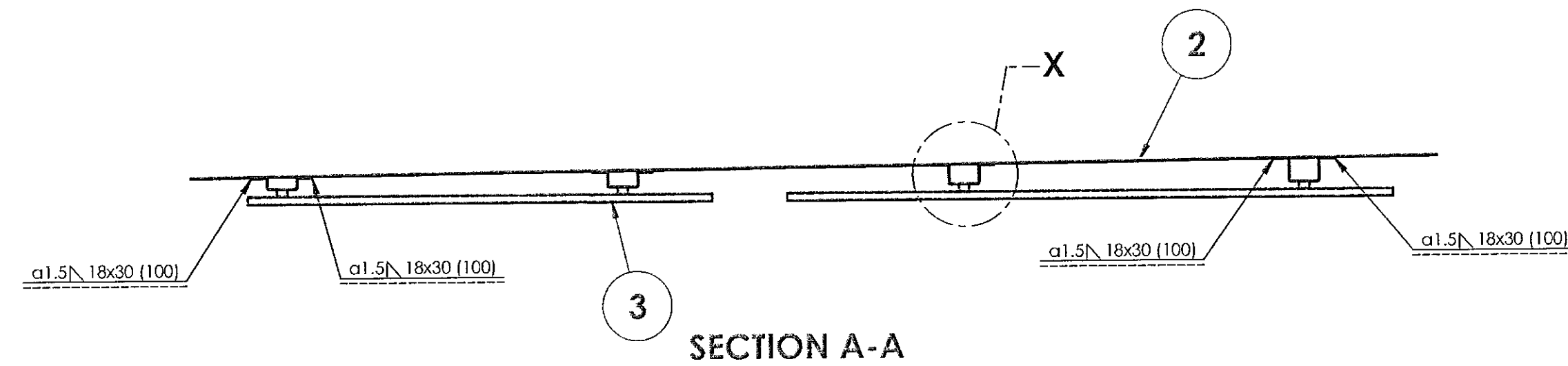
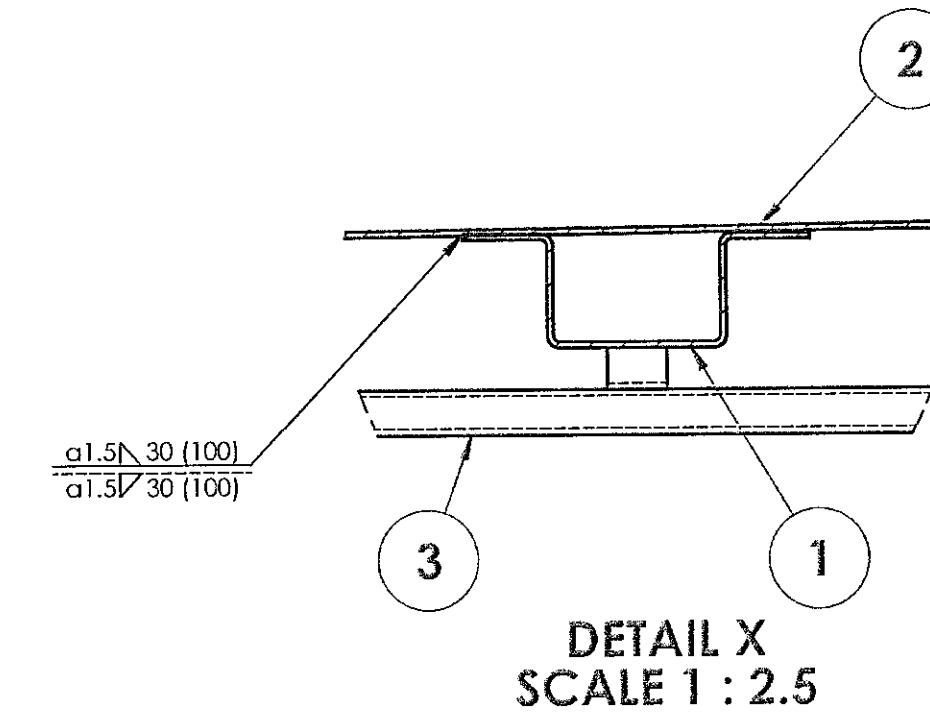
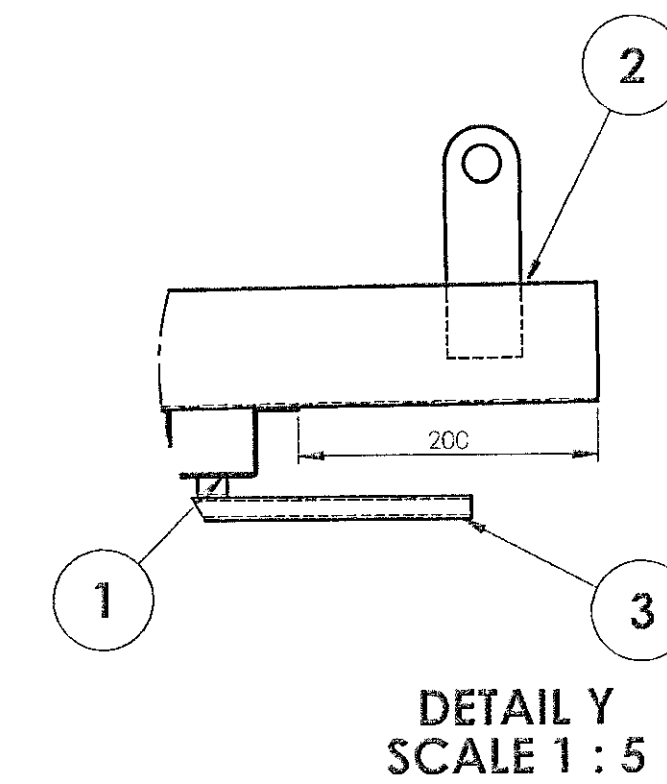
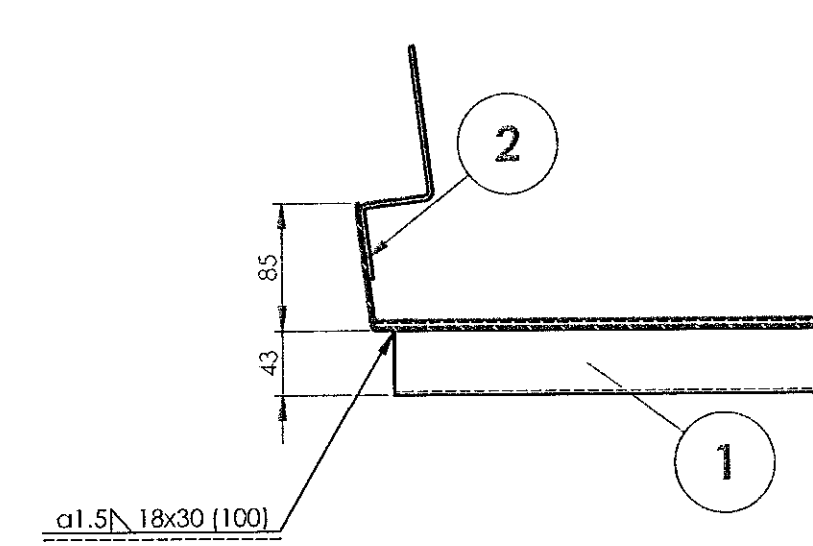
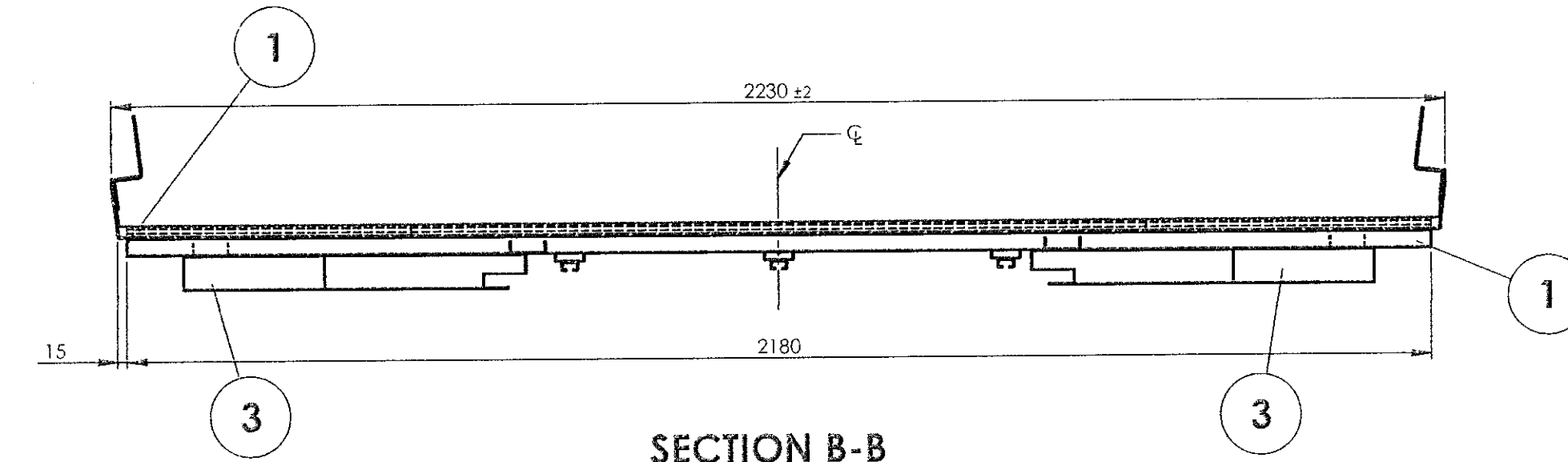
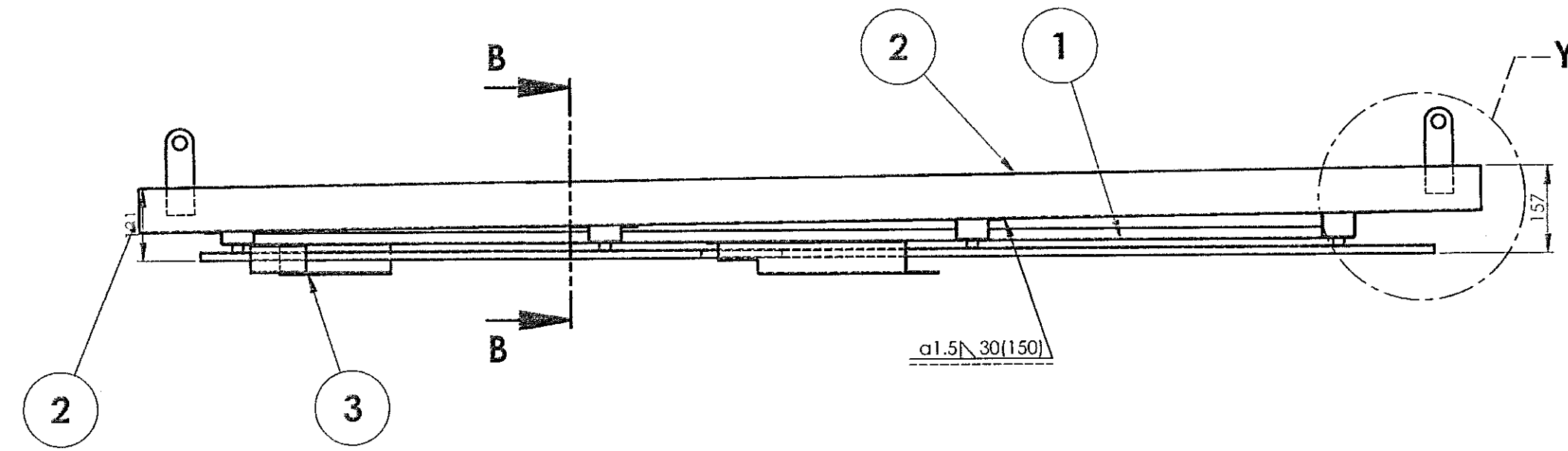


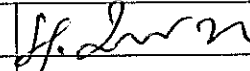
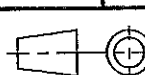
82716005

12	13	14	15	16
▽ ROUGH MACHINED	① ROUGH CLEANED	REVISIONS		
▽▽ FINISH MACHINED	② BURRS REMOVED	ALT.	ZONE	APPROVED & DATE
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED	α		ITEM-2 & 3 REVISED AND VIEWS UPDATED.



NOTE :

1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. CK-201 SHALL BE USED FOR WELDING.
2. ALL WELDING SHALL BE OF TIG UNLESS OTHERWISE SPECIFIED.
3. FOR WELD TESTING PREFERENCES REFER DRG. No. ICF/STD-9-0-998.
4. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/STD-9-0-999.
5. ALL WELDED JOINTS SPATTERS SHALL BE GROUND.
6. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
7. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
8. ALTERNATIVELY MATERIAL SPEC. ASTM A240 TYPE-304 ALSO ACCEPTABLE IN PLACE OF IS: 6911 X04C19Ni9.

1	WELDING PARTS		3	82716007		9.43				
1	ROOF SHEET ASSY		2	82716006		92.27				
1	FRAME WORK FOR FLAT ROOF ASSEMBLY		1	82716008		31.64				
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS			
GROUP: 1-6 Roof Construction			SURFACE AREA IN Sq.m.: 16737627.4		WT/ASSY IN Kgs:					
FLAT ROOF ASSEMBLY					SCALE 1:10	SSE/D CHD				
					ALT. a	ALTD DRN		E.SATHISH KUMAR		
					INDIAN RAILWAY STANDARDS				LWFAC/PP2	
					INTEGRAL COACH FACTORY, CHENNAI - 600038				82716005	
					SHEET 1 OF 1			A1		

23/01/26	08/03/25	
DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SHE

REF.DRG.NO.:-

82716006

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

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

REVISIONS

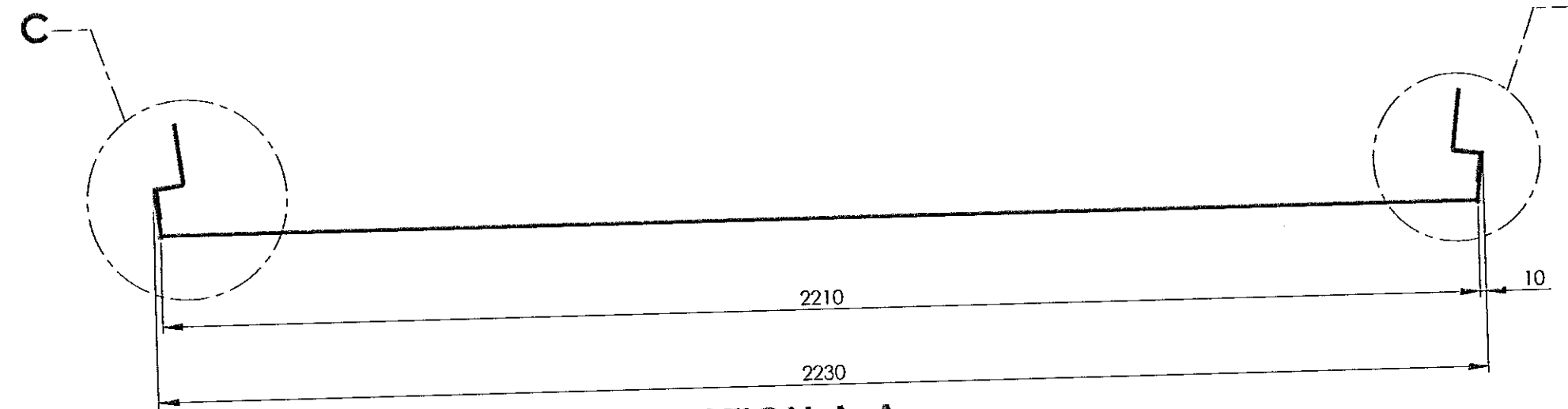
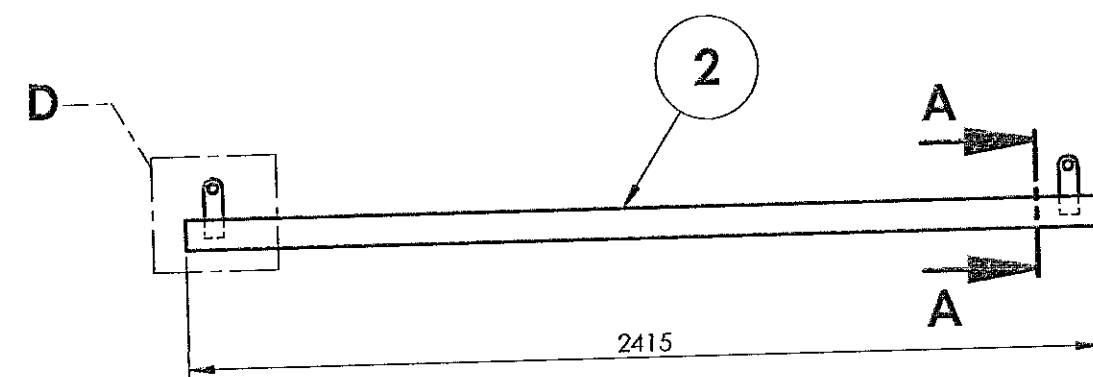
ALT.

ZONE

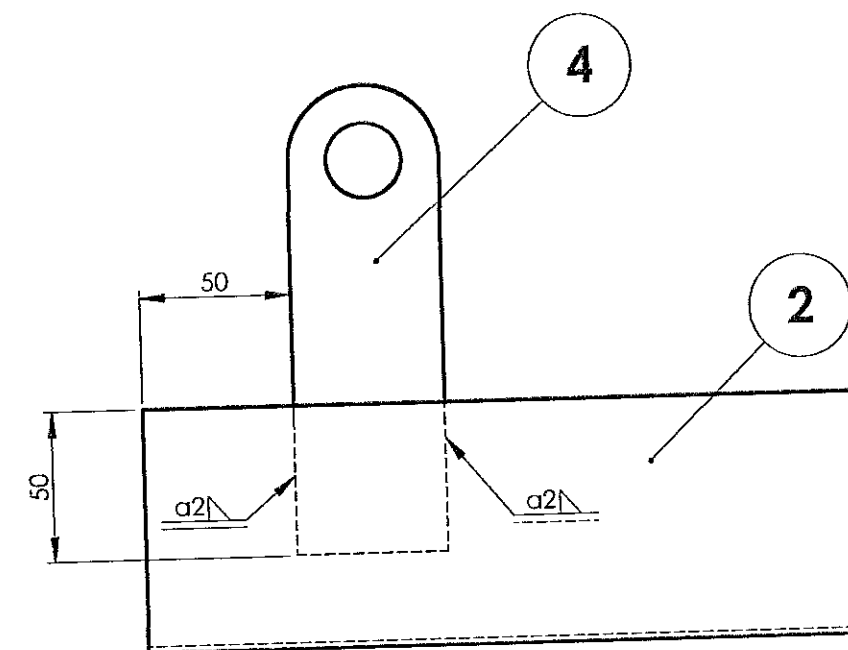
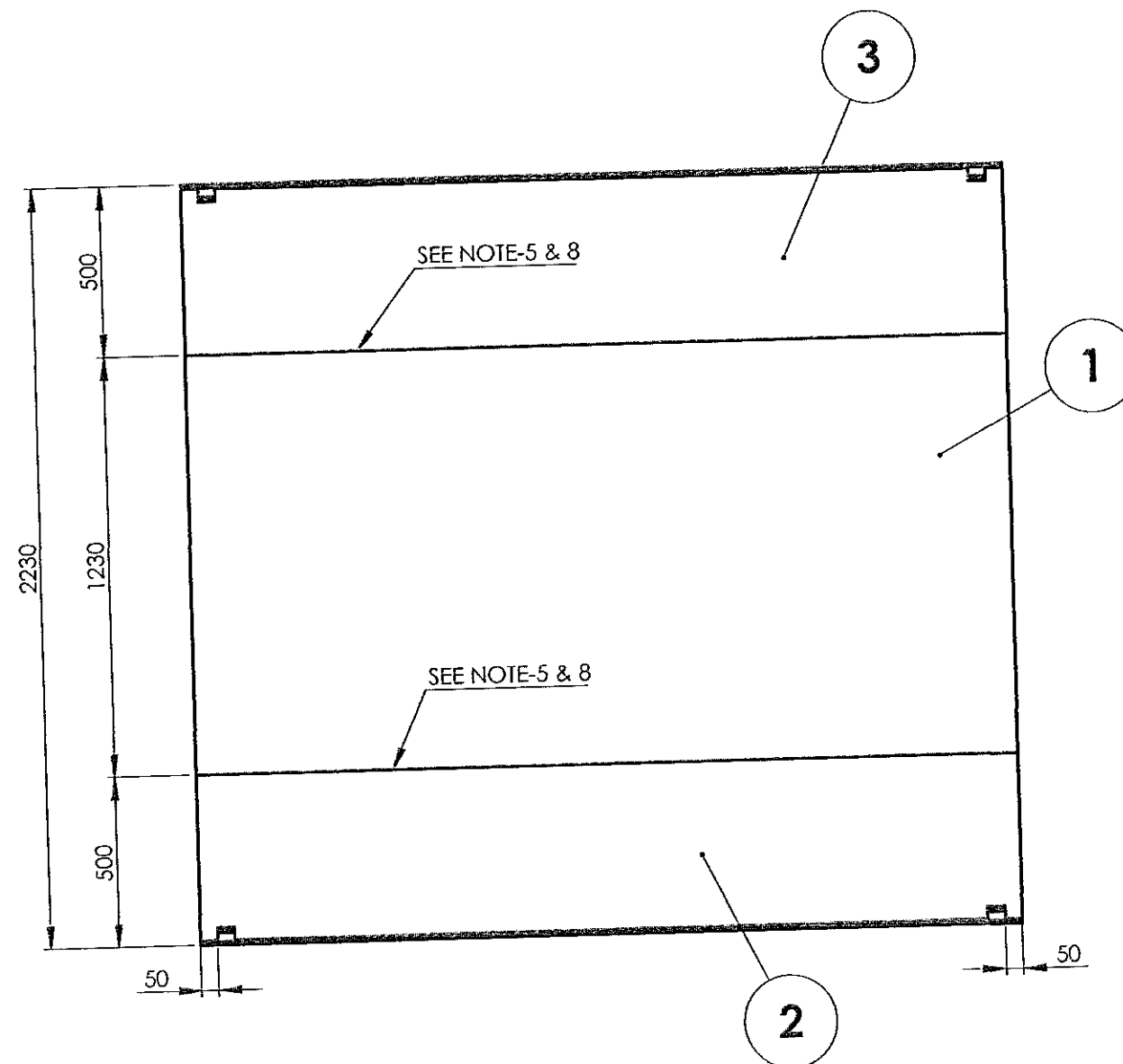
DESCRIPTION

APPROVED &
DATE

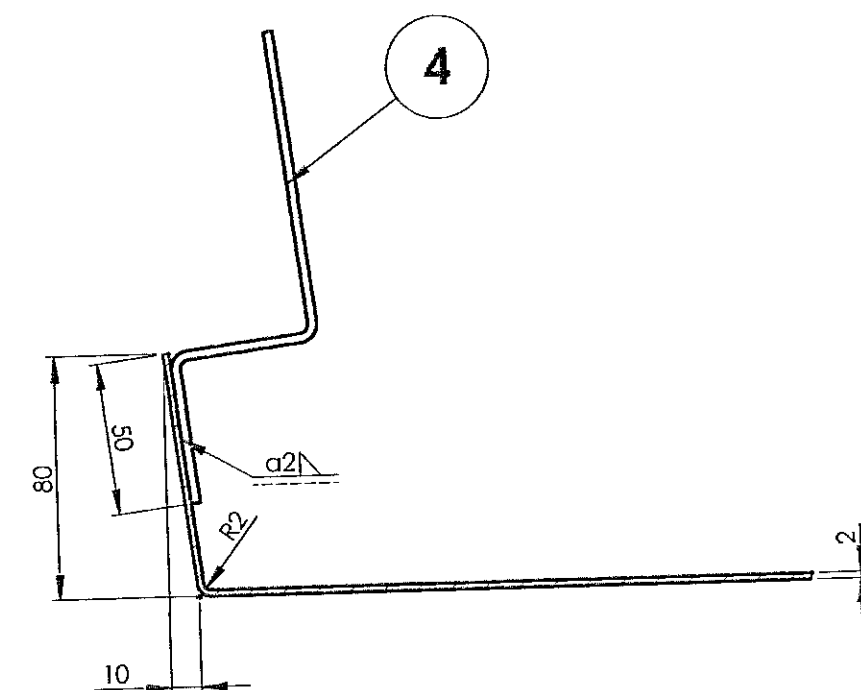
ITEM-4 ADDED AND VIEWS UPDATED.



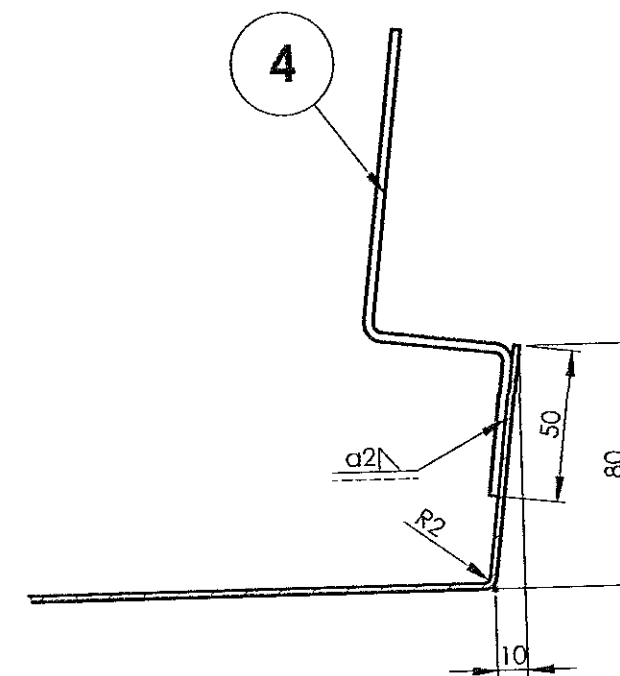
SECTION A-A
SCALE 1 : 10



DETAIL D
SCALE 1 : 2.5



DETAIL C
SCALE 1 : 2.5



DETAIL B
SCALE 1 : 2.5

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. WELDING OF SHEET JOINT SHALL BE OF LEAK PROOF BUTT JOINT AND SHALL BE MADE THROUGH TIG/LASER/RESISTANCE SEAM WELD PROCESS.
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.
8. ROOF SHEET ASSY WITH SINGLE JOINT CAN ALSO BE ACCEPTABLE.

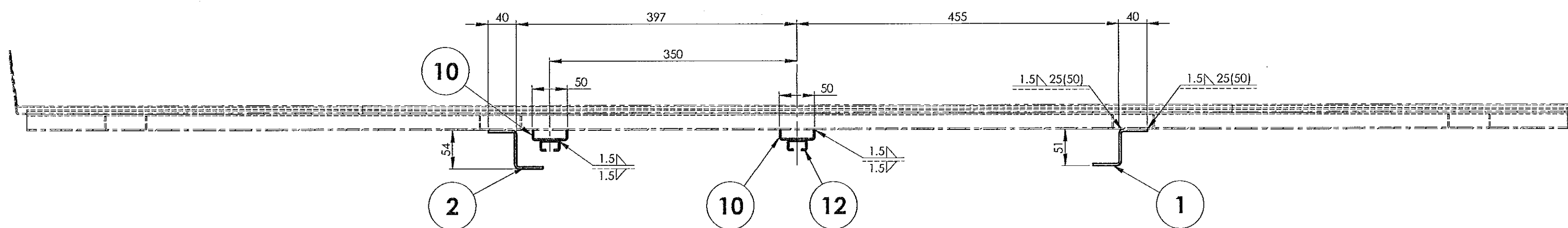
4	LIFTING HOOK		4	AAF16435		0.21	
1	ROOF SHEET		3	AAF16106		21.94	
1	ROOF SHEET		2	AAF16105		21.94	
1	ROOF SHEET	2 x 1230 x 2415	1		RDSO SPEC C-K201 X5 Cr Ni 18 10	47.53	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.: 11542955.86		WT/ASSY IN Kgs:	
ROOF SHEET ASSY				SCALE 1:20	SSE/D CHD	E.SATHISH KUMAR E. SATHISH KUMAR	
				ALT a	ALTD DRN		
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		LWFAC/PP2	
INTEGRAL COACH FACTORY, CHENNAI - 600038				82716006		A2	

21/01/26 08/08/25
DATE OF LATEST ALT. DATE OF FIRST ISSUE ABE/SME

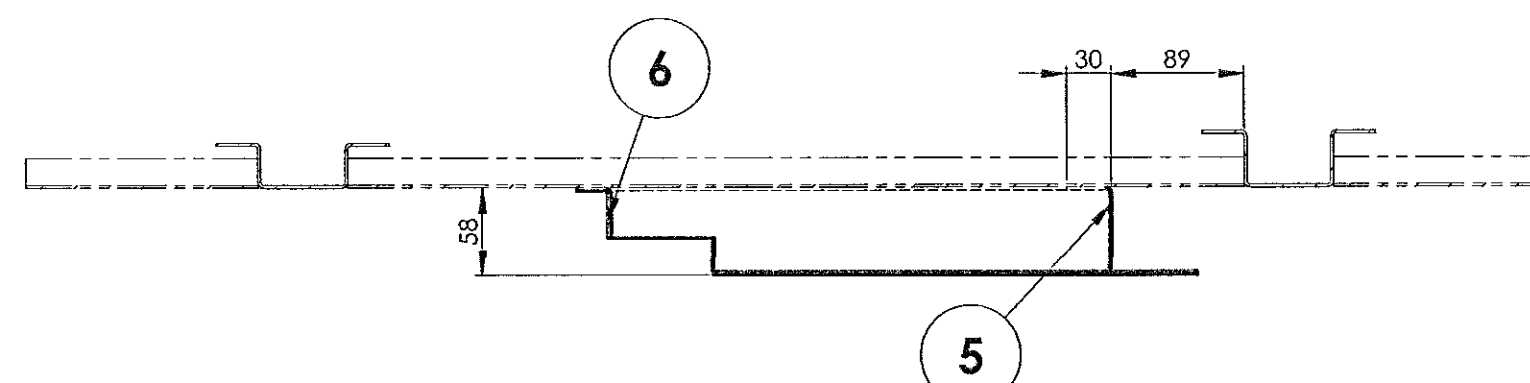
REF.DRG.NO.-

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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

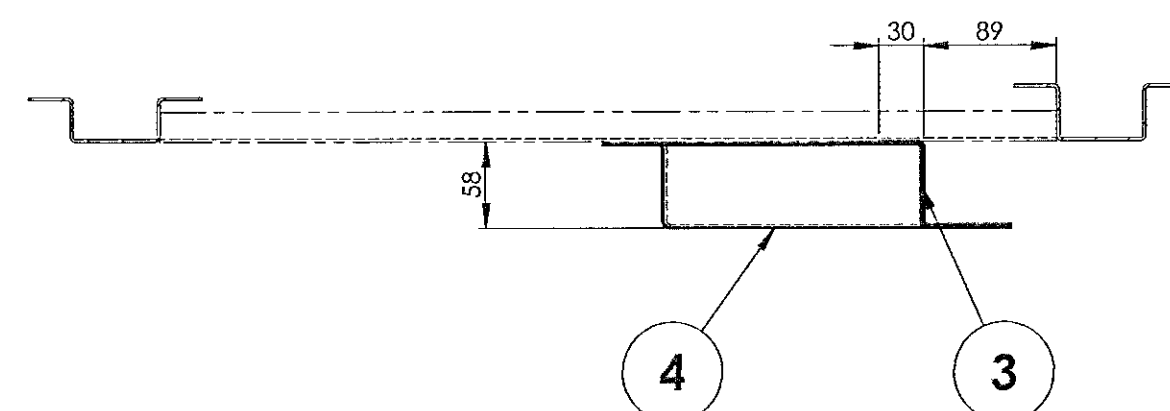
12		13		14		15		16	
▽ ROUGH MACHINED		(01) ROUGH CLEANED		REVISIONS					
▽▽ FINISH MACHINED		(019) BURRS REMOVED		ALT.	ZONE	DESCRIPTION			APPROVED & DATE
▽▽▽ FINE FINISH MACHINED		(18) CHAMFERED		a		ITEMS-11 & 12 ADDED. ITEMS- 7& 9 DELETED. VIEWS UPDATED.			



SECTION B-B
SCALE 1 : 5



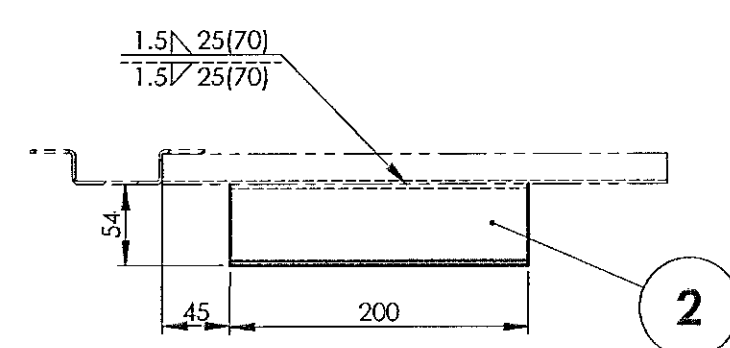
SECTION D-D
SCALE 1 : 5



1. ALL WELDING SHALL BE OF TIG UNLESS OTHERWISE SPECIFIED.
2. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. CK-201 SHALL BE USED FOR WELDING.
3. ALL WELDED JOINTS SPATTERS SHALL BE GROUND.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
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	C-BAR	L = 900	12	AAE16185		0.88	
1	C-BAR	L = 2220	11	AAE16185		2.16	
10	CHANNEL		10	AAE16292		0.02	
1	C-BAR	L = 980	9	AAE16185		0.95	
2	C-BAR	L = 1175	8	AAE16185		1.14	
1	C-BAR	L = 2300	7	AAE16185		2.24	
1	Z - STIFFENER		6	AAE16333		0.95	
1	Z - STIFFENER		5	AAE16332		0.54	
1	Z - STIFFENER		4	AAE16331		0.95	
1	Z - STIFFENER		3	AAE16330		0.54	
1	Z - STIFFENER		2	AAE16329		0.60	
1	Z - STIFFENER		1	AAE16328		0.29	

GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 1673/82716007		QUANTITY IN Kgs.	
<p style="text-align: center;">WELDING PARTS</p>		SCALE 1:20	SSE/D	<i>Handwritten Signature</i>	
			CHD		
		ALT. a	ALTD	E.SATHISH KUMAR	
			DRN	E.SATHISH KUMAR	
<p style="text-align: center;">INDIAN RAILWAY STANDARDS</p> <p style="text-align: center;">INTEGRAL COACH FACTORY, CHENNAI - 600038</p>		SHEET 1 OF 1		LWFAC/PP2	
				<p style="text-align: center;">82716007</p>	
				A1	



SECTION F-F
SCALE 1 : 5

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 S813-1986. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

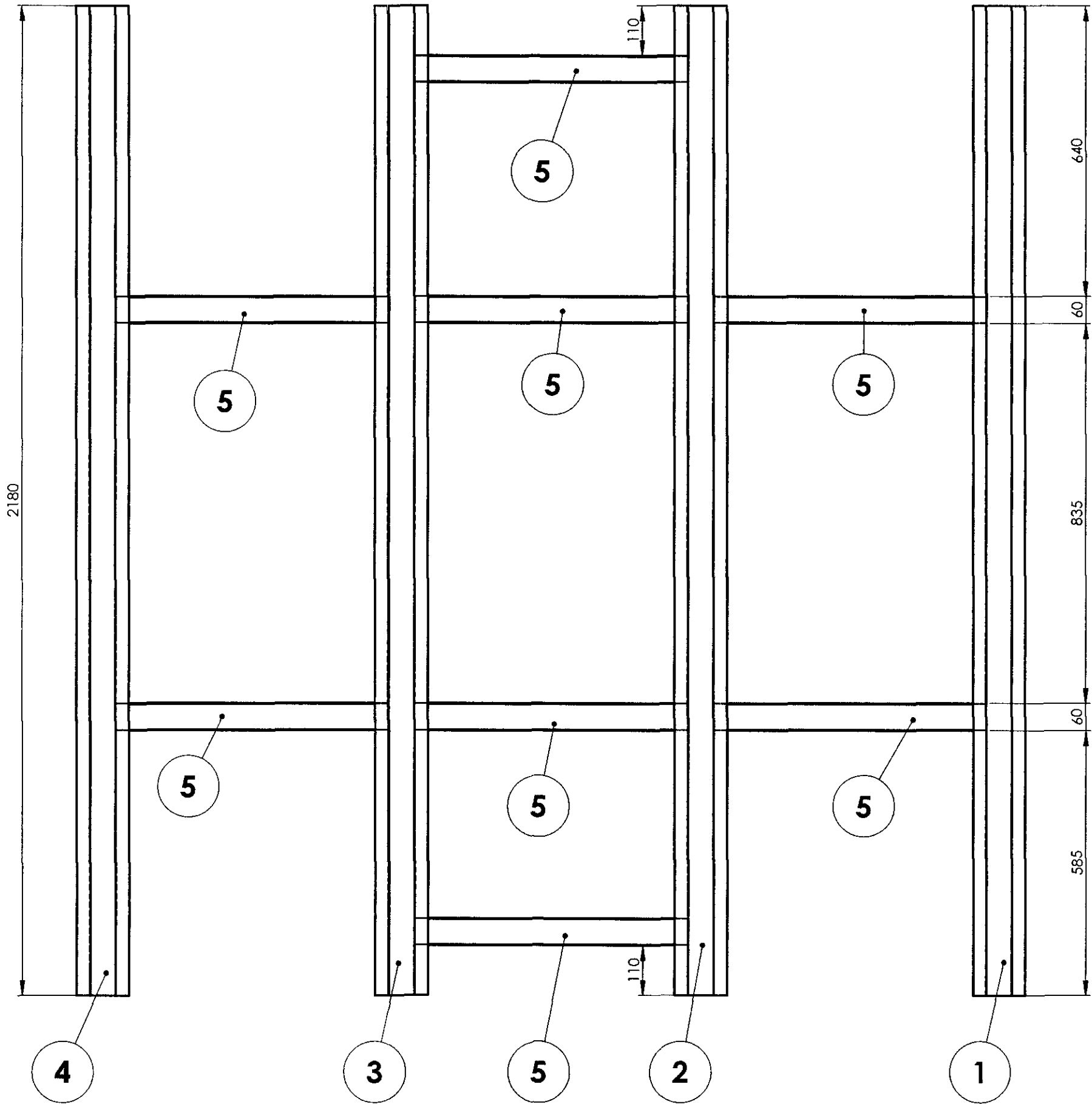
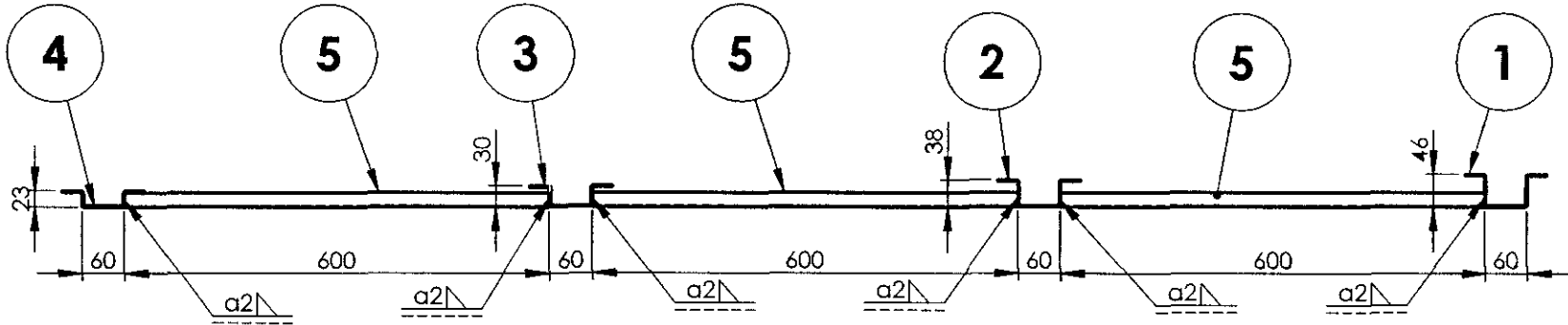
REF.DRG.NO.-

27/01/20	08/08/25	<i>He</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SM

82716008

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



NOTE:

1. ALL WELDING SHALL BE OF TIG UNLESS OTHERWISE SPECIFIED.
2. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC. CK-201 SHALL BE USED FOR WELDING.
3. ALL WELDED JOINTS SPATTERS SHALL BE GROUND.
4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDED JOINTS SHALL BE PICKLED AND PASSIVATED BEFORE SURFACE TREATMENT.
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	STIFFENER		5	AAF16113		0.9	
1	STIFFENER		4	AAF16111		5.33	
1	STIFFENER		3	AAF16110		5.82	
1	STIFFENER		2	AAF16109		6.38	
1	STIFFENER		1	AAF16108		6.94	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-6 Roof Construction SURFACE AREA IN Sq.m.: 4014849.31 WT/ASSY IN Kgs:

FRAME WORK FOR FLAT ROOF ASSEMBLY

INDIAN RAILWAY STANDARDS
INTEGRAL COACH FACTORY, CHENNAI - 600038

SCALE 1:20	SSE/D	CHD	ALT	ALTD	DRN	E.SATHISH KUMAR
LWFAC/PP2						
82716008						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

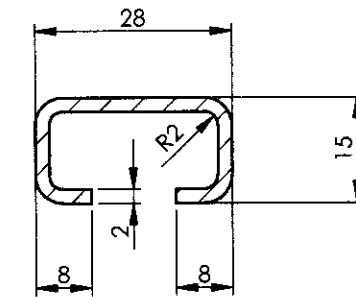
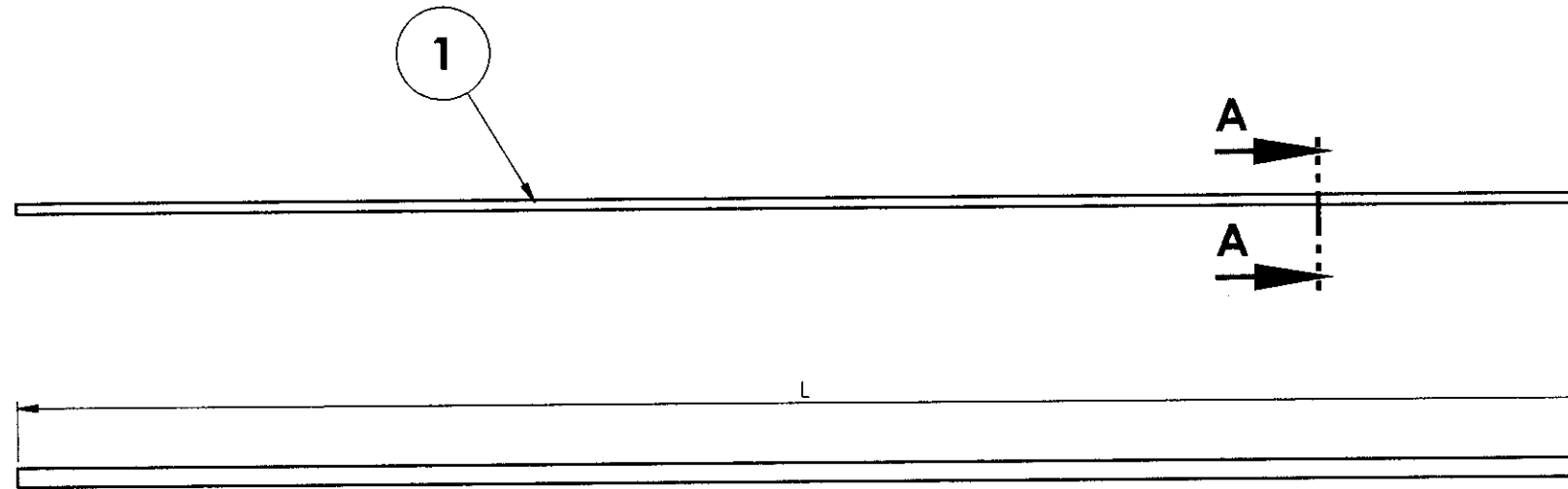
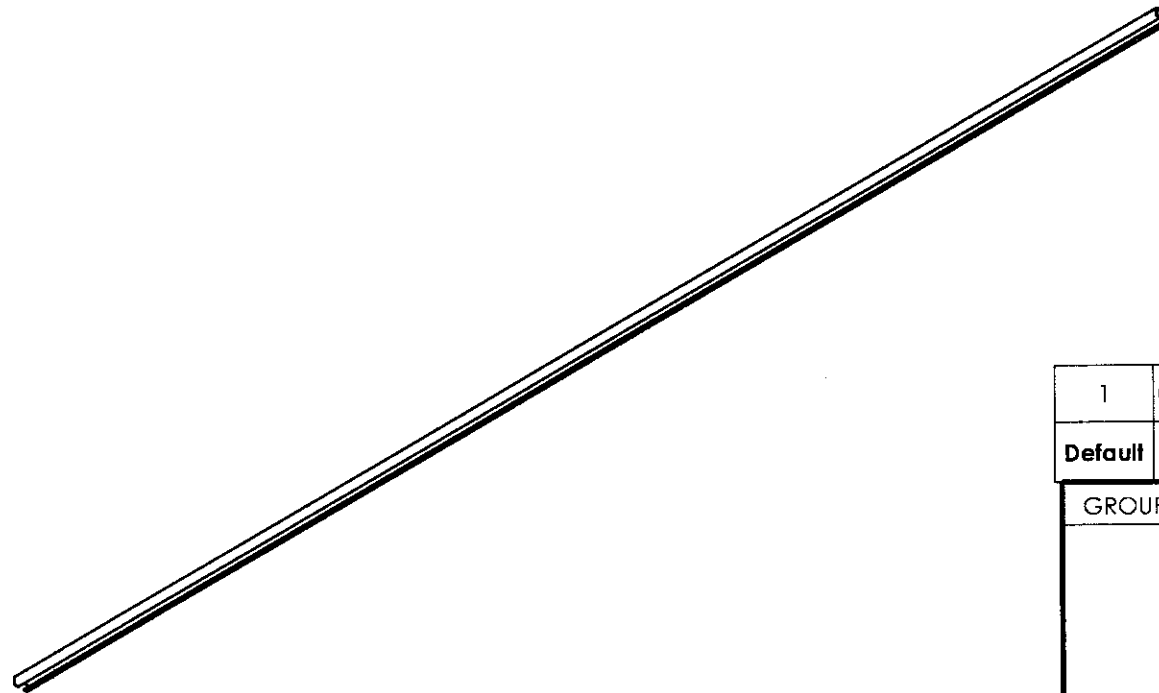
REF.DRG.NO.-

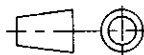
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME
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AAB16185

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

REVISIONS				APPROVED & DATE
ALT.	ZONE	DESCRIPTION		
a		LENGTH OF ITEM - 1 MENTIONED AS "L"		

SECTION A-A
SCALE 1:1

1	C-BAR	2 x 15 x 28 x L	1		IS:6911-'92; X04Cr19Ni9	2.24		
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS	
GROUP: 1-6		SURFACE AREA IN Sq.m.:			WT/ASSY IN Kgs:			
C-BAR					SCALE	SSE/D	L. Panduranga Rao	
					1:20	CHD		
					ALT.	ALTD	S.K.MUTHUKUMAR	
					a	DRN	S.K.MUTHUKUMAR	
INDIAN RAILWAY STANDARDS								
INTEGRAL COACH FACTORY, CHENNAI - 600038					SHEET 1 OF 1		AAB16185	A3

REF.DRG.NO.-

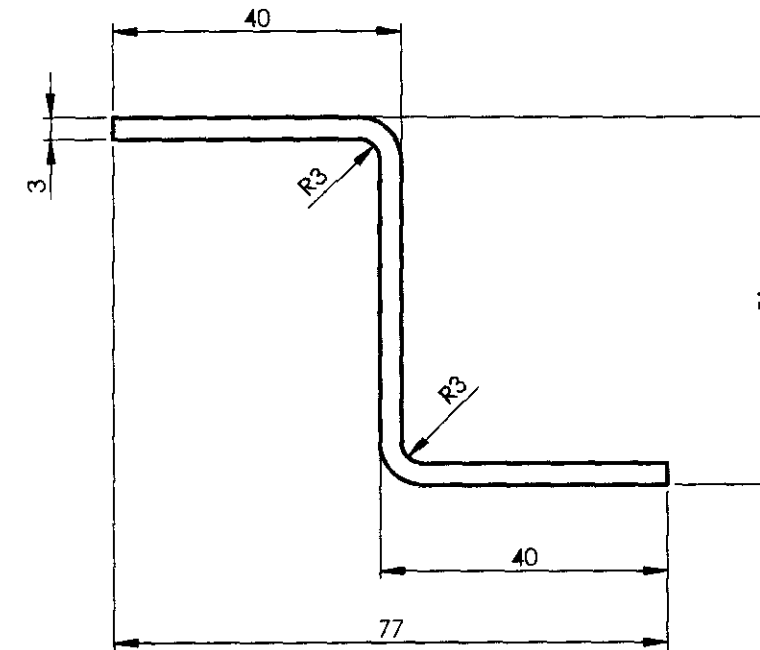
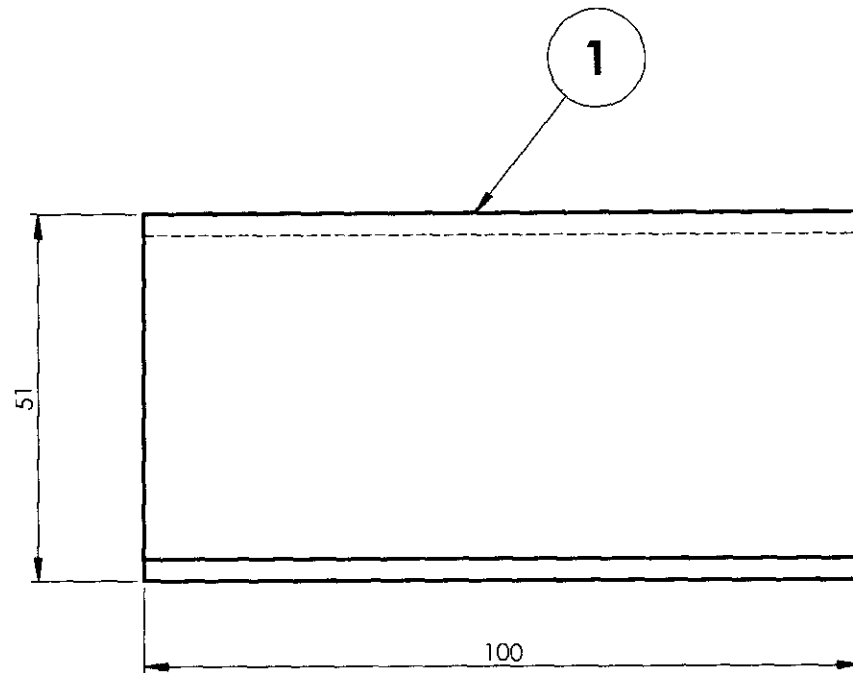
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813:1986.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

1		2		3		4		5		6		7		8																																																																				
AAE16292				▽ ROUGH MACHINED		⑧1 ROUGH CLEANED		REVISIONS																																																																										
				▽▽ FIN.SH MACHINED		⑧ BURRS REMOVED		ALT.		ZONE		DESCRIPTION		APPROVED & DATE																																																																				
				▽▽▽ FINE FIN.SH MACHINED		⑧ CHAMFERED																																																																												
<div><div><div>1</div><div><div></div><div>20</div></div></div><div><div>2</div><div><div>R2</div><div>50</div><div>14</div></div></div></div>																																																																																		
<table><tr><td>1</td><td>CHANNEL</td><td>2 x 20 x 70</td><td>1</td><td></td><td>IS:6911 X04Cr19Ni9</td><td>0.02</td><td></td></tr><tr><td>QTY</td><td>DESCRIPTION</td><td>DIMENSIONS</td><td>ITEM NO.</td><td>REF. DRGS</td><td>MATL.SPEC.</td><td>WT/UNIT IN KGS</td><td>REMARKS</td></tr><tr><td colspan="4">GROUP: 1-6 Roof Construction</td><td colspan="2">SURFACE AREA IN Sq.m.:</td><td colspan="2">WT/ASSY IN Kgs:</td></tr><tr><td colspan="5" rowspan="3">CHANNEL</td><td>SCALE</td><td>SSE/D</td><td rowspan="2">S K MUTHUKUMAR/RAVI</td></tr><tr><td>2:1</td><td>CHD</td></tr><tr><td>ALT.</td><td>ALTD</td><td></td></tr><tr><td colspan="5" rowspan="2">INDIAN RAILWAY STANDARDS</td><td colspan="2">SHEET 1 OF 1</td><td rowspan="2">AAE16292</td><td rowspan="2">A3</td></tr><tr><td colspan="2">INTEGRAL COACH FACTORY, CHENNAI - 600038</td></tr><tr><td colspan="2">REF.DRG.NO.</td><td>DATE OF LATEST ALT.</td><td>DATE OF FIRST ISSUE</td><td>AME/SME</td><td colspan="3"></td><td colspan="3"></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr></table>																1	CHANNEL	2 x 20 x 70	1		IS:6911 X04Cr19Ni9	0.02		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:		CHANNEL					SCALE	SSE/D	S K MUTHUKUMAR/RAVI	2:1	CHD	ALT.	ALTD		INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		AAE16292	A3	INTEGRAL COACH FACTORY, CHENNAI - 600038		REF.DRG.NO.		DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME							1	2	3	4	5	6	7	8
1	CHANNEL	2 x 20 x 70	1		IS:6911 X04Cr19Ni9	0.02																																																																												
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:																																																																												
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INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		AAE16292	A3																																																																										
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REF.DRG.NO.		DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME																																																																														
1	2	3	4	5	6	7	8																																																																											
<div>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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY</div>																																																																																		
A		B		C		D		E		F																																																																								

AAE16328

▽ 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 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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.

DATE OF LATEST ALT.	27-8-22	AME/SME
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1	Z - STIFFENER	3 x 100 x 119	1		IS:6911 X04Cr19Ni9	0.29	
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:	
Z - STIFFENER					SCALE 1:1	SSE/D CHD	<i>S. K. Muthukumar</i>
					ALT.	ALTD DRN	S K MUTHUKUMAR/RAVI
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAE16328	
INTEGRAL COACH FACTORY, CHENNAI - 600038						A3	

1		2		3		4		5		6		7		8		
AAE16329				▽ ROUGH MACHINED		① ROUGH CLEANED		REVISIONS								
				▽▽ FINISH MACHINED		② BURRS REMOVED		ALT.		ZONE		DESCRIPTION			APPROVED & DATE	
				▽▽▽ FINE FINISH MACHINED		③ CHAMFERED										
<div><div><div>1</div><div><div><div></div><div></div><div></div></div><div><div>200</div><div>54</div></div></div><div><div><div>40</div><div>R3</div><div>R3</div><div>40</div><div>54</div><div>3</div><div>77</div></div></div></div></div>																
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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY																
REF.DRG.NO.																
INDIAN RAILWAY STANDARDS																
INTEGRAL COACH FACTORY, CHENNAI - 600038																
SHEET 1 OF 1																
AAE16329																
A3																

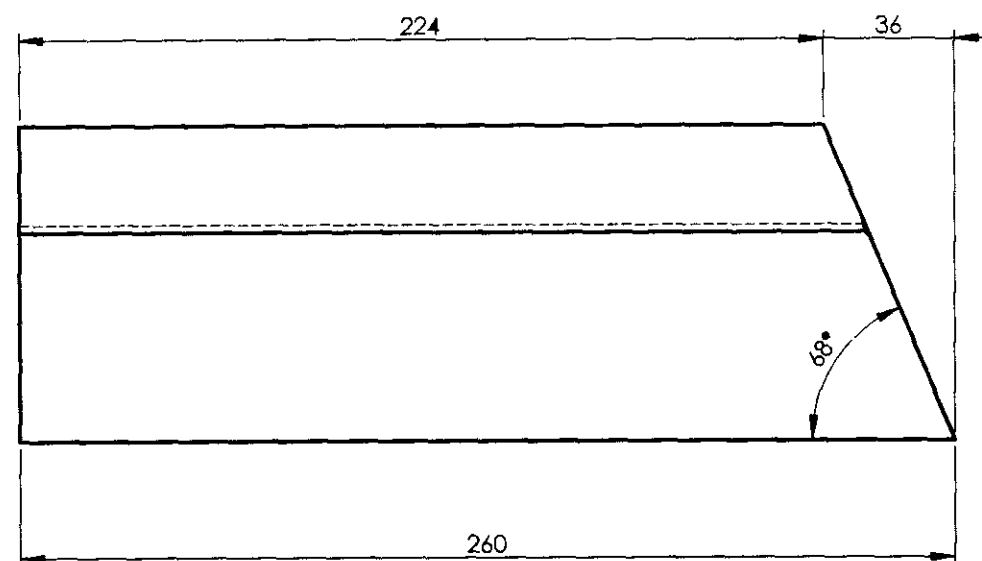
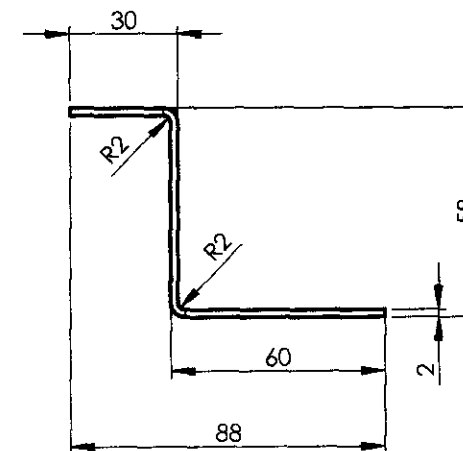
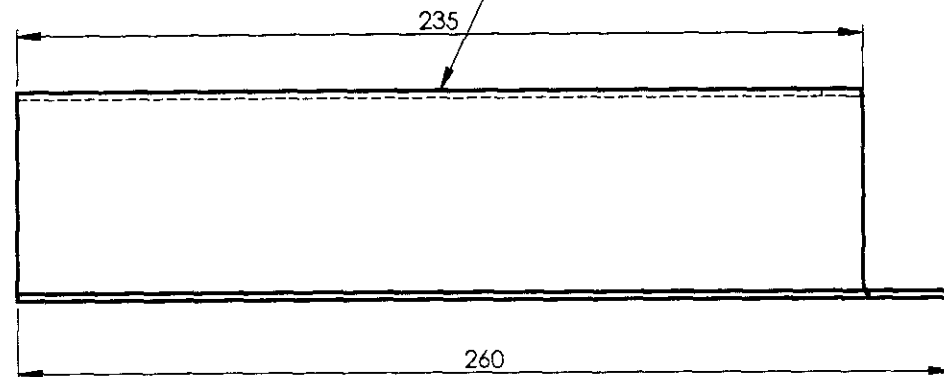
1	Z - STIFFENER	3 x 122 x 200	1		IS:6911 X04Cr19Ni9	0.60	
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.:		WT/ASSY IN Kgs:	
Z - STIFFENER					SCALE 1:2	SSE/D CHD	L. Pandiranga Rao
					ALT.	ALTD	
						DRN	S K MUTHUKUMAR/RAVI
DATE OF LATEST ALT.					DATE OF FIRST ISSUE	AME/SME	
27-8-22					V. S. S. S.		

AAE16330

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

REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
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1	Z - STIFFENER	2 x 140 x 240	1		IS:6911 X04Cr19Ni9	0.54	
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:	
Z - STIFFENER					SCALE	SSE/D	L. Panduranga Rao
					1:2	CHD	
					ALT.	ALTD	
INDIAN RAILWAY STANDARDS						DRN	S K MUTHUKUMAR
					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAE16330		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.
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REF.DRG.NO.

	27-8-22	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

AAE16331

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

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &
DATE

1

475

25

100

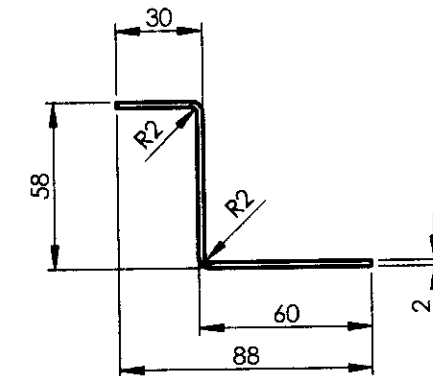
500


464

36

88°

400



1	Z - STIFFENER	2 x 140 x 500	1		IS:4911 X04Cr19Ni9	0.95	
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:		
Z - STIFFENER					SCALE	SSE/D	<i>S. K. Muthukumar</i>
					1:5	CHD	
					ALT.	ALTD	S K MUTHUKUMAR/RAVI
					-	DRN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600034				SHEET 1 OF 1			
					AAE16331		A3

REF.DRG.NO.

1		2		3		4		5		6		7		8			
AAE16332				▽ ROUGH MACHINED		① ROUGH CLEANED		REVISIONS									
				▽▽ FINISH MACHINED		② BURRS REMOVED		ALT.		ZONE		DESCRIPTION			APPROVED & DATE		
				▽▽▽ FINE FINISH MACHINED		③ CHAMFERED											
<div><div><div>1</div><div>235</div><div>260</div></div><div><div>36</div><div>224</div><div>260</div><div>88°</div></div><div><div>30</div><div>58</div><div>60</div><div>88</div><div>2</div><div>R2</div><div>R2</div></div></div>																	
<div><div>1</div><div>Z - STIFFENER</div><div>2 x 140 x 260</div><div>1</div><div></div><div>IS:6911 X04Cr19Ni9</div><div>0.54</div><div></div></div>																	
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:					
Z - STIFFENER										SCALE 1:2		SSE/D		L. Panduranga Rao			
										ALT.		CHD					
										DRN		S K MUTHUKUMAR/RAVI					
INDIAN RAILWAY STANDARDS										SHEET 1 OF 1		AAE16332		A3			
INTEGRAL COACH FACTORY, CHENNAI - 600038																	
REF.DRG.NO.-		DATE OF LATEST ALT.		DATE OF FIRST ISSUE		AME/SME											
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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
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

1		2		3		4		5		6		7		8	
AAE16333				▽ ROUGH MACHINED		⊖ ROUGH CLEANED		REVISIONS							
				▽▽ FINISH MACHINED		⊖⊖ BURRS REMOVED		ALT.		ZONE		DESCRIPTION		APPROVED & DATE	
				▽▽▽ FINE FINISH MACHINED		⊖⊖⊖ CHAMFERED									
<div><div><div>1</div><div><div><div>25</div><div>100</div></div><div><div>500</div></div></div></div><div><div><div>464</div><div>36</div></div><div><div>400</div><div>68°</div></div></div></div> <div><div><div>30</div><div>R2</div><div>58</div><div>60</div><div>88</div><div>2</div></div></div>															

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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

AA16105

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

REVISIONS

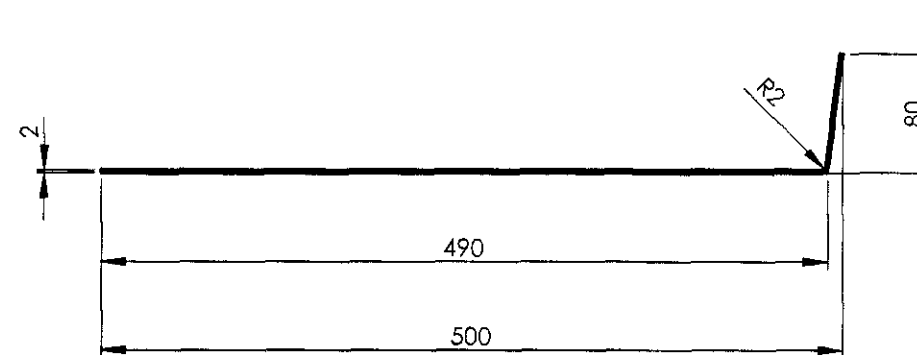
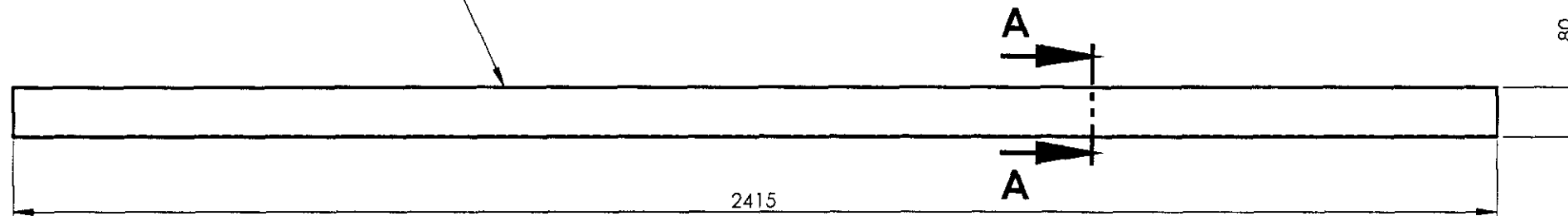
ALT.

ZONE

DESCRIPTION

APPROVED &
DATE

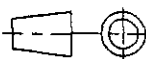
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SECTION A-A
SCALE 1 : 5

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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

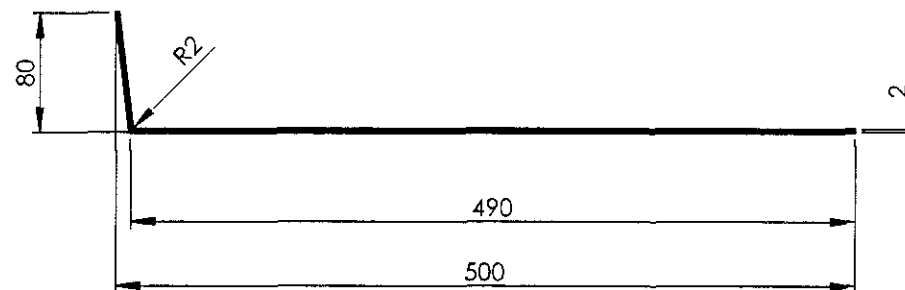
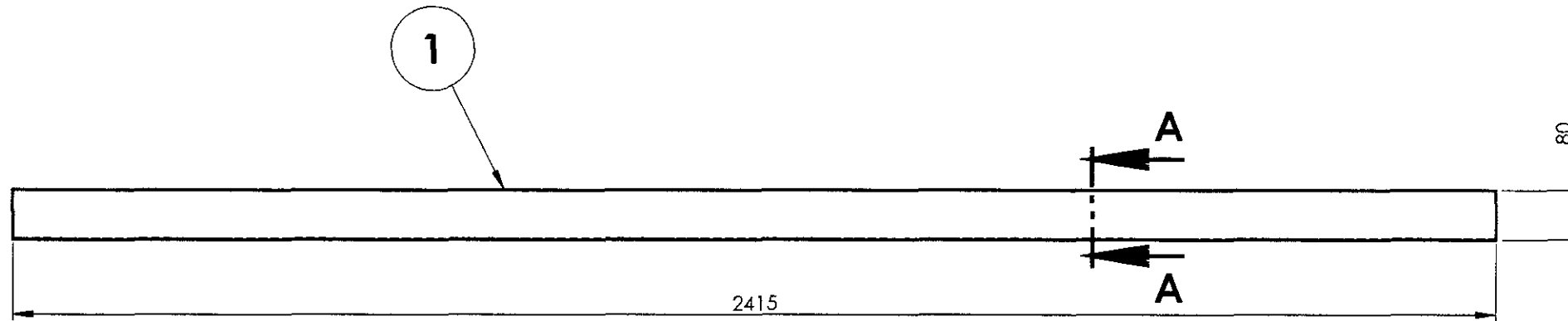
REF.DRG.NO.-

-	8/8/25	
DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SME

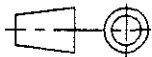
1	ROOF SHEET	2x568x2415	1		RDSO SPEC C- K201 X5 Cr NI 18 10	21.94	
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.:			WT/ASSY IN Kgs:		
ROOF SHEET					SCALE	SSE/D	<i>E. Panduranga Rao</i>
					1:20	CHD	
					ALT.	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAF16105

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



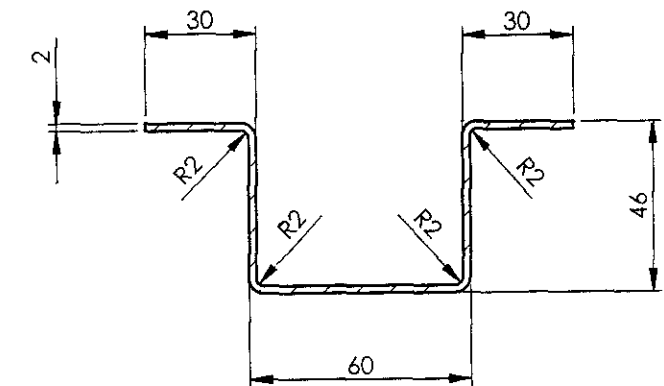
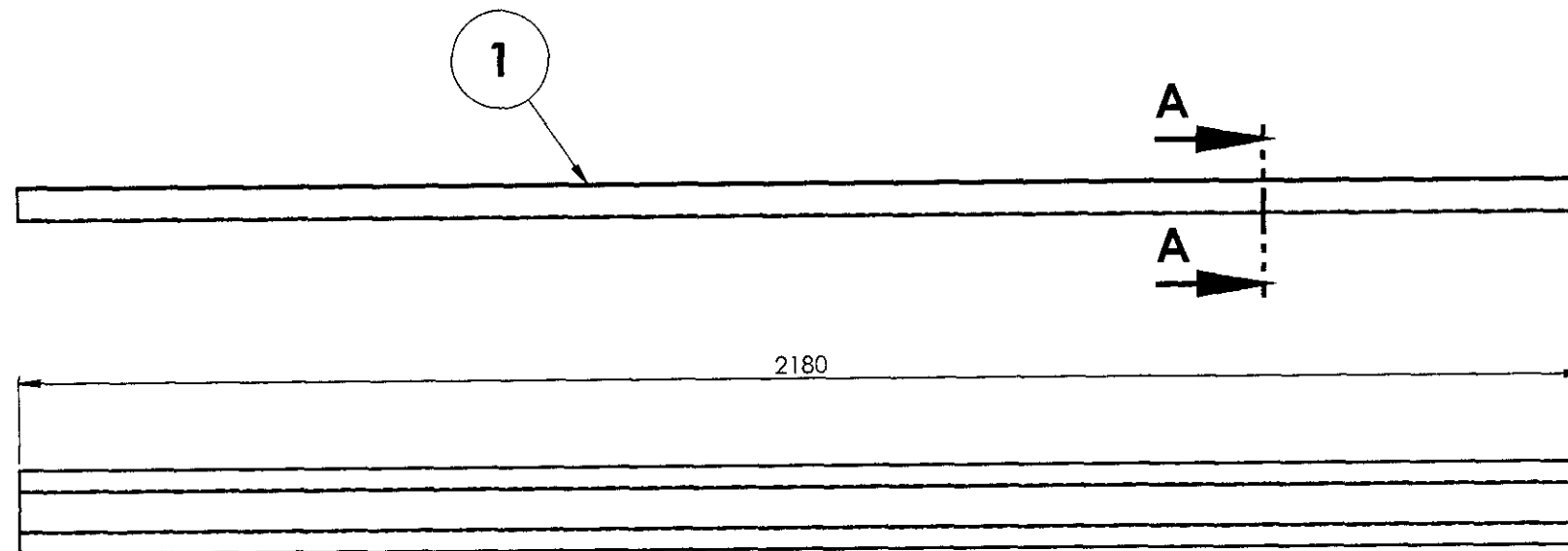
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY


1	ROOF SHEET	2x568x2415	1		RDSO SPEC C- K20T X5 Cr Ni 18 10	21.94	
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:		
ROOF SHEET					SCALE	SSE/D	L. Panduranga Rao
					1:20	CHD	
					ALT.	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAF16106		A3

AA16108

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

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			

SECTION A-A
SCALE 1 : 2

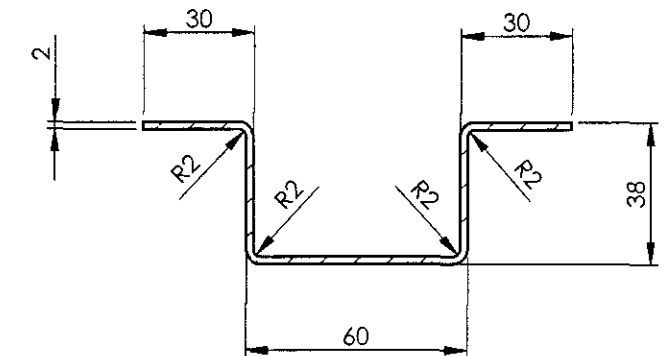
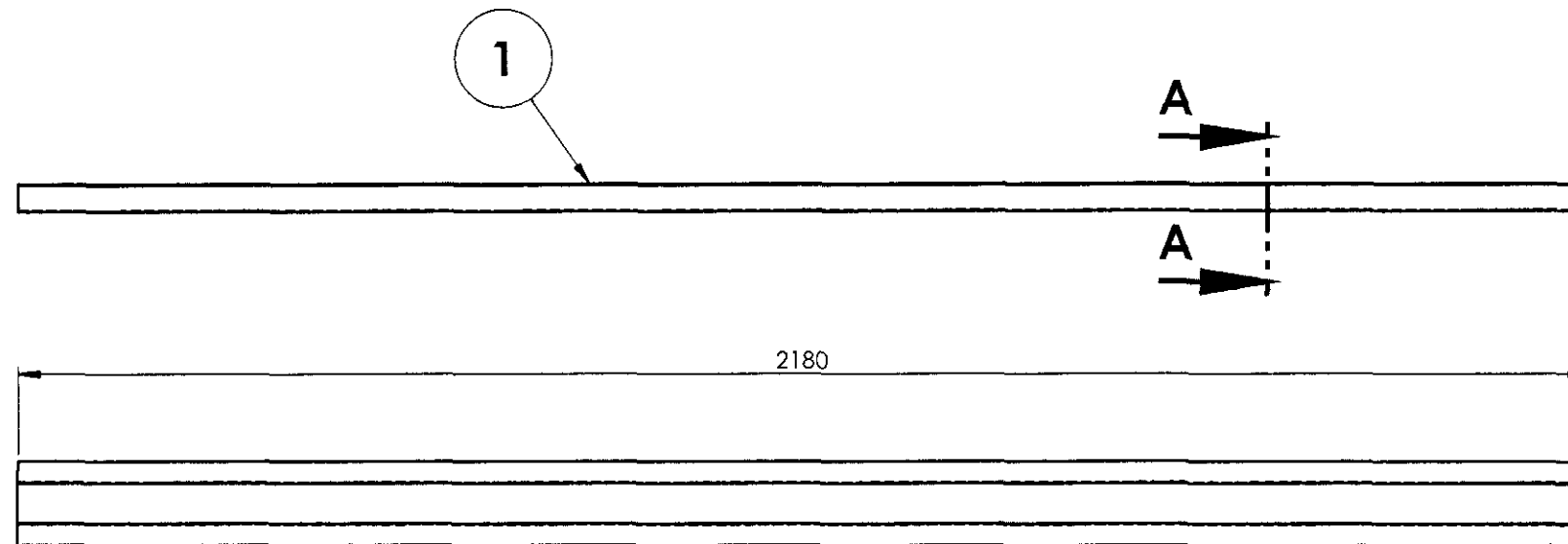
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QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.:			WT/ASSY IN Kgs:		
STIFFENER					SCALE	SSE/D	L. Panduranga R.
					1:1	CHD	
					ALT.	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAF16108		A3

REF.DRG.NO.-

AA16109

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

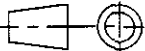
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A
SCALE 1 : 2

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WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.-

-	25/12/25	Sh
DATE OF LATEST ALT	DATE OF FIRST ISSUE	AME/SME

1	STIFFENER	2x180x2180	1		IS:6911 X04Cr19Ni9	6.38	
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:		
STIFFENER					SCALE	SSE/D	L. Panduranga Rao
					1:1	CHD	
					ALT.	ALTD	E.SATHISH KUMAR
						DRN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AA16109		A3

AA16110

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

REVISIONS

ALT.

ZONE

DESCRIPTION

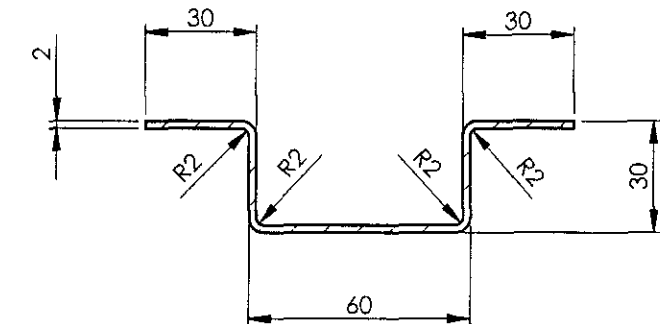
APPROVED &
DATE

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A

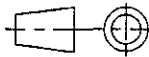
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SECTION A-A
SCALE 1 : 2

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.
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WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.-

-	8/8/25	dw
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

1	STIFFENER	2x164x2180	1		IS:6911 X04Cr19Ni9	5.82	
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:		
STIFFENER					SCALE 1:1	SSE/D	<i>L. Pandurangam</i>
						CHD	
					ALT.	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							
					SHEET 1 OF 1		AAF16110

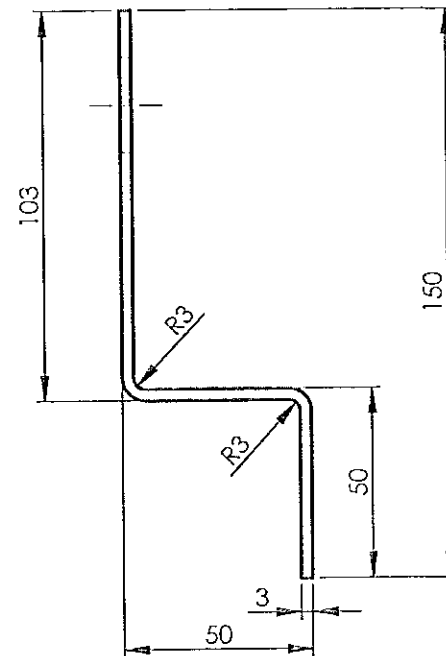
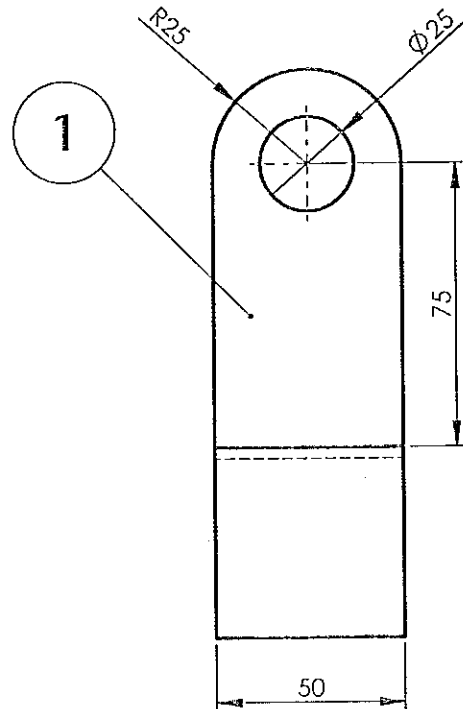
1		2		3		4		5		6		7		8																																																																									
AAf16111				▽ ROUGH MACHINED		① ROUGH CLEANED		REVISIONS																																																																															
				▽▽ FINISH MACHINED		①b BURRS REMOVED		ALT.		ZONE		DESCRIPTION		APPROVED & DATE																																																																									
				▽▽▽ FINE FINISH MACHINED		⑱ CHAMFERED																																																																																	
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<table><tr><td>1</td><td>STIFFENER</td><td>2x150x2180</td><td>1</td><td></td><td>IS:6911 X04Cr19Ni9</td><td>5.33</td><td></td></tr><tr><td>QTY</td><td>DESCRIPTION</td><td>DIMENSIONS</td><td>ITEM NO.</td><td>REF. DRGS</td><td>MATL.SPEC.</td><td>WT/UNIT IN KGS</td><td>REMARKS</td></tr><tr><td colspan="4">GROUP: 1-6 Roof Construction</td><td colspan="2">SURFACE AREA IN Sq.m.:</td><td colspan="2">WT/ASSY IN Kgs:</td></tr><tr><td colspan="5">STIFFENER</td><td>SCALE 1:1</td><td>SSE/D CHD</td><td>L. Ramesh Babu</td></tr><tr><td colspan="5"></td><td>ALT.</td><td>ALTD</td><td></td></tr><tr><td colspan="5"></td><td></td><td>DRN</td><td>E.SATHISH KUMAR</td></tr><tr><td colspan="4">INDIAN RAILWAY STANDARDS</td><td colspan="2">SHEET 1 OF 1</td><td colspan="2">AAf16111 A3</td></tr><tr><td colspan="4">INTEGRAL COACH FACTORY, CHENNAI - 600038</td><td colspan="2"></td><td colspan="2"></td></tr><tr><td colspan="2">REF.DRG.NO.-</td><td>DATE OF LATEST ALT.</td><td>DATE OF FIRST ISSUE</td><td colspan="2">AME/SME</td><td colspan="2"></td></tr></table>																1	STIFFENER	2x150x2180	1		IS:6911 X04Cr19Ni9	5.33		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:		STIFFENER					SCALE 1:1	SSE/D CHD	L. Ramesh Babu						ALT.	ALTD								DRN	E.SATHISH KUMAR	INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAf16111 A3		INTEGRAL COACH FACTORY, CHENNAI - 600038								REF.DRG.NO.-		DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME			
1	STIFFENER	2x150x2180	1		IS:6911 X04Cr19Ni9	5.33																																																																																	
QTY	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS																																																																																
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STIFFENER					SCALE 1:1	SSE/D CHD	L. Ramesh Babu																																																																																
					ALT.	ALTD																																																																																	
						DRN	E.SATHISH KUMAR																																																																																
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAf16111 A3																																																																																	
INTEGRAL COACH FACTORY, CHENNAI - 600038																																																																																							
REF.DRG.NO.-		DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME																																																																																			
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1		2		3		4		5		6		7		8	
AAF16113				▽ ROUGH MACHINED		① ROUGH CLEANED		REVISIONS							
				▽▽ FINISH MACHINED		② BURRS REMOVED		ALT.		ZONE		DESCRIPTION			
				▽▽▽ FINE FINISH MACHINED		③ CHAMFERED						APPROVED & DATE			
<div><div><div>1</div><div><div>A</div><div>A</div></div><div>600</div></div><div><div>2</div><div>20</div><div>R2</div><div>R3</div><div>60</div></div><div>SECTION A-A SCALE 1 : 2</div></div>															
<div><div>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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY</div><div>REF.DRG.NO.-</div><div><div>DATE OF LATEST ALT.</div><div>DATE OF FIRST ISSUE</div><div>AME/SME</div></div><div><div>INDIAN RAILWAY STANDARDS</div><div>INTEGRAL COACH FACTORY, CHENNAI - 600038</div></div><div><div>GROUP: 1-6 Roof Construction</div><div>SURFACE AREA IN Sq.m.:</div><div>WT/ASSY IN Kgs:</div></div><div><div>STIFFENER</div><div>SCALE 1:1</div><div>ALT.</div><div>SSE/D</div><div>CHD</div><div>ALTD</div><div>DRN</div><div>E.SATHISH KUMAR</div></div><div><div>SHEET 1 OF 1</div><div>AAF16113</div><div>A3</div></div></div>															
1		2		3		4		5		6		7		8	

AAF16435

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

6		7		8	
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

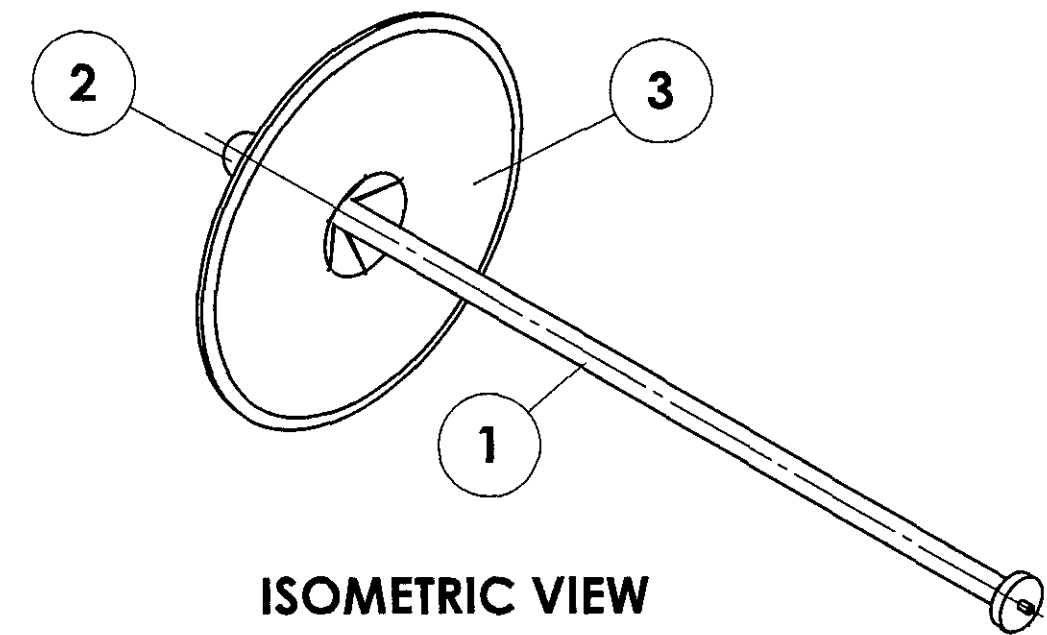
REF.DRG.NO.

1	LIFTING HOOK	3x50x191	1		IS:6911 X04Cr19Ni9	0.21	
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:	
LIFTING HOOK					SCALE 1:2	SSE/D CHD	
					ALT.	ALTD	
						DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAF16435	
INTEGRAL COACH FACTORY, CHENNAI - 600038						A3	
DATE OF LATEST ALT.		DATE OF FIRST ISSUE		AME/SME			
		21/01/2026					

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

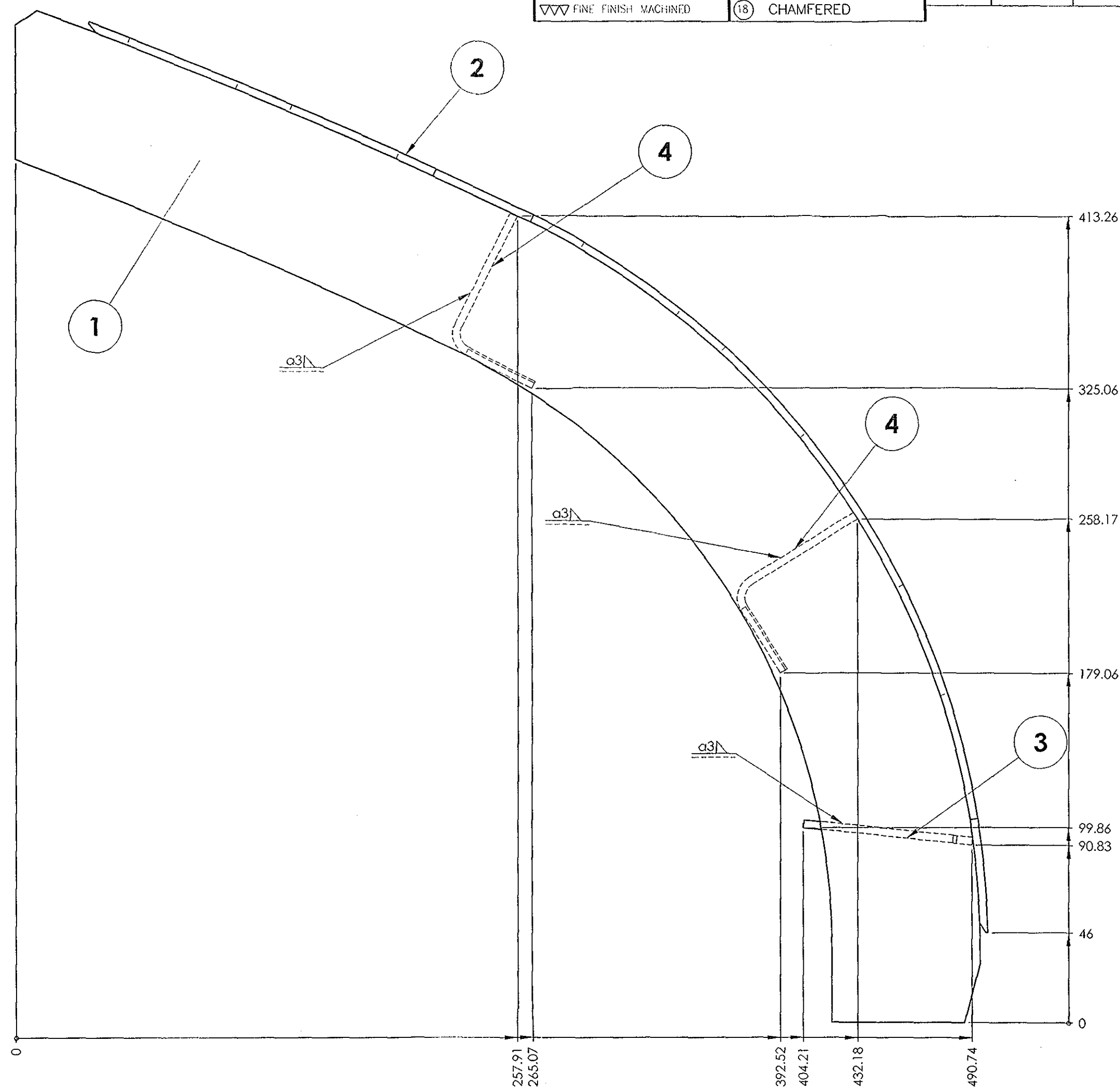
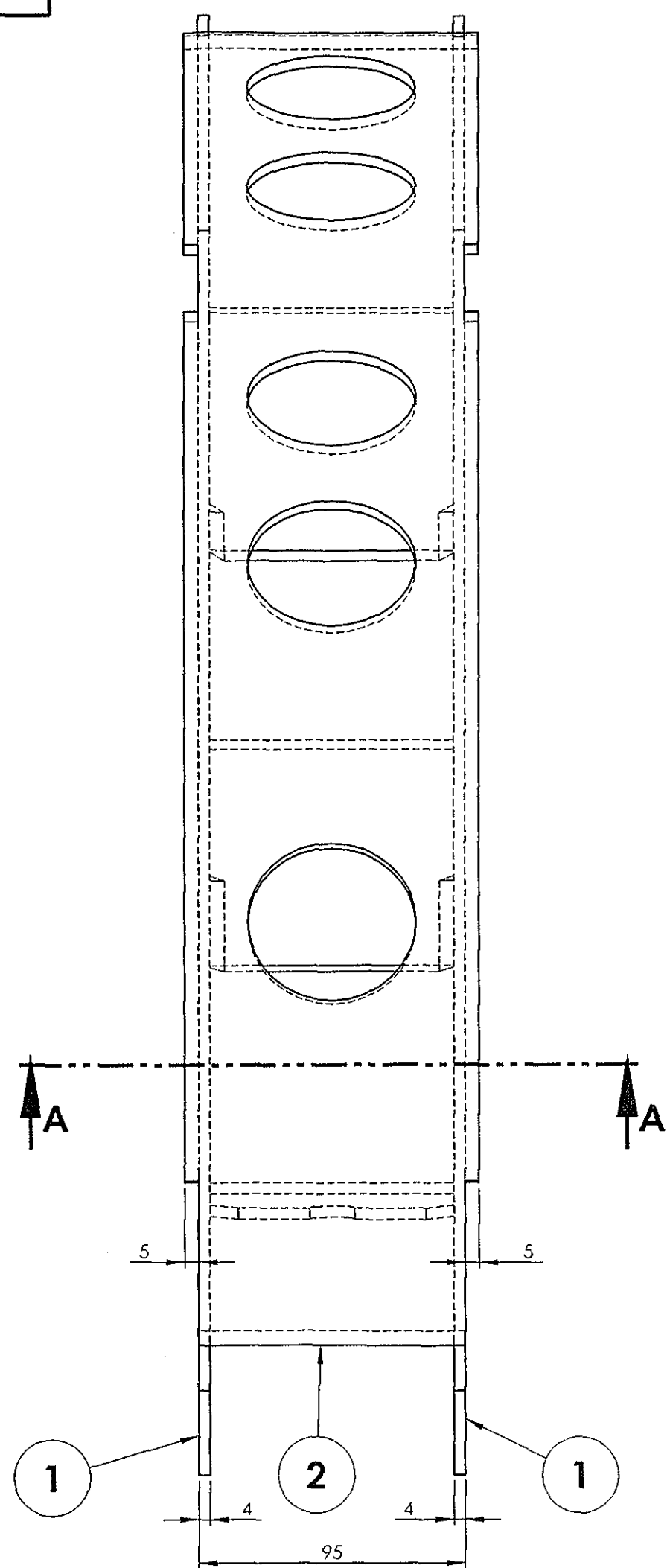
REF.DRG.NO.mi005176

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

59316018

▽ ROUGH MACHINED	01 ROUGH CLEANED
▽▽ FINISH MACHINED	01b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	18 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. ALL BUTT WELDINGS TO BE DONE AT COACH OUTSIDE AND ROUGH GRINDING TO BE DONE ON THE SAME SIDE. PENETRATION SHOULD NOT BE GROUND.

SECTION A-A
SCALE 1:2

REF.DRG.NO.2 10113.0.20.210.006

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	DRN	K.Sriram

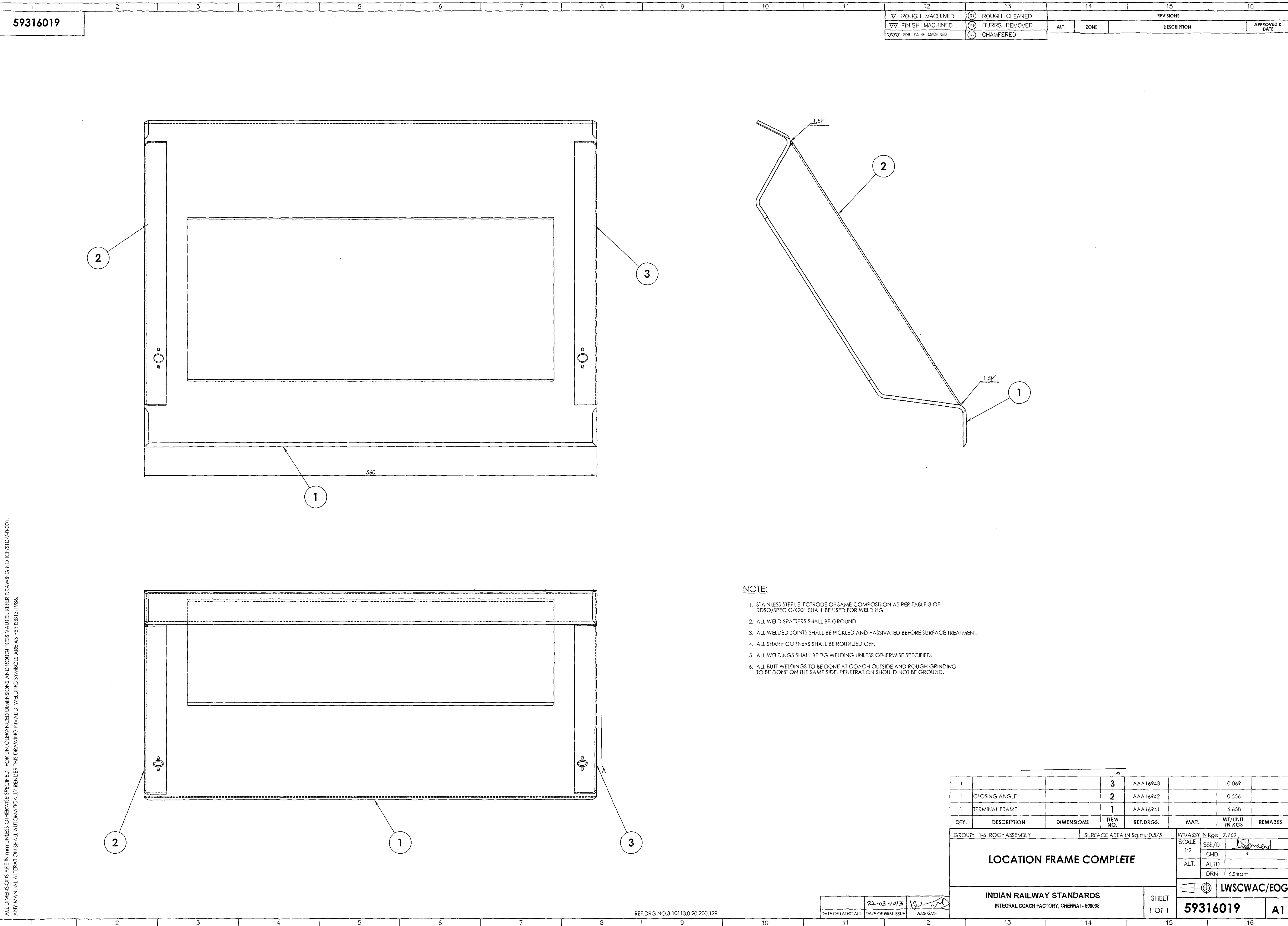
INDIAN RAILWAY STANDARDS
INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

LWSCWAC/EOG

59316018

A2



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

- 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			3	AAA16943		0.069	
1	CLOSING ANGLE		2	AAA16942		0.556	
1	TERMINAL FRAME		1	AAA16941		6.658	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY			SURFACE AREA IN Sq.m.: 0.575		WT/ASSY IN Kgs: 7.769		
LOCATION FRAME COMPLETE				SCALE 1:2	SSE/D	CHD	
				ALT.	ALTD	DRN	
						K.Sriram	
						LWSCWAC/EOG	
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					59316019		A1

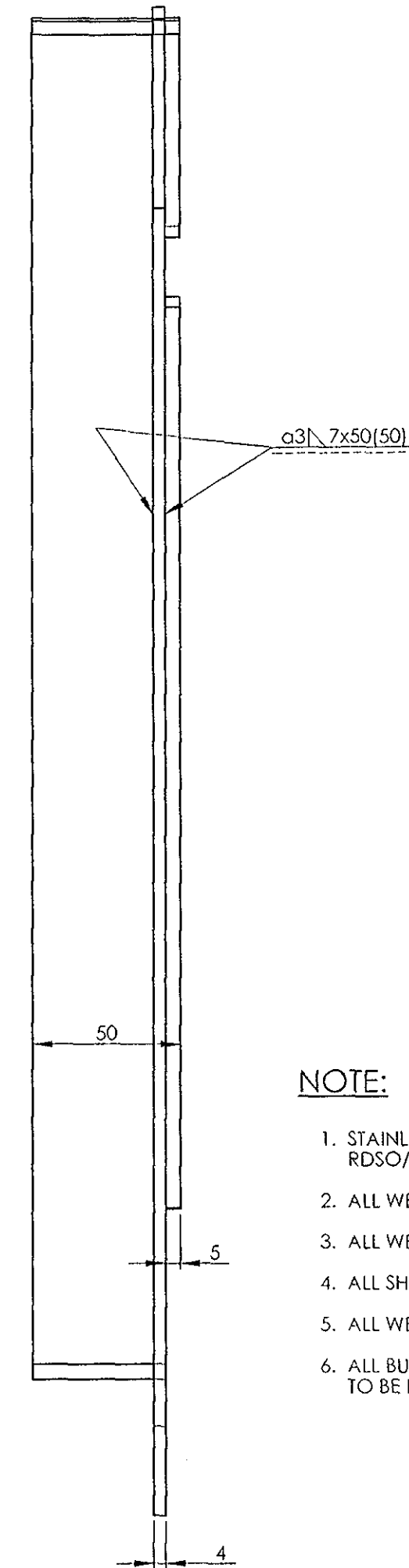
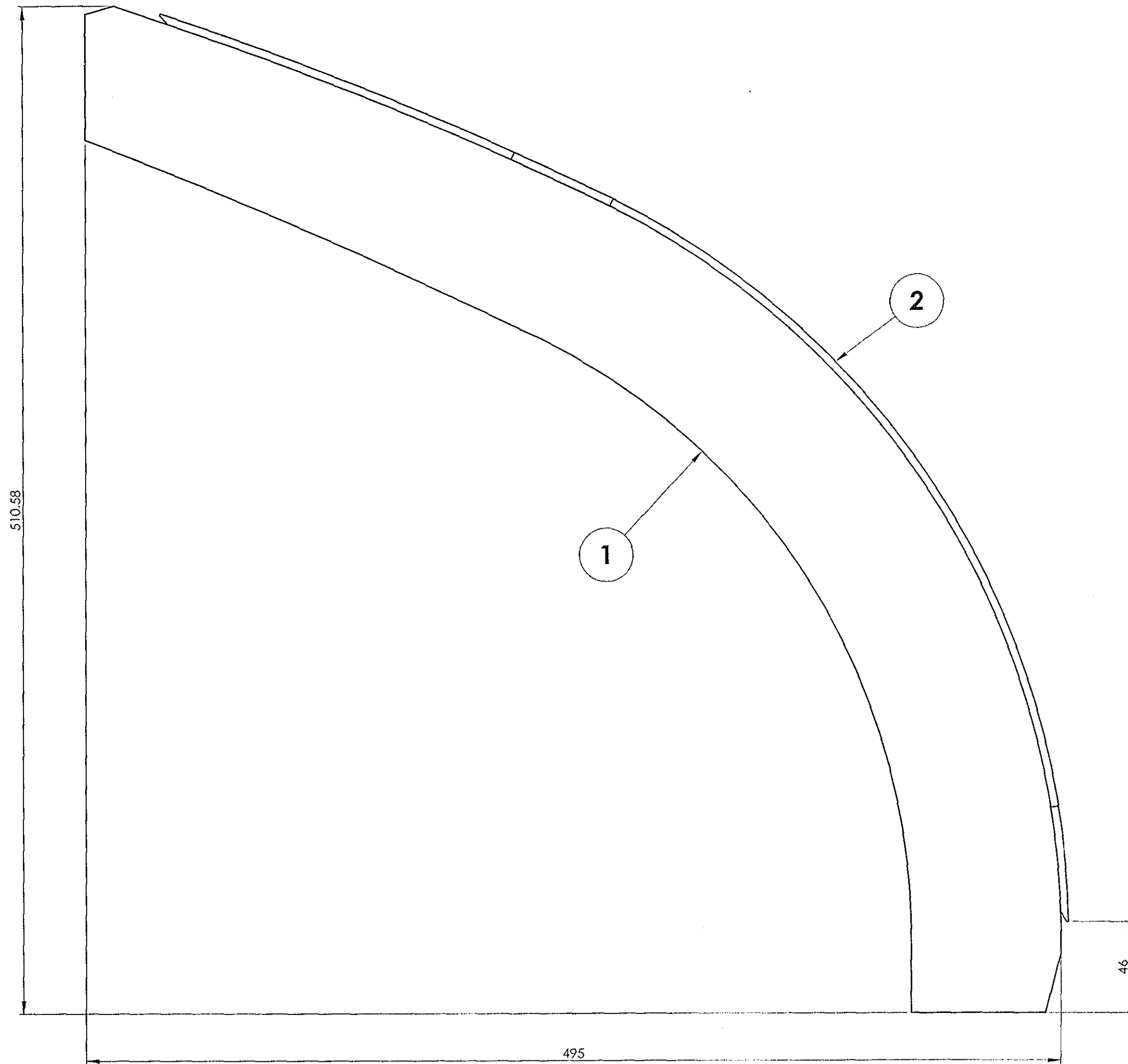
22-03-2013	AME/SME
DATE OF LATEST ALT.	DATE OF FIRST ISSUE

REF.DRG.NO.3 10113.0.20.200.129

59316022

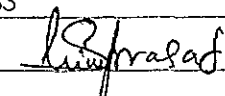

▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	①b BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	①c CHAMFERED

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. 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	AAA16957		1.10		
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.: 0.19		WT/ASSY IN Kgs:2.83			
ROOF ARCH COMPLETE					SCALE 1:5	SSE/D		
						CHD		
					ALT	ALTD		
						DRN		K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038						LWSCWAC/EOG		
						59316022		
					SHEET 1 OF 1			A2

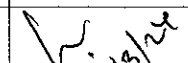
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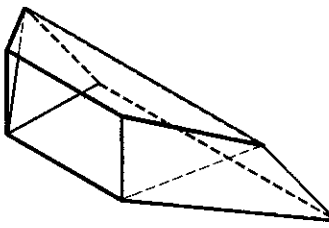
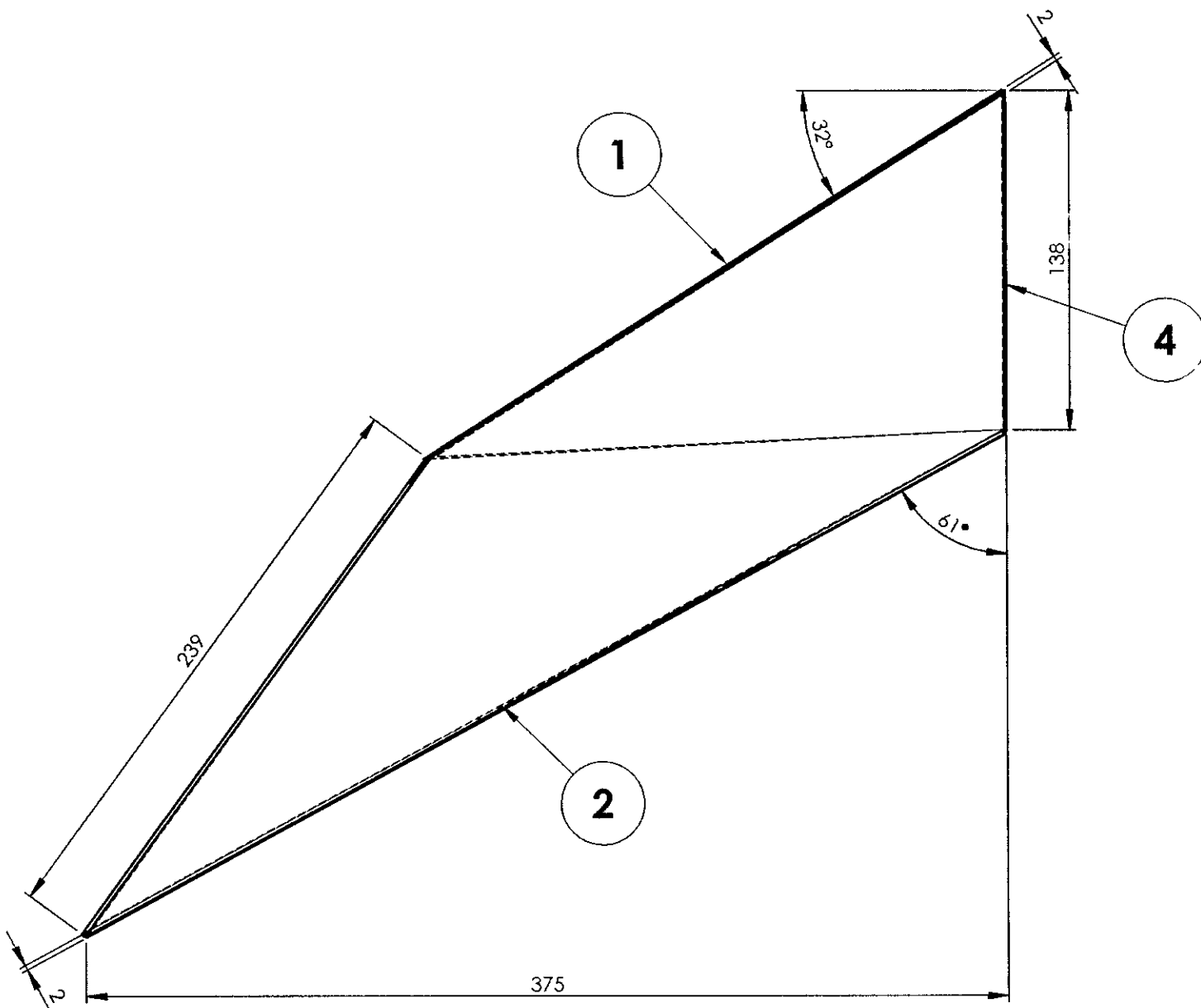
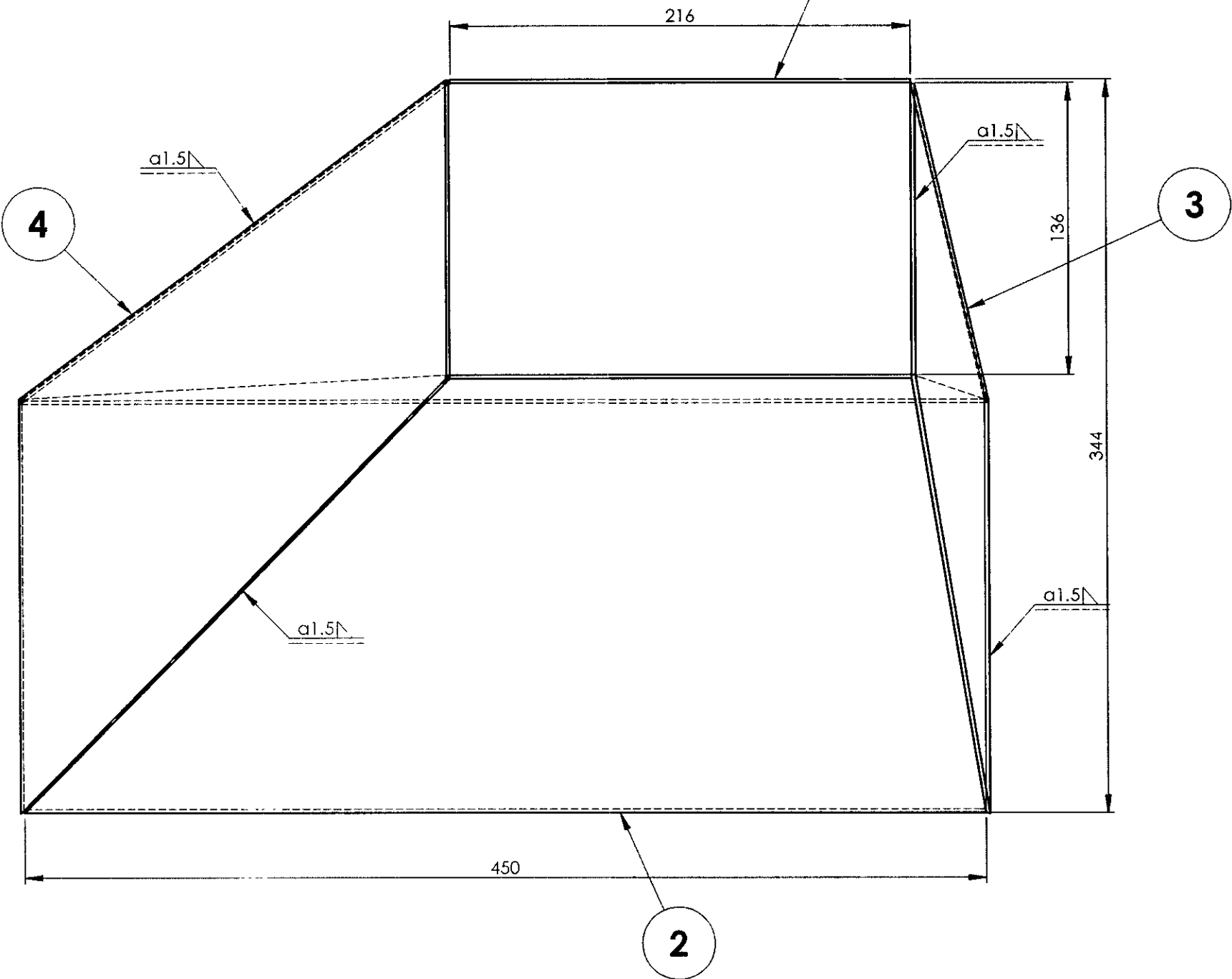
REF.DRG.NO.2 10113.0.20.210.008

DATE OF LATEST A.C.	22-03-2013	DATE OF FIRST ISSUE	AMF/SME
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59316057

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

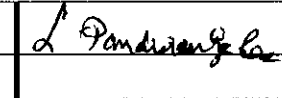
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		SUCTION PIPE MODIFIED AND VIEWS UPDATED.	

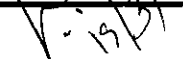


ISOMETRIC VIEW

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.

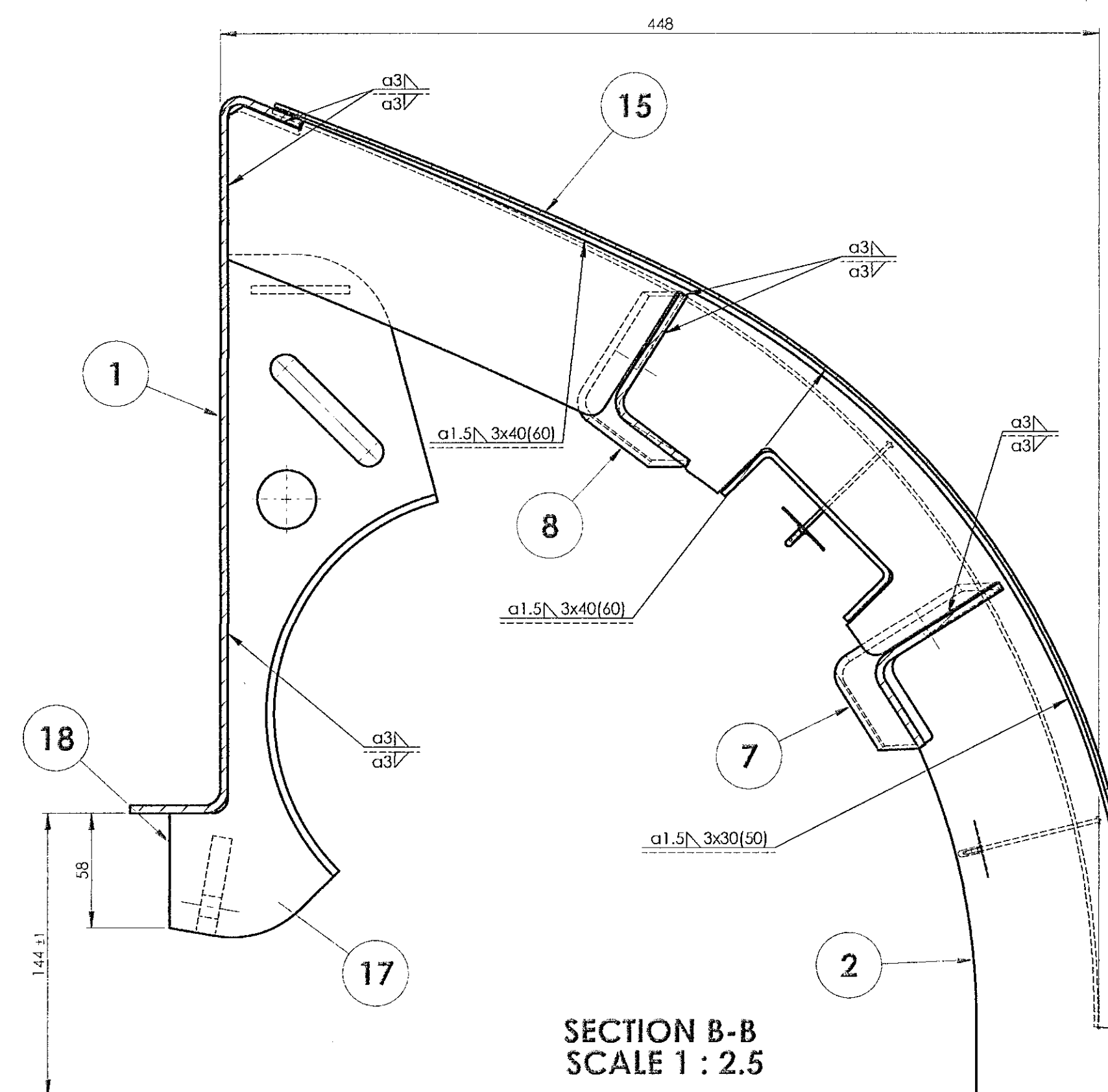
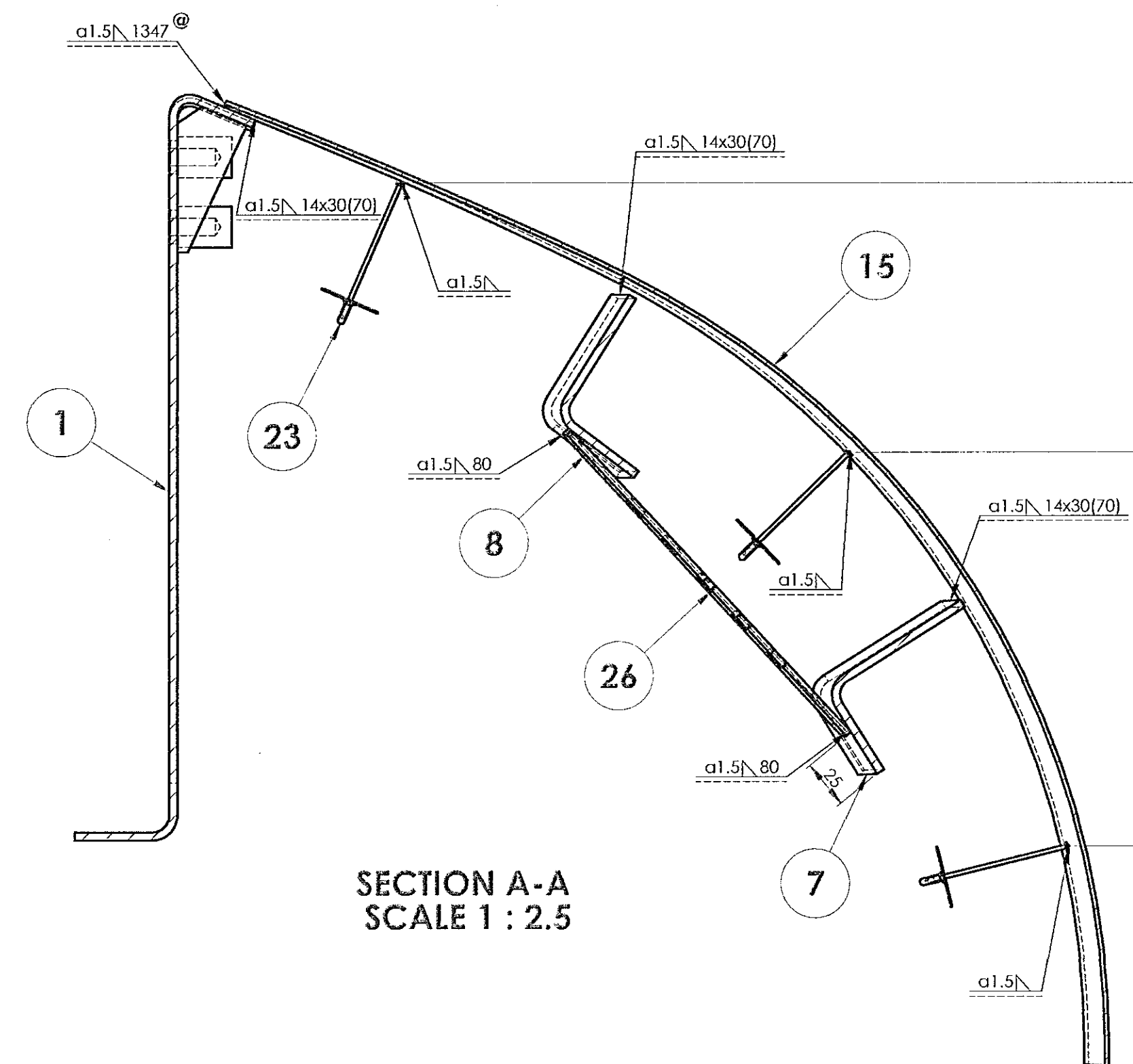
1	SIDE SHEET		4	AAE16690		0.865	
1	SIDE SHEET		3	AAE16691		0.613	
1	BOTTOM SHEET		2	AAE16692		2.269	
1	TOP SHEET		1	AAE16693		1.49	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.: 0.665		WT/ASSY IN Kgs: 5.239	
SUCTION PIPE COMPLETE					SCALE 1:2.5	SSE/D CHD	
					ALT a	ALTD DRN	E.SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					SHEET 1 OF 1		
					59316057		A2

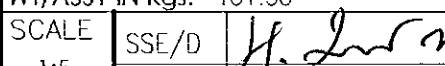
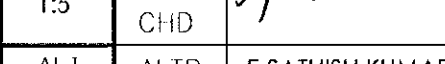
15-03-24	07-06-23	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

REF.DRG.NO.2 10113.0.20.200.007

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

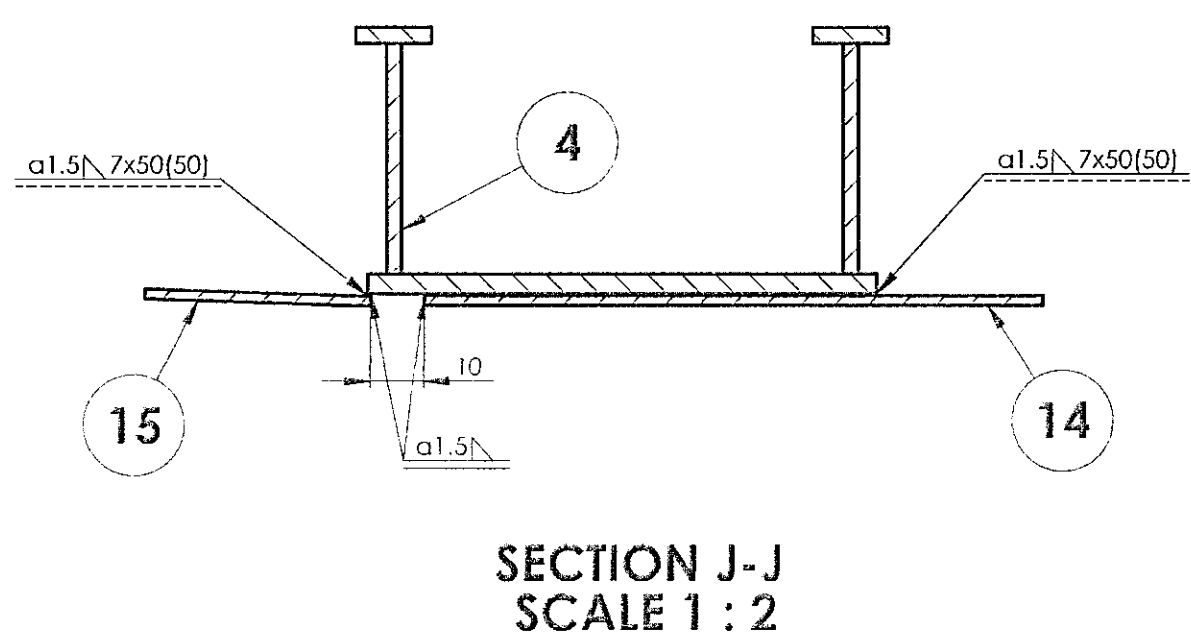
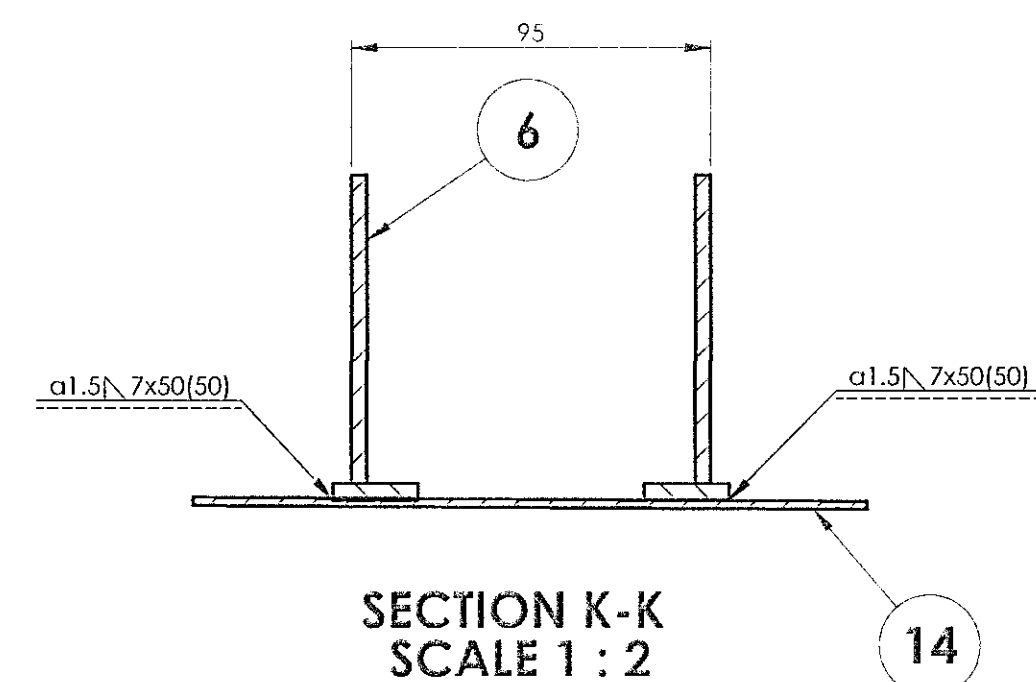
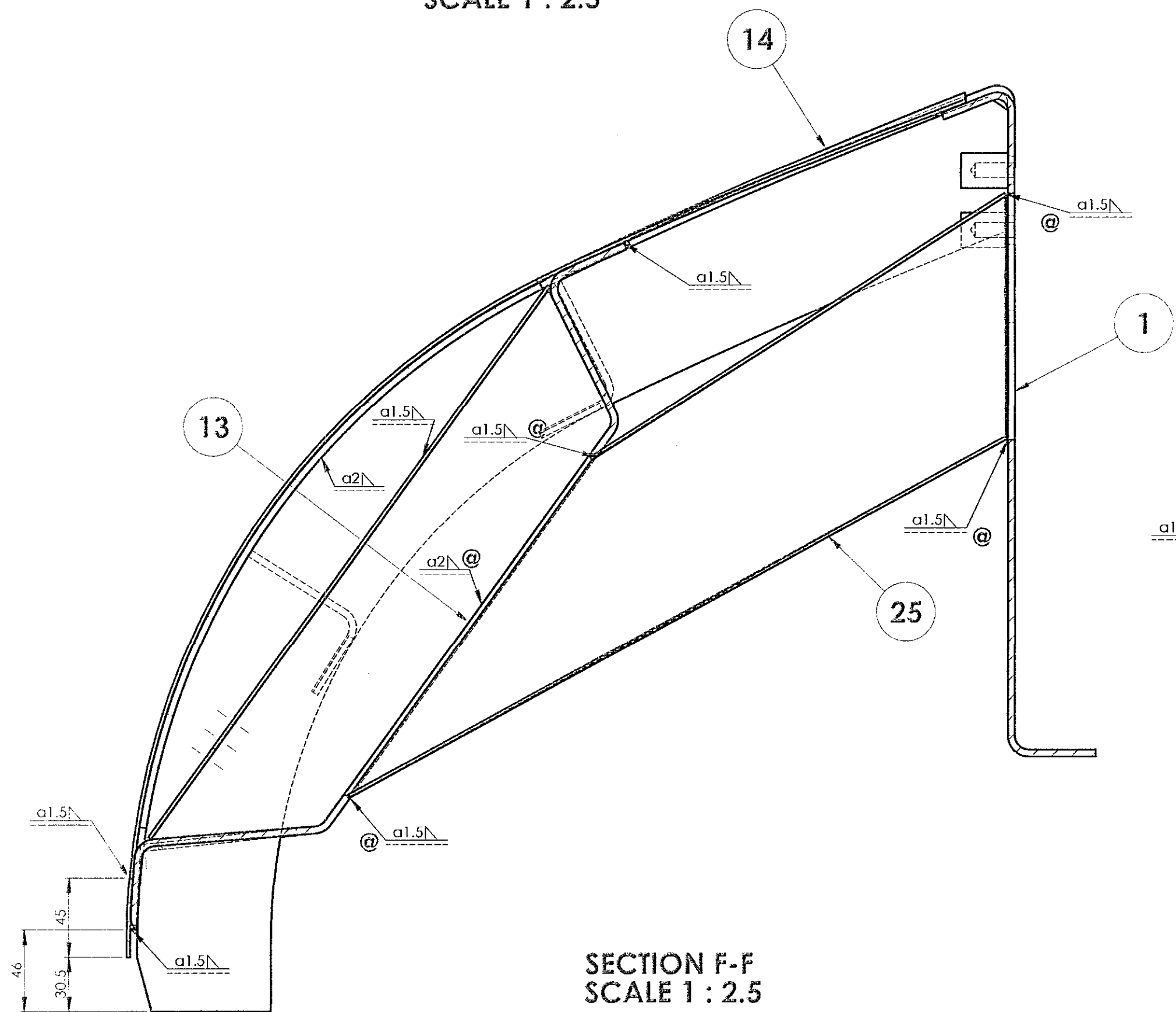
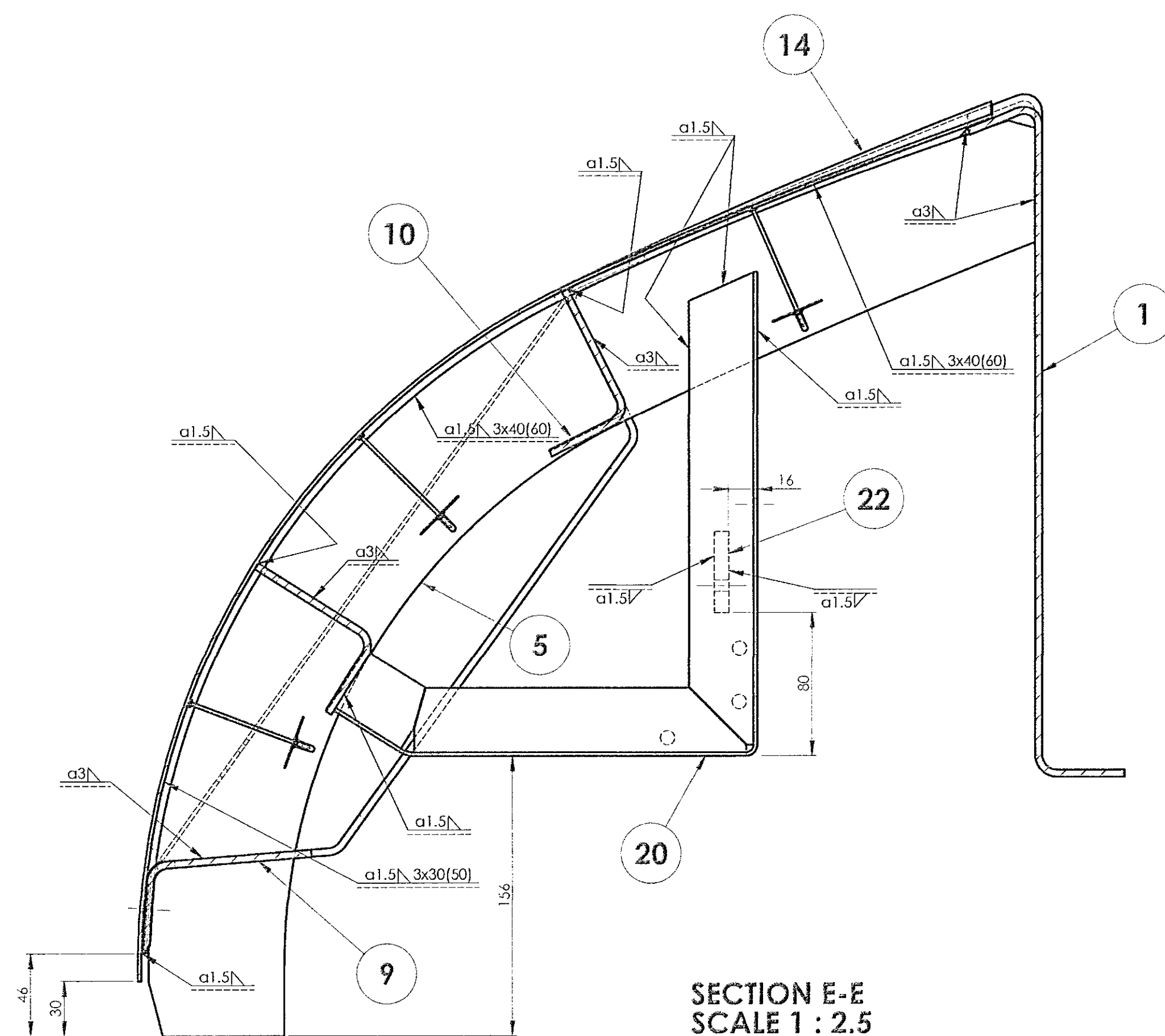
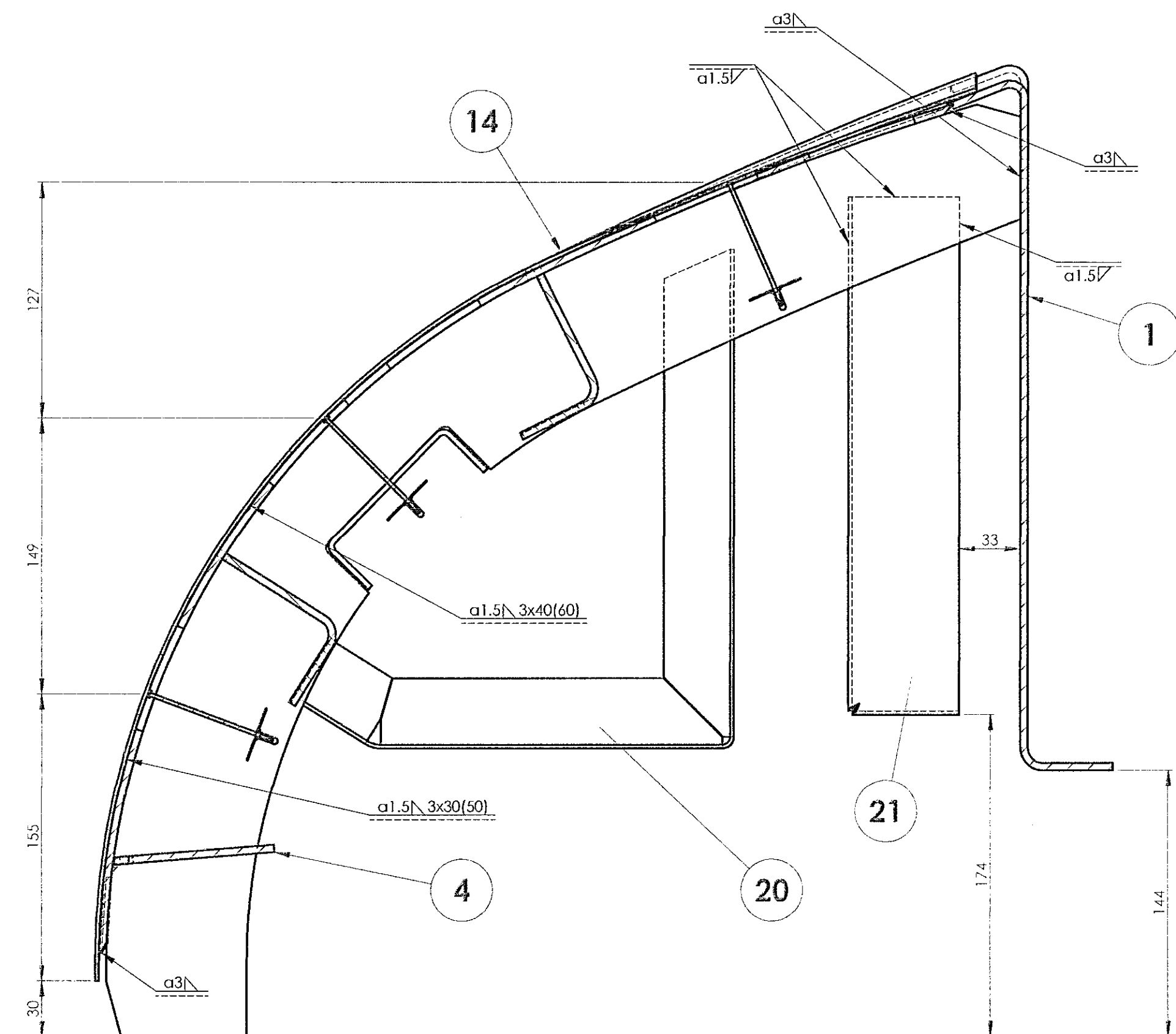
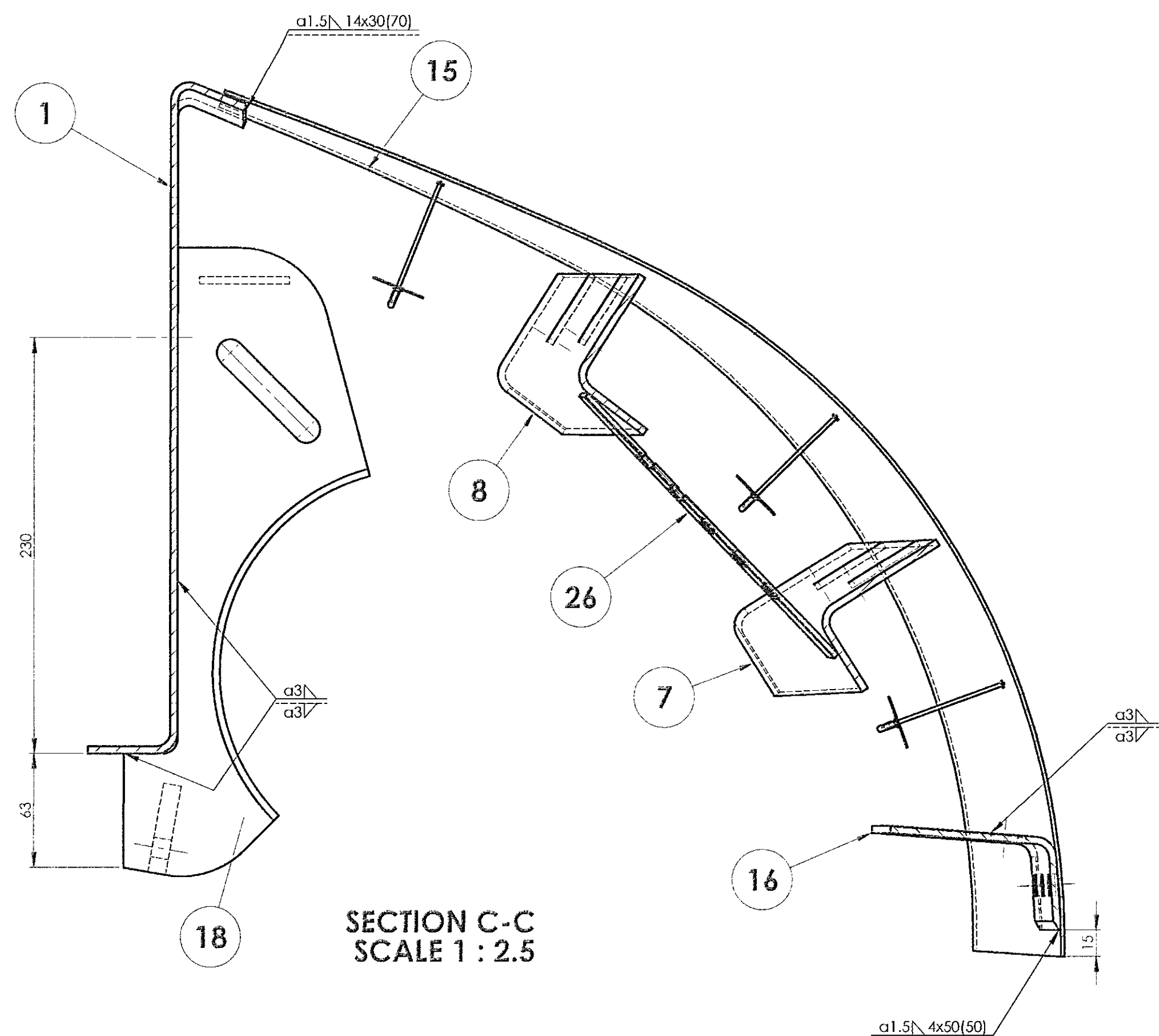


GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 9.52		WT/ASSY IN Kgs: 101.50 SCALE: 1:5 SFE/D CHD ALT. b ALTD DRN E.SATHISH KUMAR E.SATHISH KUMAR 	
FINAL ROOF ELEMENT COMPLETE					
				LWFAC/PP2	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 3	
				82716010	
				A1	

REF.DRG.NO.

82716010

▽ ROUGH MACHINED	(01) ROUGH CLEANED
▽▽ FINISH MACHINED	(02) BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	(03) CHAMFERED



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLENCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO CF/SD/9-0001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS 813-1986.

REF.DRG.NO.

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

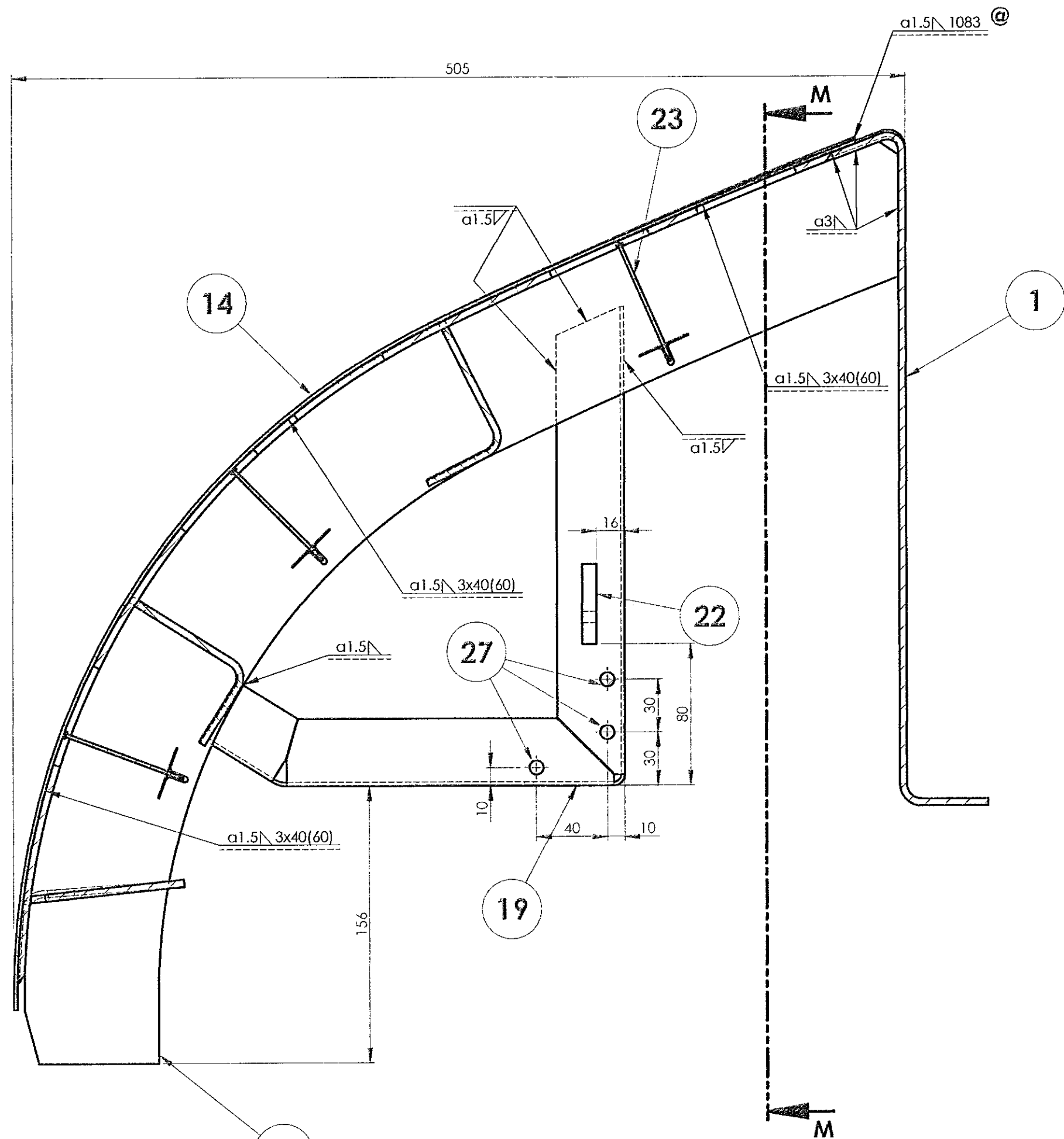
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 9.52		WT/ASSY IN Kgs: 101.50	
SCALE: 1:5		SSE/D CHD		AL.T. b	
AL.T. b		AL.T.D DRN		E.SATHISH KUMAR	
INDIAN RAILWAY STANDARDS		SHEET 2 OF 3		LWFAC/PP2	
INTEGRAL COACH FACTORY, CHENNAI - 600038		82716010		A1	

82716010

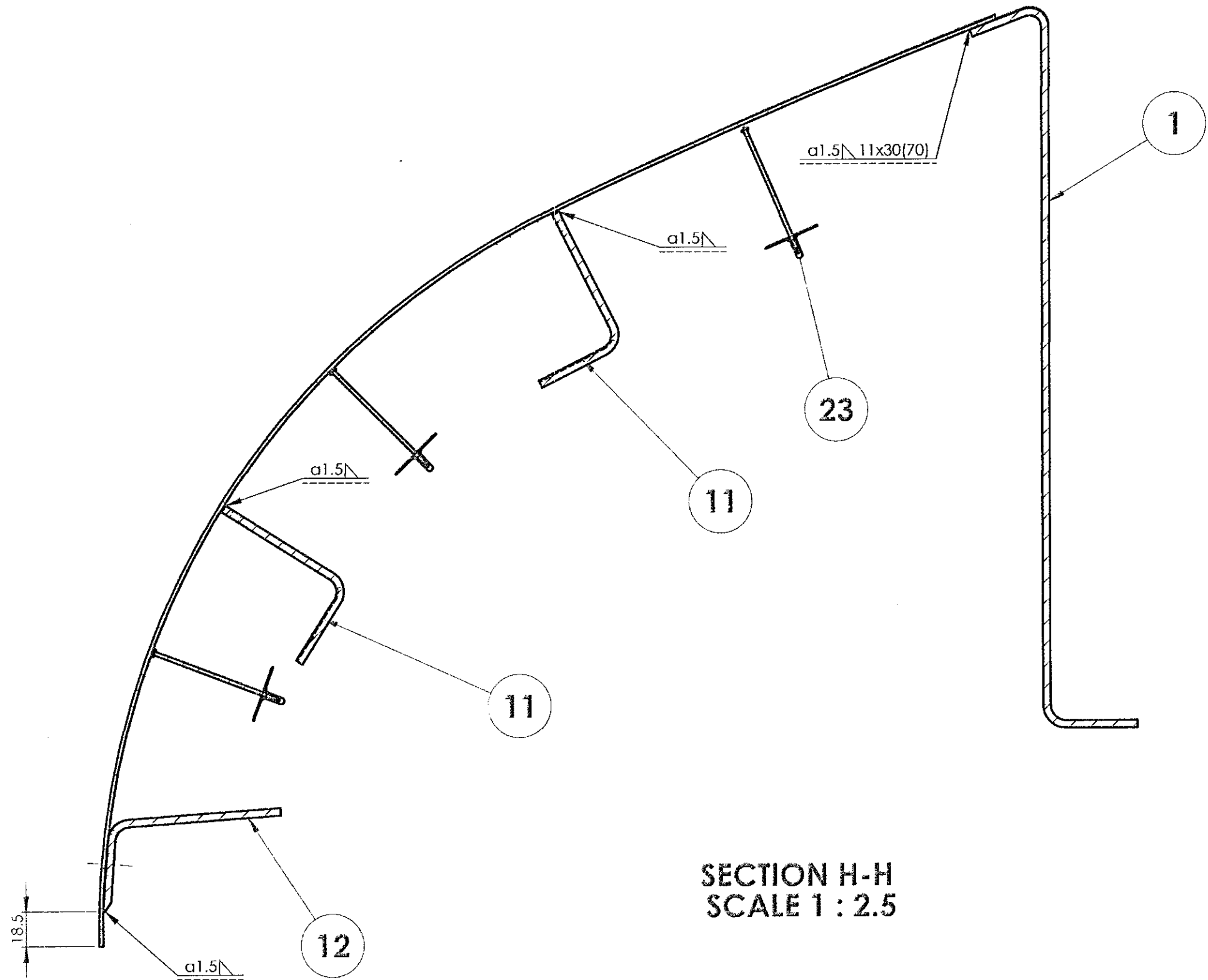
▽	ROUGH MACHINED
▽▽	FINISH MACHINED
▽▽▽	FINE FINISH MACHINED

Ⓒ	ROUGH CLEANED
Ⓓ	BURRS REMOVED
Ⓔ	CHAMFERED

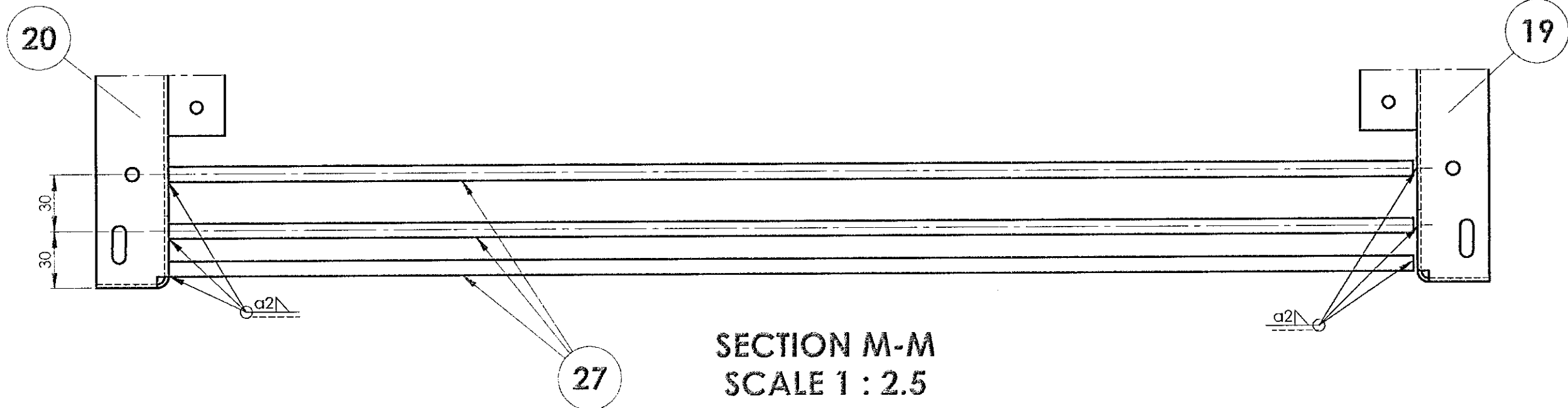
ALT.	ZONE	REVISIONS	DESCRIPTION	APPROVED & DATE
a			ITEM-1 REVISED VIEWS UPDATED.	
b			ITEM-14 REVISED AND ITEM-27 ADDED. SECTION-MM ADDED. WELDING UPDATED IN SECTION-FF. VIEWS UPDATED.	



SECTION G-G
SCALE 1 : 2.5



SECTION H-H
SCALE 1 : 2.5



SECTION M-M
SCALE 1 : 2.5

NOTE:-

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/STD-9-0-998.
8. FOR WELD PROCEDURE SPECIFICATION REFER DRG. No. ICF/STD-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 RIVETTED 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 PAINTLESS EARTHING SURFACE AND THE MASKING TAPE'S SHALL BE REMOVED AT FURNISHING STAGE DURING EARTHING CONNECTION OF ELECTRIC EQUIPMENTS.

3	TIE ROD	Ø8 x 657	27		SS-304	0.26	
3	FLAT		26	AAB16550		0.33	
1	SUCTION PIPE COMPLETE		25	59316057		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	AAA10968		0.615	
1	BRACKET		20	AAB10005		0.547	
1	BRACKET		19	AAB10006		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	AAA16950		1.84	
1	ROOF SHEET		15	AAA16949		15.18	
1	ROOF SHEET		14	AAA16948		8.88	
1	LOCATION FRAME COMPLETE		13	59316019		7.283	
1	STIFFENING ANGLE		12	AAA16955		0.57	
2	STIFFENING ANGLE		11	AAA16926		0.544	
2	STIFFENING ANGLE		10	AAA16954		0.64	
1	STIFFENING ANGLE		9	AAA16953		0.63	
1	STIFFENING ANGLE		8	AAA16952		4.84	
1	STIFFENING ANGLE		7	AAA16951		5.22	
1	ROOF ARCH COMPLETE		6	59316018		6.260	
1	ROOF ARCH COMPLETE		5	59316022		2.83	
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	82716012		34.344	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGs.	MATL	WT/UNIT IN KGS	REMARKS

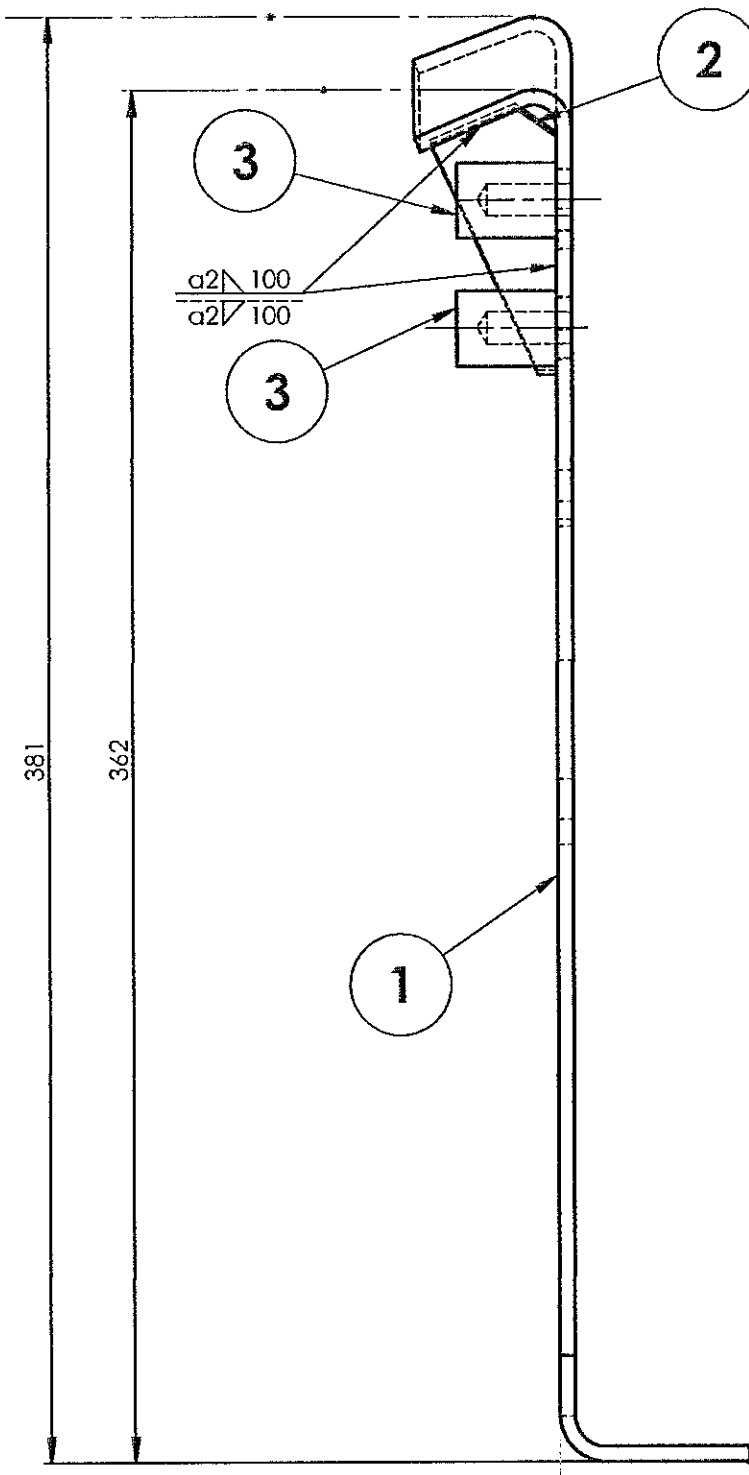
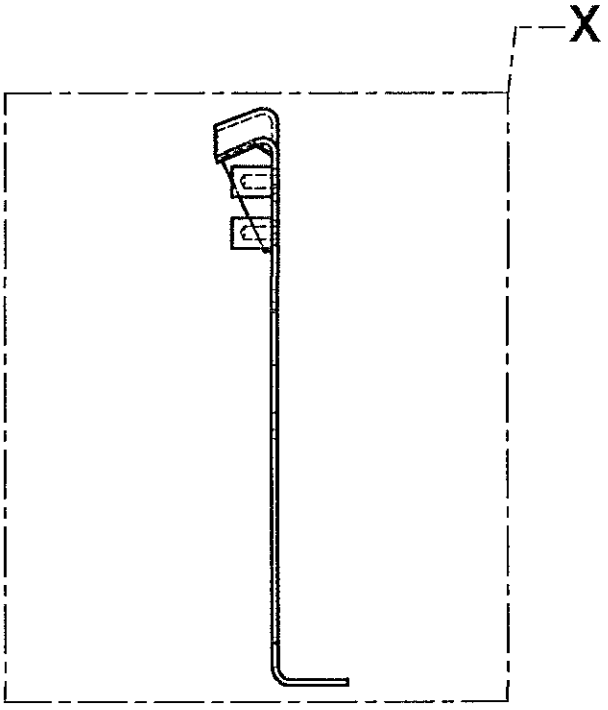
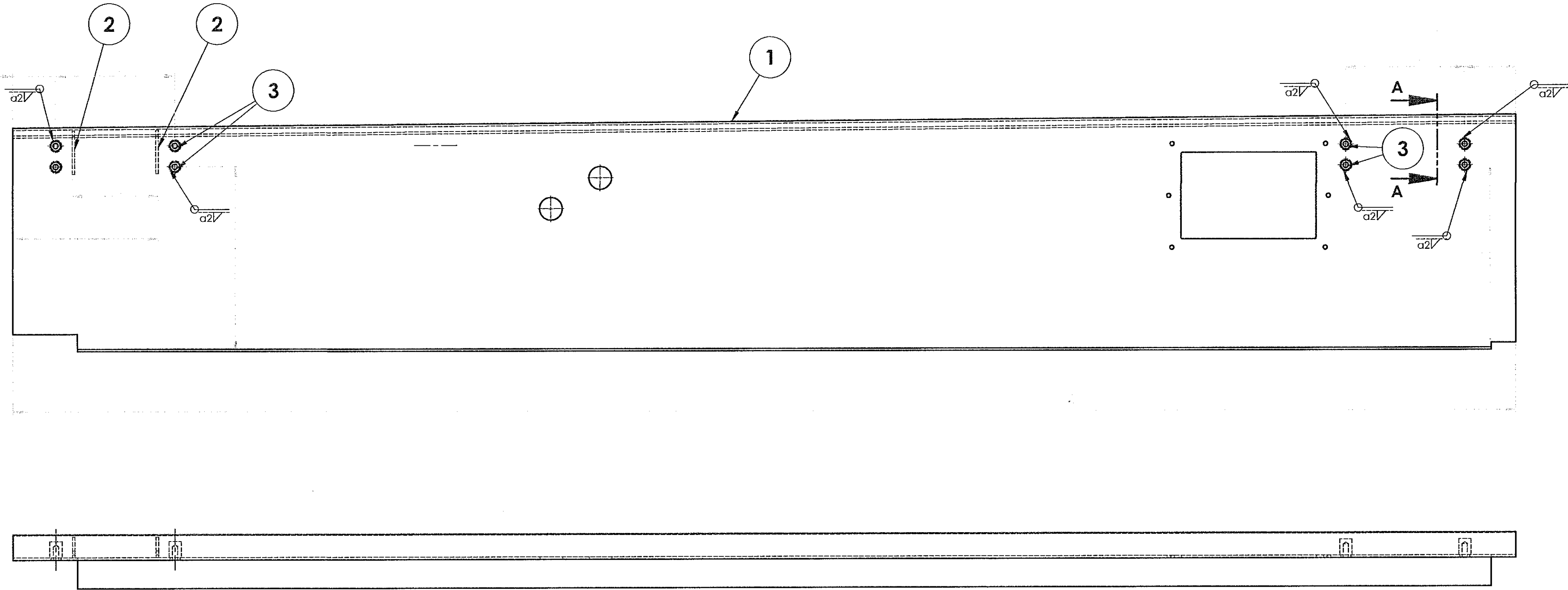
GROUP: 1-6 Roof Construction		SURFACE AREA IN Sq.m.: 9.52		WT/ASSY IN Kgs:	
SCALE 1:5		SSE/D CHD		E.SATHISH KUMAR	
ALT. b		ALTD DRN		E.SATHISH KUMAR	
INDIAN RAILWAY STANDARDS		SHEET 3 OF 3		LWFAC/PP2	
INTEGRAL COACH FACTORY, CHENNAI - 600038		82716010		A1	

REF.DRG.NO.

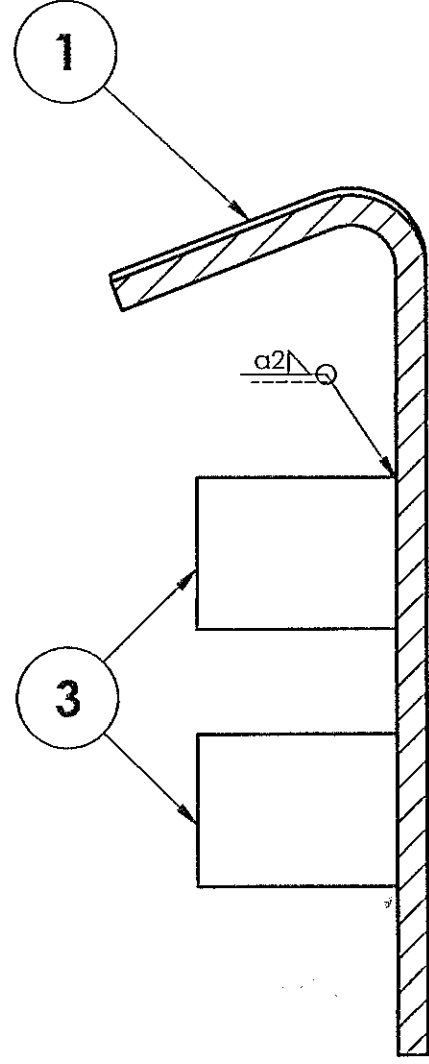
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DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

82716012

12		13	14	15	16
▽ ROUGH MACHINED		① ROUGH CLEANED	REVISIONS		
▽▽ FINISH MACHINED		② BURRS REMOVED	ALT.	ZONE	DESCRIPTION
▽▽▽ FINE FINISH MACHINED		③ CHAMFERED	α		ITEM-1 REVISED VIEWS UPDATED.
					APPROVED & DATE



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	AAF16121		33.764	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 Roof Construction				SURFACE AREA IN Sq.m.: 2.70		WT/ASSY IN Kgs:	
MEMBER COMPLETE				SCALE 1:5	SSE/D CHD	[Signature]	
				ALT. α	ALTD DRN	E.SATHISH KUMAR	
						E.SATHISH KUMAR	
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		LWFAC/PP2	
INTEGRAL COACH FACTORY, CHENNAI - 600038				82716012		A1	

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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

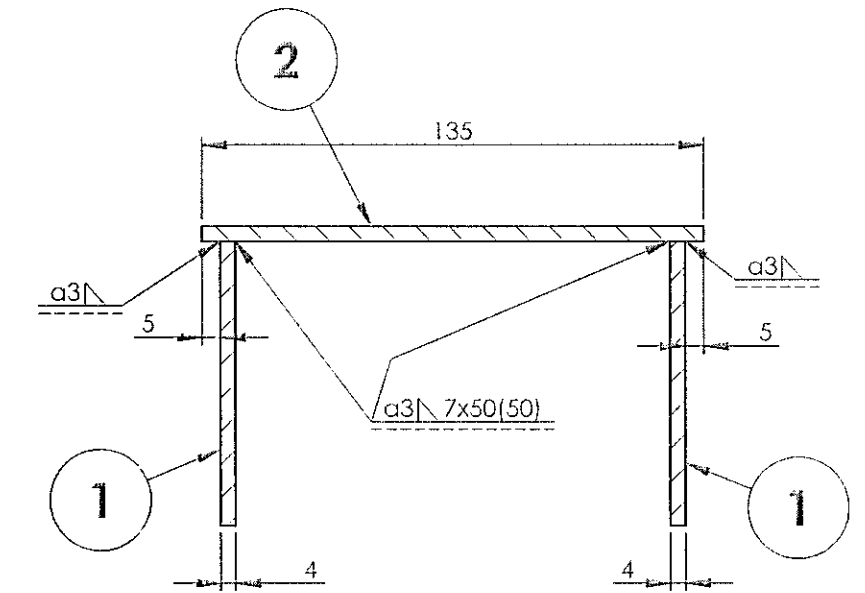
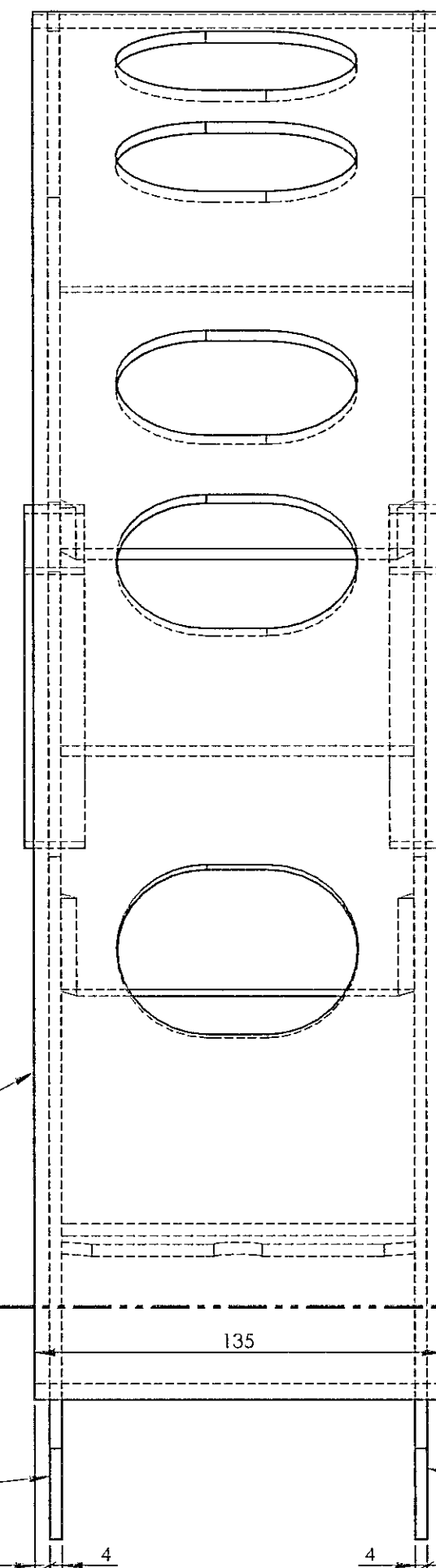
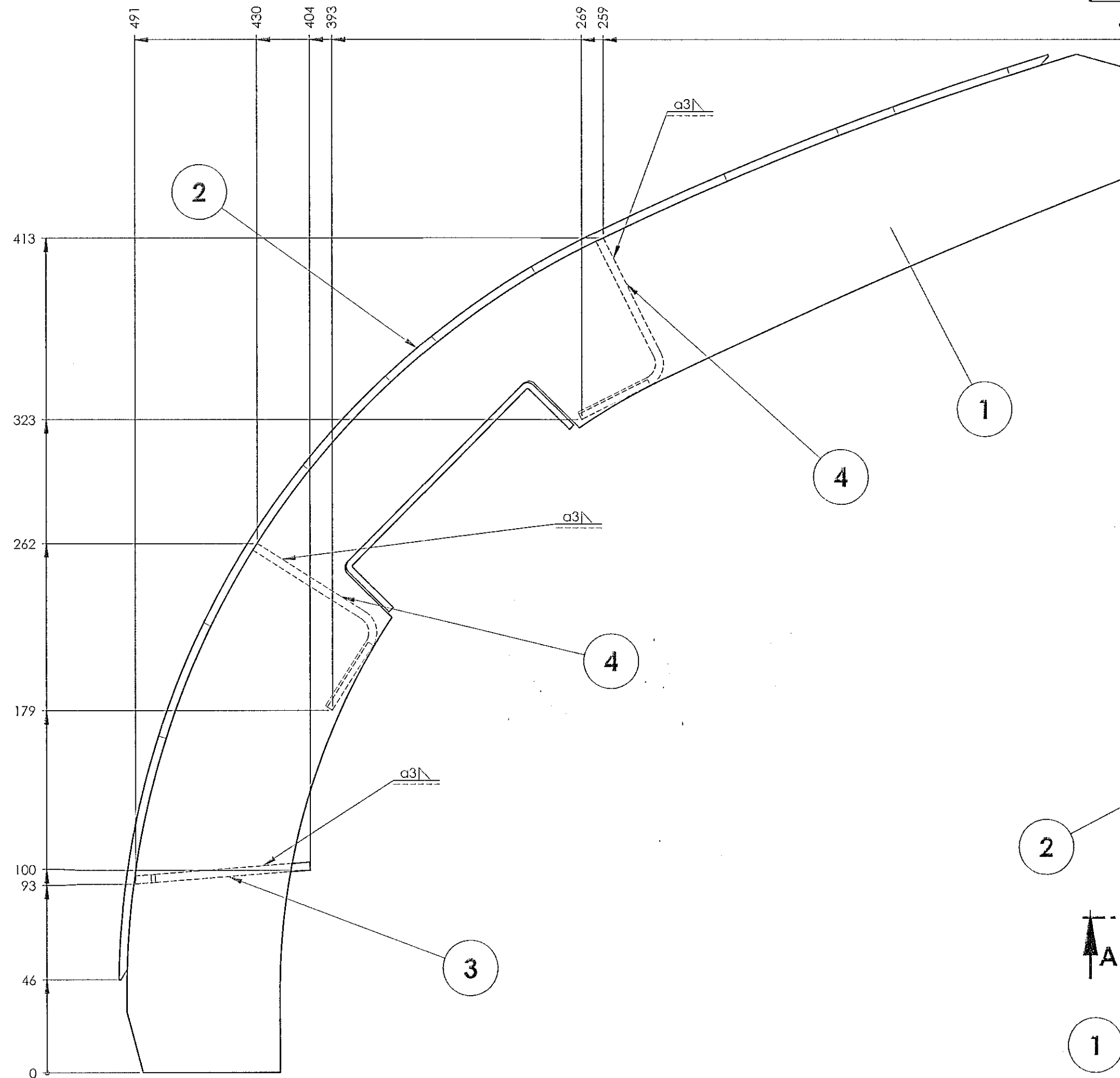
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32/10/26	04/09/25	[Signature]
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

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 1:5	SSE/D CHD	E.SATHISH KUMAR
ALT	ALTD DRN	

LWFAC/PP2

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET 1 OF 1

82716015

A2

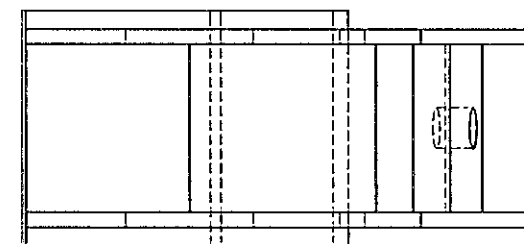
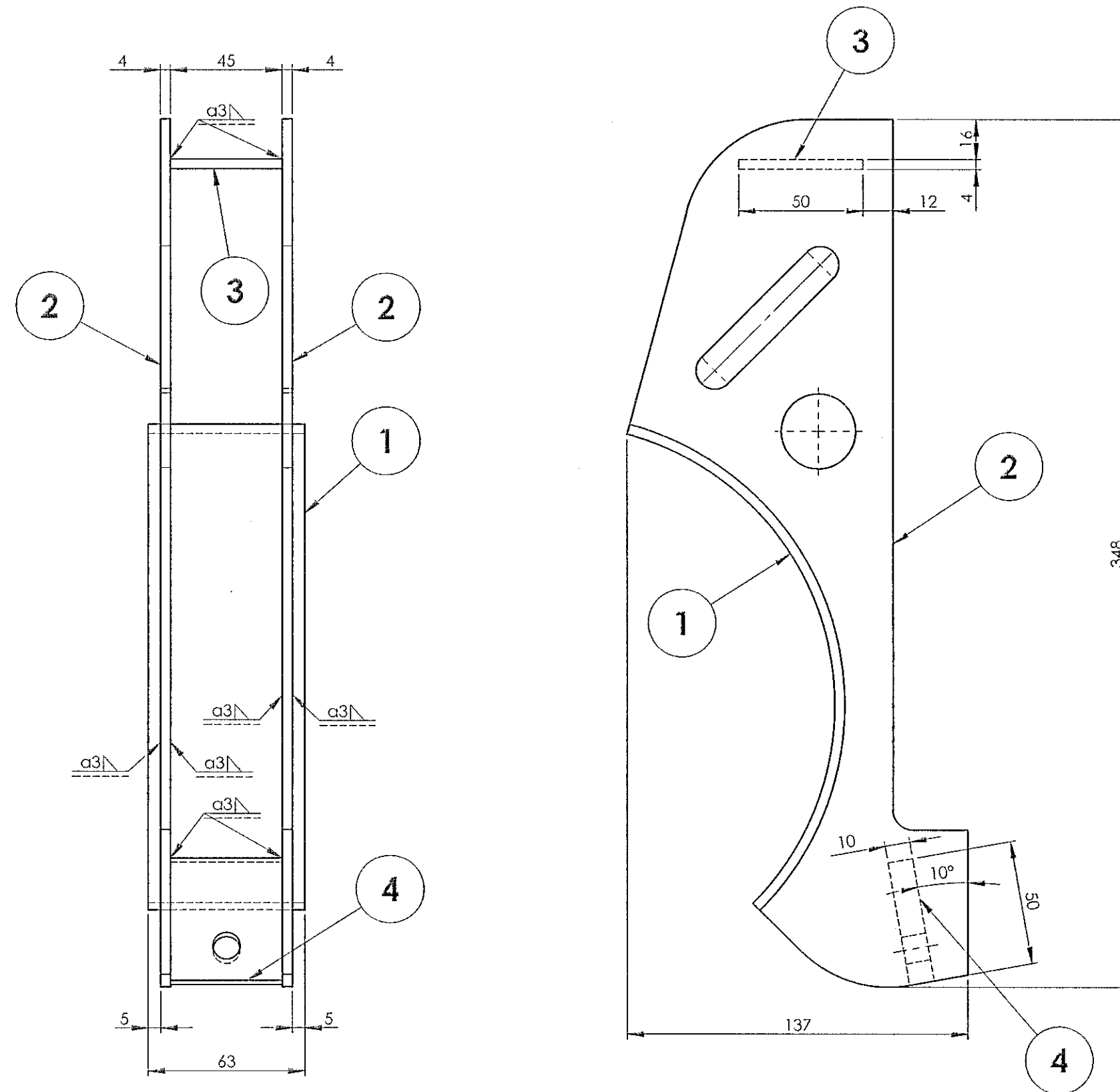
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813-1986.

REF.DRG.NO.

DATE OF LATEST ALT.	04/09/25	AME/SME
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82716016

▽ ROUGH MACHINED	① ROUGH CLEANED	REVISIONS			
▽▽ FINISH MACHINED	①a BURRS REMOVED	ALT.	ZONE	DESCRIPTION	APPROVED & DATE
▽▽▽ FINE FINISH MACHINED	①b CHAMFERED				



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					SHEET 1 OF 1	82716016	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.

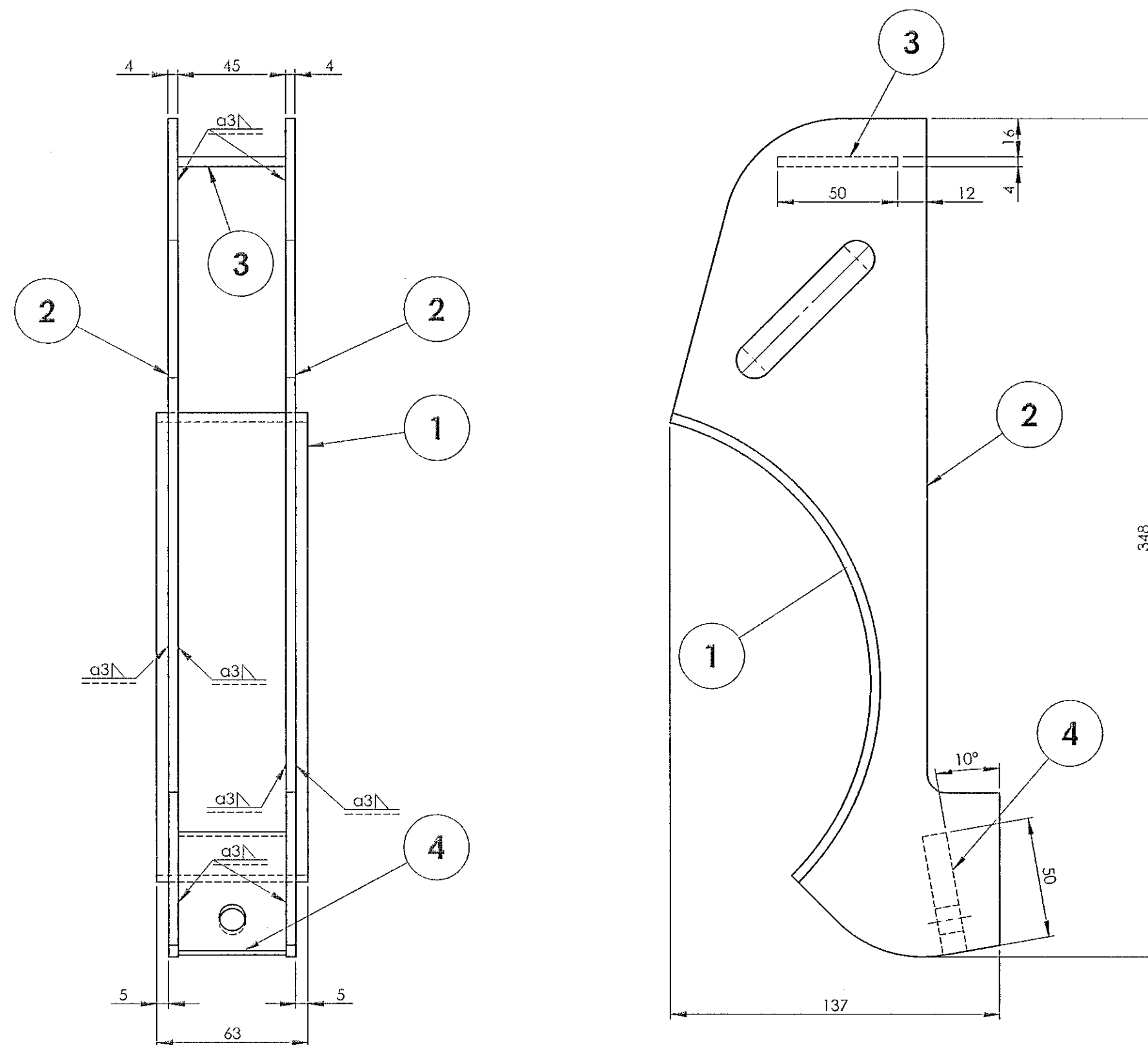
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DATE OF LATEST ALT.	04/09/25	AME/SME
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82716017

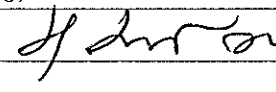
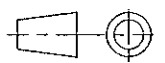
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			



NOTE:

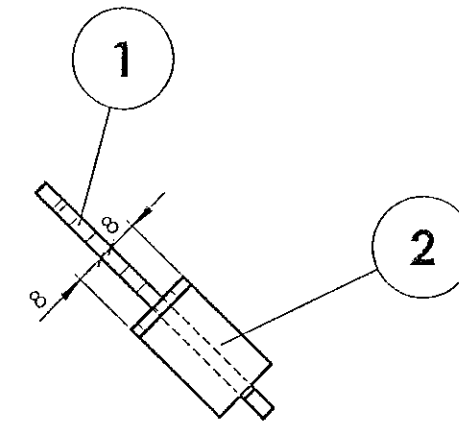
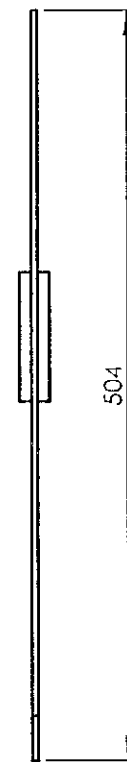
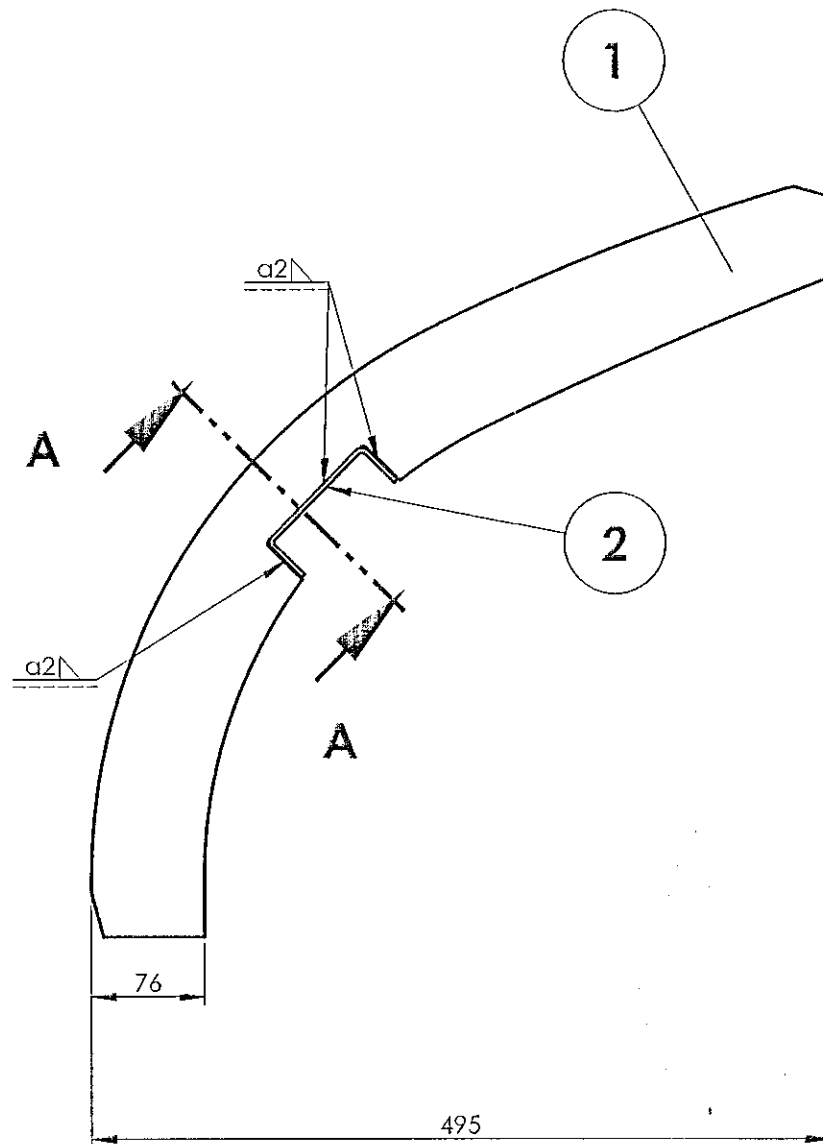
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
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4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
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6. FOR WELD TESTING PREFERANCES REFER DRG.NO.ICF/STD-9-0-998.
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	AAF16202		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	
						82716017	
					SHEET 1 OF 1	A2	

82716018

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

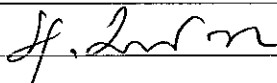
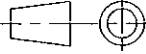
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



SECTION A-A
SCALE 1 : 2

NOTE:

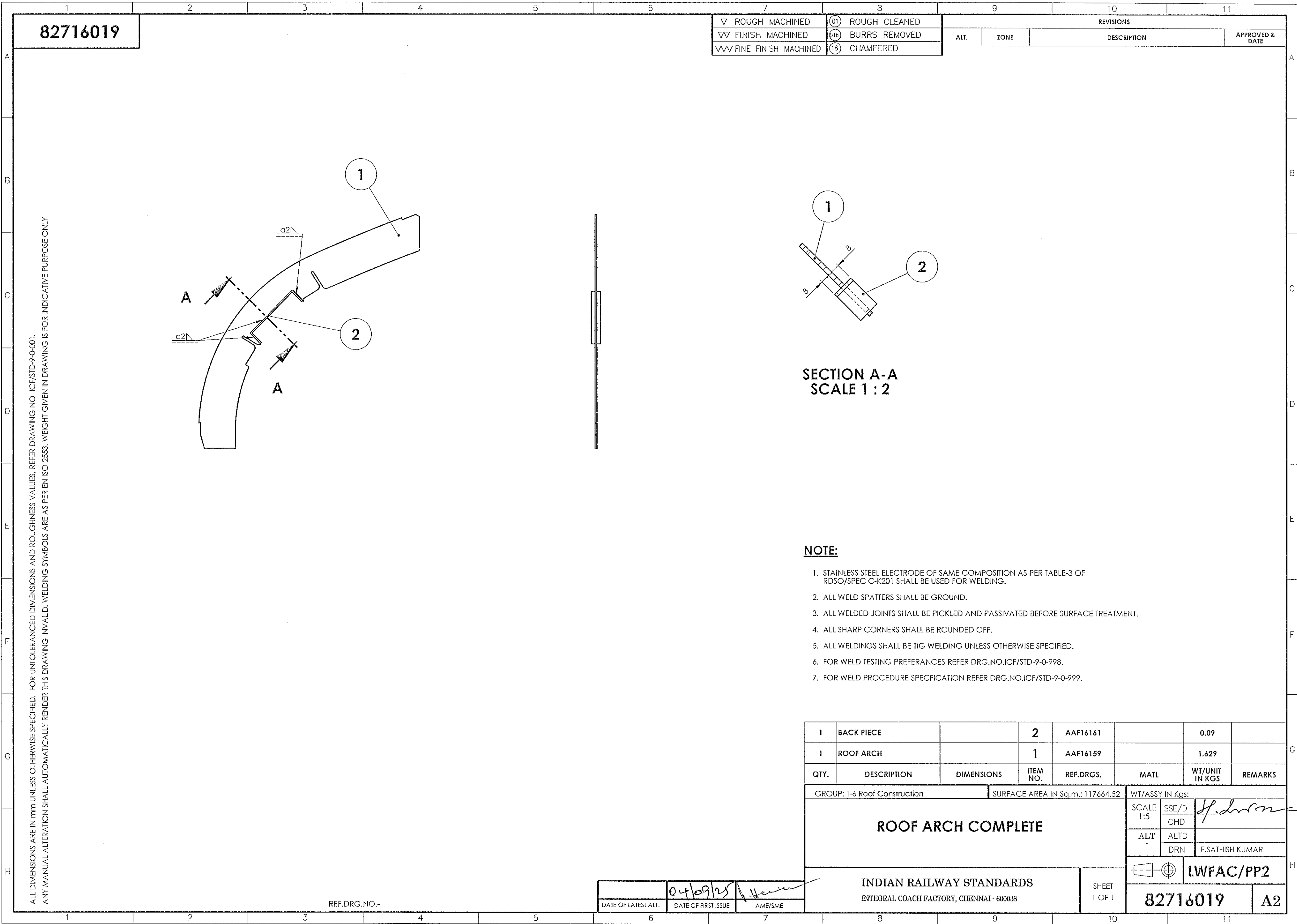
1. STAINLESS STEEL ELECTRODE OF SAME COMPOSITION AS PER TABLE-3 OF RDSO/SPEC C-K201 SHALL BE USED FOR WELDING.
2. ALL WELD SPATTERS SHALL BE GROUND.
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4. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
5. ALL WELDINGS SHALL BE TIG WELDING UNLESS OTHERWISE SPECIFIED.
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	
						CHD	
					ALT'	ALTD	
						DRN	SATHISH KUMAR
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		LWFAC/PP2	
						82716018 A2	

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REF.DRG.NO.-

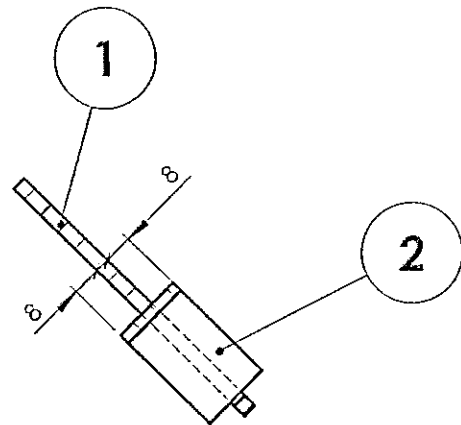
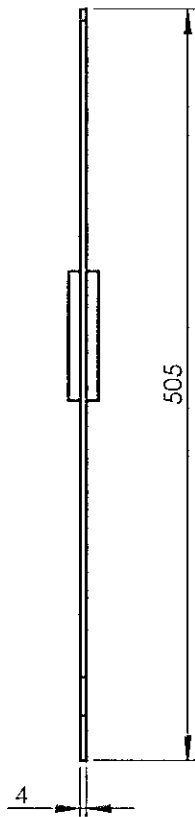
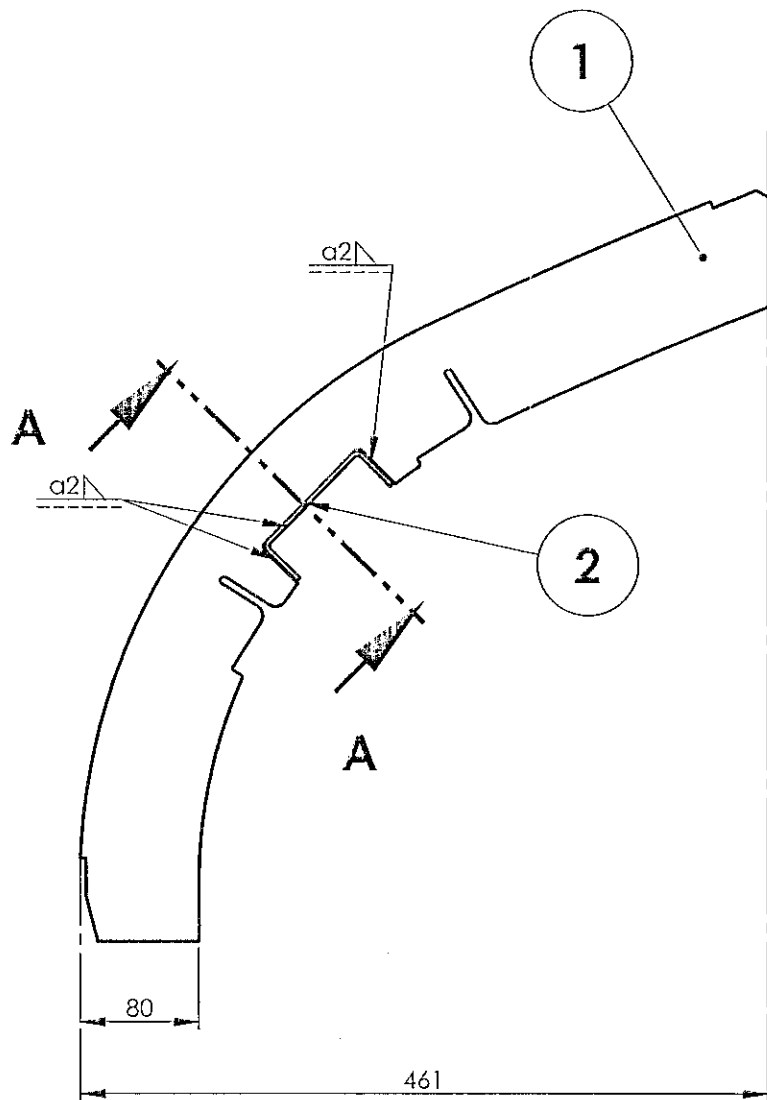
DATE OF LATEST ALT.	04/09/25	AME/SME
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82716020

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


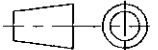
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



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	
						82716020	
					SHEET 1 OF 1	A2	

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REF.DRG.NO.-

DATE OF LATEST ALT.	04/09/25	AME/SME
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AAA10968

▽ ROUGH MACHINED

⊙ ROUGH CLEANED

▽▽ FINISH MACHINED

⊙⊙ BURRS REMOVED

▽▽▽ FINE FINISH VACUUM

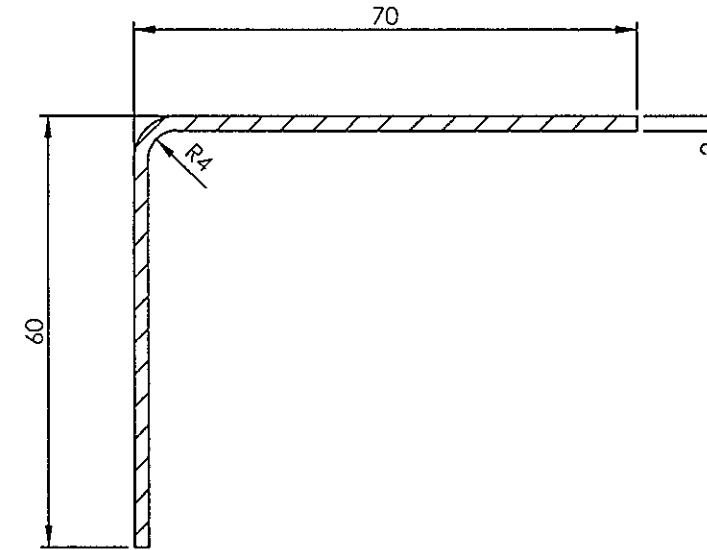
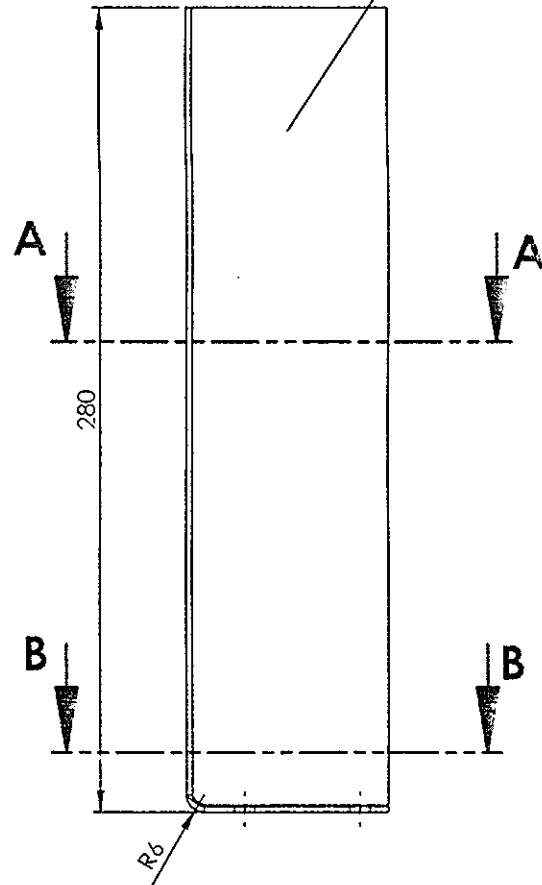
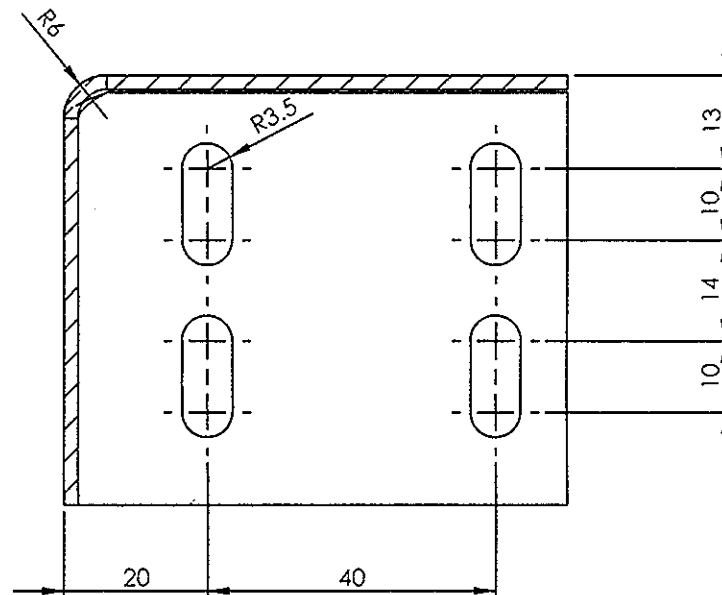
⊙⊙⊙ CHAMFERED

REVISIONS

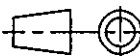
ALT.

ZONE

DESCRIPTION

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

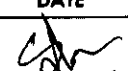
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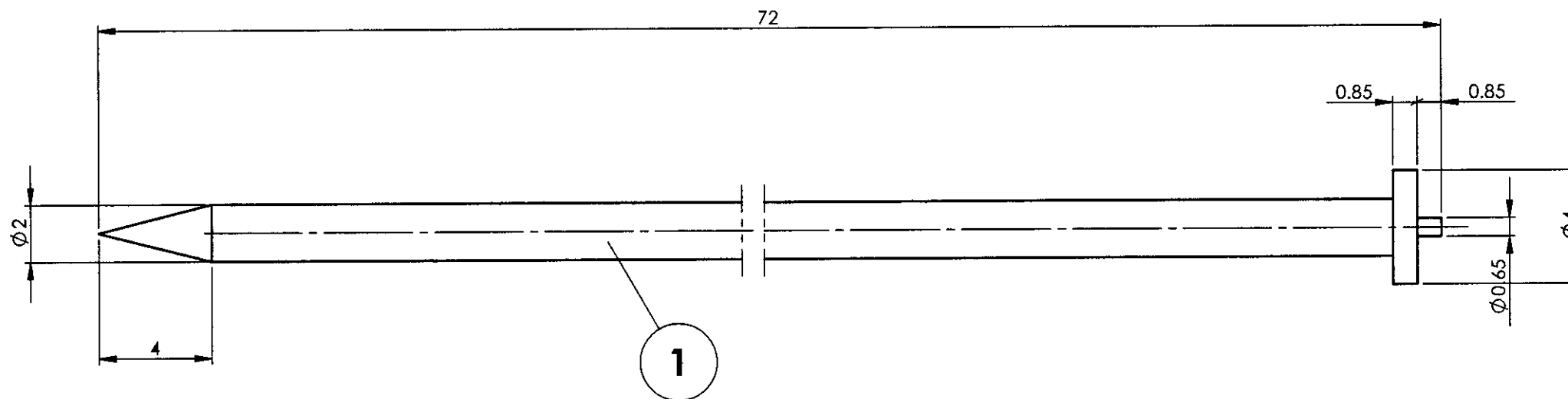
1	BRACKET	4X126X346	1		RDSO/SPEC C-K201 X2CrNi12	0.615	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-0		SURFACE AREA IN Sq.m.:0.079			WT/ASSY IN Kgs:0.615		
BRACKET					SCALE	SSE/D	L.Panduranga Rao
					1:2.5	CHD	
					ALT.	ALTD	
						DRN	L.PANDURANGA RAO
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAA10968		A3

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

AAA16493

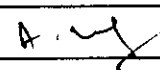
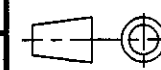
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

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



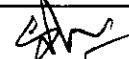
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ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

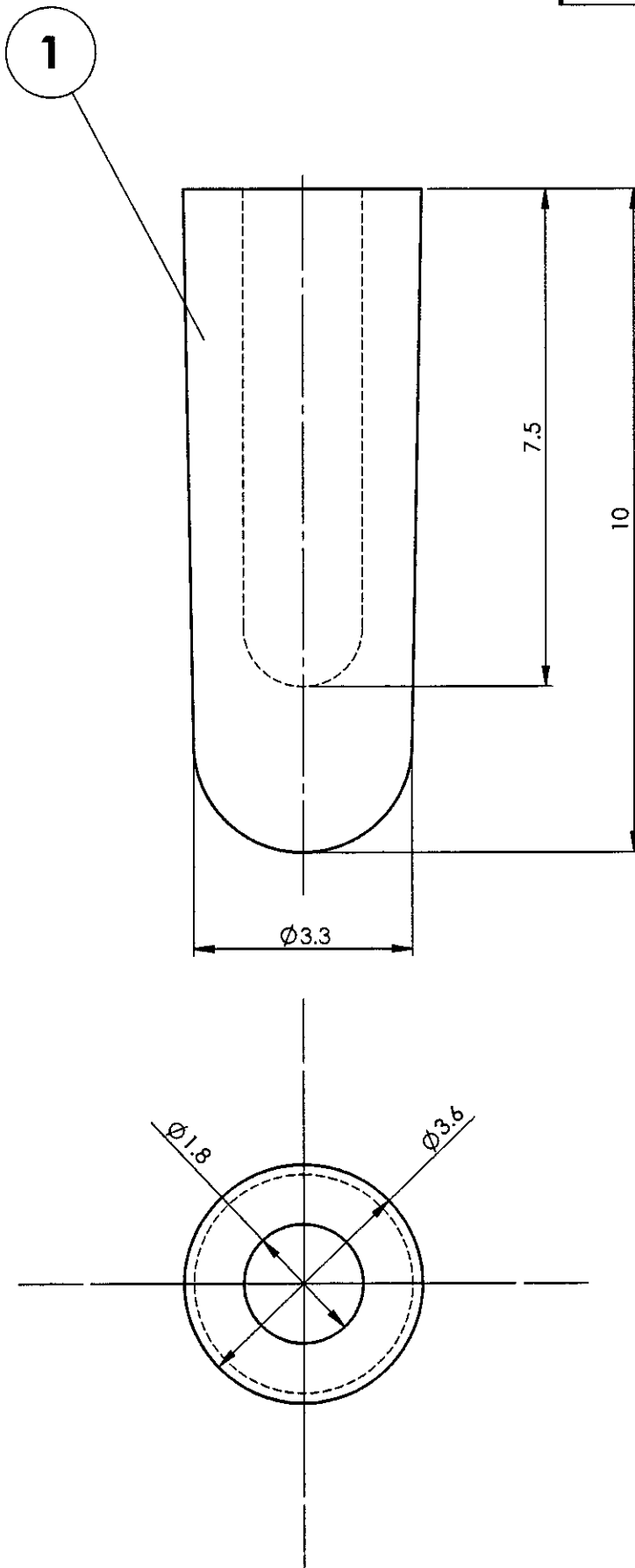
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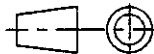
1	WELDING PIN	Ø 4 x 72	1		IS:6528 X04Cr18Ni10	0.002	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF CONSTRUCTION		SURFACE AREA IN Sq.m.: 0.000			WT/ASSY IN Kgs:		
WELDING PIN					SCALE	SSE/D	
					5:1	CHD	
					ALT. a	ALTD	A.Palanichamy
						DRN	3D:A.Palanichamy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


AAA16494

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

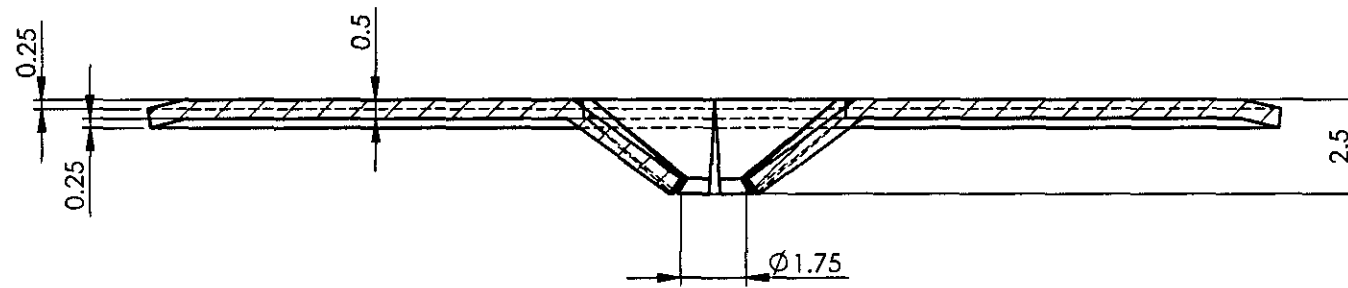
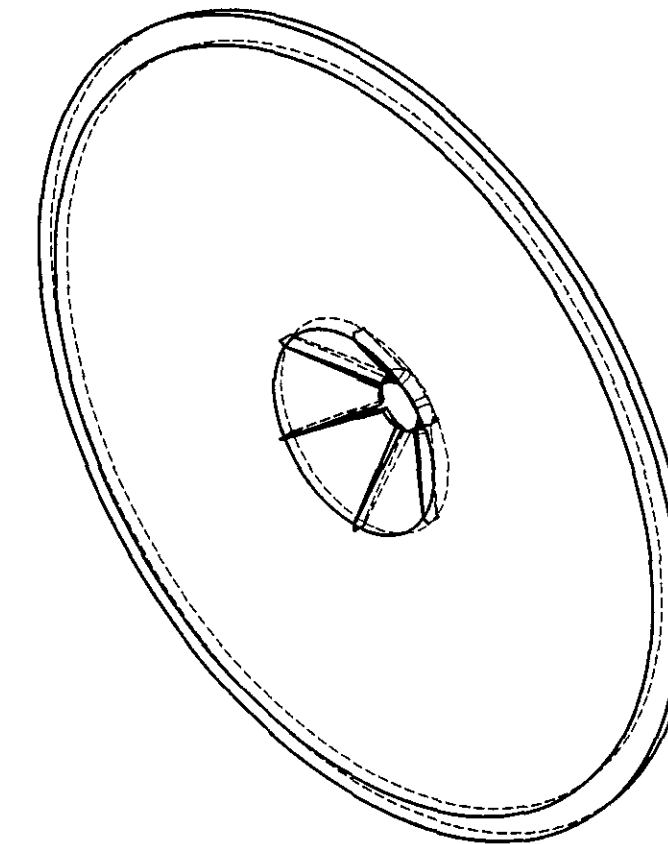
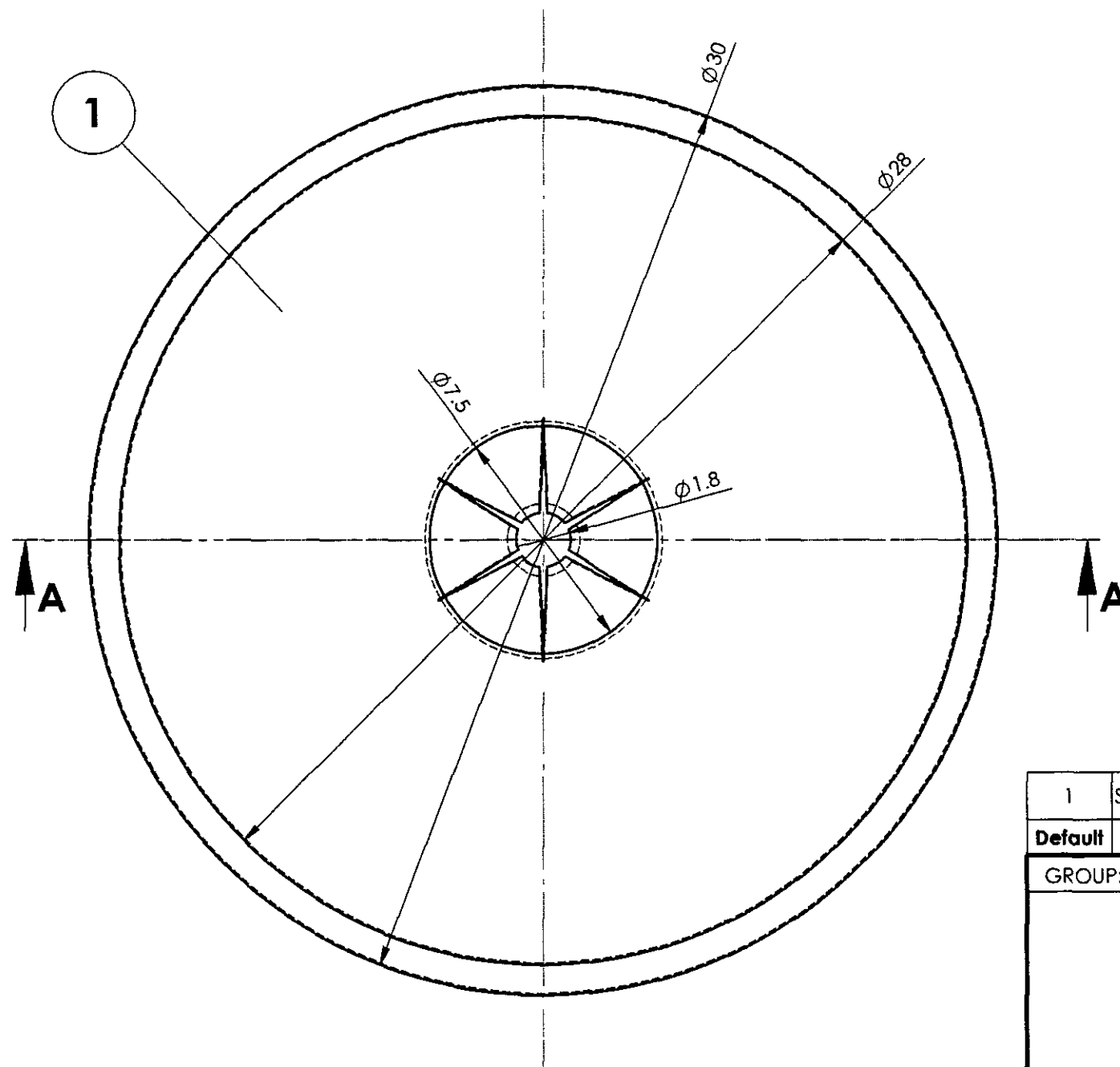
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER EN ISO 2553. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

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

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	SSE/D	
					2:1	CHD	
					ALT.	ALTD	A.Palanichamy
					a	DRN	3D:A.Palanichamy 2D:P.Murugan
INDIAN RAILWAY STANDARDS							
INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		AAA16495	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-3

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

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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	REF. DRGS	RDSO/SPEC C- K201 X5 Cr Ni 18 10	0.084	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.:0.004		WT/ASSY IN Kgs:0.083
GROUNDING FLAP					SCALE 1:1		SSE/D CHD
					ALT.		ALTD
					DRN		K.Sriram
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16900		A3
DATE OF LATEST ALT.		DATE OF FIRST ISSUE		AME/SME			
		21-03-2013		[Signature]			

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AAA16926

▽ ROUGH MACHINED

⑦ ROUGH CLEANED

▽▽ FINISH MACHINED

⑧ BURRS REMOVED

▽▽▽ FINISH VACUUMED

⑨ CHAMFERED

REVISIONS

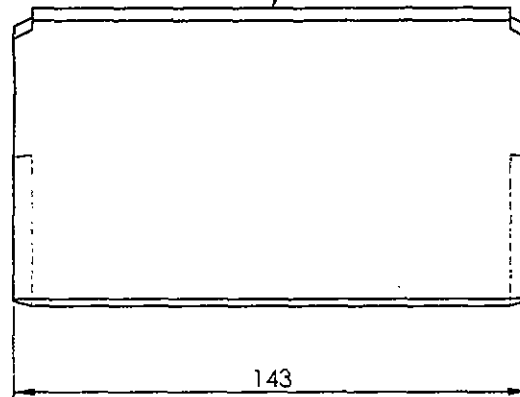
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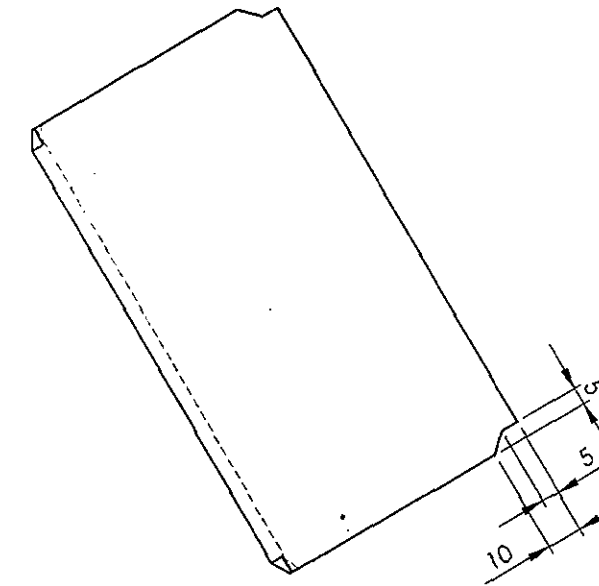
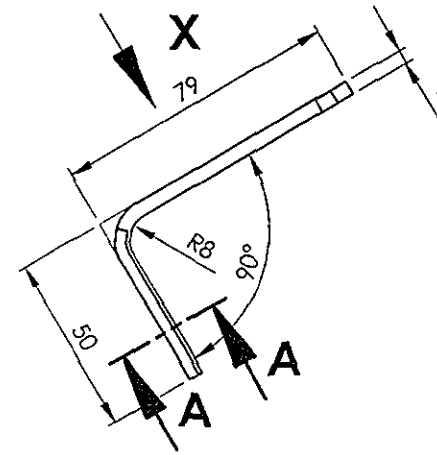
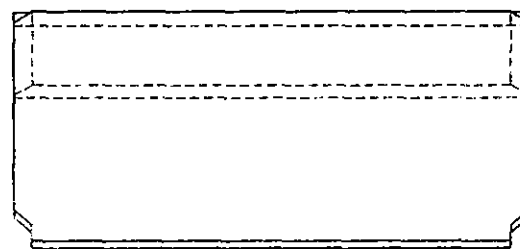
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APPROVED &
DATE

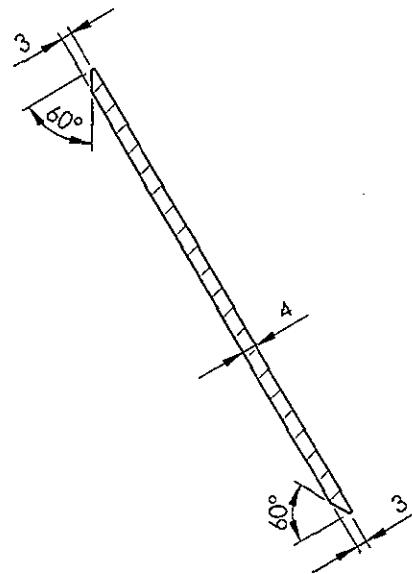
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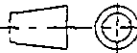
143



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>Subramanian</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

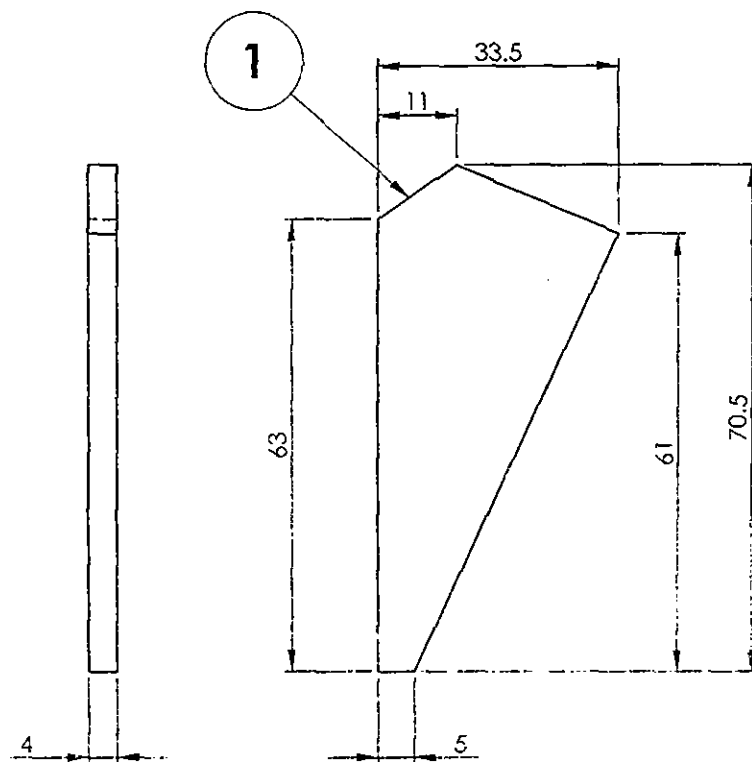
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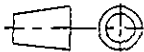
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				▽▽ FINISH MACHINED		③ BURRS REMOVED		ALT.				ZONE				DESCRIPTION				APPROVED & DATE			
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ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC/STD 9.0.001. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WEIDING SYMBOLS ARE AS PER IS: 813:1986.

REF.DRG.NO.4 10113.0.20.200.138

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	<i>W. Srinivasan</i>	
					1:1	CHD		
					ALT.	ALTD	K.Sriram	
						DRN		
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1		AAA16929		A3
INTEGRAL COACH FACTORY, CHENNAI - 600038								
		21-03-2013	<i>W. Srinivasan</i>					
DATE OF LATEST ALT.		DATE OF FIRST ISSUE			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	<i>W. S. Prasad</i>
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAA16929		A3

AAA16932

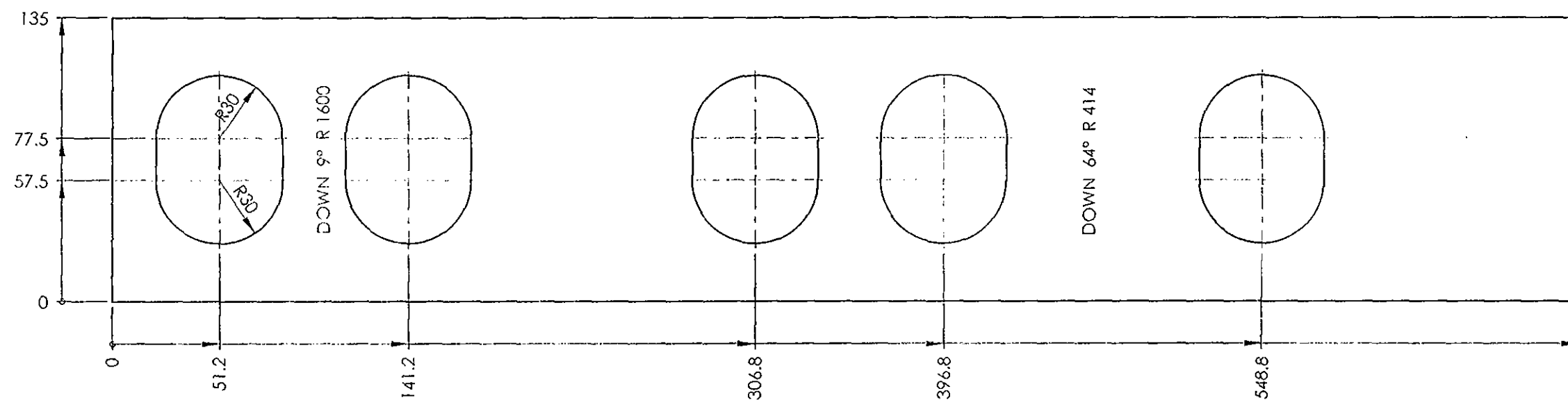
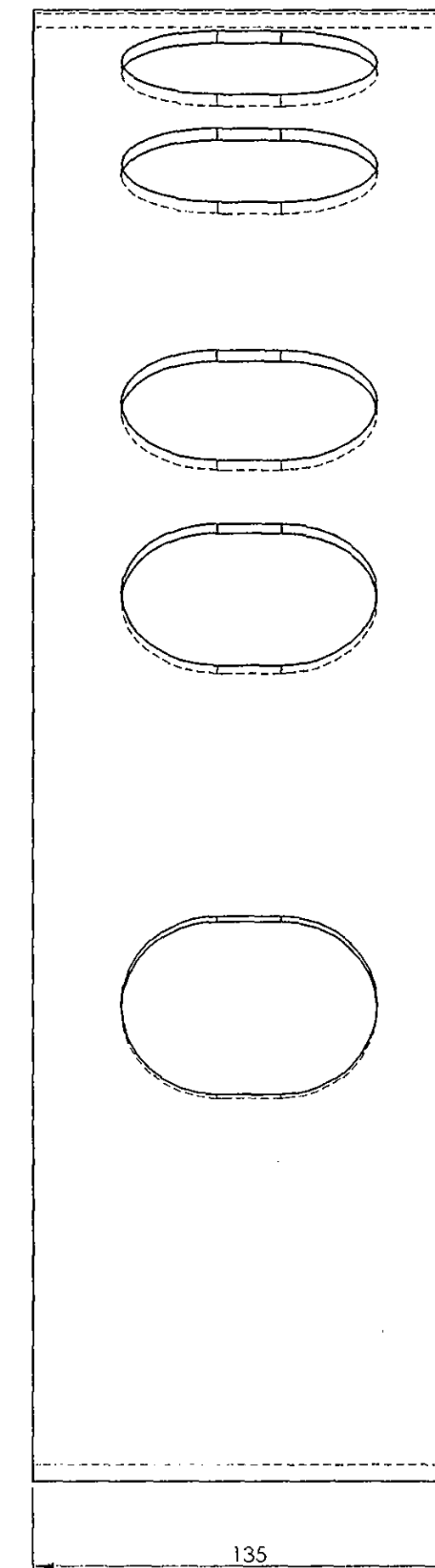
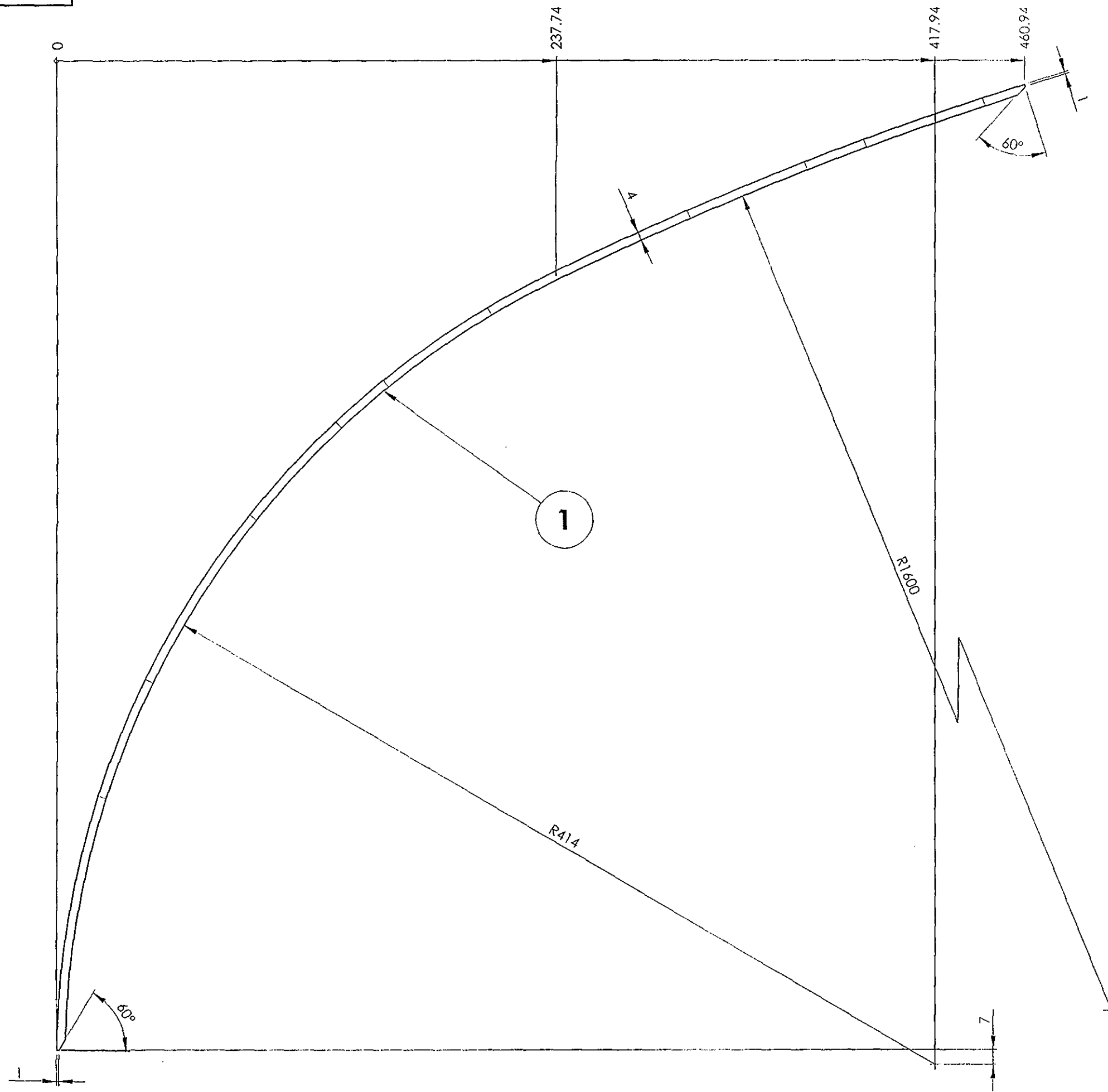
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

ALT.

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REVISIONS

DESCRIPTION

APPROVED &
DATE

DEVELOPMENT VIEW

REF.DRG.NO.3 10113.0.20.210.117

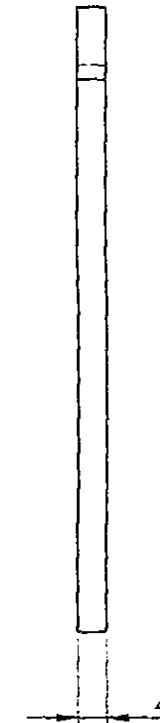
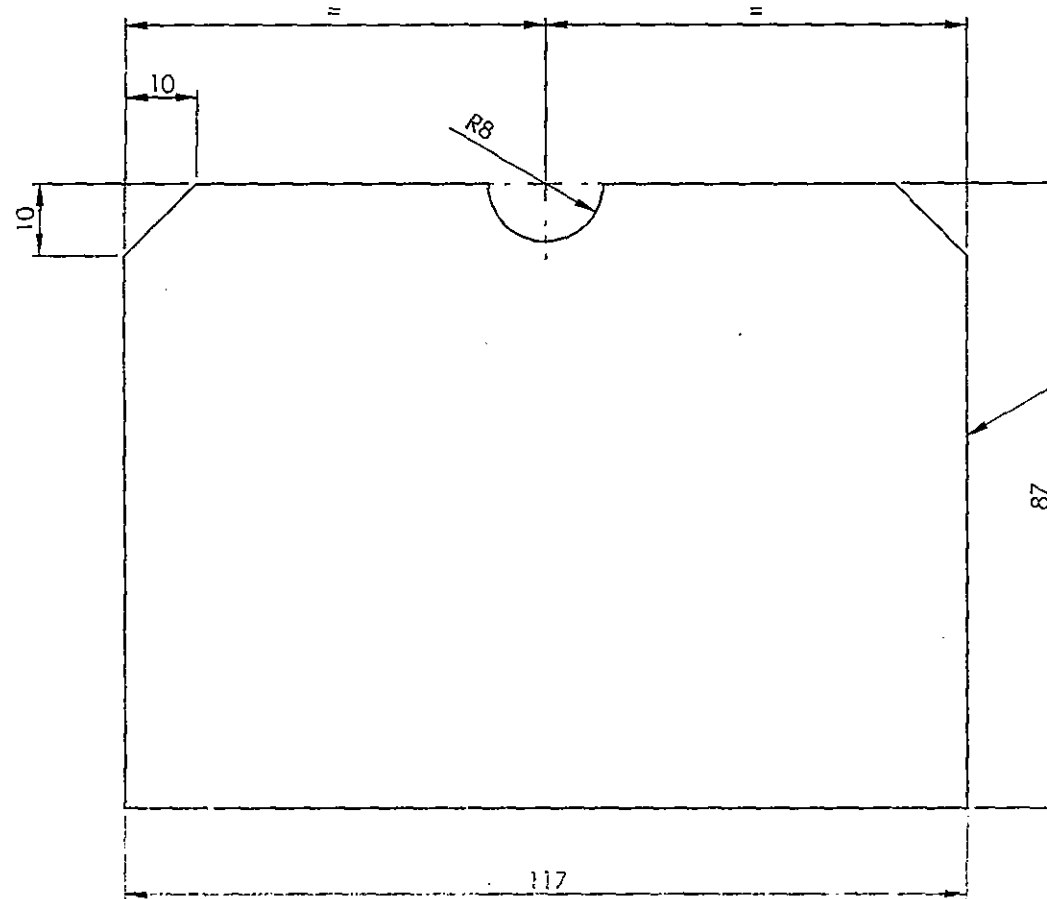
DATE OF LATEST ALT.	21-03-2013	AME/SME
DATE OF FIRST ISSUE		

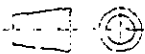
QTY.	FLANGE	4 x 135 x 701	ITEM NO.	1	REF. DRGS	INDCO/SPEC C 1-01 X2CIN12	WT/UNIT IN KGS	2.367	RE MARKS
GROUP: 1-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m: 0.160		WT/ASSY IN Kgs: 2.367		SCALE 1:2	SSE/D	CHD	ALT
FLANGE		INDIAN RAILWAY STANDARDS		SHEET 1 OF 1		ALT	ALTD	DRN	K.Sriram
						DRN			
INTEGRAL COACH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

AAA16934

▽ ROUGH MACHINED

① ROUGH CLEANED

▽▽ FINISH MACHINED

② BURRS REMOVED

▽▽▽ FINE FINISH VAC-NEED

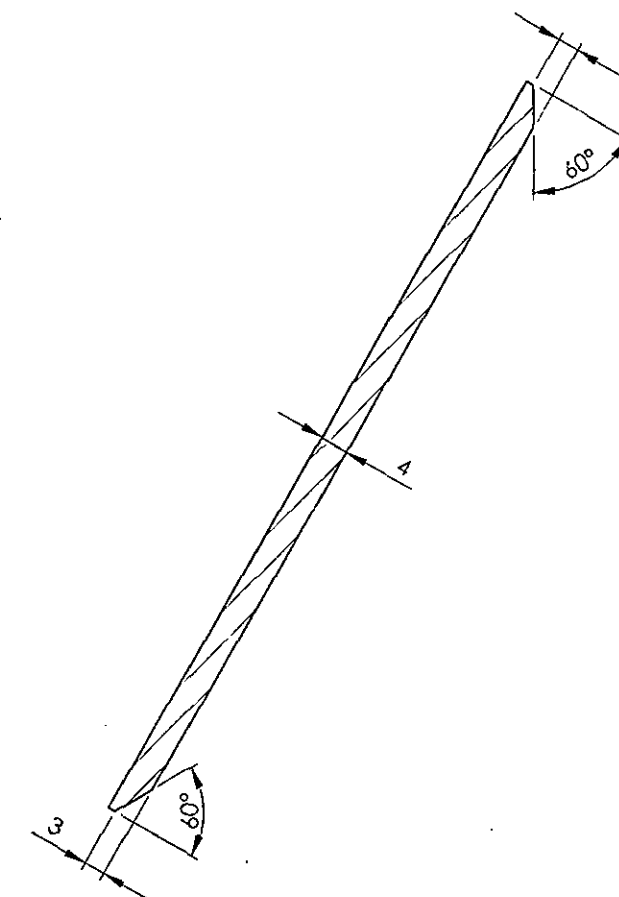
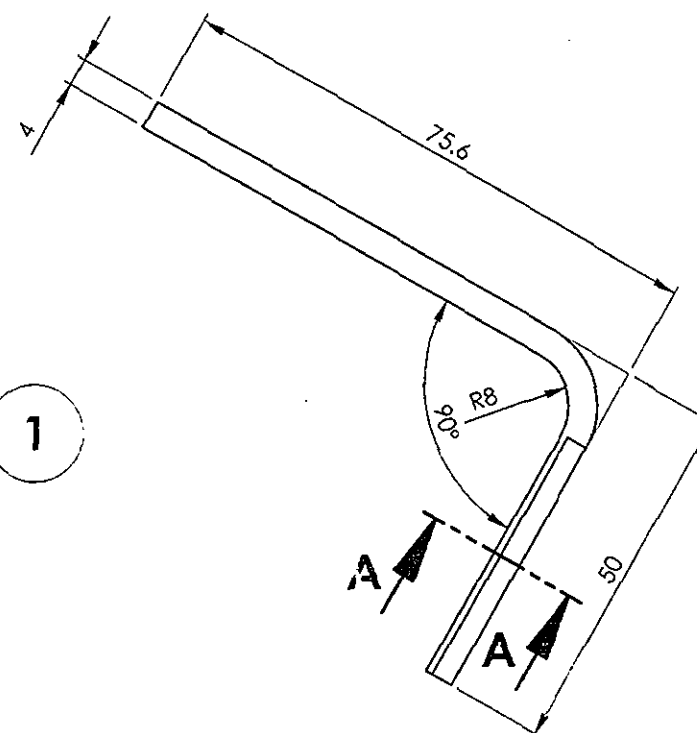
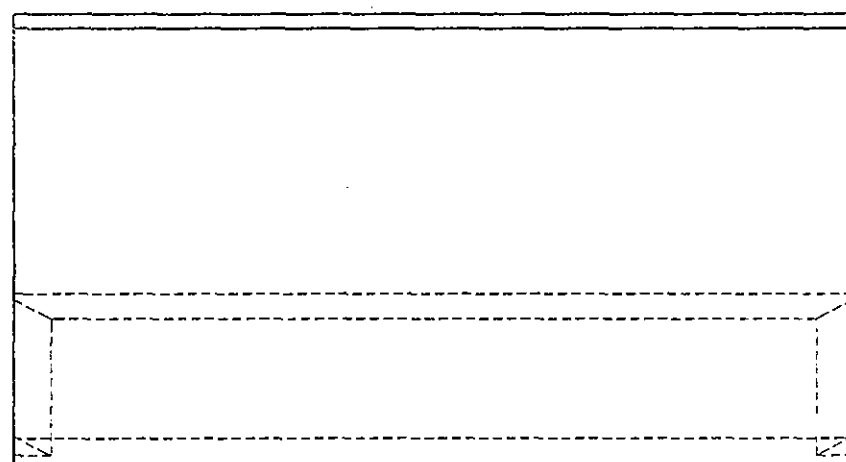
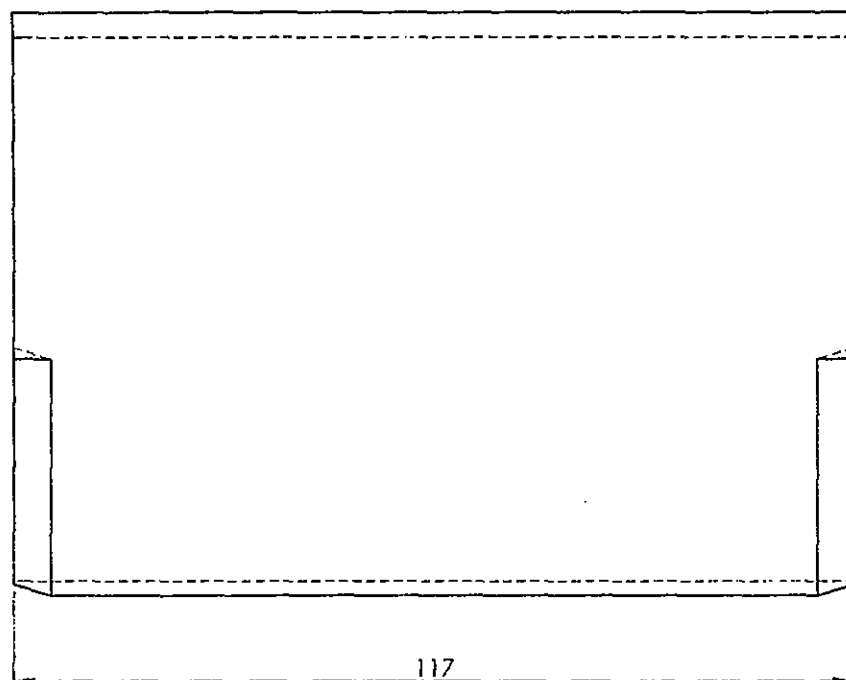
③ CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &
DATE

SECTION A-A

1	STIFFENING ANGLE	4 x 117 x 118	1		RDSO/SPEC C- K201 X2CrNi12	0.434	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-6 ROOF ASSEMBLY				SURFACE AREA IN Sq.m.: 0.029		WT/ASSY IN Kgs: 0.434	
STIFFENING ANGLE					SCALE 1:1	SSE/D CHD	<i>Sanjiv</i>
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS				SHEET 1 OF 1			
INTEGRAL COACH FACTORY, CHENNAI - 600038							
DATE OF LATEST ALT.		21-03-2013	DATE OF FIRST ISSUE		AME/SME	AAA16934	
						A3	

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ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

REF.DRG.NO.3 10113.0.20.200.124

AAA16935

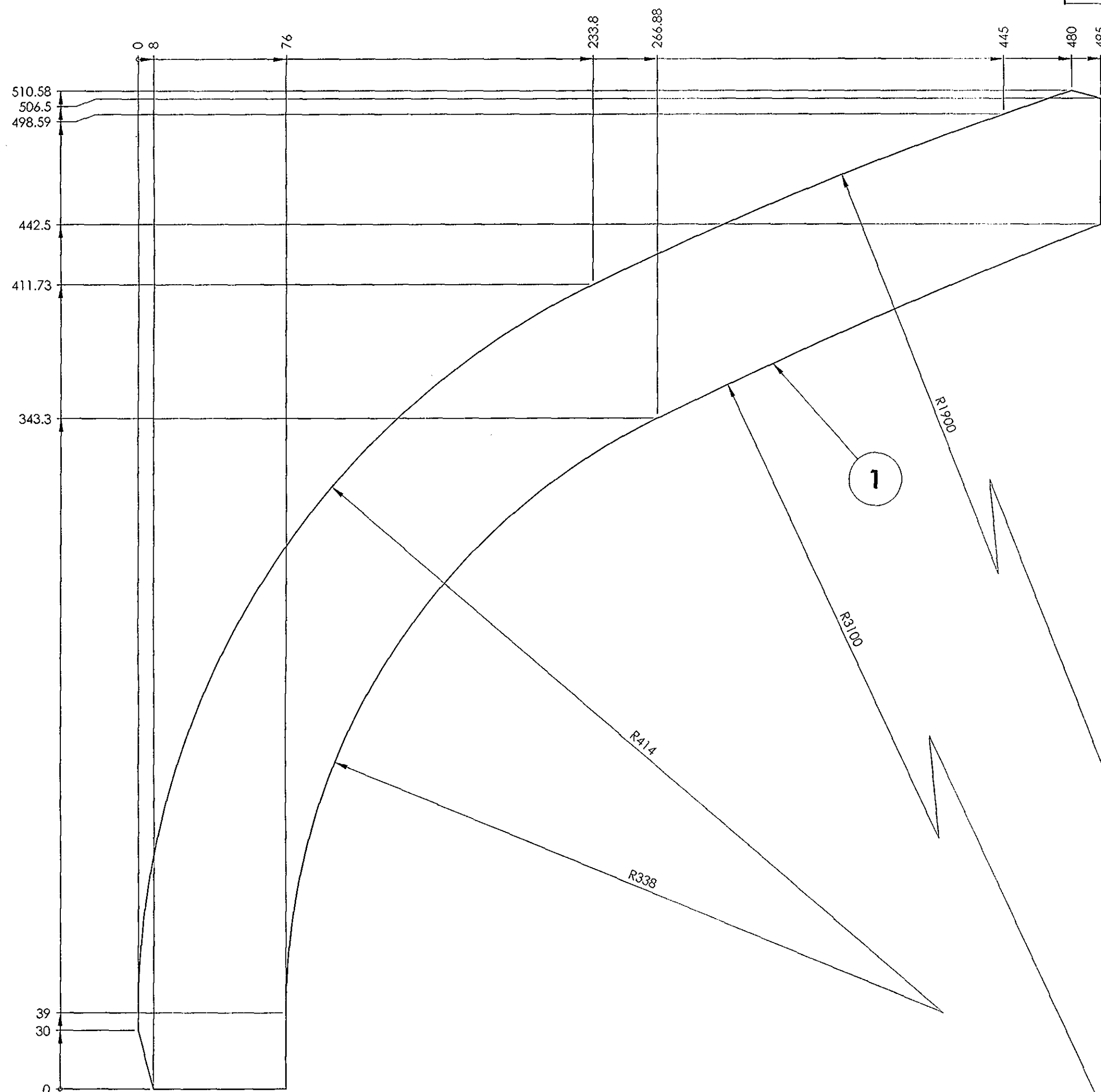
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

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.
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REF.DRG.NO.2 10113.0.20.210.104

DATE OF LATEST ALT.	21-03-2013	AME/SME
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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 INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		AAA16935 A2	

AAA16937

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

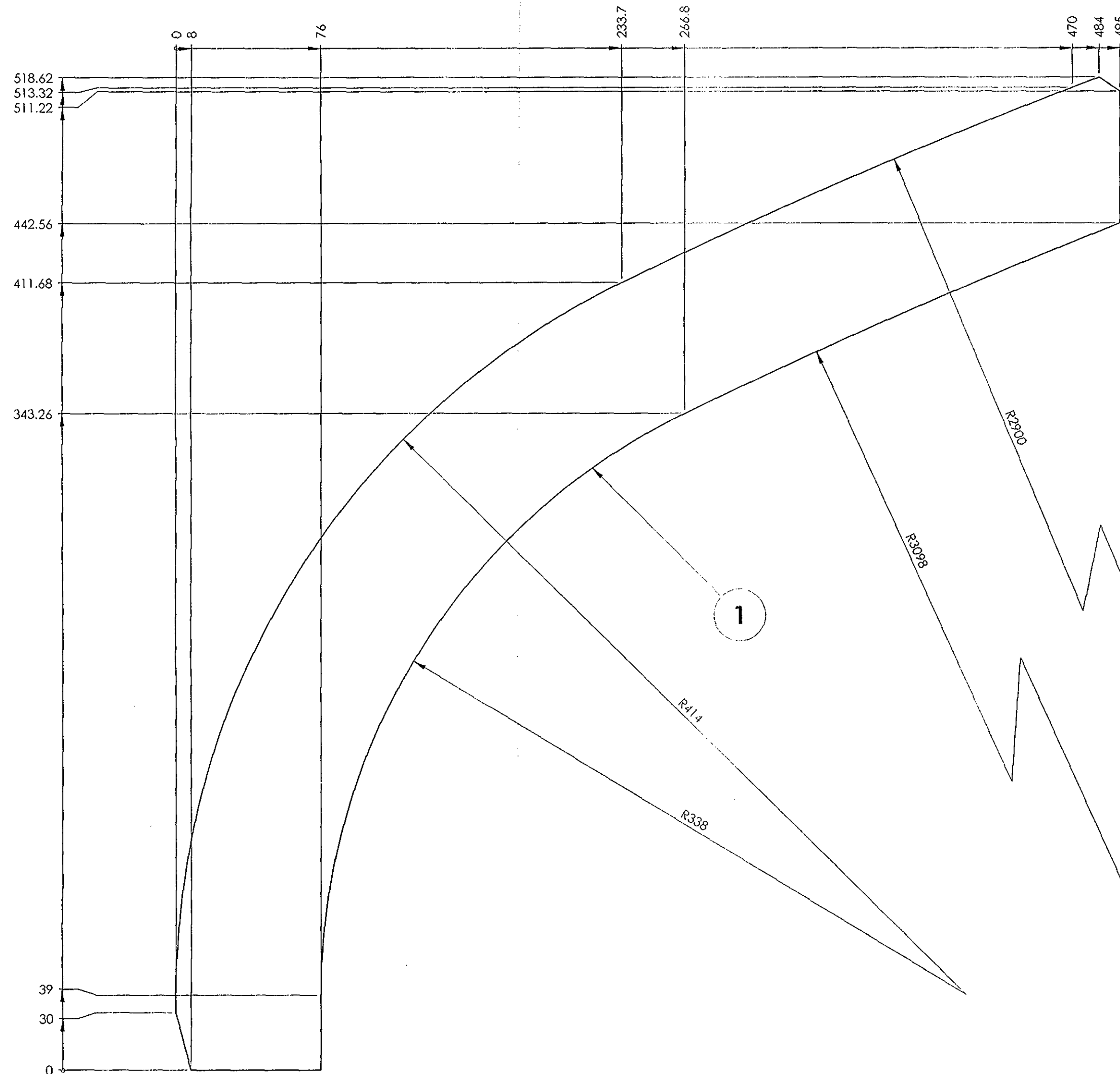
REVISIONS

ALT.

ZONE

DESCRIPTION

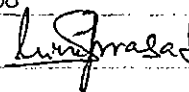
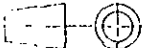
APPROVED &
DATE



ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO 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

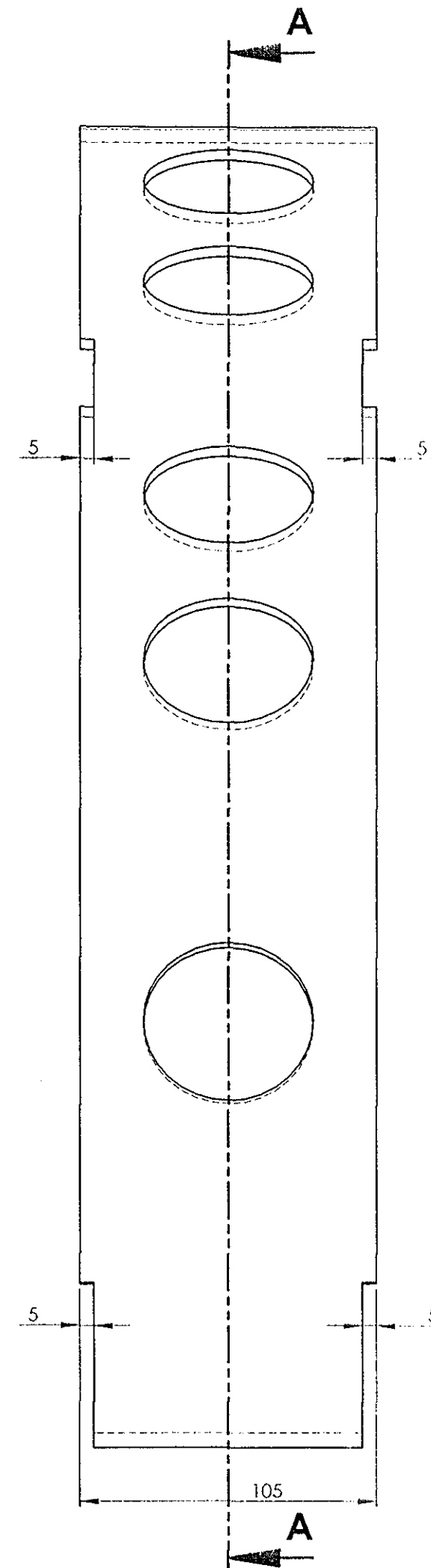
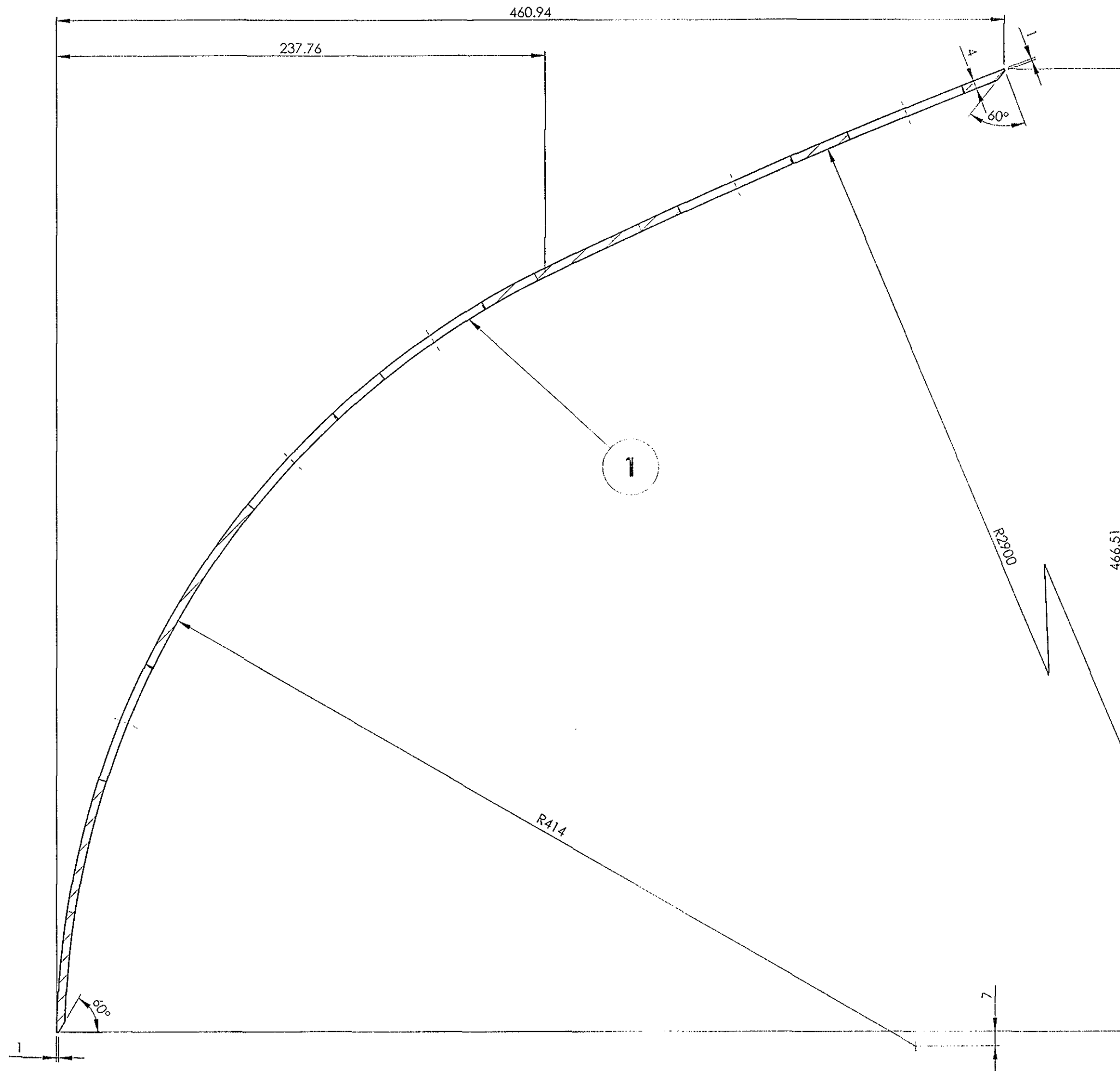
DATE OF LATEST ALL.	21-03-2013	AME/SME
DATE OF FIRST ISSUE		

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

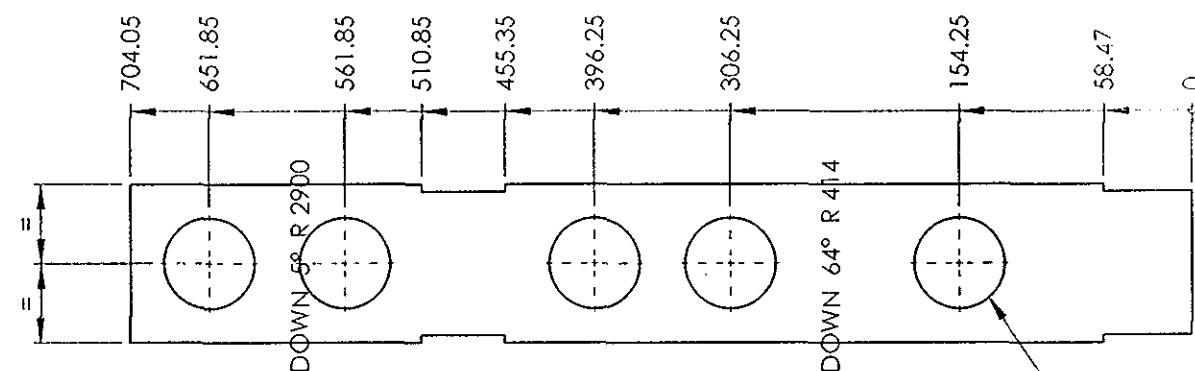
AAA16938

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

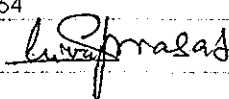

REVISIONS			APPROVED & DATE
ALT.	ZONE	DESCRIPTION	



SECTION A-A



DEVELOPMENT VIEW

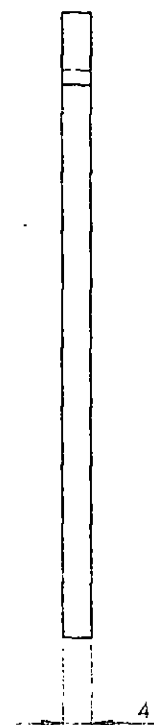
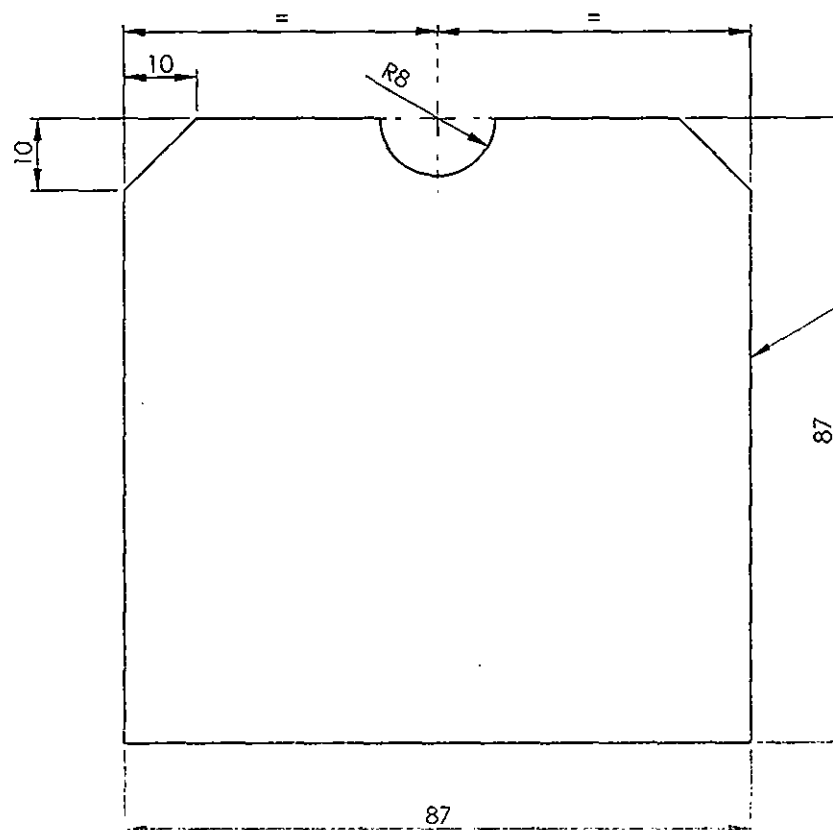
1	FLANGE	4 x 105 x 705	1		RDSO/SPEC C- K201 X2CrNi12	1.864	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: I-6 ROOF ASSEMBLY		SURFACE AREA IN Sq.m.: 0.127			WT/ASSY IN Kgs: 1.864		
FLANGE				SCALE 1:2	SSE/D		
					CHD		
				ALT	ALTD		
					DRN		K.Sriram
INDIAN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

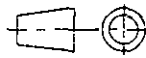
REF.DRG.NO.3 10113.0.20.210.121

AAA16939

▽ ROUGH MACHINED	⊖ ROUGH CLEANED
▽▽ FINISH MACHINED	⊖⊖ BURRS REMOVED
▽▽▽ V.E. - V.S. - VAC - V.D.	⊖⊖⊖ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



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	K. Sriram
					1:1	CHD	
					ALT.	ALTD	K. Sriram
						DRN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAA16939		A3

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.

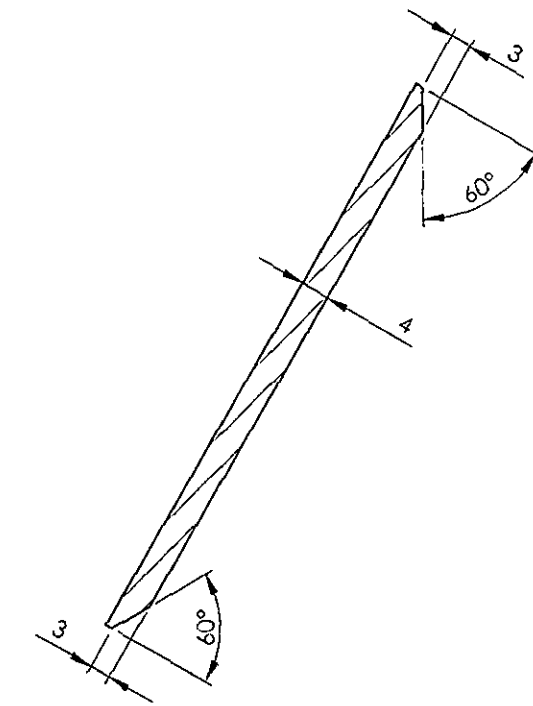
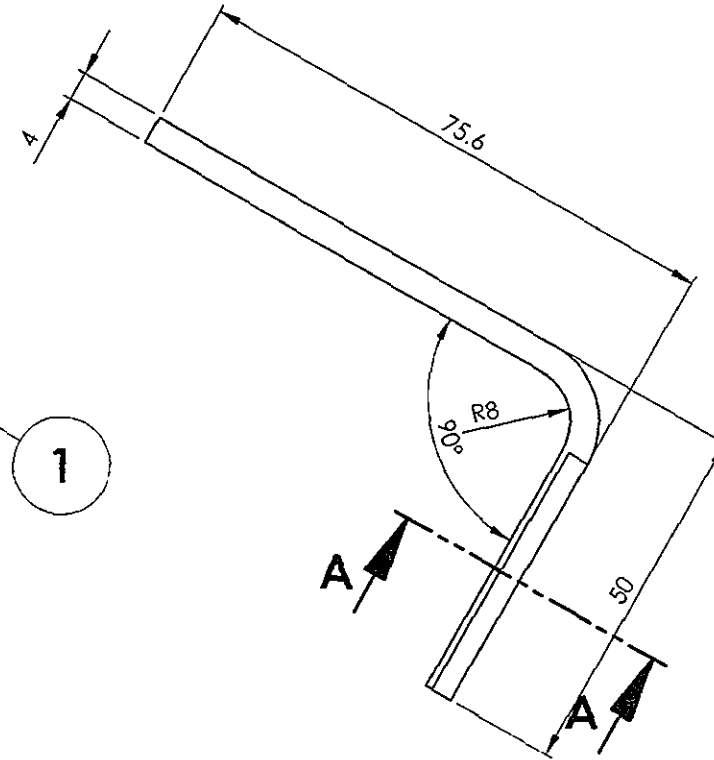
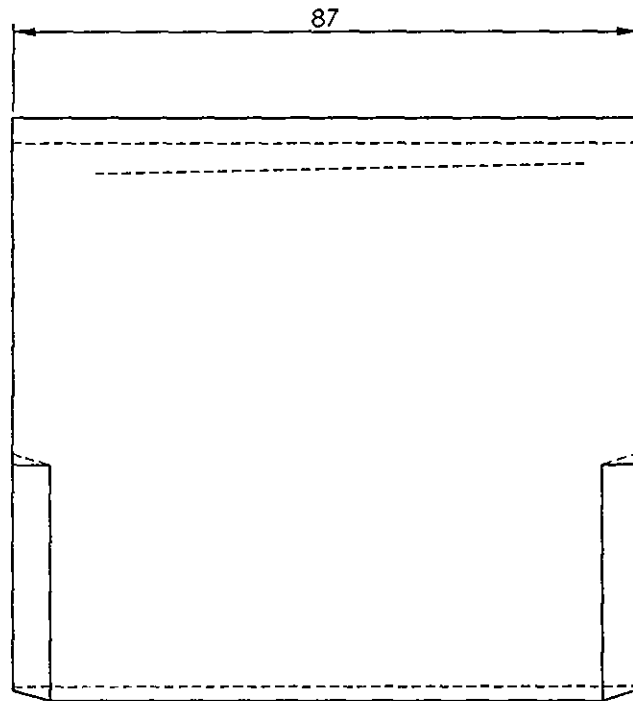
REF.DRG.NO.3 10113.0.20.200.121

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

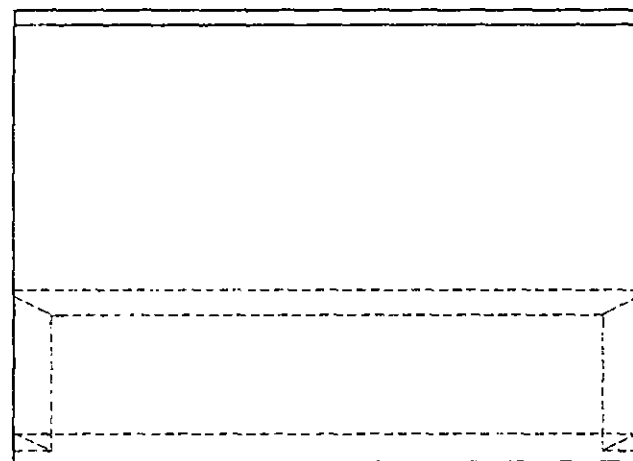
AAA16940

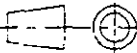
▽ ROUGH MACHINED	⊙ ROUGH CLEANED
▽▽ FINISH MACHINED	⊙⊙ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⊙⊙⊙ CHAMFERED

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>As per lead</i>
					1:1	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS							
INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1		AAA16940	A3

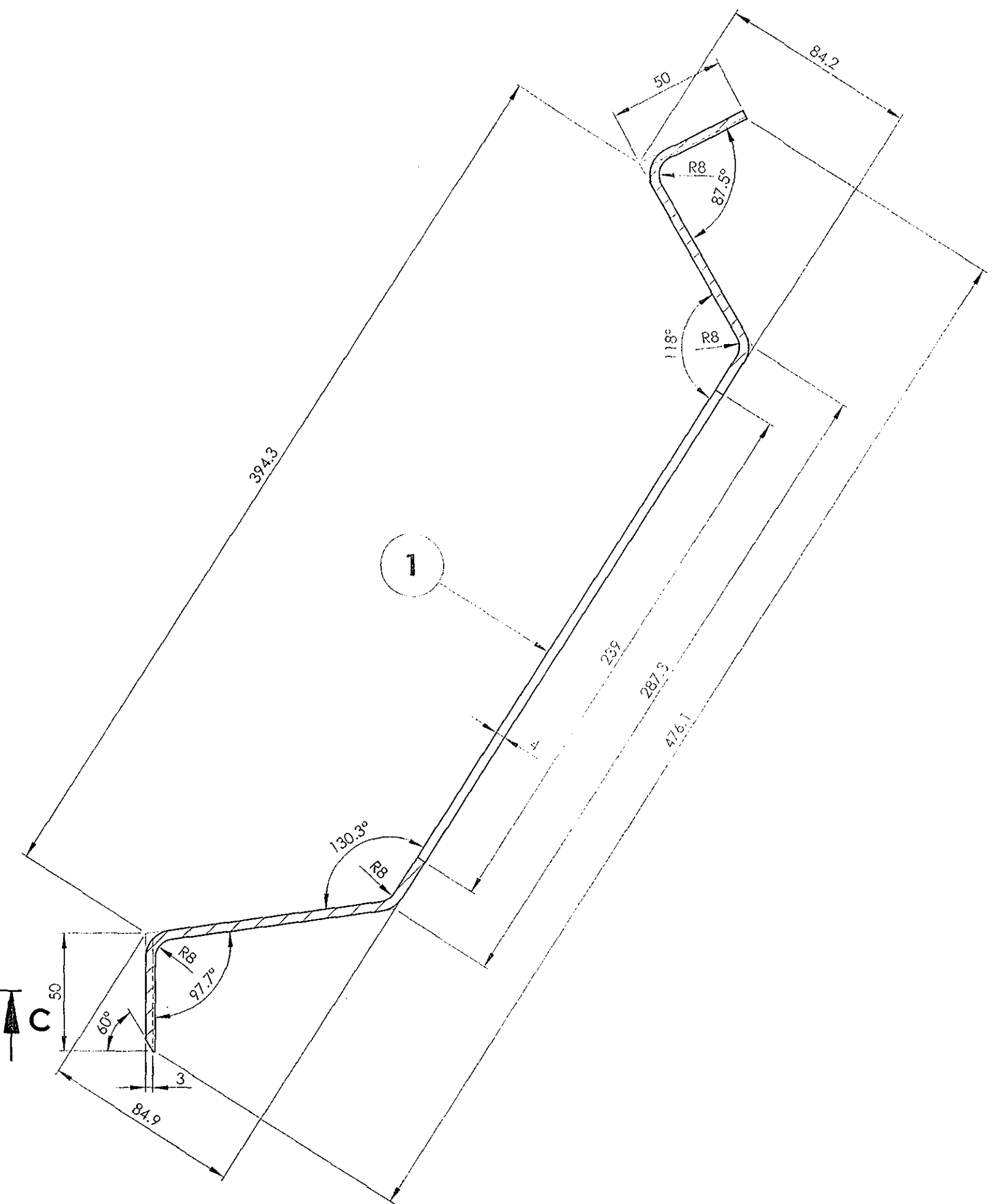
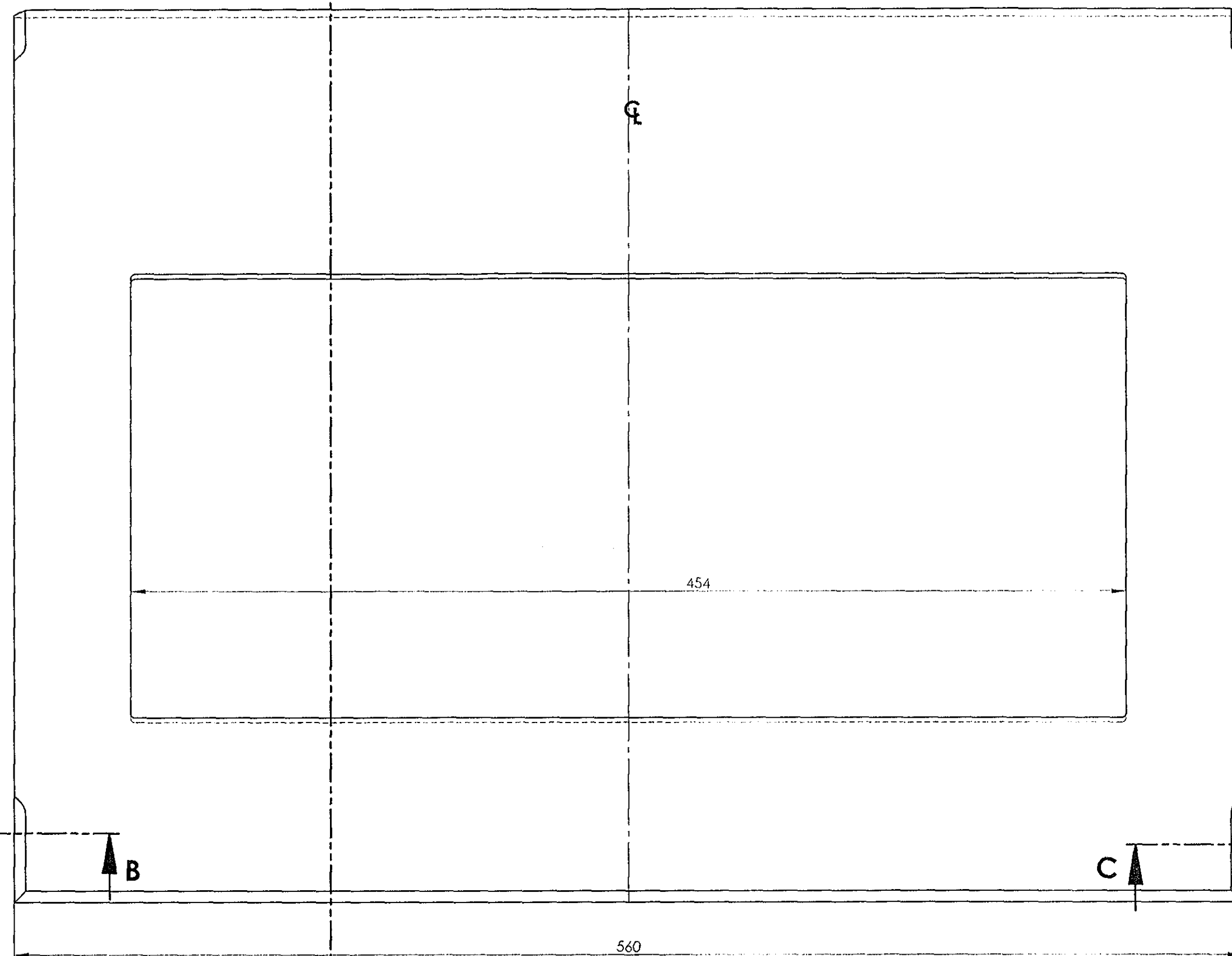
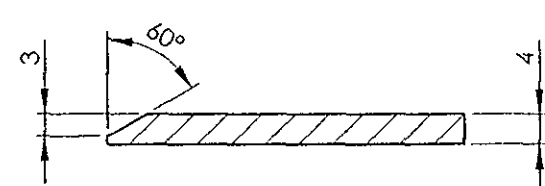
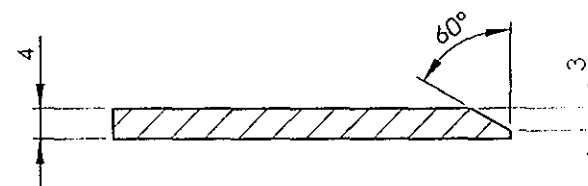
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICT/STD-9-0-001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.

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
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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>Surfaced</i>
					ALT	ALTD	
					DRN	DRN	K.Sriram
INDIAN RAILWAY STANDARDS					SHEET 1 OF 1		
INTEGRAL COACH FACTORY, CHENNAI - 600038					AAA16941 A2		

AAA16942

▽ ROUGH MACHINED

① ROUGH CLEANED

▽▽ FINISH MACHINED

② BURRS REMOVED

▽▽▽ FINE FINISH MACHINED

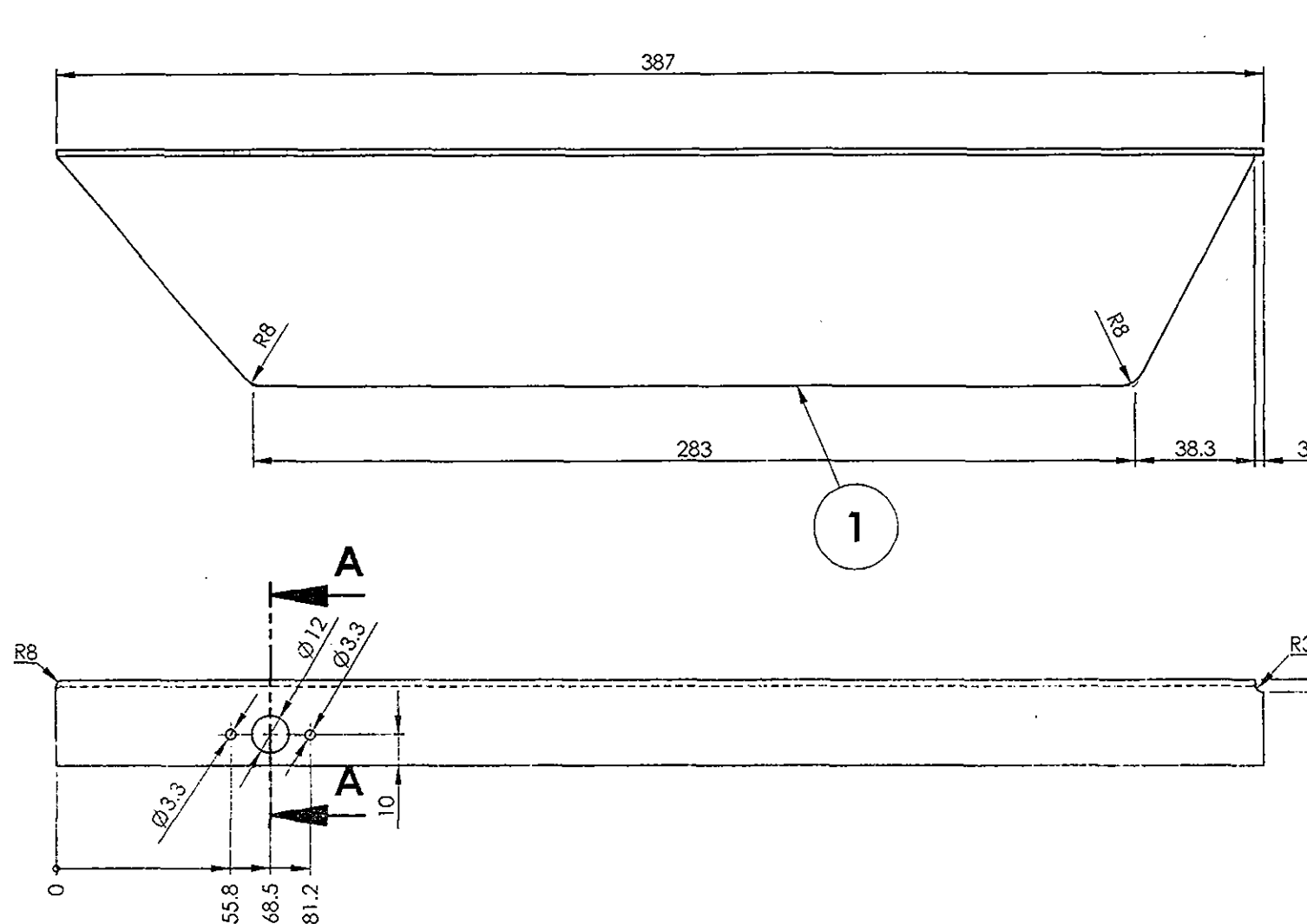
③ CHAMFERED

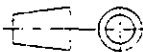
REVISIONS

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>hira prasad</i>
					1:2	CHD	
					ALT.	ALTD	
						DRN	K.Sriram
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			
					AAA16942		A3

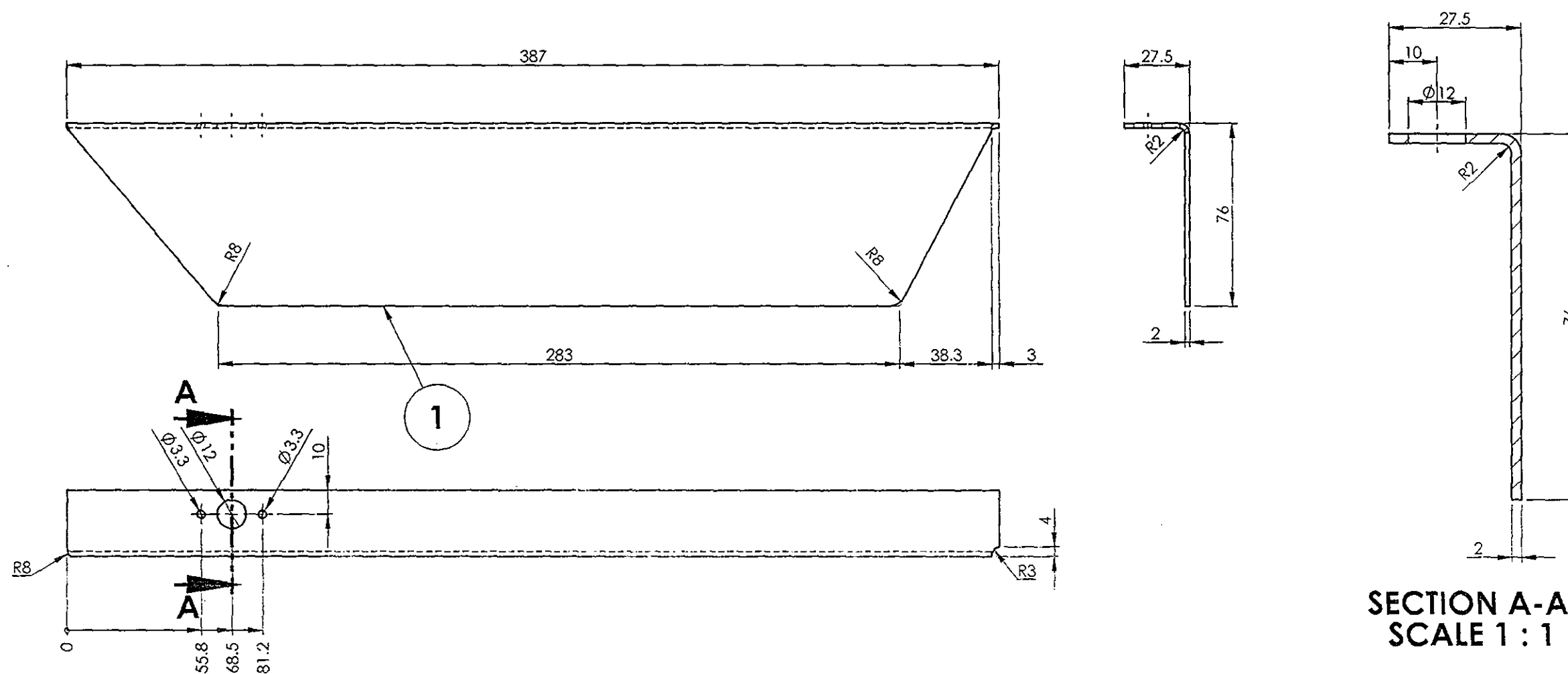
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD 9.0.001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.

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

