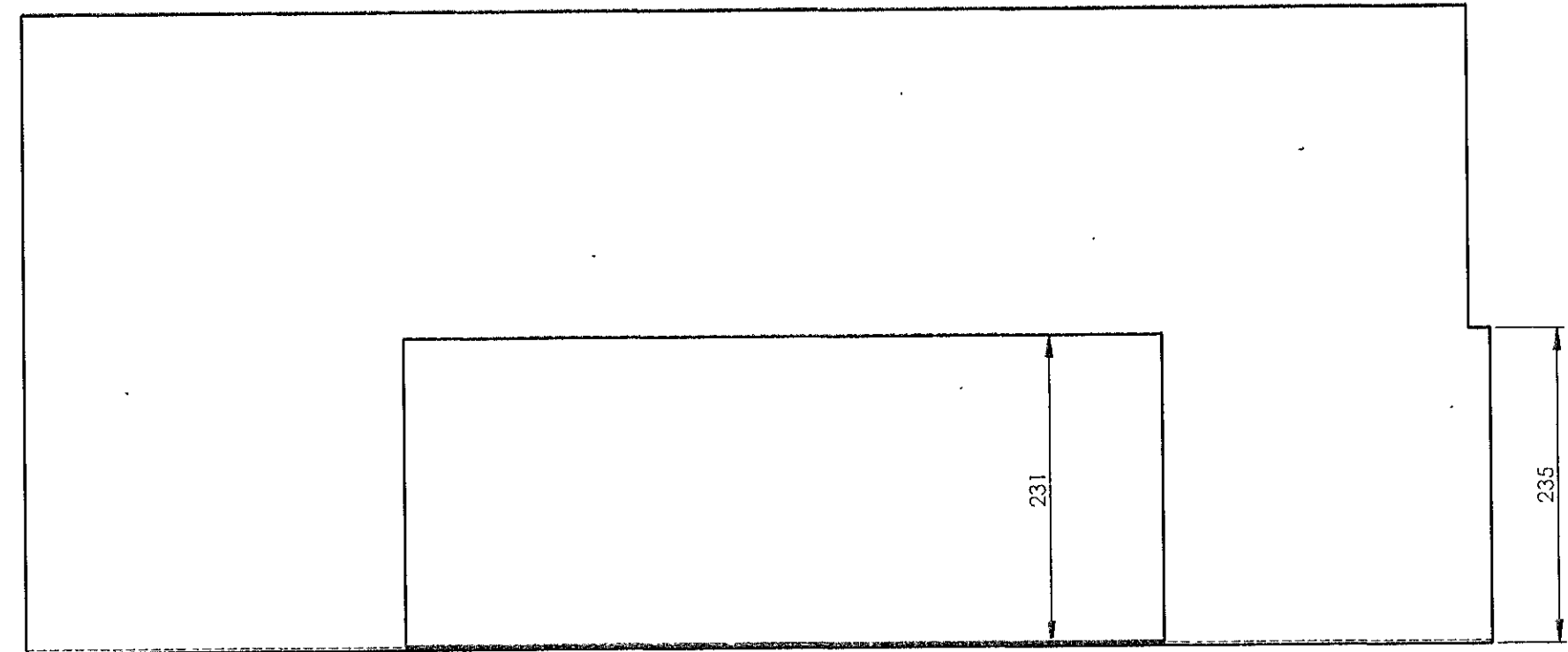
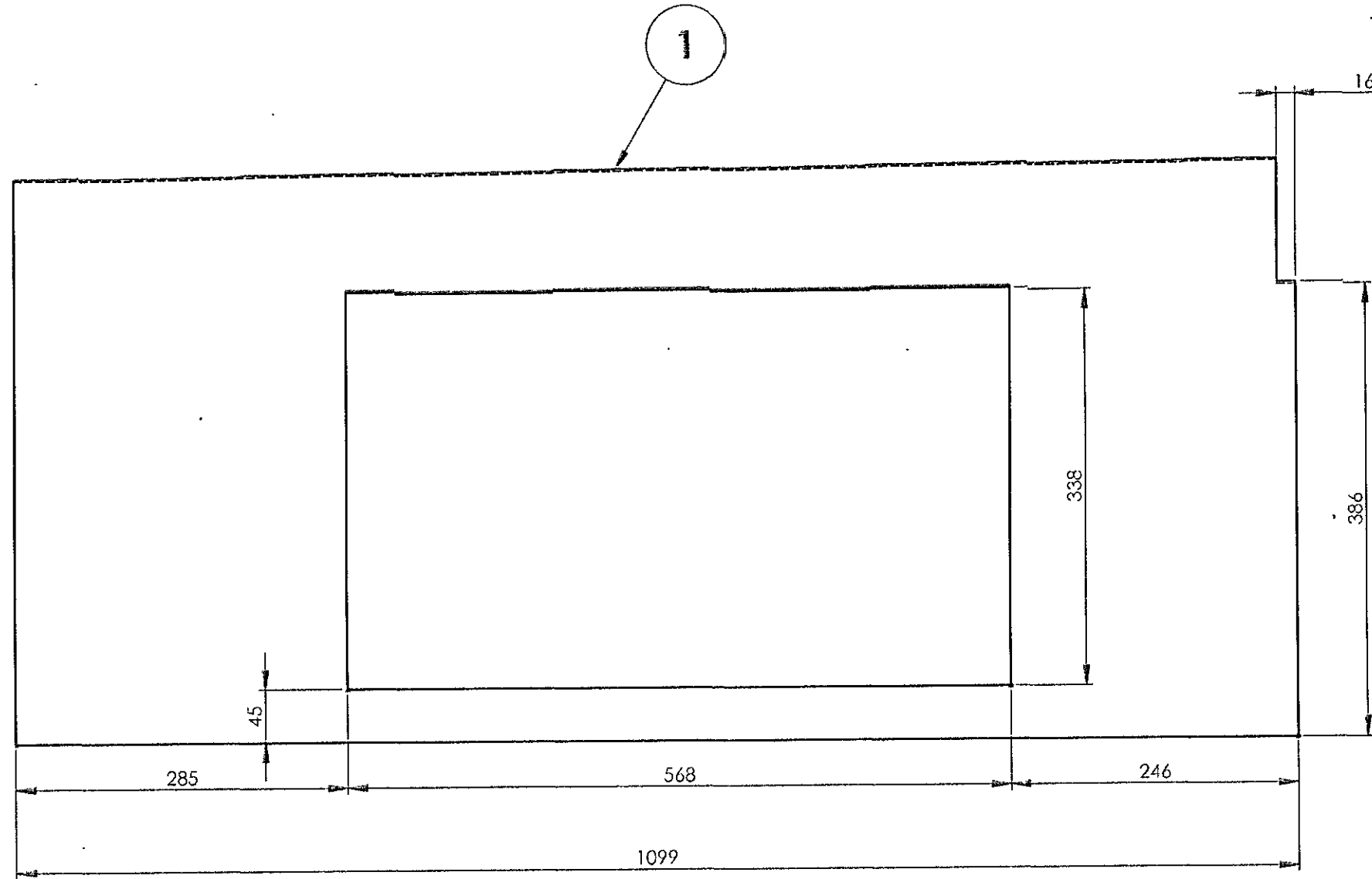
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS ADD TOLERANCES AS VALUES. REFER DRAWING NO IC/STD 9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.4.10113.0.20.095.138

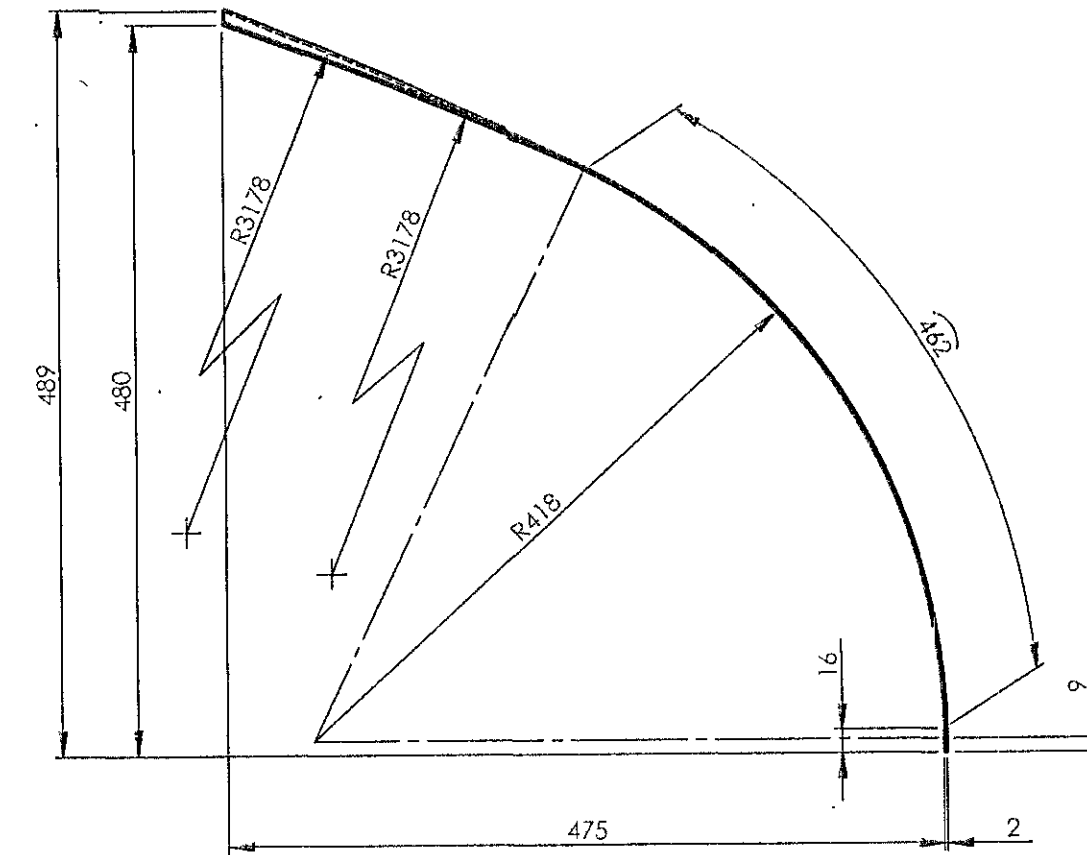
—	GROUNDING FLAP	8 x 30 x 45	1		RDSO/SPEC C- K201 X5 Cr Ni 18 10	0.084	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.004			WT/ASSY IN Kgs:0.083		
GROUNDING FLAP					SCALE	SSE/D	
					1:1	CHD	
					ALT.	ALTD	
					DRN	K.Sriram	
					INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038		
					AAA16900		A3


AAA16917

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.



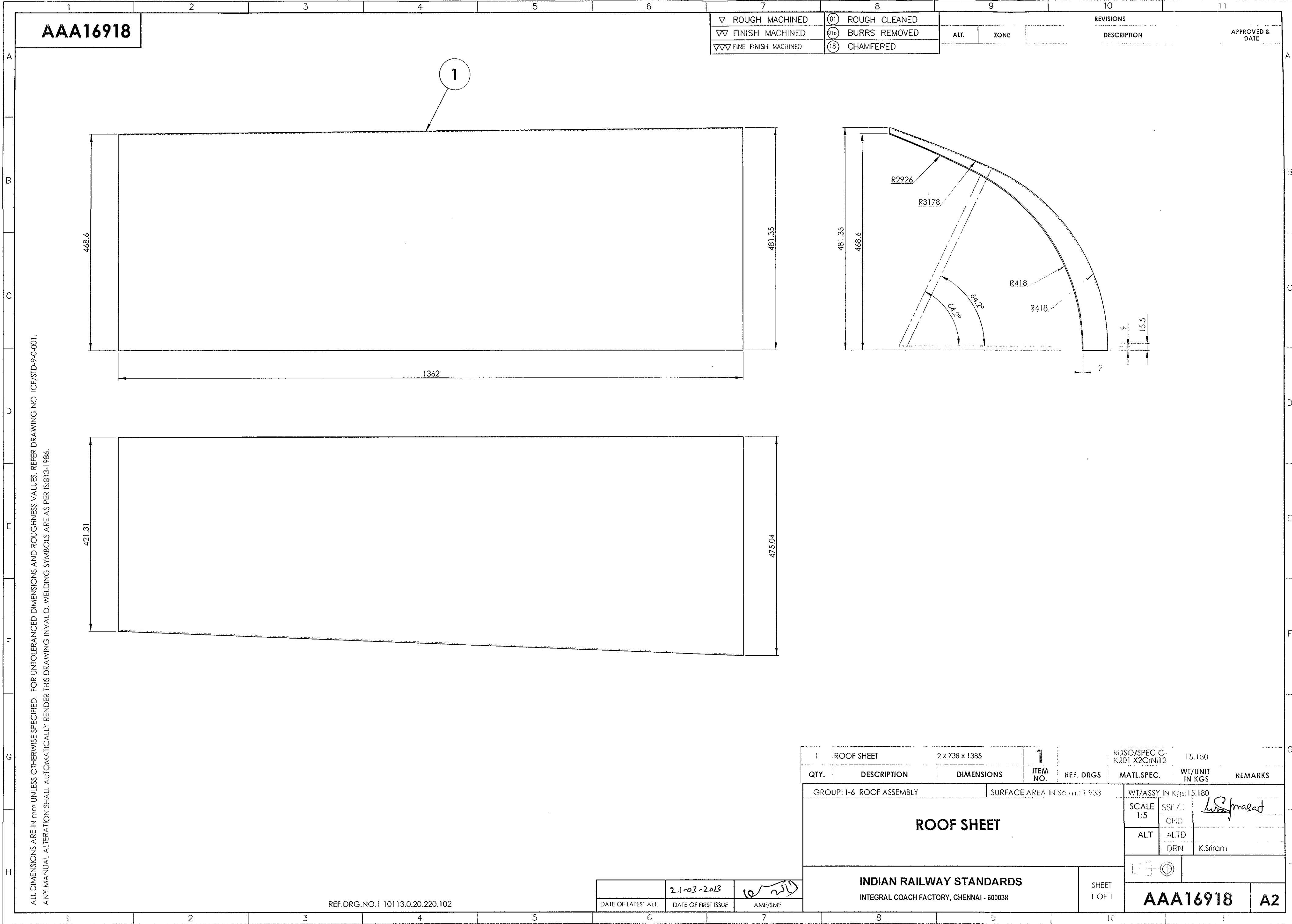
▽ ROUGH MACHINED	⑧1 ROUGH CLEANED	REVISIONS			APPROVED & DATE
▽▽ FINISH MACHINED	⑧1b BURRS REMOVED	ALT.	ZONE	DESCRIPTION	
▽▽▽ FINE FINISH MACHINED	⑧18 CHAMFERED	a		ITEM-1 CUTAWAY REVISED. VIEWS UPDATED.	1.4



1	ROOF SHEET	2 x 740 x 1099	1		RDSO/SPEC C-K201 X2CrNi12	8.879	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY			SURFACE AREA IN Sq.m : 1.137			WT/ASSY IN Kgs:8.879	
ROOF SHEET					SCALE 1:5	SSE/D	
						CHD	
					ALT a	ALTD	E.SATHISH KUMAR
						DRN	K.Sriram
					INDIAN RAILWAY STANDARDS		
INTEGRAL COACH FACTORY, CHENNAI - 600038							
					AAA16917		A2


12/2/26	21-03-2013	1.4
DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SME

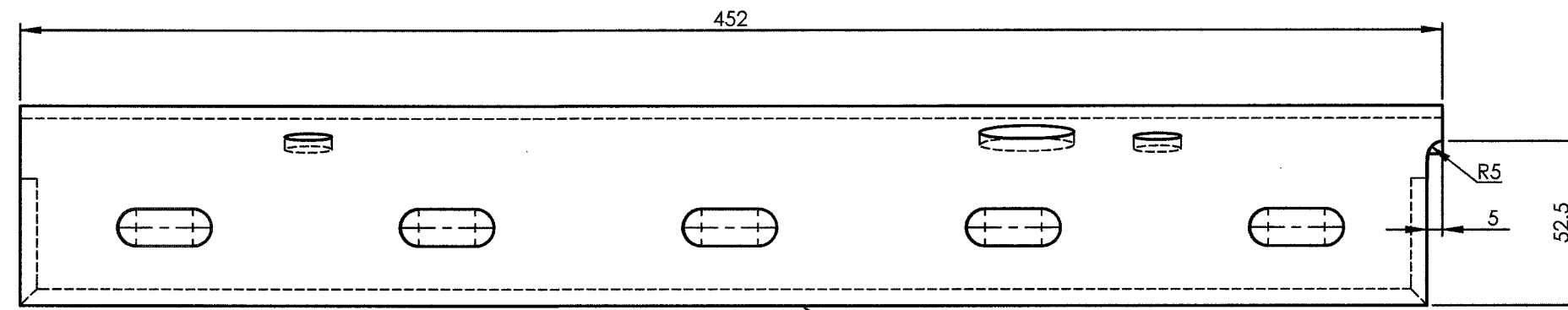
REF.DRG.NO.1 10113.20.220.101



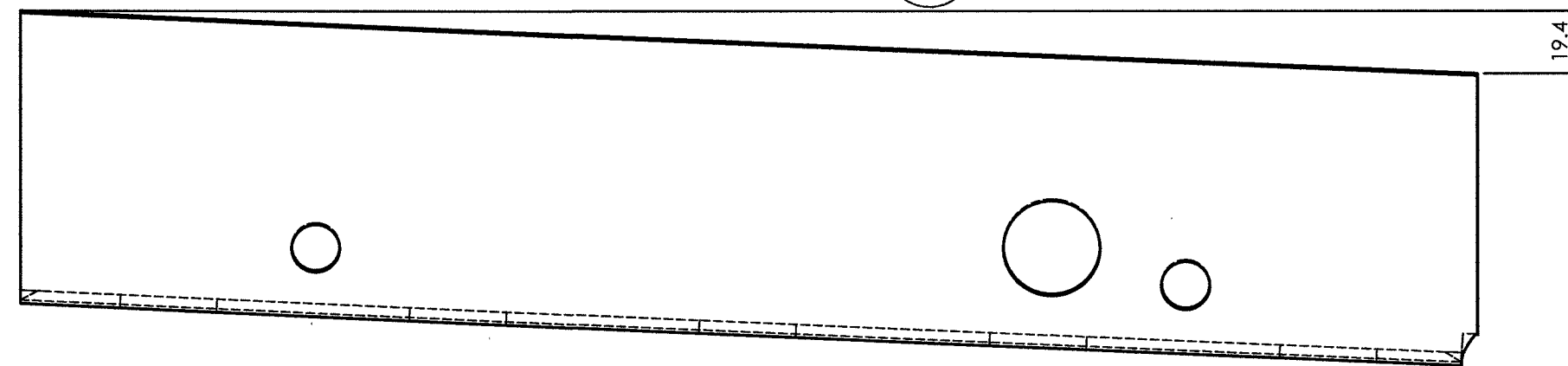
AAA16920

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	⑥ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑧ CHAMFERED

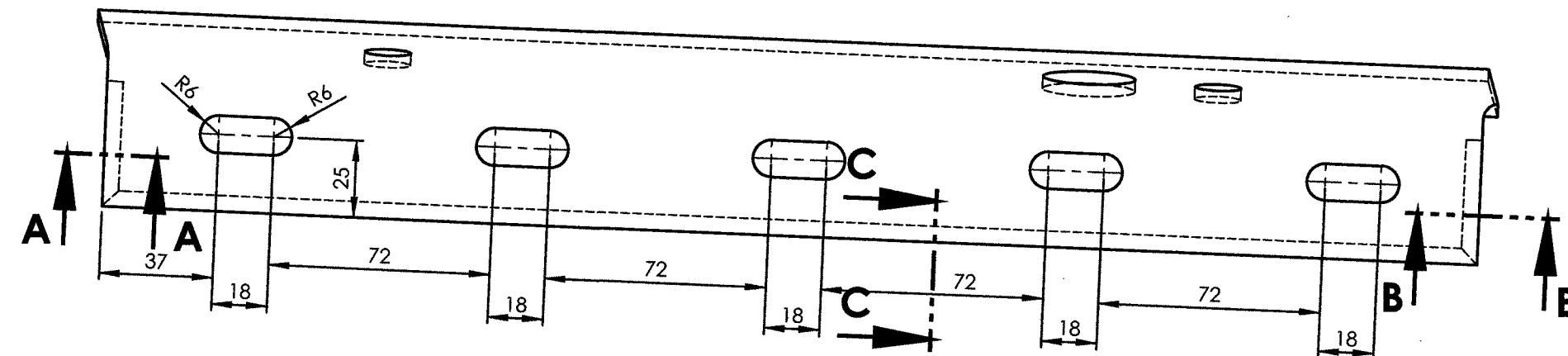
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		Ø 30 HOLES ADDED .	



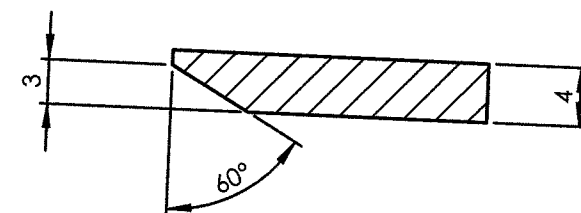
1



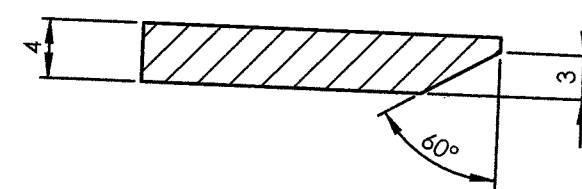
Y



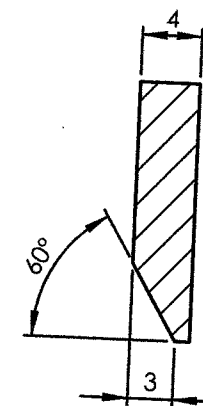
VIEW Y



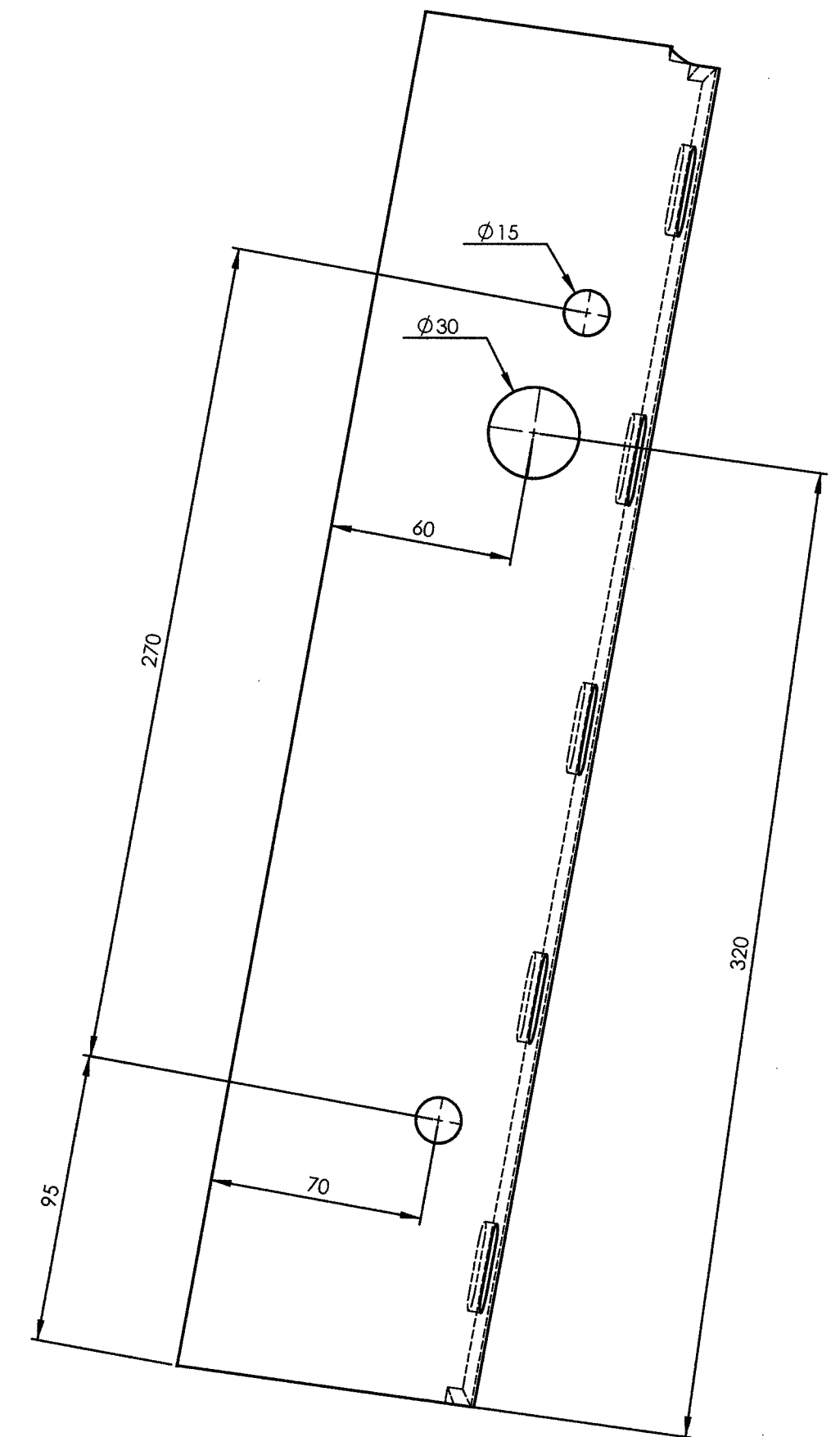
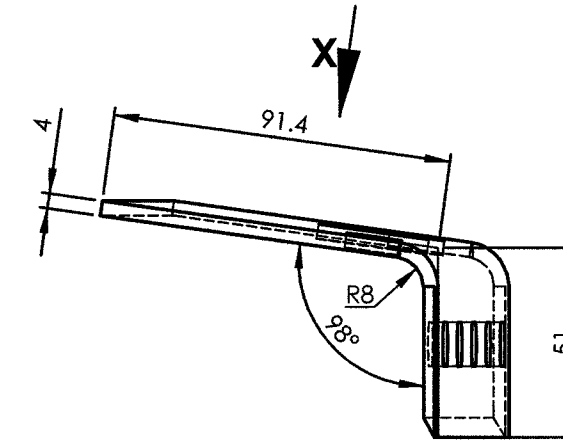
SECTION A-A  
SCALE 2 : 1



SECTION B-B  
SCALE 2 : 1



SECTION C-C  
SCALE 2 : 1



VIEW X

1	STIFFENING ANGLE	4 x 157 x 458	1		RDSO/SPEC C-K201 X2CrNi12	1.838	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY				SURFACE AREA IN Sq.m.: 0.123		WT/ASSY IN Kgs:	
STIFFENING ANGLE					SCALE 1:2	SSE/D	<i>L. Panduranga Rao</i>
					ALT a	CHD	E.SATHISH KUMAR
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAA16920	
INTEGRAL COACH FACTORY, CHENNAI - 600038						A2	

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS813-1986. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

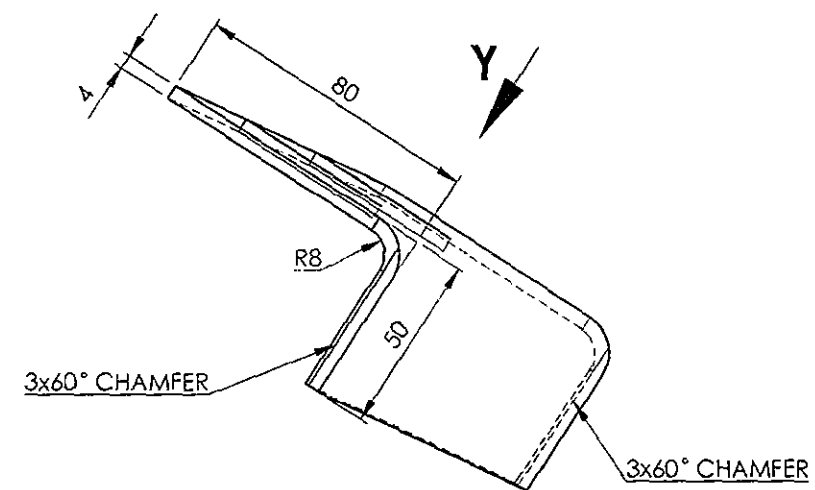
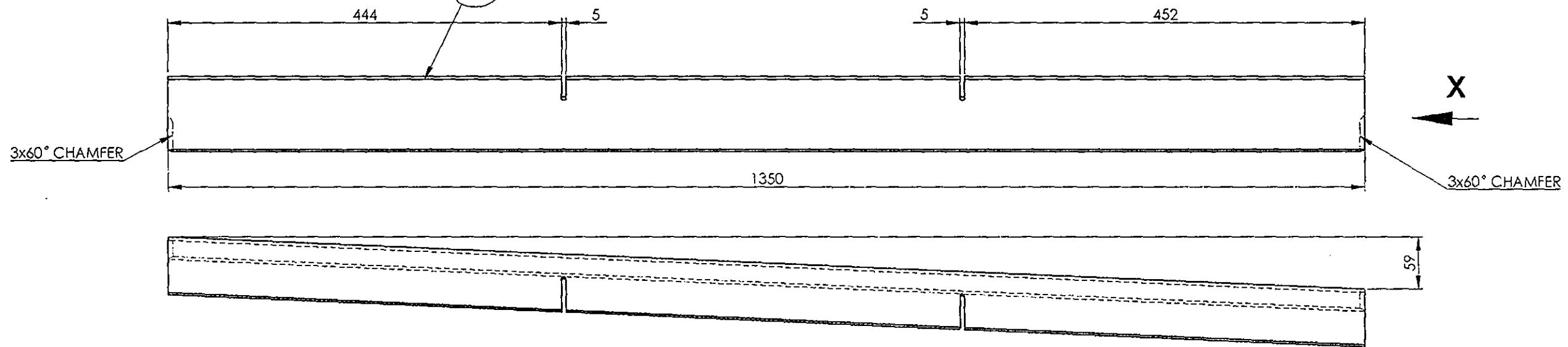
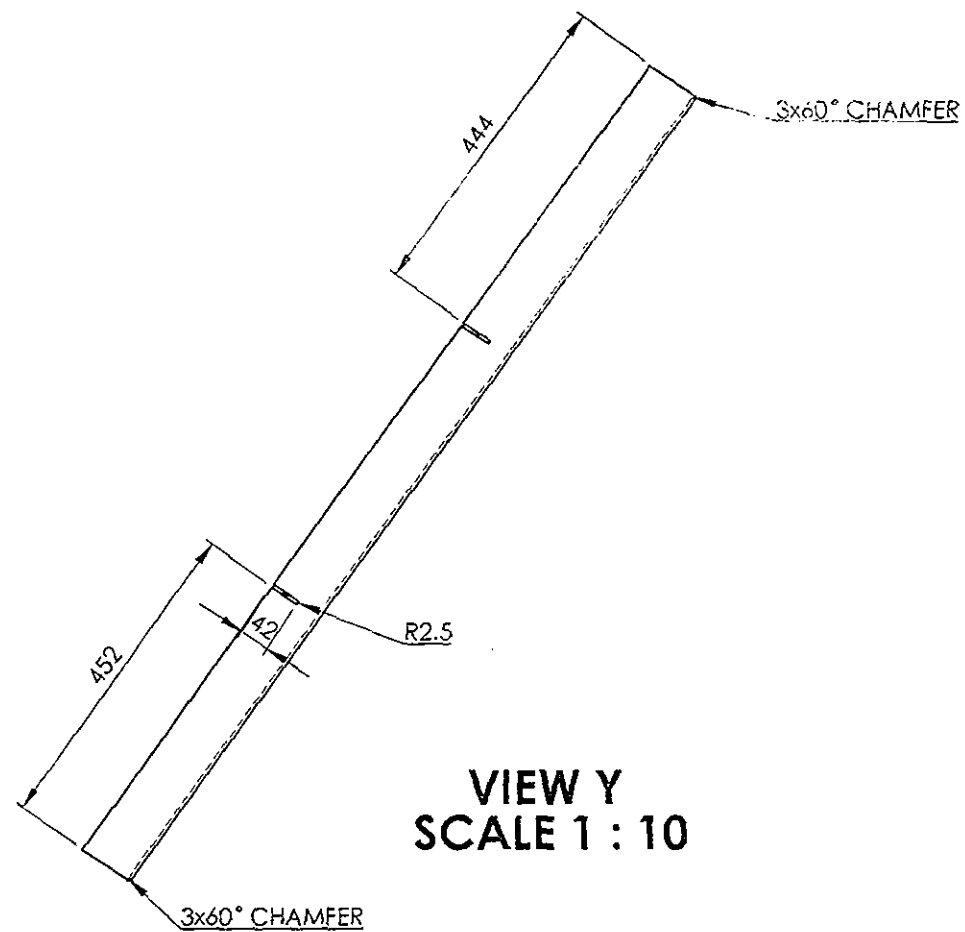
REF.DRG.NO.3 10113.0.20.200.119

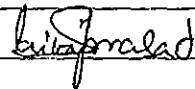
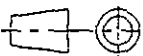
26-2-2019	21-3-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

AAA16921

▽ ROUGH MACHINED	③ ROUGH CLEANED
▽▽ FINISH MACHINED	④ BURRS REMOVED
▽▽▽ FINE FINISH VACUUM	⑤ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			

VIEW X  
SCALE 1 : 2VIEW Y  
SCALE 1 : 10

1	STIFFENING ANGLE	4 x 121 x 1355	1		RDSO/SPEC C-K201 X2CrNi12	5.224	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.339			WT/ASSY IN Kgs:5.224		
STIFFENING ANGLE					SCALE	SSE/D	
					1:5	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							A3
					AAA16921		

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICT/STD-9.0.001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.2 10113.0.20.200.109

AAA16922

▽ ROUGH MACHINED

① ROUGH CLEANED

▽▽ FINISH MACHINED

② BURRS REMOVED

▽▽▽ FINE FINISH VACUUMED

③ CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &  
DATE

1

3x60° CHAMFER

1350

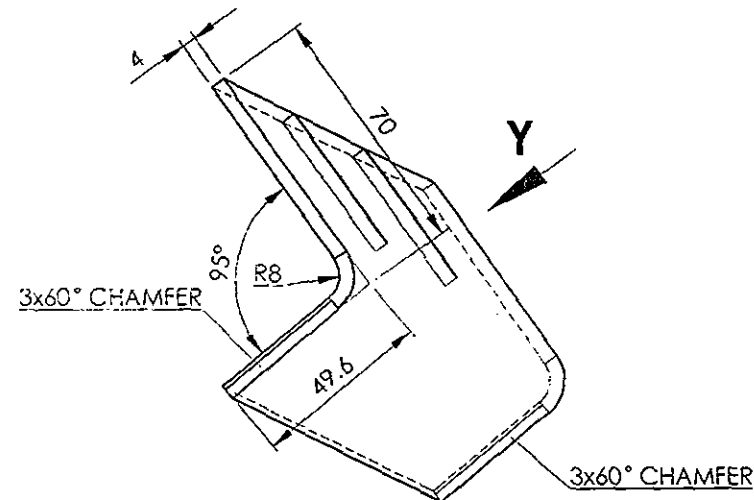
3x60° CHAMFER

X



58.9

3x60° CHAMFER

VIEW X  
SCALE 1 : 2

VIEW Y

3x60° CHAMFER

452

R2.5

1	STIFFENING ANGLE	4 x121 x 1350	1		RDSO/SPEC C- K201 X2CrNi12	4.841	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.315			WT/ASSY IN Kgs:4.841		
STIFFENING ANGLE					SCALE	SSE/D	<i>K. Sriram</i>
					1:5	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAA16922

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD. 9.0.001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.

REF.DRG.NO.2 10113.0.20.200.111

AAA16923

▽ ROUGH MACHINED

⊖ ROUGH CLEANED

▽▽ FINISH MACHINED

⊖⊖ BURRS REMOVED

▽▽▽ FINE FINISH MACHINED

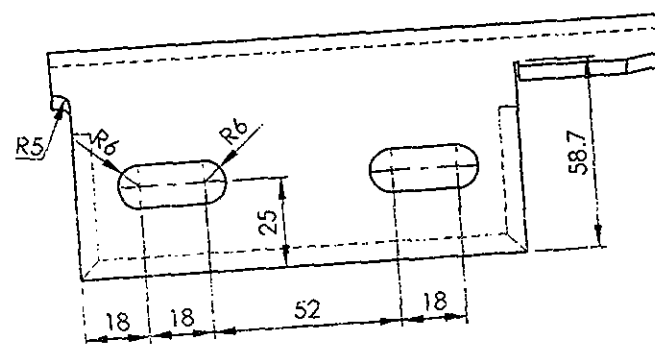
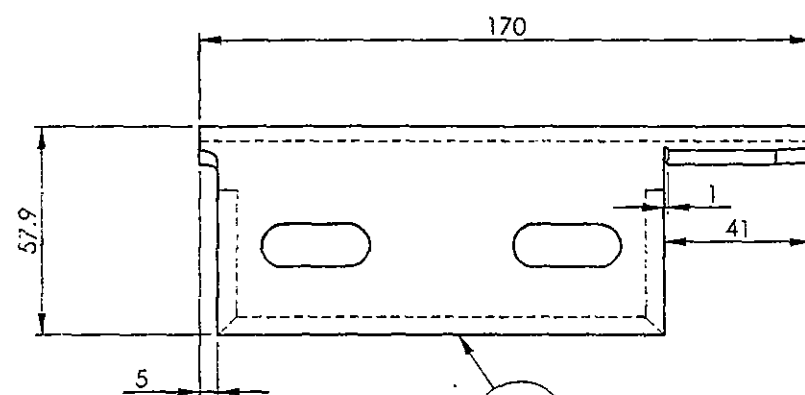
⊖⊖⊖ CHAMFERED

REVISIONS

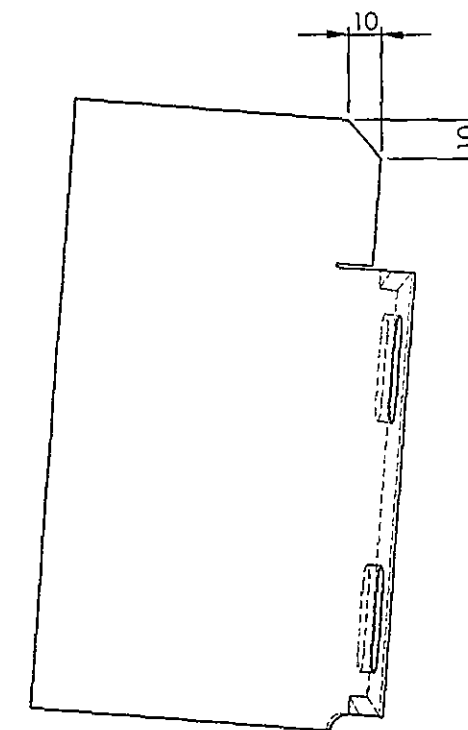
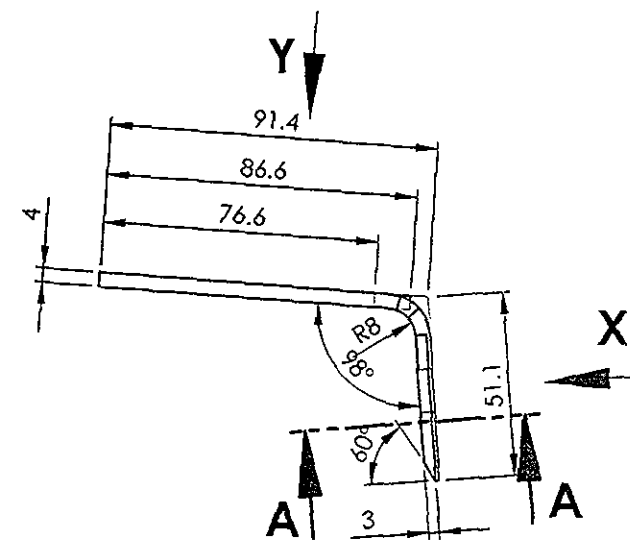
ALT.

ZONE

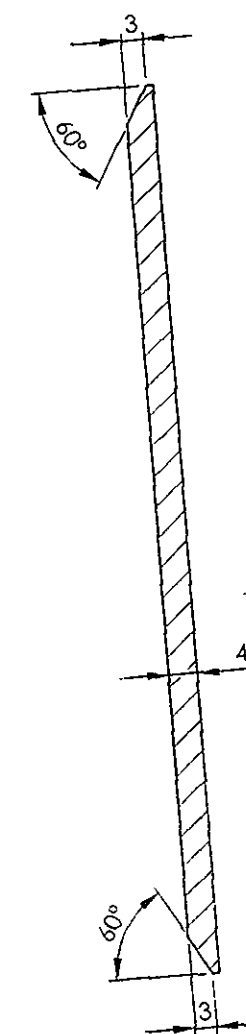
DESCRIPTION

APPROVED &  
DATE

VIEW X



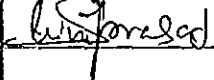
VIEW Y

SECTION A-A  
SCALE 1:1

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICT/STD-9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.20.200.113

	21-03-2013	Ue 2013
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

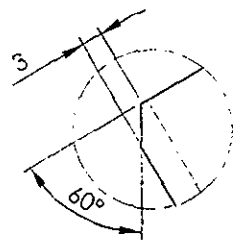
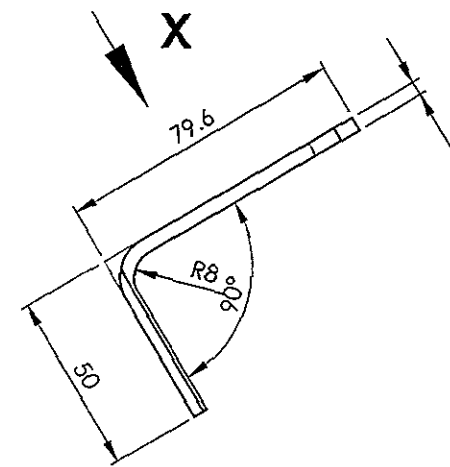
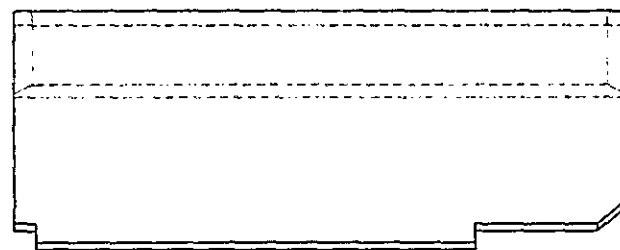
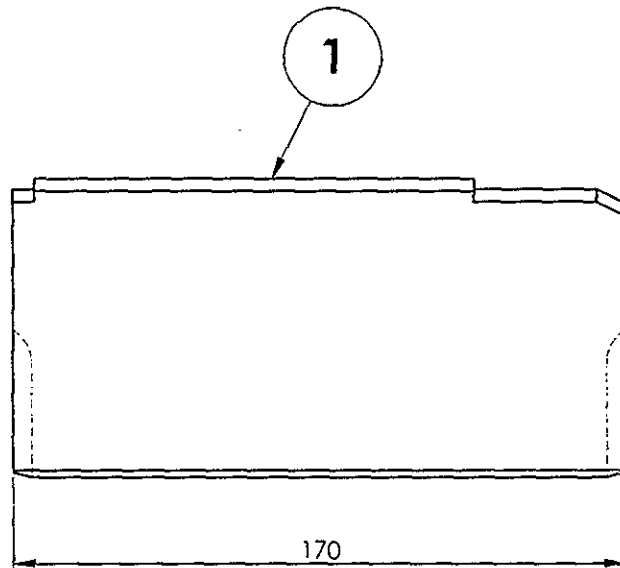
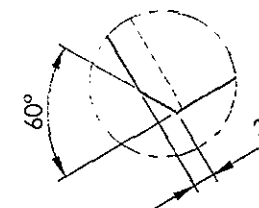
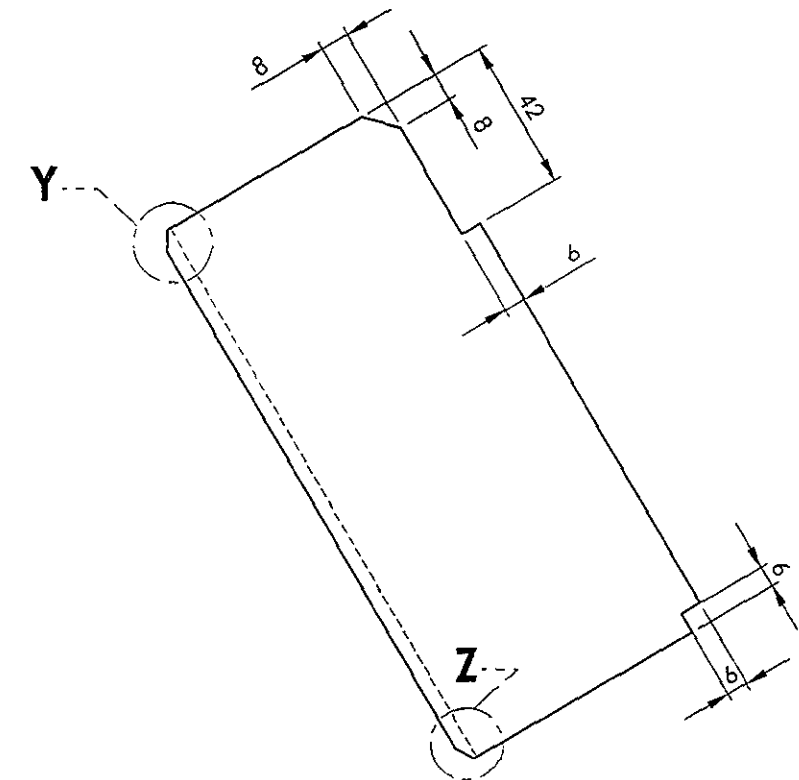
1	STIFFENING ANGLE	4 x 136 x 170	1		RDSO/SPEC C- K201 X2 Cr Ti 12	0.631	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.043			WT/ASSY IN Kgs:0.631		
STIFFENING ANGLE					SCALE	SSE/D	
					1:2	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
					INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038		
AAA16923		A3					



AAA16924

▽ ROUGH MACHINED	③ ROUGH CLEANED
▽▽ FINISH MACHINED	④ BURRS REMOVED
▽▽▽ FINISH MACHINED	⑤ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			

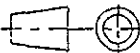
DETAIL Y  
SCALE 1:1DETAIL Z  
SCALE 1:1

VIEW X

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9 0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.20.200.115

DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	STIFFENING ANGLE	4 x 121 x 170	1		RDSO/SPEC C- K201 X2CrNi12	0.644	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.043			WT/ASSY IN Kgs:0.644		
STIFFENING ANGLE					SCALE	SSE/D	<i>K.Sriram</i>
					1:2	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1	AAA16924	
							A3

AAA16926

▽ ROUGH MACHINED

⑦ ROUGH CLEANED

▽▽ FINISH MACHINED

⑧ BURRS REMOVED

▽▽▽ FINISH VACUUM

⑧ CHAMFERED

REVISIONS

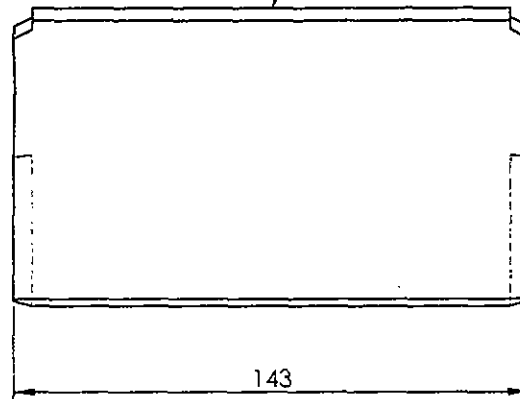
ALT.

ZONE

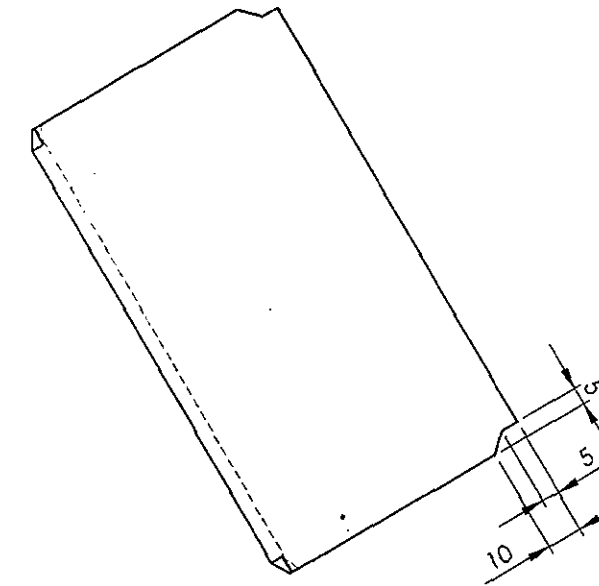
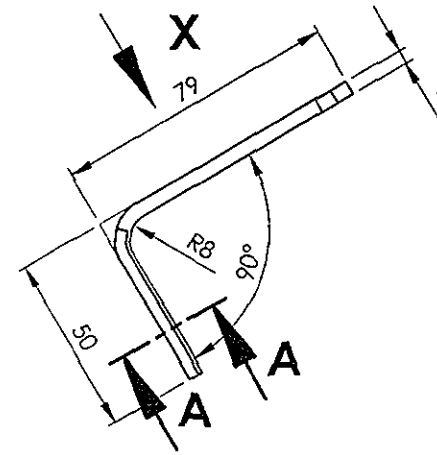
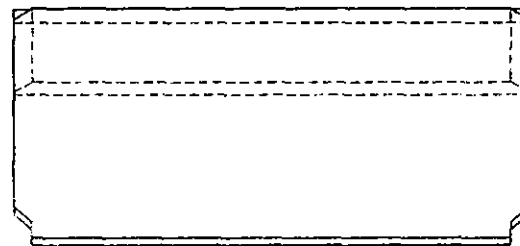
DESCRIPTION

APPROVED &  
DATE

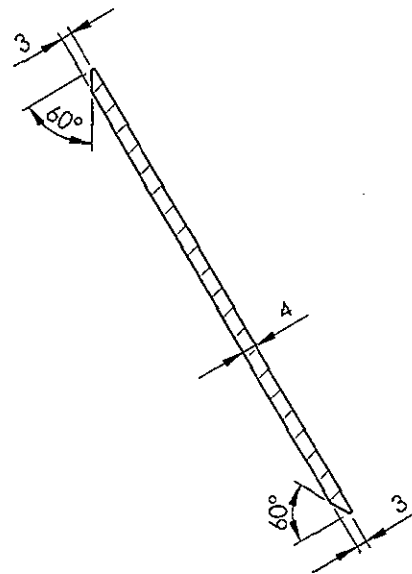
1



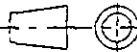
143



VIEW X



SECTION A-A

1	STIFFENING ANGLE	4 x 121 x 143	1		RDSO/SPEC C- K201 X2CrNi12	0.544		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.036			WT/ASSY IN Kgs:0.544			
STIFFENING ANGLE					SCALE	SSE/D	<i>Signature</i>	
					1:2	CHD		
					ALT.	ALTD	K.Srirom	
						DRN		
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			AAA16926	A3

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/SID 9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.0.20.200.123

21-03-2013

DATE OF LATEST ALT.

DATE OF FIRST ISSUE

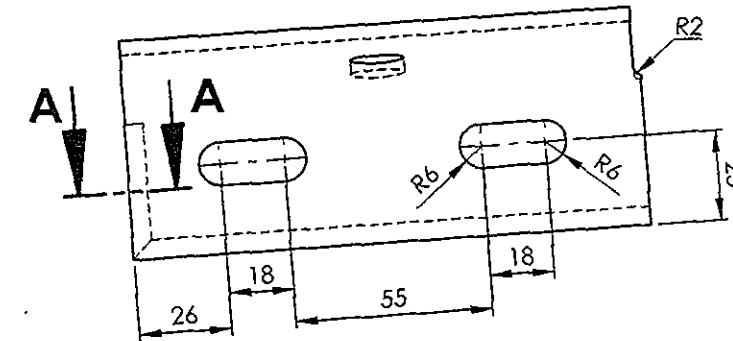
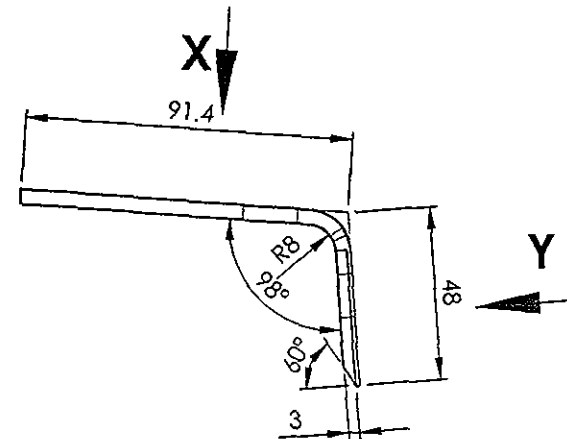
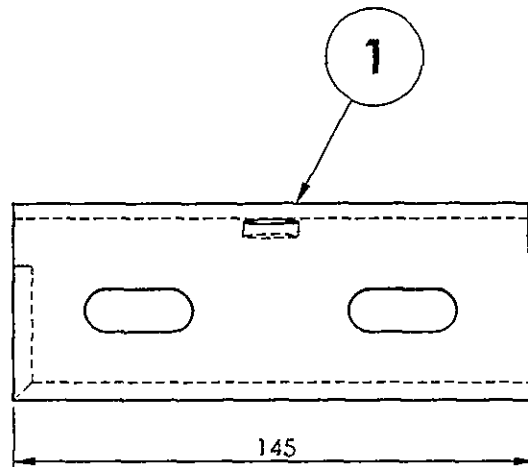
AME/SME

AAA16927

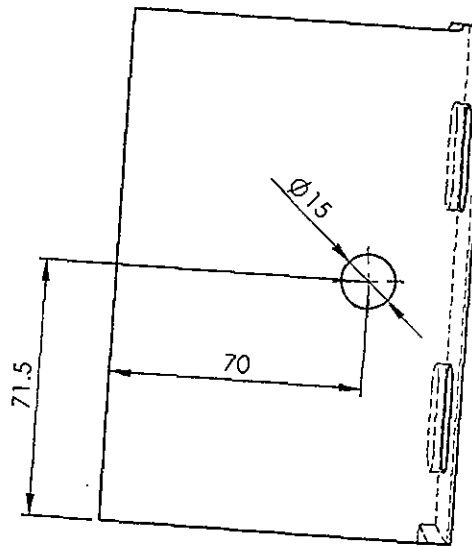
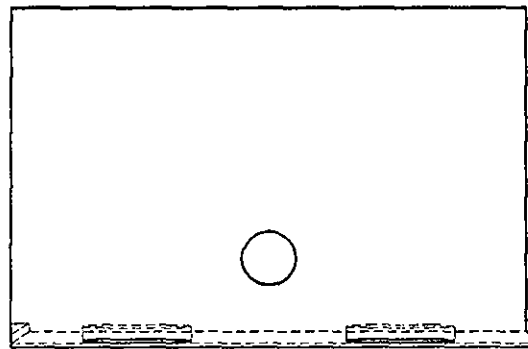
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

## REVISIONS

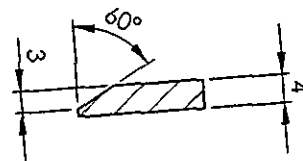
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
------	------	-------------	-----------------



VIEW Y



VIEW X

SECTION A-A  
SCALE 1:1

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/SID-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.0.20.200.125

	21-03-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

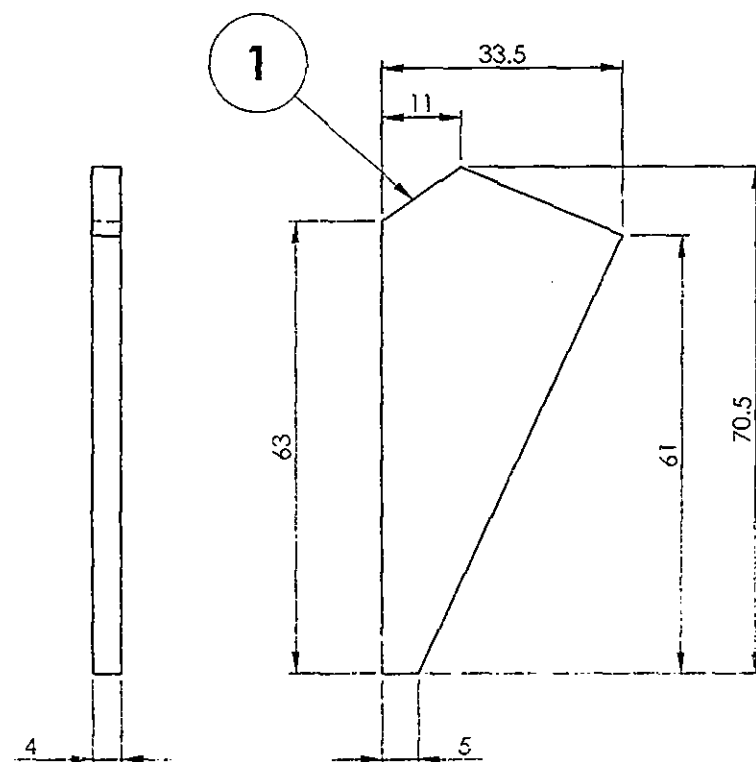
1	STIFFENING ANGLE	4 x 135 x 145	1		RDSO/SPEC C- K201 X2CrNi12	0.573	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.039			WT/ASSY IN Kgs:0.573		
STIFFENING ANGLE					SCALE	SSE/D	<i>K.Sriram</i>
					1:2	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1			
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16927	A3	

AAA16929

▽ ROUGH MACHINED	③ ROUGH CLEANED
▽▽ FINISH MACHINED	④ BURRS REMOVED
▽▽▽ -VS- -VS- VAC- -VS-	⑤ CHAMFERED

## REVISIONS

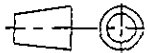
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
------	------	-------------	-----------------



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD 9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.

REF.DRG.NO.4 10113.0.20.200.138

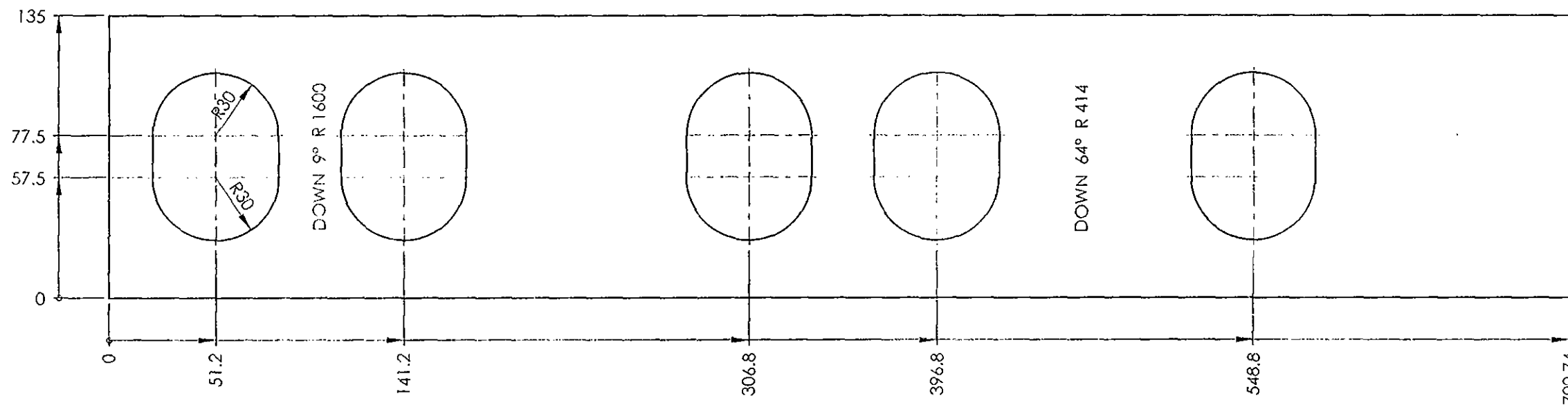
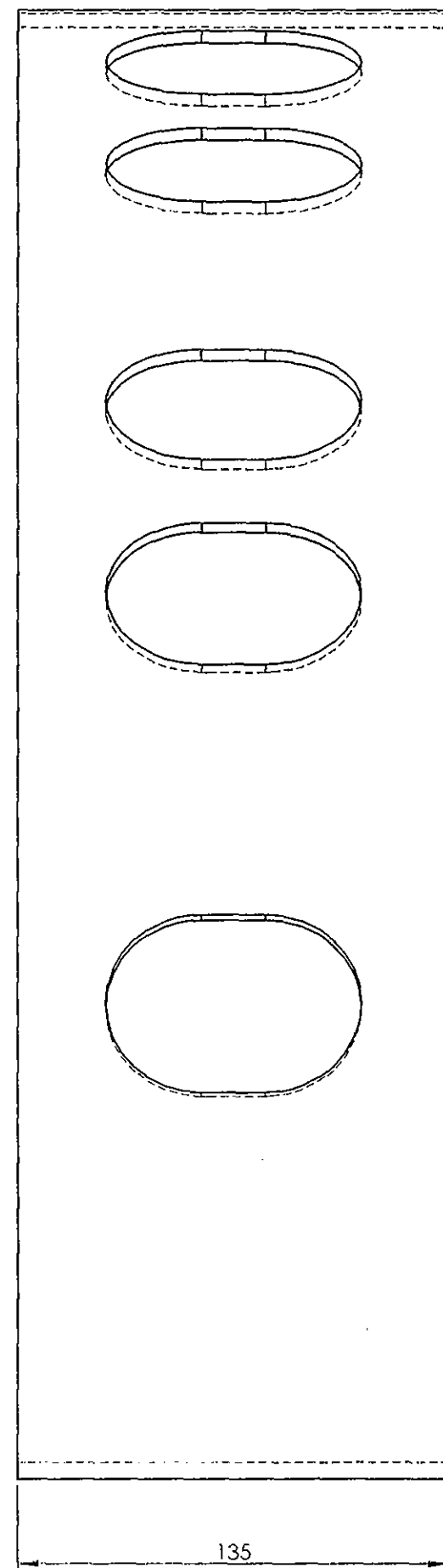
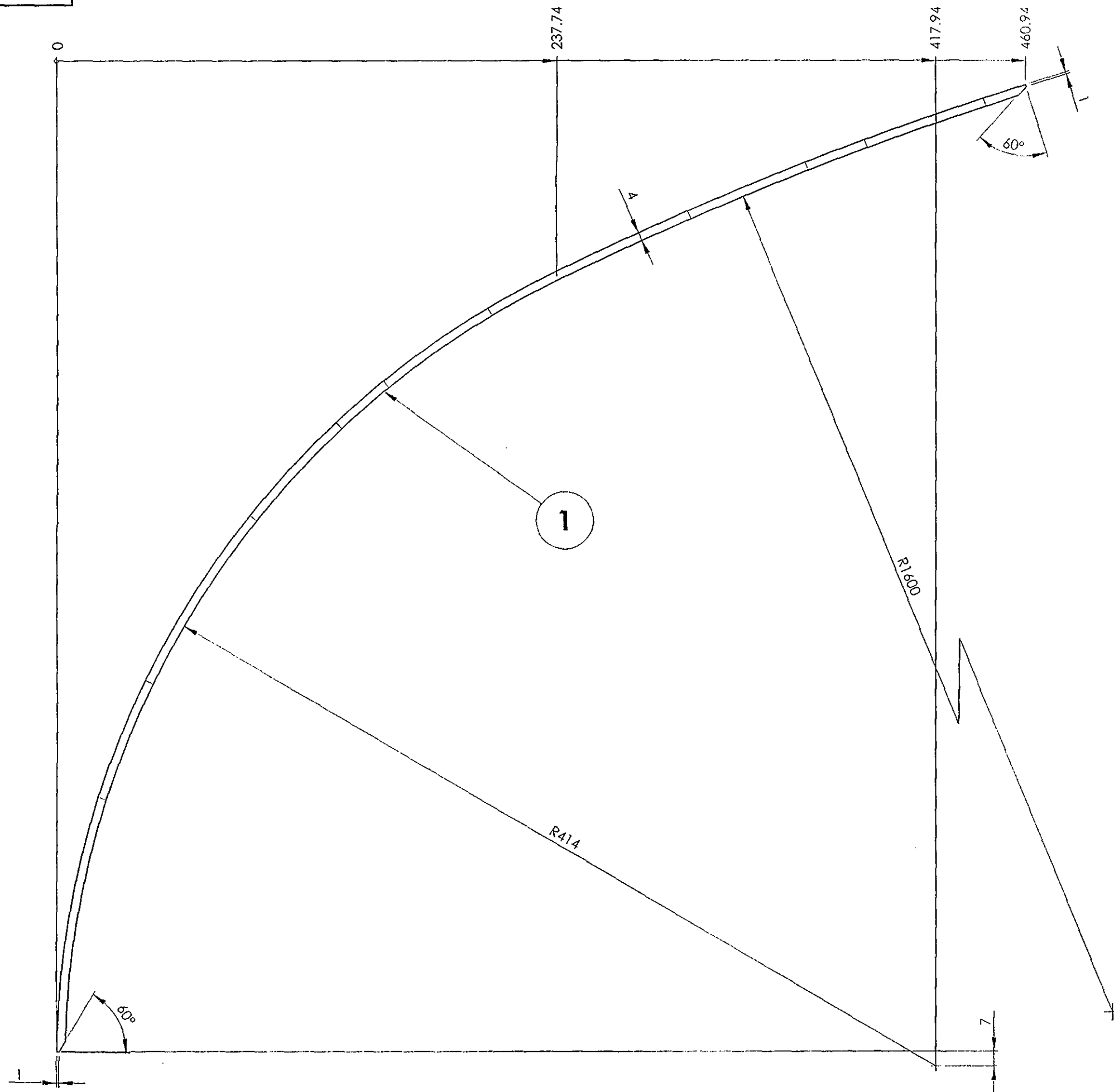
DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	RIB	4 x 33.5 x 70.5	1		RDSO/SPEC C- K201 X2 Cr Ni 12	0.043	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.003			WT/ASSY IN Kgs:0.043		
RIB					SCALE	SSE/D	K. Srinivasan
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Srinam.
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAA16929

AAA16932

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

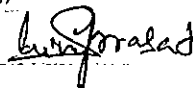
REVISIONS			APPROVED & DATE
ALT.	ZONE	DESCRIPTION	



DEVELOPMENT VIEW

REF.DRG.NO.3 10113.0.20.210.117

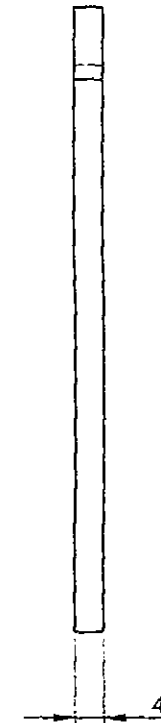
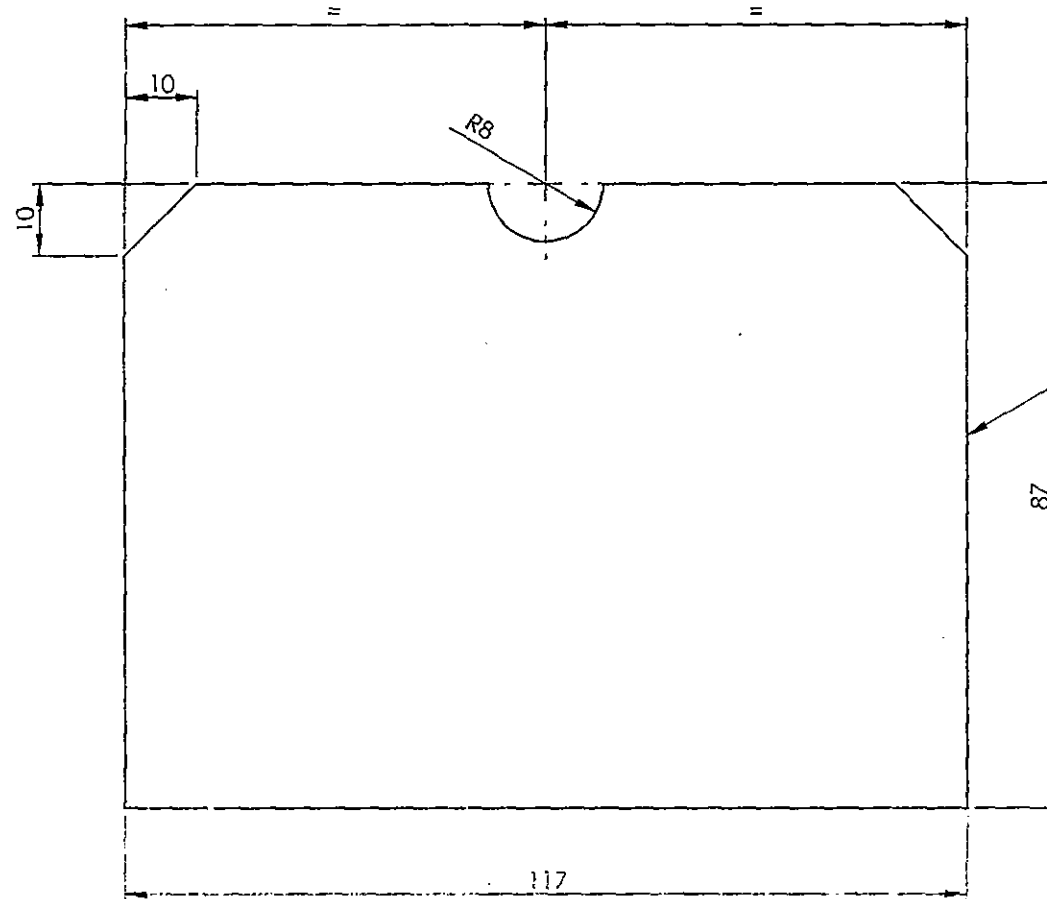
DATE OF LATEST ALT.	21-03-2013	AME/SME
DATE OF FIRST ISSUE		

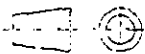
1	FLANGE	4 x 135 x 701	1	REF. DRGS	INDCO/SPEC C 1-01 X2CIN12	2.367	RE MARKS	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.		MATL.SPEC.	WT/UNIT IN KGS		
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m: 0.160			WT/ASSY IN Kgs: 2.367			
FLANGE					SCALE 1:2	SSE/D CHD		
					ALT	ALTD		
						DRN	K.Sriram	
					INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038			
SHEET 1 OF 1								
					AAA16932		A2	

AAA16933

▽ ROUGH MACHINED	⊙ ROUGH CLEANED
▽▽ FINISH MACHINED	⊙⊙ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⊙⊙⊙ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



1	WEB	4 x 87 x 117	1		RDSO/SPEC C- K201 X2CrNi12	0.319	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.022			WT/ASSY IN Kgs:0.319		
WEB					SCALE	SSE/D	K. Srirom
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Srirom
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAA16933

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICE/STD 9 0 001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.

REF.DRG.NO.3 10113.0.20.200.122

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC7/SID-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

Technical drawing of a mechanical part, showing three views: front, top, and side.

**Front View:** A rectangular part with a width of 117. The top edge is dashed, indicating it is hidden.

**Top View:** A rectangular part with a width of 117 and a depth of 50. The bottom edge is dashed, indicating it is hidden.

**Side View:** A rectangular part with a width of 117 and a depth of 50. The part has a 90-degree bend with a radius of R8. The bend is labeled "90° R8". The section line A-A is indicated by two arrows labeled "A".

**Section A-A:** A cross-section view of the part, showing a rectangular shape with a width of 117 and a depth of 50. The section is labeled "SECTION A-A".

REF.DRG.NO.3 10113.0.20.200.124

	21-03-2013	<i>W 2013</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

AAA16935

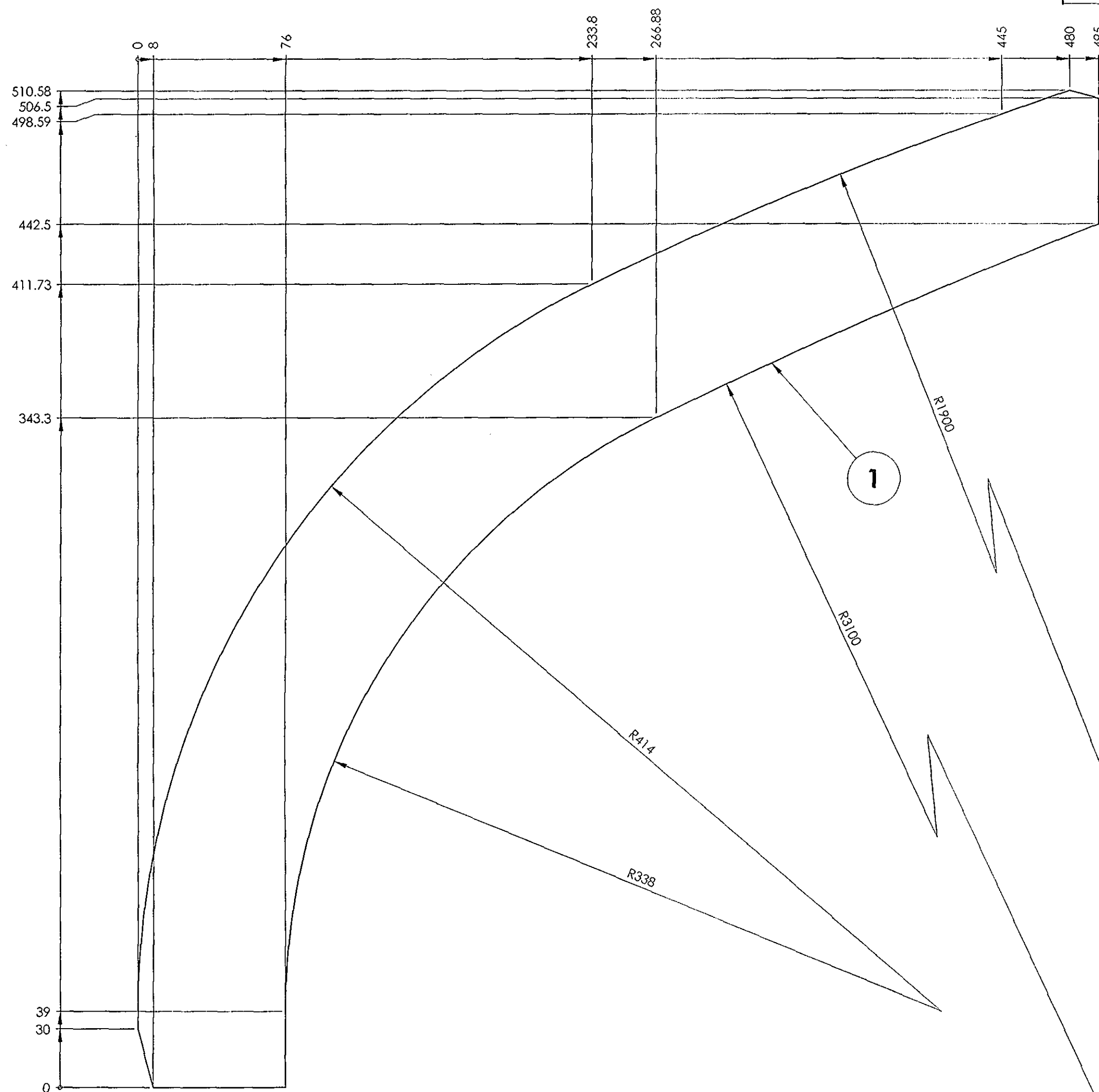
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

ALT.

ZONE

REVISIONS

DESCRIPTION

APPROVED &  
DATE

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

REF.DRG.NO.2 10113.0.20.210.104

DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	ROOF ARCH	4 x 495 x 511	1	RDSO/SPEC C- K201 X2CIN12	1.737		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.115		WT/ASSY IN Kgs: 1.737			
ROOF ARCH				SCALE 1:2	SSE/D CHD	<i>K. Sriram</i>	
				ALT	ALTD		
				DRN	K. Sriram		
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAA16935 A2	
INTEGRAL COACH FACTORY, CHENNAI - 600038							



AAA16936

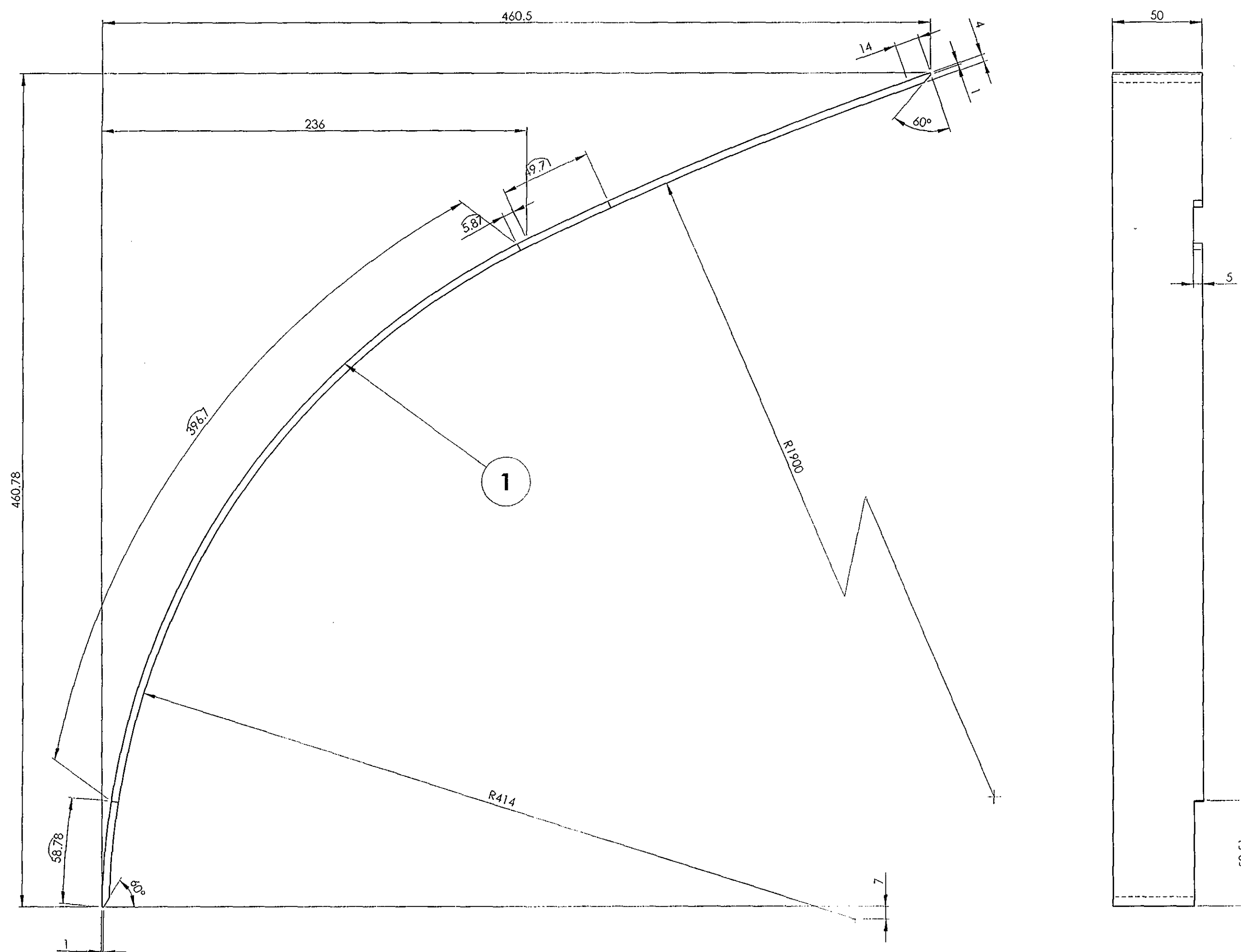
▽ ROUGH MACHINED	(11) ROUGH CLEANED
▽▽ FINISH MACHINED	(12) BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	(13) CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &  
DATE

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS813:1986.

REF.DRG.NO.3 10113.0.20.210.119

DATE OF LATEST ALI.	21-03-2013	AME/SME
---------------------	------------	---------

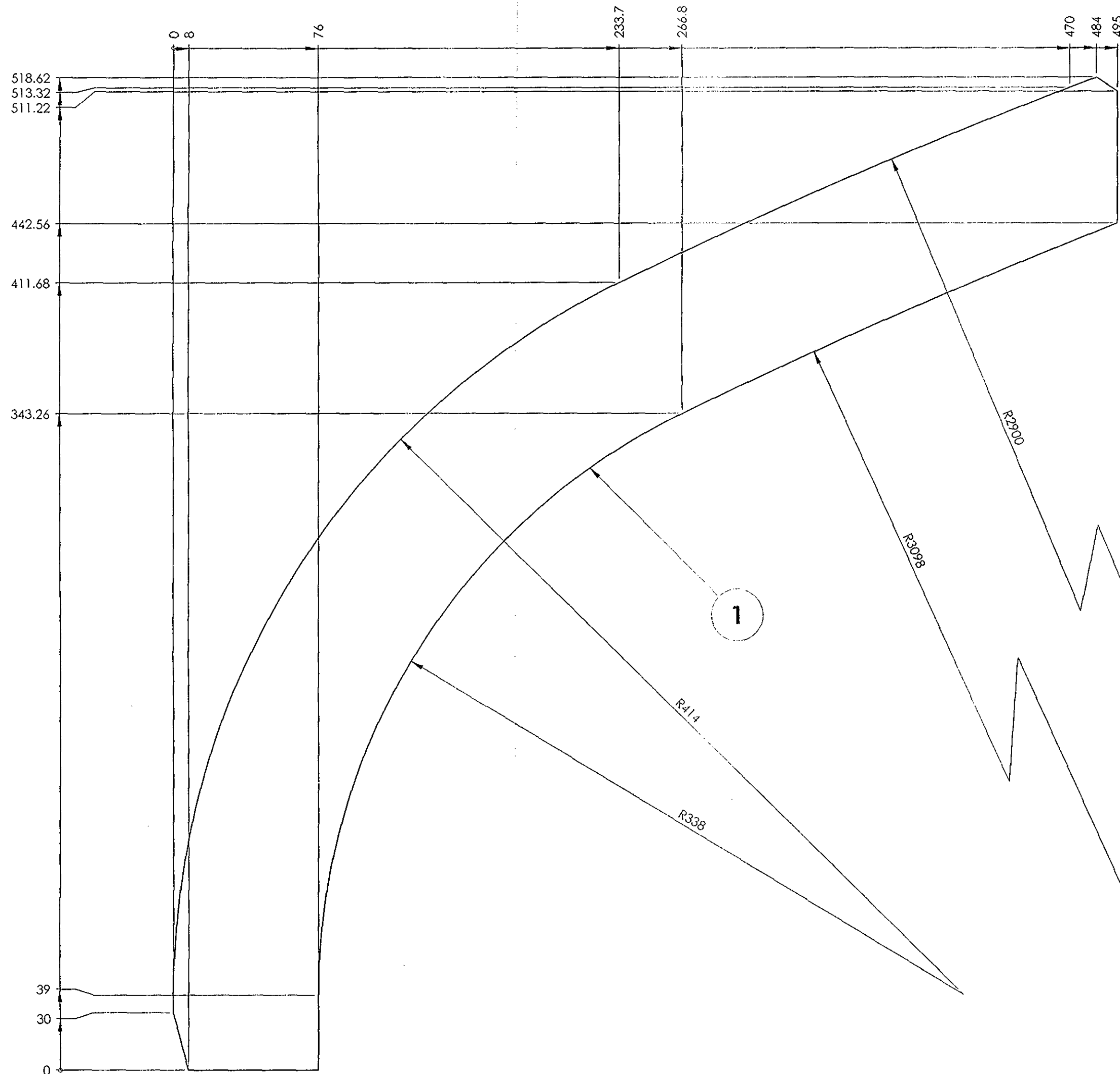
I	FLANGE	4 x 50 x 702	1	REF. DRGS	RDSO/SPEC C- K201 X2Cn12	1.098	REMARKS
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.075			WT/ASSY IN Kgs: 1.098		
FLANGE					SCALE 1:2	SSE/1 CHD	K.Sriram
					ALT	ALTD DRN	
					K.Sriram		
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16936		
					A2		

AAA16937

▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⊖(18) CHAMFERED

REVISIONS

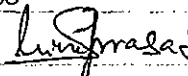
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
------	------	-------------	-----------------



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. IC/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 13-1986.

REF.DRG.NO.2 10113.0.20.210.105

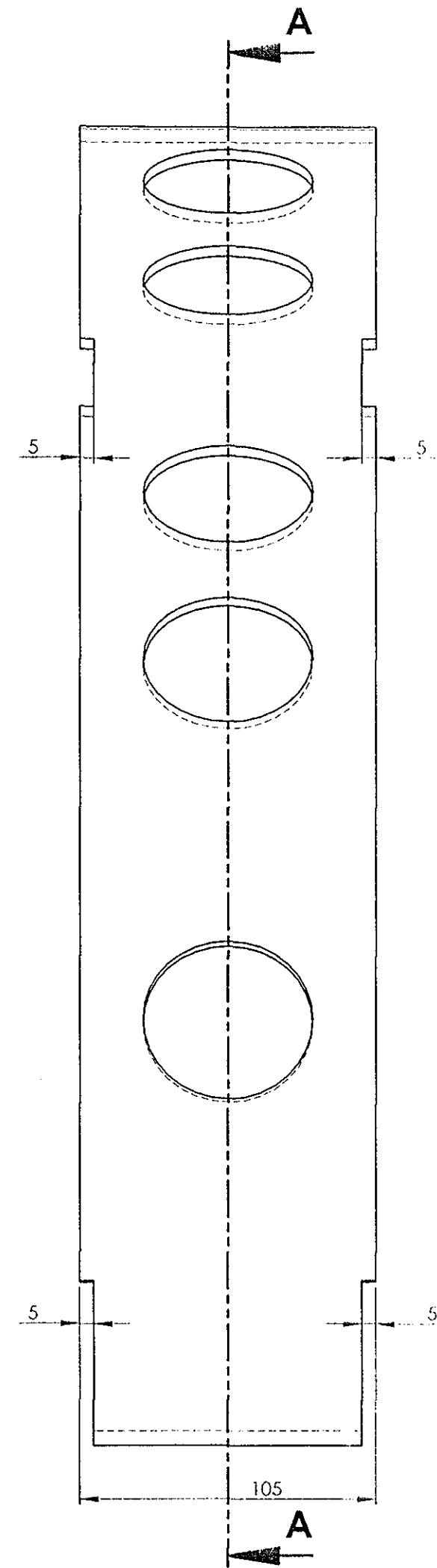
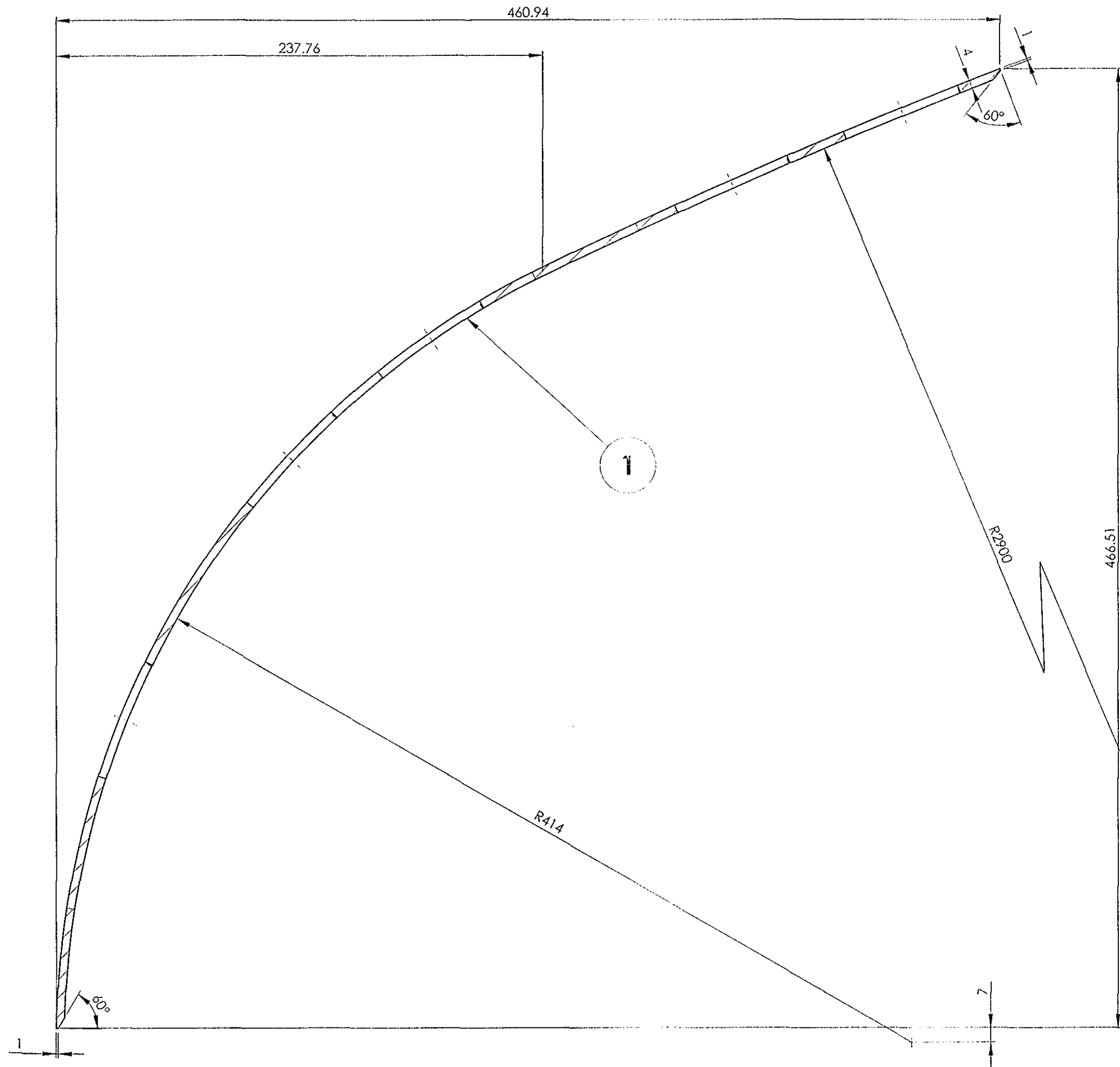
DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	ROOF ARCH	4 x 495 x 519	1		RDSO/SPEC C- K201 X2CIN12	1.758	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.116			WT/ASSY IN Kgs: 1.758		
ROOF ARCH					SCALE 1:2	SSE/D CHD	
					ALT	ALTD	
						DRN	K.Sriram
					INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038		
SHEET 1 OF 1							
AAA16937		A2					

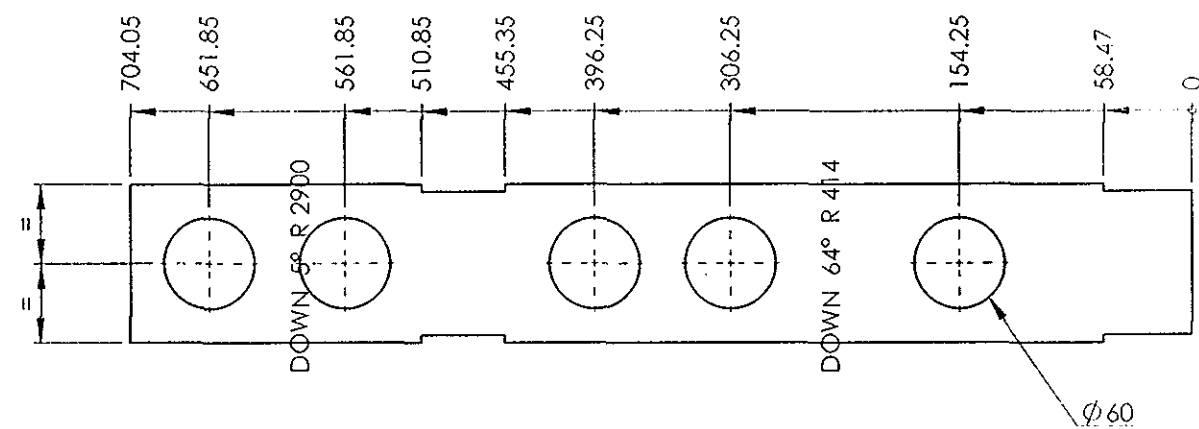
AAA16938

▽ ROUGH MACHINED	⑪ ROUGH CLEANED
▽▽ FINISH MACHINED	⑫ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑬ CHAMFERED

REVISIONS			APPROVED & DATE
ALT.	ZONE	DESCRIPTION	



SECTION A-A



DEVELOPMENT VIEW

REF.DRG.NO.3 10113.0.20.210.121

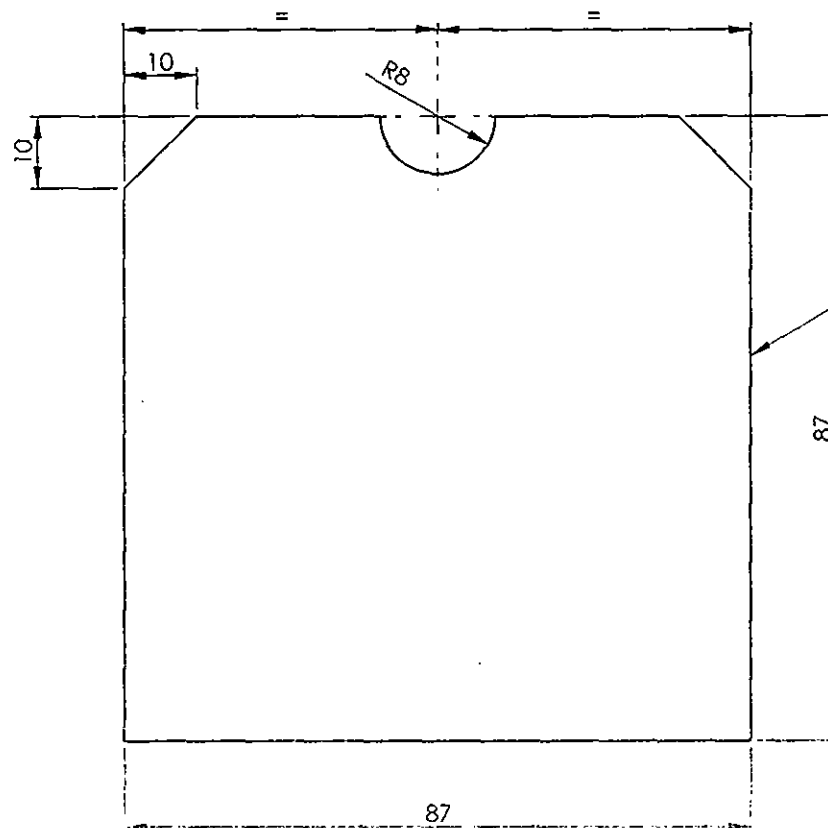
DATE OF LATEST ALL.	21-03-2013	AME/SME
---------------------	------------	---------

1	FLANGE	4 x 105 x 705	1		RDSO/SPEC C-K201 X2CrNi12	1.864	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: I-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.127			WT/ASSY IN Kgs: 1.864		
FLANGE					SCALE 1:2	SSE/D	K. S. Sriram
						CHD	
					ALT	ALTD	K. S. Sriram
						DRN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1	H		
					AAA16938 A2		

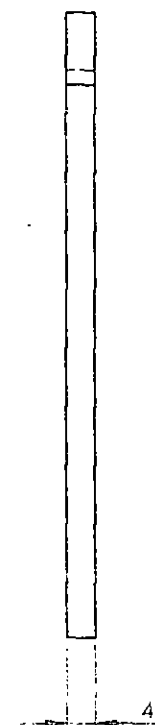
AAA16939

▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖⊖ BURRS REMOVED
▽▽▽ VACUUM POLISHED	⊖⊖⊖ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



1



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC/STD 9 0.001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.

REF.DRG.NO.3 10113.0.20.200.121

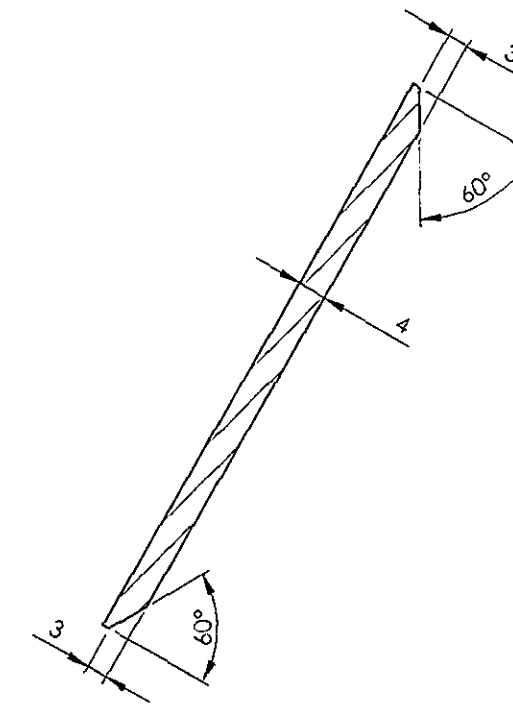
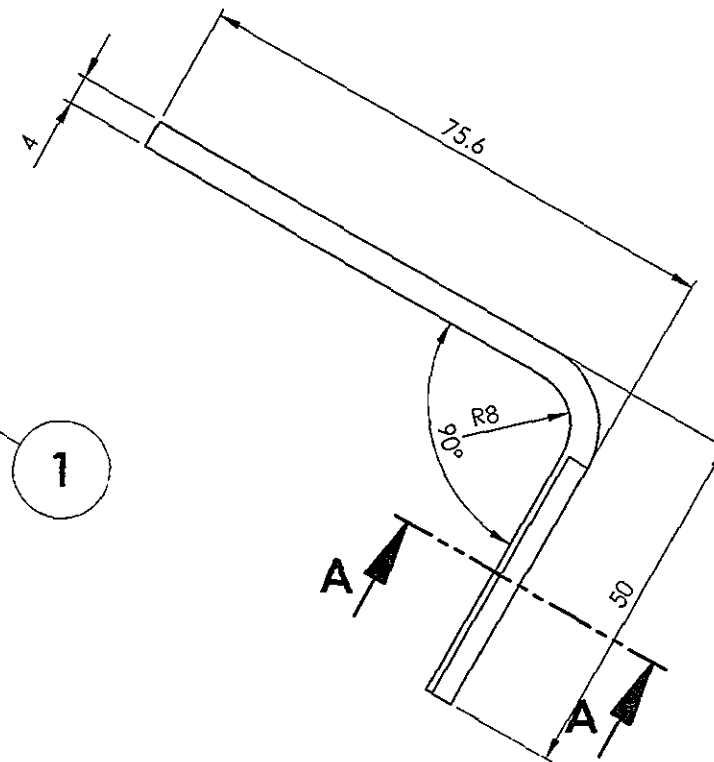
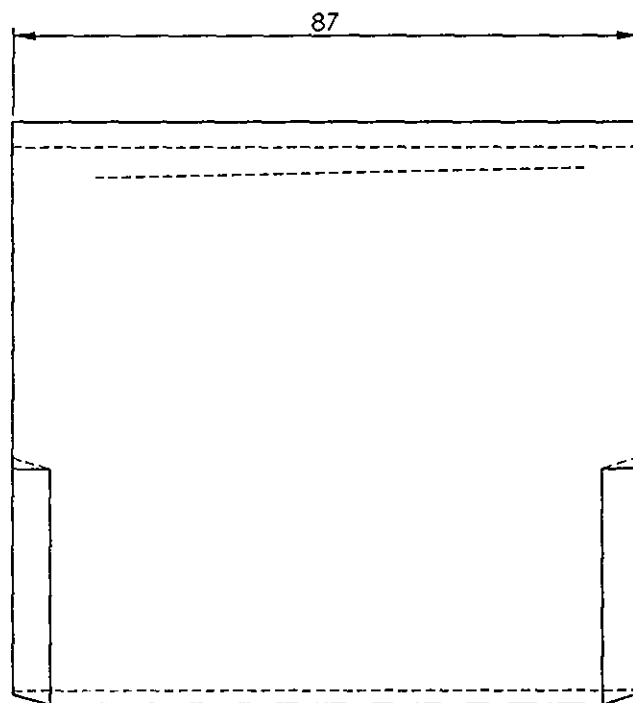
DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	WEB	4 x 87 x 87	1		RDSO/SPEC C- K201 X2CrNi12	0.236	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.016			WT/ASSY IN Kgs:0.236		
WEB					SCALE	SSE/D	<i>h. Soralad</i>
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAA16939

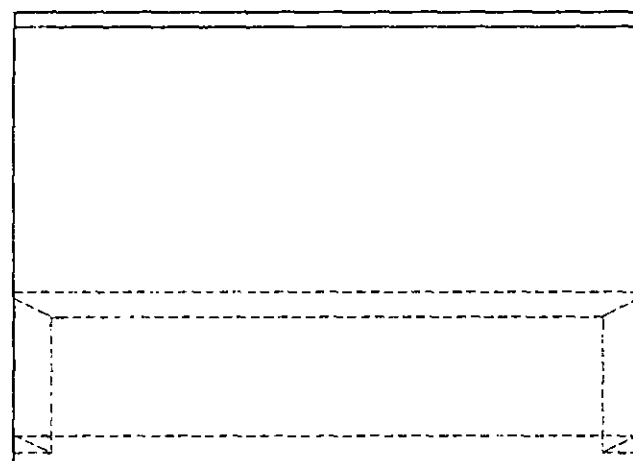
AAA16940

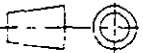
▽ ROUGH MACHINED	⊙ ROUGH CLEANED
▽▽ FINISH MACHINED	⊙⊙ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⊙⊙⊙ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			



SECTION A-A



1	STIFFENING ANGLE	4 x 87 x 118	1		RDSO/SPEC C- K201 X2CrNi12	0.322	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.022			WT/ASSY IN Kgs:0.322		
STIFFENING ANGLE					SCALE	SSE/D	<i>K.Sriram</i>
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		
					AAA16940		A3

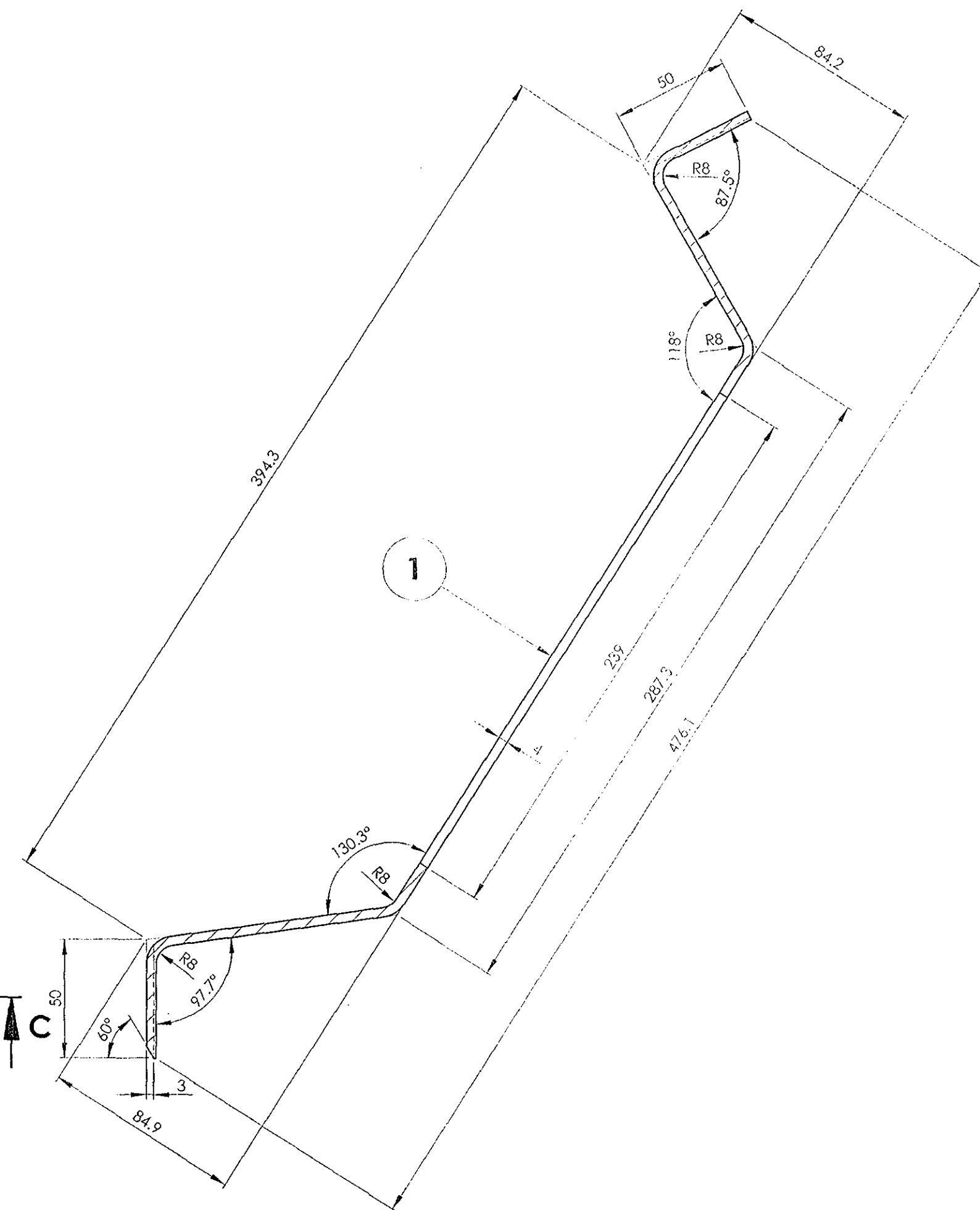
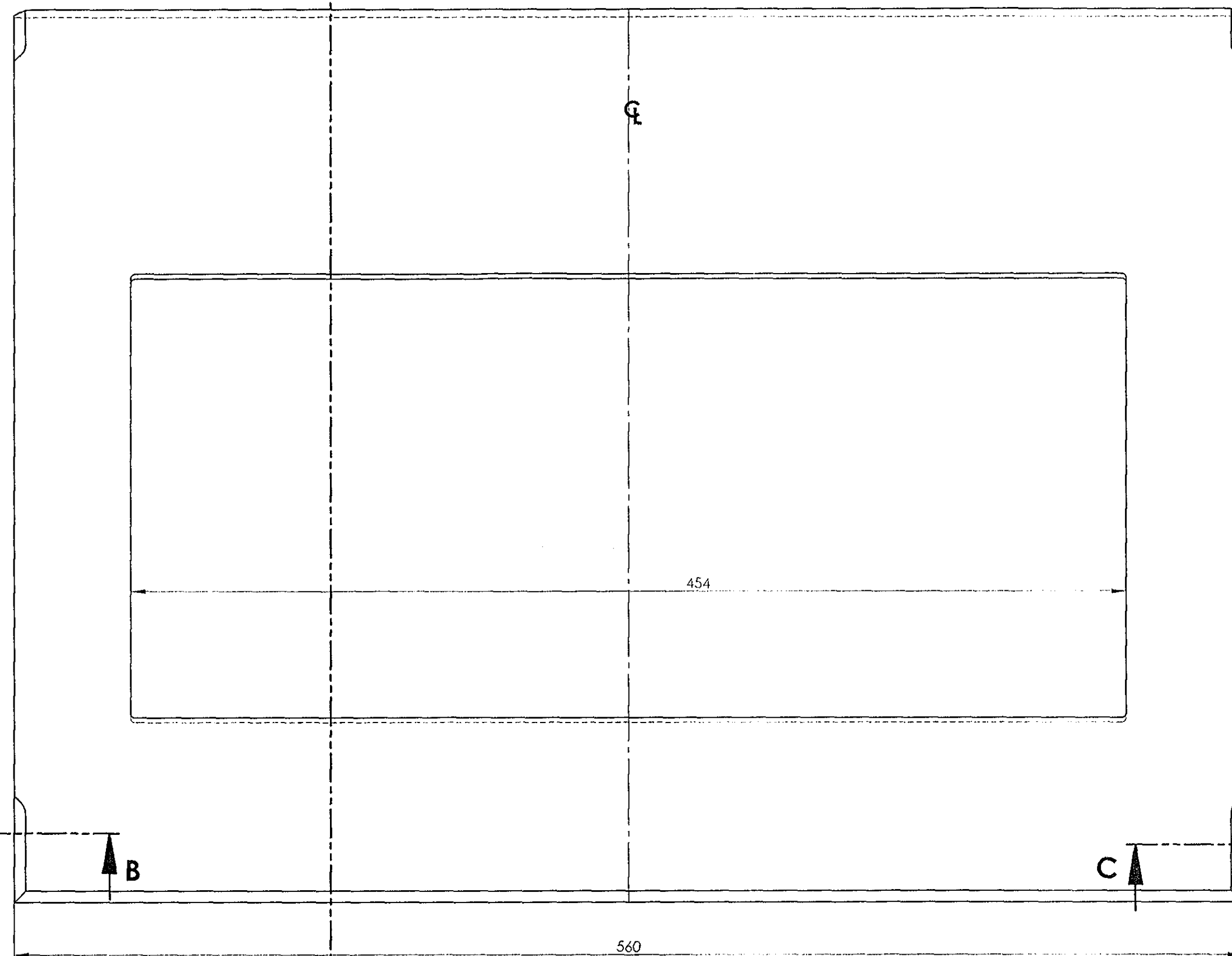
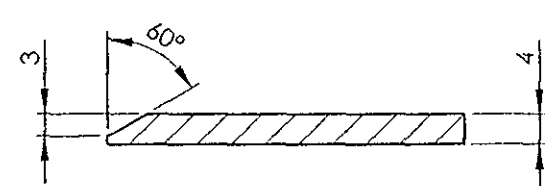
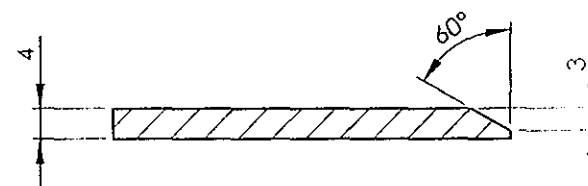
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICT/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.

REF.DRG.NO.3 10113.0.20.200.117

AAA16941

▽ ROUGH MACHINED	⑥1 ROUGH CLEANED
▽▽ FINISH MACHINED	⑥1b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑥1c CHAMFERED

REVISIONS				APPROVED & DATE
ALT.	ZONE	DESCRIPTION		

SECTION A-A  
SCALE 1 : 2SECTION B-B  
SCALE 1 : 1SECTION C-C  
SCALE 1 : 1

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS 813:1986.

REF.DRG.NO.1 10113.0.20.200.127

DATE OF LATEST ALT.	21-03-2013	AME/SME
---------------------	------------	---------

1	TERMINAL FRAME	4 x 560 x 568	1	REF. DRGS	RDSO/SPEC C- K201 X2CIN12	6.658	REMARKS
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY				SURFACE AREA IN Sq.m.: 0.432		WT/ASSY IN Kgs: 6.658	
TERMINAL FRAME					SCALE 1:2	SSE/D CHD	<i>Amrinder</i>
					ALT	ALTD	K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					DRN		
					SHEET 1 OF 1		
					AAA16941		A2

AAA16942

▽ ROUGH MACHINED

① ROUGH CLEANED

▽▽ FINISH MACHINED

② BURRS REMOVED

▽▽▽ FINE FINISH MACHINED

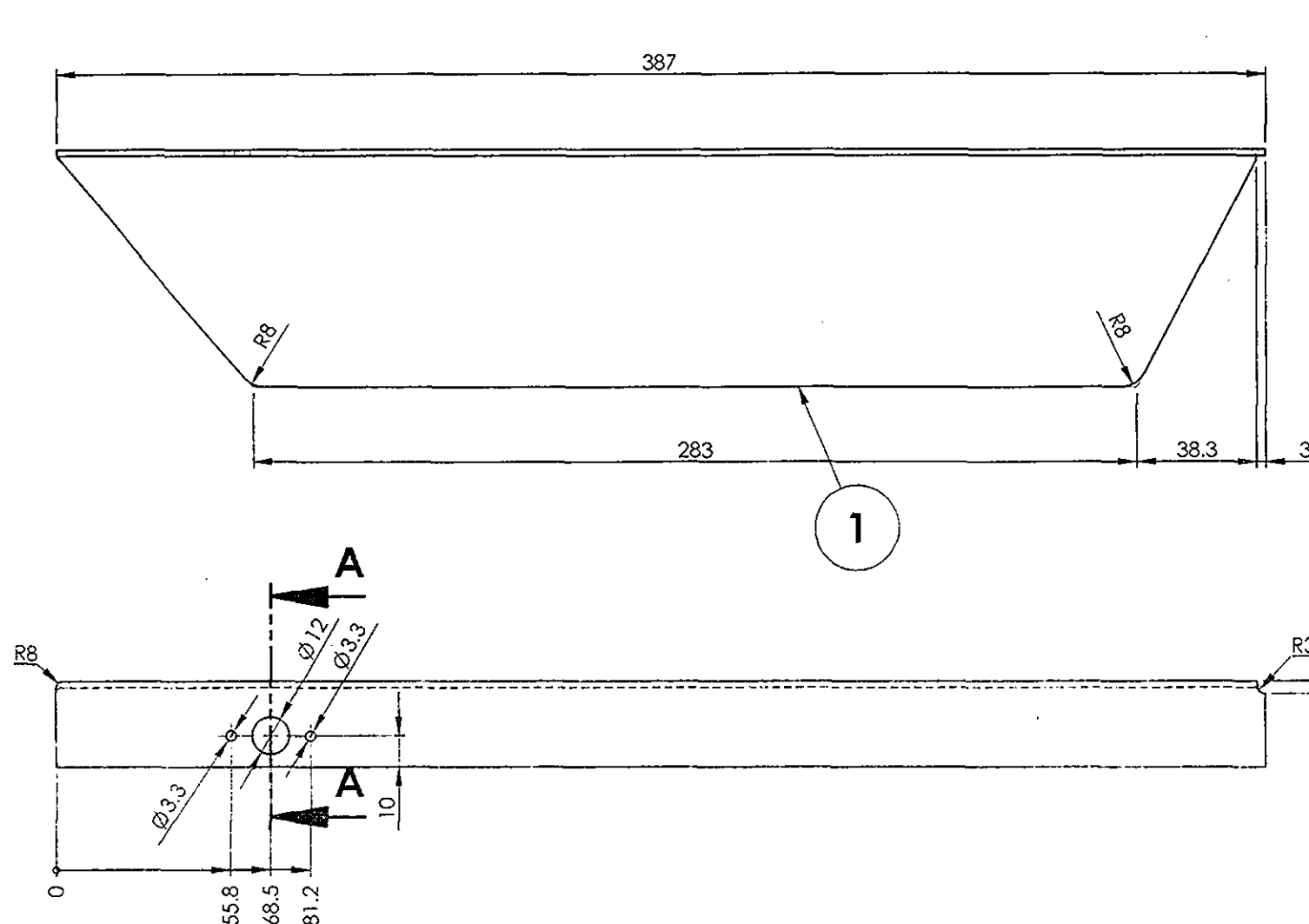
③ CHAMFERED

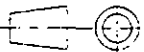
REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &  
DATESECTION A-A  
SCALE 1:1

1	CLOSING ANGLE	2 x 101 x 387	1		RDSO/SPEC C- K201 X2CrNi12	0.556	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.071			WT/ASSY IN Kgs:0.556		
CLOSING ANGLE					SCALE	SSE/D	<i>K. Sriram</i>
					1:2	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS  INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAA16942		A3

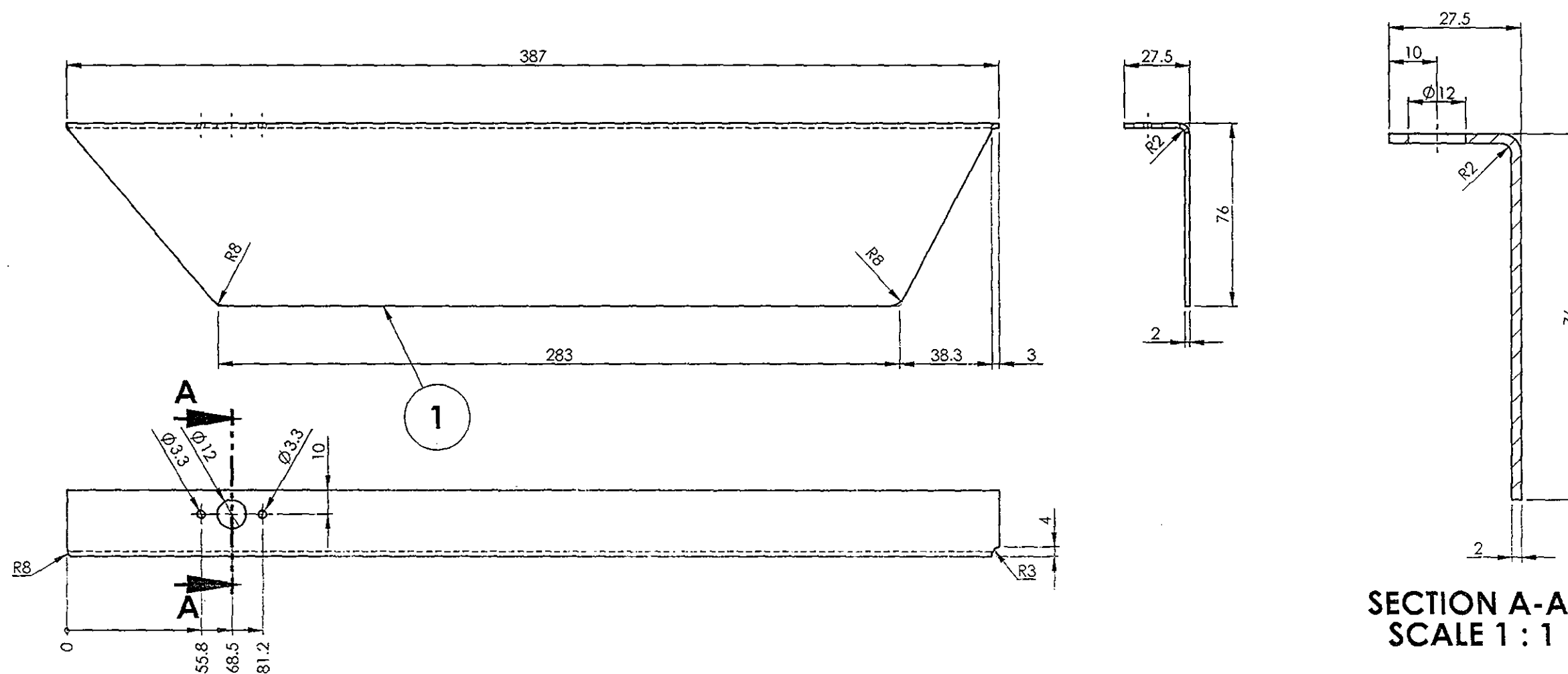
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD 9.0.001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.0.20.200.128

AAA16943

▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖⊖ BURRS REMOVED
▽▽▽ FINE FINISH - VACUUM	⊖⊖⊖ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A  
SCALE 1:1

1	CLOSING ANGLE	2 x 101 x 387	1		RDSO/SPEC C-K201 X2CrNi12	0.069	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY				SURFACE AREA IN Sq.m.:0.07		WT/ASSY IN Kgs:0.56	
CLOSING ANGLE					SCALE 1:2	SSE/D	Signature
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16943		
					A3		

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.

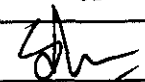
REF.DRG.NO.3 10113.0.20.200.129

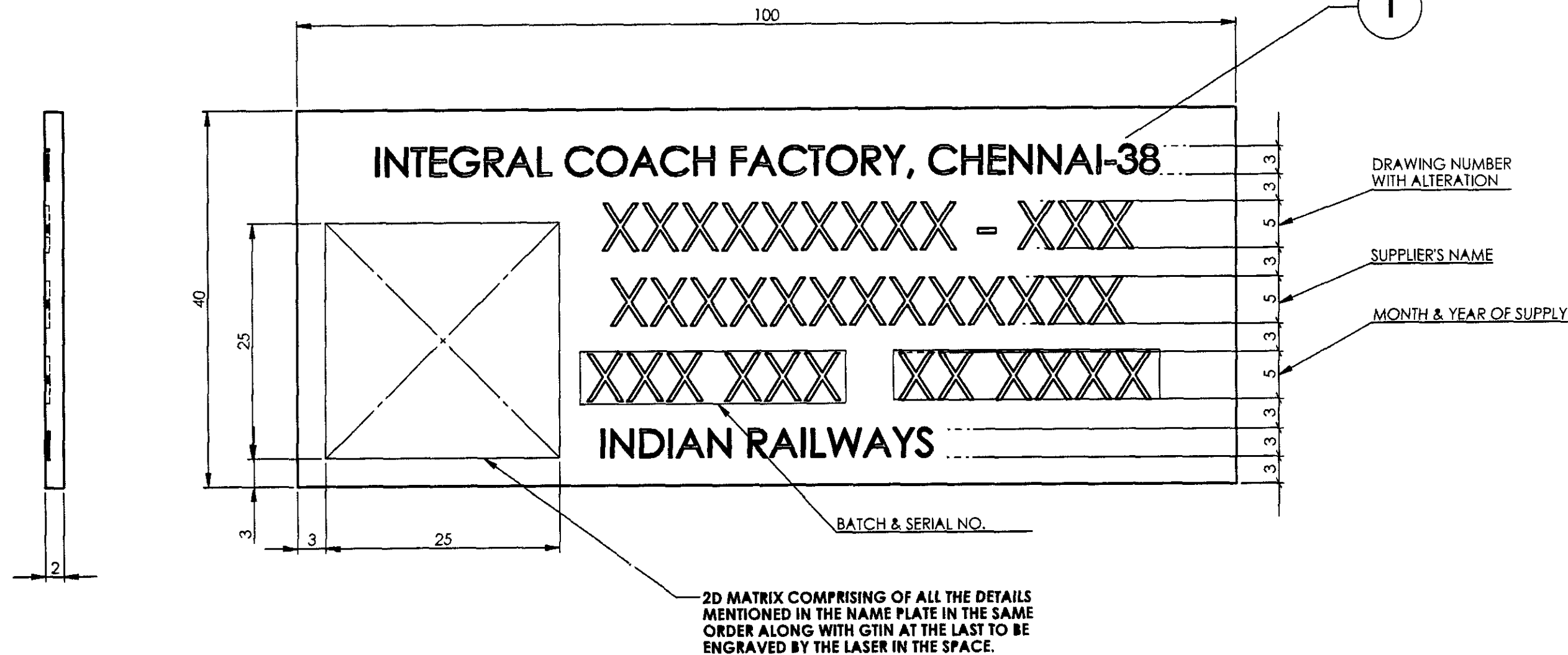
	21-03-2013	Signature
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME



AAA51072

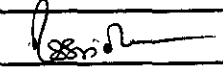
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①① BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①①① CHAMFERED


REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NAME PLATE REVISED.	-sd-
b		DESIGN REVISED.	-sd-
c		BATCH & SERIAL NO. ADDED	-sd-
d		NOTE-2 ADDED.	



**NOTE:**

1. LETTERS TO BE PUNCHED OR ENGRAVED.
2. ALTERNATIVELY AISI-304/SS-304 (X02Cr19Ni10)/IS:6911(X04Cr19Ni9) ALSO ACCEPTABLE.

1	NAME PLATE FOR SUPPLIER IDENTIFICATION	2x40x100	1		RDSO/SPEC C-K201 X2 Cr Ni 12	0.063	\$
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 5-1 Body Side Doors				SURFACE AREA IN Sq.m.:0.009		WT/ASSY IN Kgs:	
NAME PLATE FOR SUPPLIER IDENTIFICATION					SCALE 2:1	SSE/D	
					ALT. d	CHD	
						ALTD	KUNTI THAKUR
						DRN	G. NAGESWARAN
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA51072		
					A3		

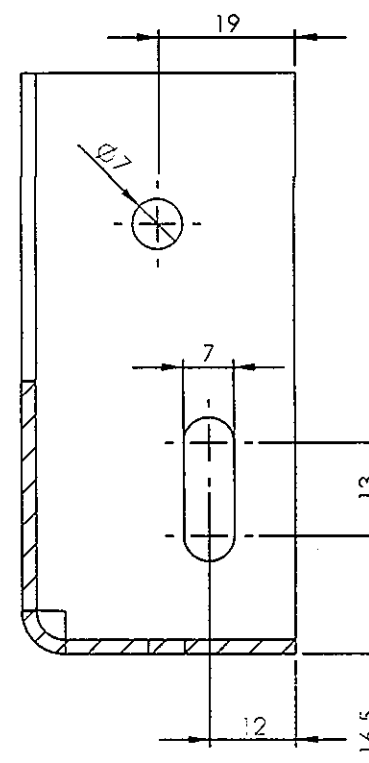
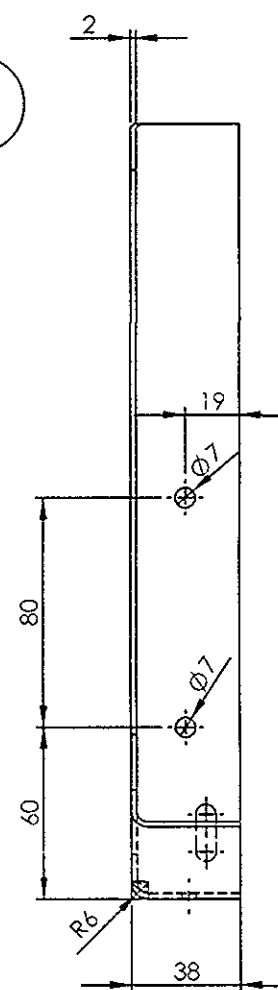
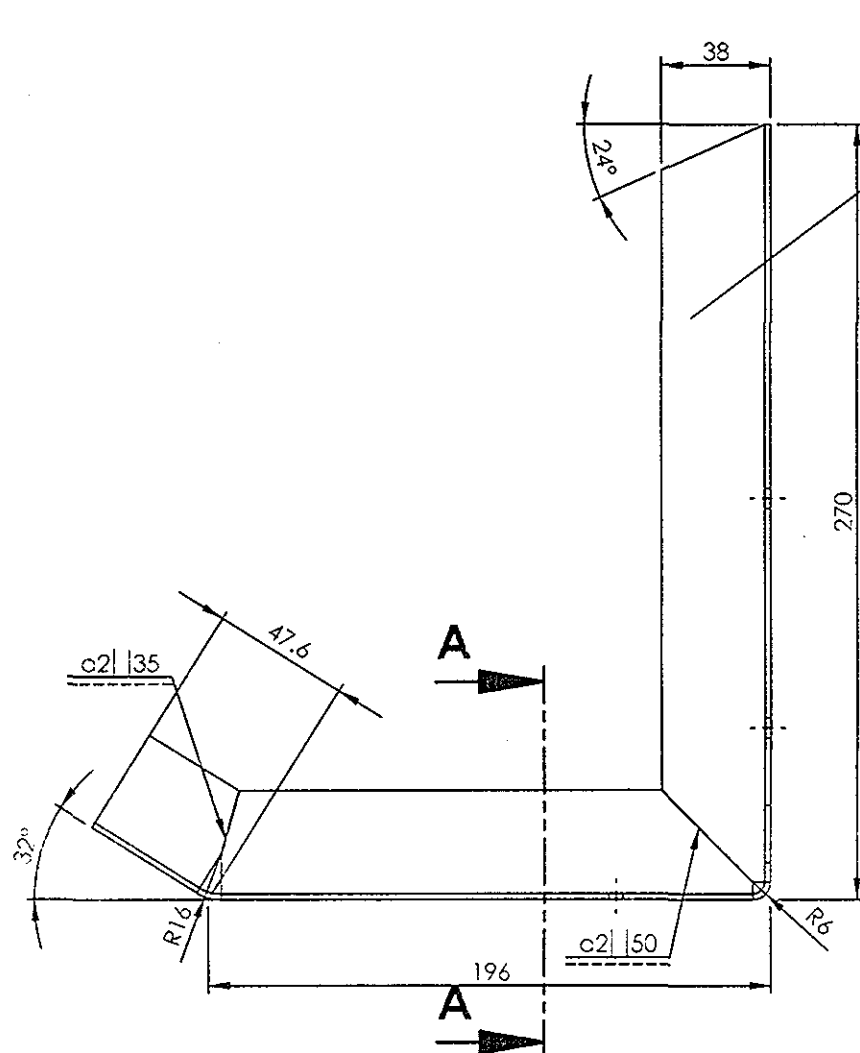
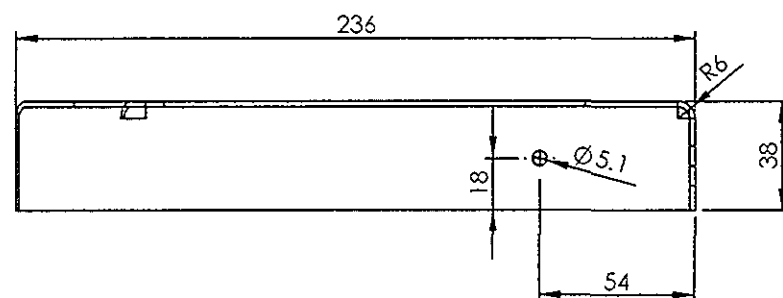
06-07-2024	02.06.2010	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME


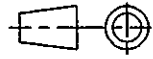
REF.DRG.NO.

AAB10005

▽ ROUGH MACHINED	① ROUGH CLEANED
▽ FINISH MACHINED	② BURRS REMOVED
▽ FINISH VACUUM	③ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A  
SCALE 1 : 1

1	BRACKET	2x72x508	1		RDSO/SPEC C-K201 X2CrNi12	0.547	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-0		SURFACE AREA IN Sq.m.:0.071			WT/ASSY IN Kgs:0.547		
BRACKET					SCALE	SSE/D	
					1:2.5	CHD	
					ALT.	ALTD	
						DRN	L.PANDURANGA RAO
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAB10005		A3

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND FINISHNESS VALUES, REFER DRAWING NO IC1/STD 9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.

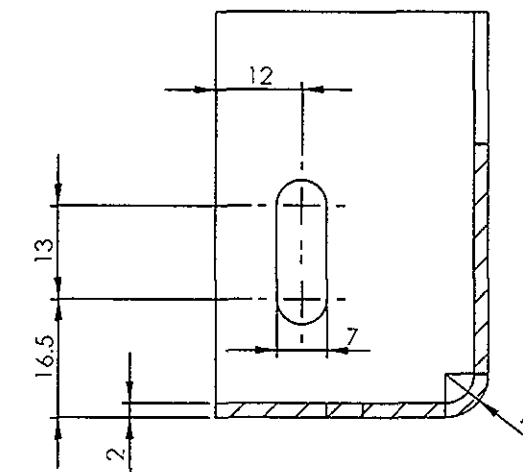
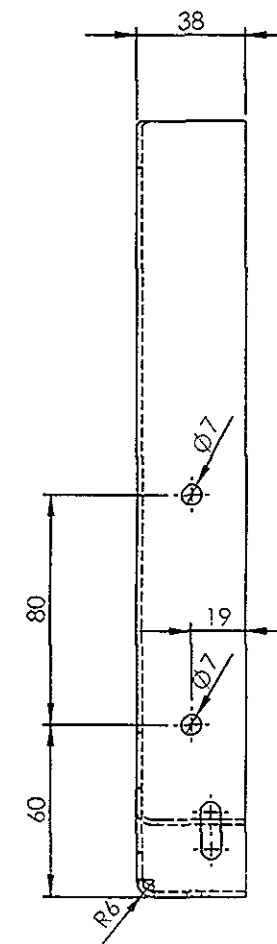
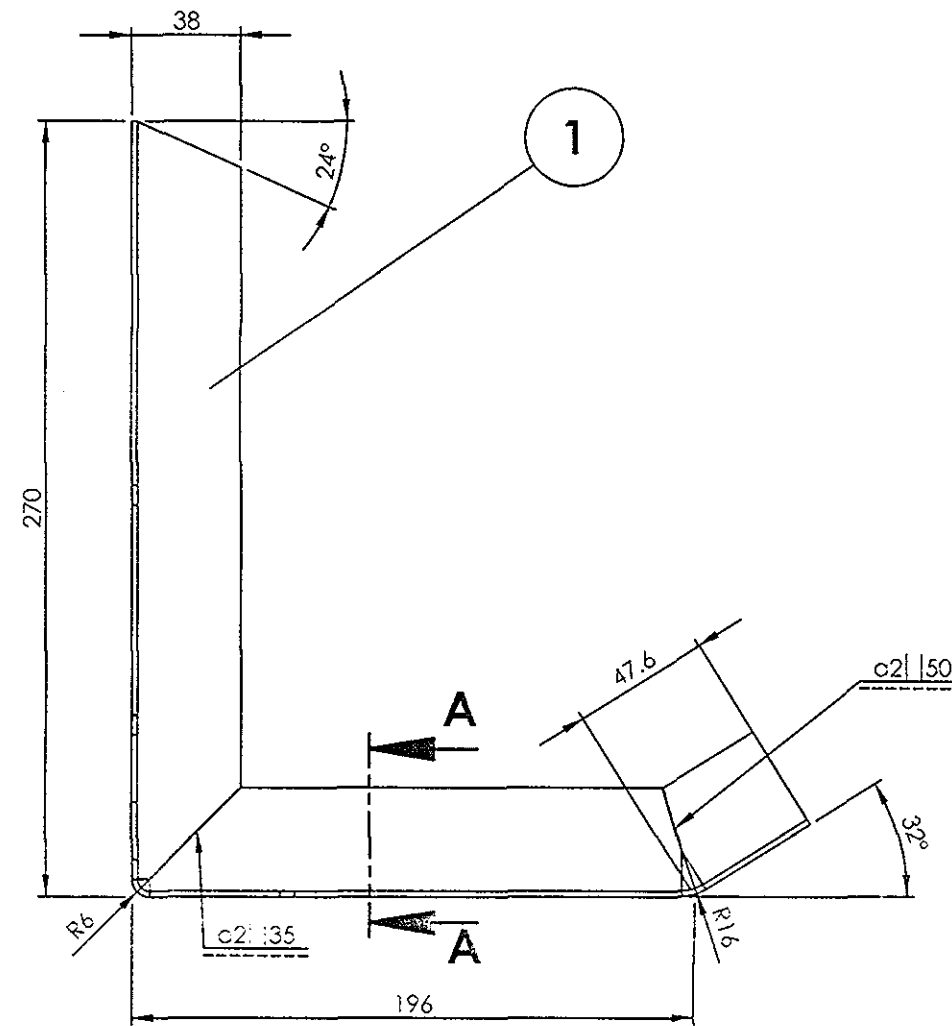
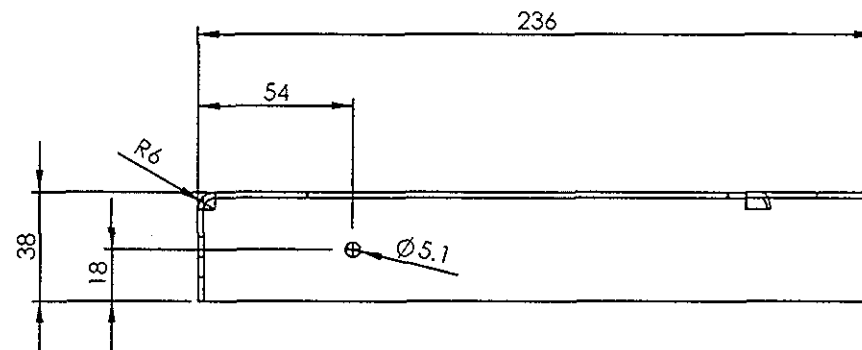
REF.DRG.NO.3 10113.0.20.095.112

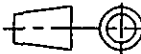
DATE OF LATEST ALT.	10-04-2013	AME/SME
---------------------	------------	---------

AAB10006

▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖⊖ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⊖⊖⊖ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A  
SCALE 1 : 1

1	BRACKET	2x72x508	1		RDSO/SPEC C-K201 X2CrNi12	0.547	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-0		SURFACE AREA IN Sq.m.:0.071			WT/ASSY IN Kgs:0.547		
BRACKET					SCALE	SSE/D	<i>h. S. Prasad</i>
					1:2	CHD	
					ALT.	ALTD	
					DRN	L.PANDURANGA RAO	
							
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1	AAB10006		A3
INTEGRAL COACH FACTORY, CHENNAI - 600038							

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICY/STD 9 0 001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.

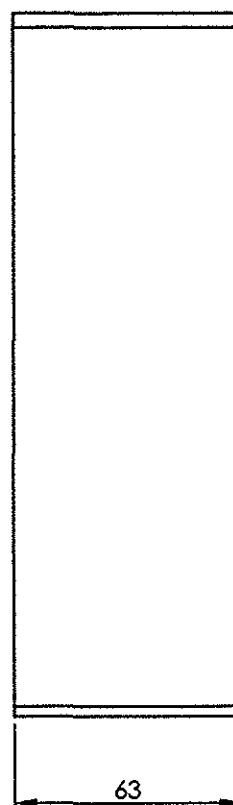
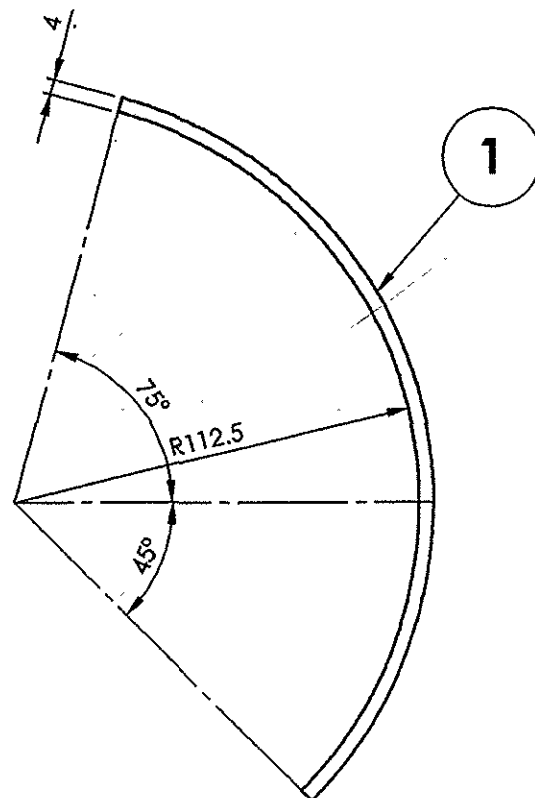
REF.DRG.NO.3 10113.0.20.095.113

	10-04-2013	<i>10/4/13</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

AAB10008

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑱ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



1	RING	4 x 63 x 240	1		RDSO/SPEC C-K201 X2CrNi12	0.483	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.033			WT/ASSY IN Kgs:0.483		
RING					SCALE	SSE/D	W. S. Prasad
					1:2	CHD	
					ALT.	ALTD	
					DRN	K.Sriram	
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1	AAB10008		A3
INTEGRAL COACH FACTORY, CHENNAI - 600038							

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS, VALUES, REFER DRAWING NO IC/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.-

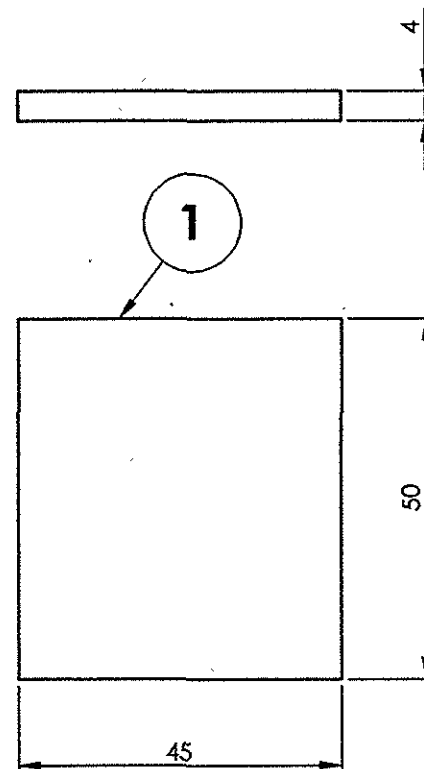
	12-06-2013	<i>W. S. Prasad</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

AAB10010

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑱ CHAMFERED

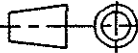
## REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
------	------	-------------	-----------------



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.  
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF:DRG.NO.-

1	PLATE	4 x 45 x 50	1		RDSO/SPEC C-K201 X2CrNi12	0.072	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.:0.005			WT/ASSY IN Kgs:0.072		
PLATE					SCALE	SSE/D	K.Sriram
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1	AAB10010	A3

	12-06-2013	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME