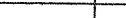
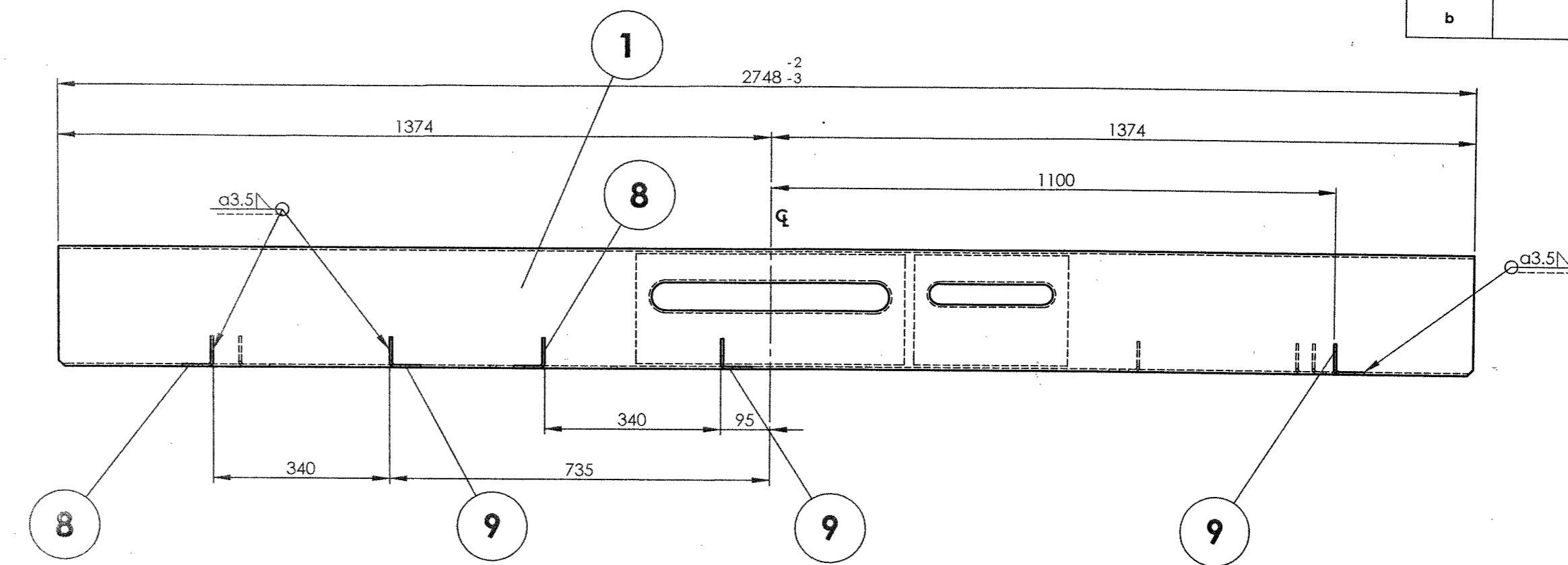
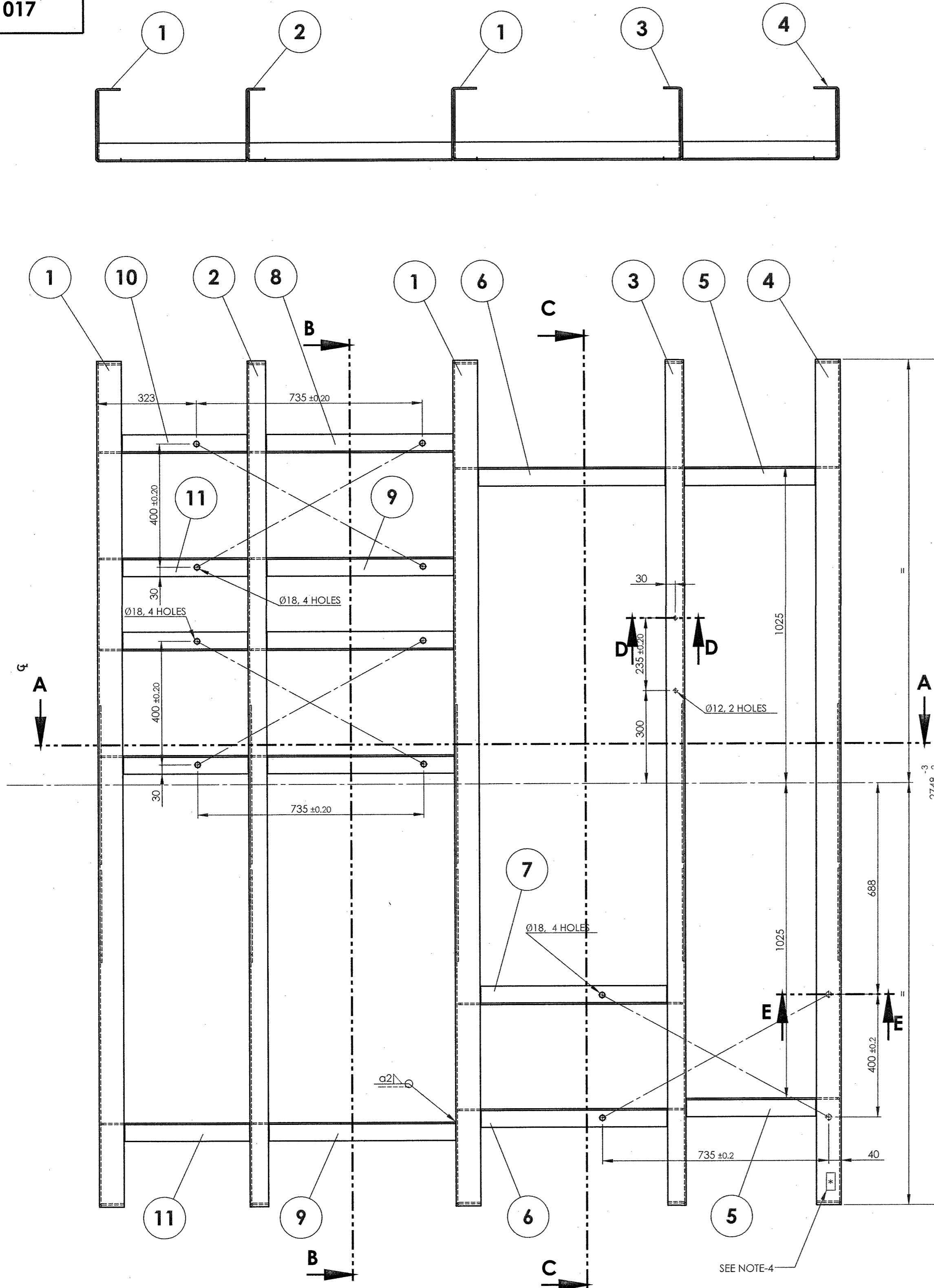
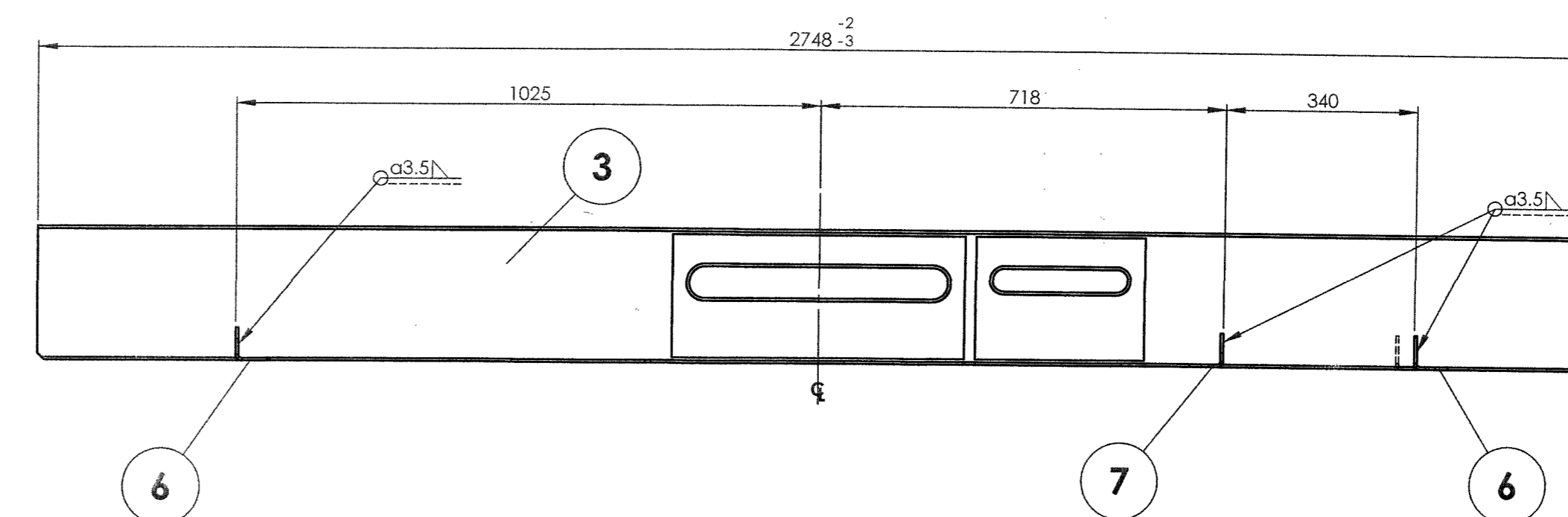
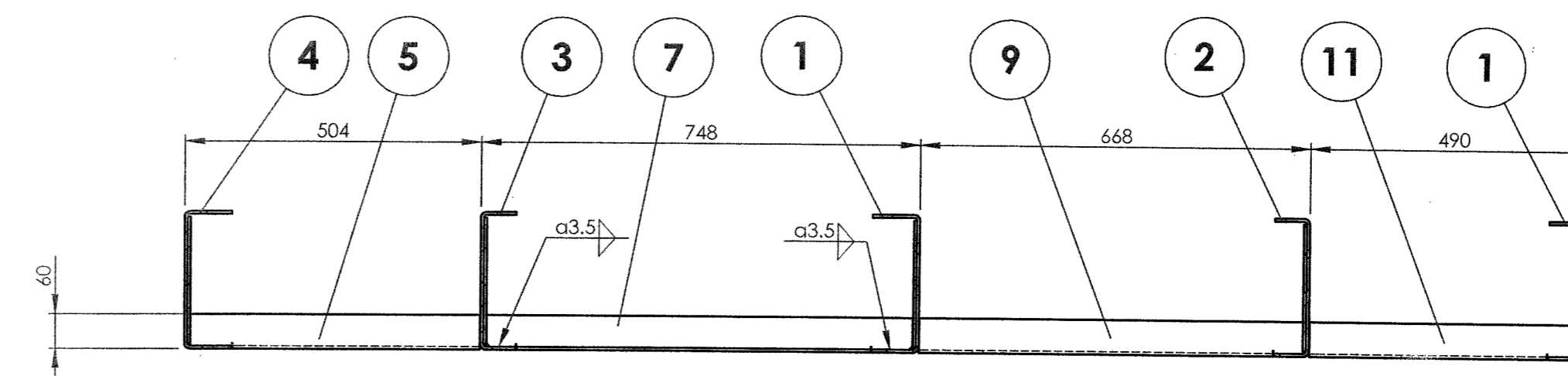
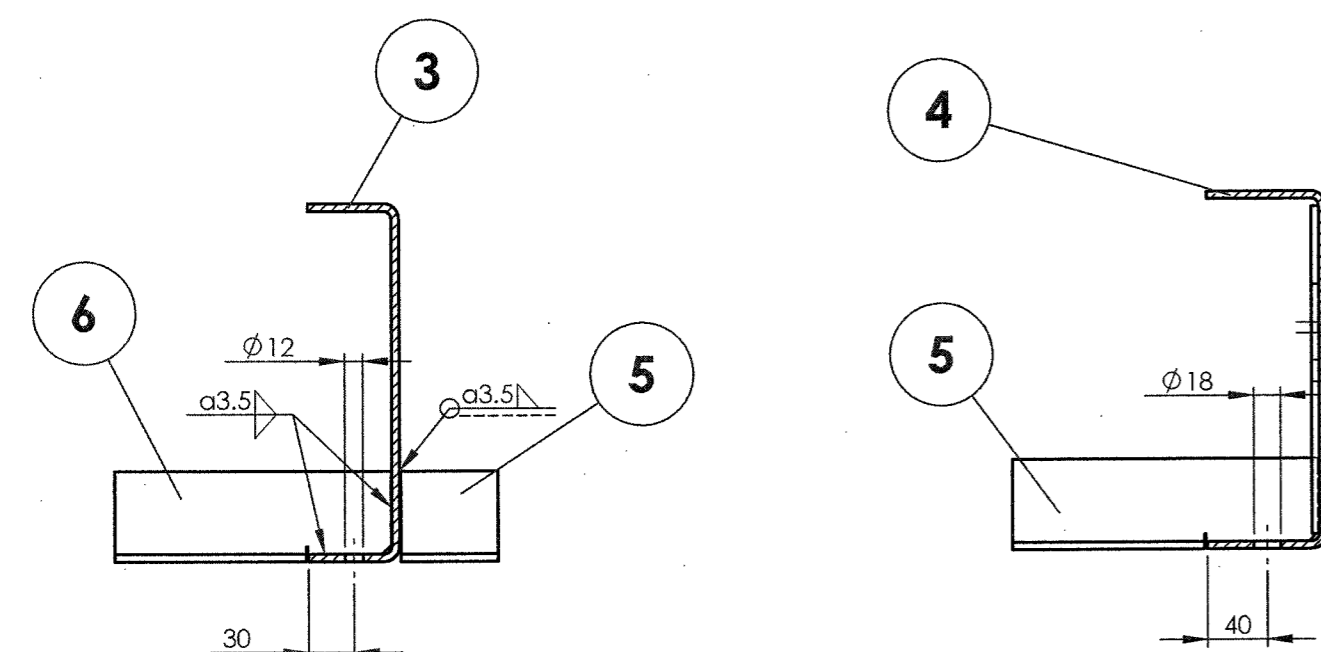


74511017

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

		15		16	
REVISIONS					
ALT.	ZONE	DESCRIPTION			APPROVED & DATE
a		LOCATING DIMENSION OF ITEMS- 8 & 9 ADDED IN SECTION-BB.			-sd-
b		LOCATING DIMENSIONS FOR Ø18 HOLES ADDED.			

SECTION B-B
SCALE 1 : 10SECTION C-C
SCALE 1 : 10SECTION A-A
SCALE 1 : 10SECTION D-D
SCALE 1 : 5SECTION E-E
SCALE 1 : 5

NOTE:-

- ALL THE HOLES TO BE JIG DRILLED.
- FOR OPEN TOLERANCE REFER ICF/STD-9-0-001.
- FINISHED COMPONENT SHALL BE THOROUGHLY CLEANED AND APPLIED WITH TWO COATS OF RED OXIDE ZINC CHROMATE PRIMER TO IS:2074/92 TO DFT OF MINIMUM 35 MICRONS WITH SMOOTH AND MAT FINISH.
- MANUFACTURE'S NAME, RUNNING SERIAL NO. & MONTH & YEAR OF MANUFACTURE SHALL BE PUNCHED 1mm HEIGHT & 1mm DEEP ON THE SPACE PROVIDED.

3	ANGLE		11	AAD11185		1.95	
2	ANGLE		10	AAD11155		1.95	
3	ANGLE		9	AAD11187		2.78	
2	ANGLE		8	AAD11186		2.78	
1	ANGLE		7	AAD11191		2.92	
2	ANGLE		6	AAD11190		2.94	
2	ANGLE		5	AAD11189		2.01	
1	CROSS BEARER		4	74511021		44.991	
1	CROSS BEARER		3	74511020		40.691	
1	CROSS BEARER		2	74511019		40.691	
2	CROSS BEARER		1	74511018		44.991	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT	REMARKS

GROUP: 1-1		SURFACE AREA IN Sq.m.: 13.281		WT/ASSY IN Kgs:	
SCALE 1:10		SSE/D CHD		Kuntli Thakur	
ALT. b		ALTD DRN		Kuntli Thakur	
INDIAN RAILWAY STANDARDS		SHEET 1 OF 1		MEMU/DMC/3PH	
INTEGRAL COACH FACTORY, CHENNAI - 600038		74511017		A1	

REF.DRG.NO.574-1-1-008

12-06-2018	20-10-2017	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

74511018

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

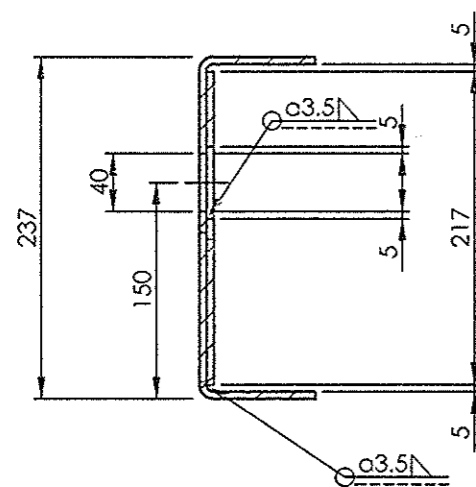
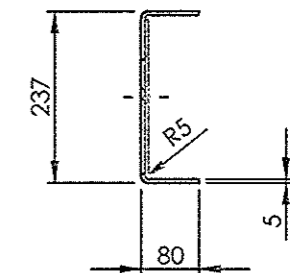
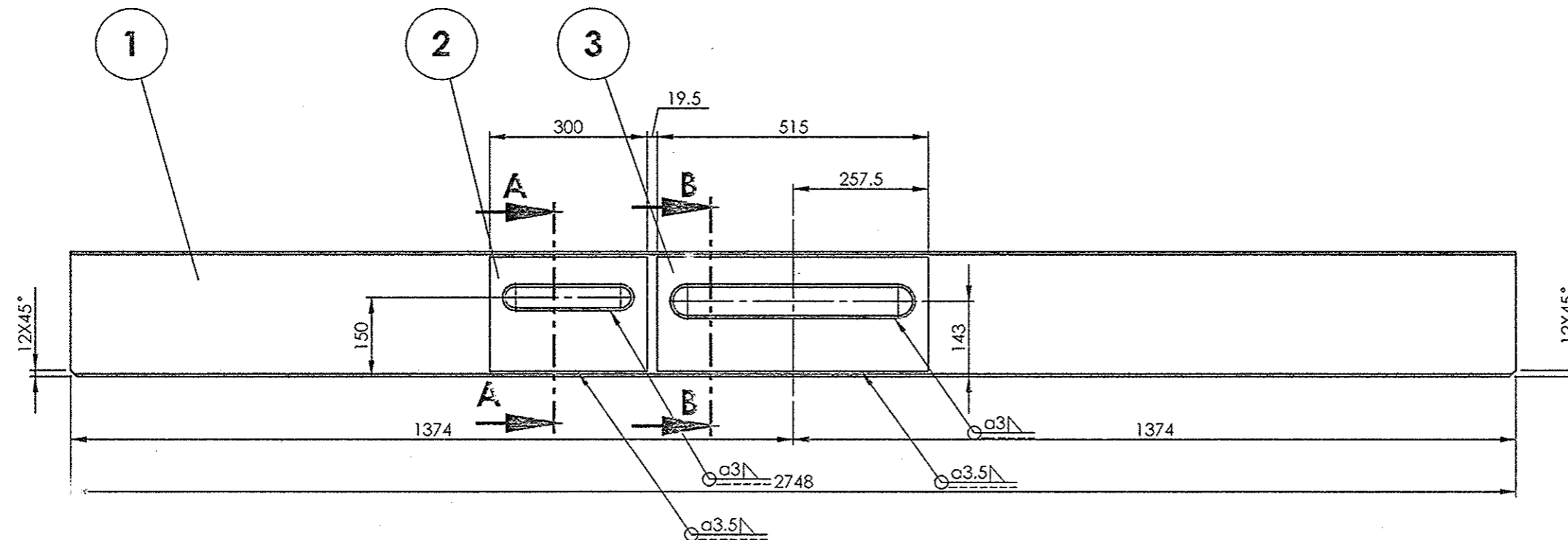
③ ROUGH CLEANED
① BURRS REMOVED
⑧ CHAMFERED

REVISIONS

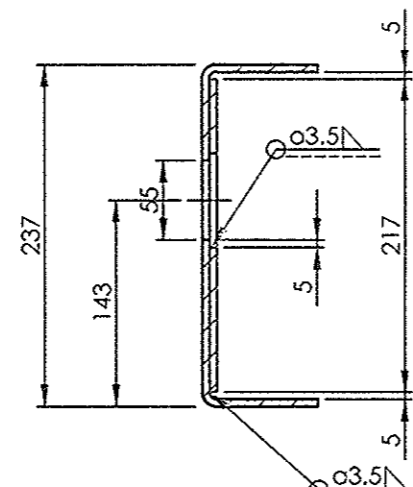
ALT.

ZONE

DESCRIPTION

APPROVED &
DATE

SECTION A-A
SCALE 1 : 5



SECTION B-B
SCALE 1 : 5

1	PLATE		3	AAD11158		3.24	
1	PLATE		2	AAD11181		2.09	
1	CHANNEL		1	AAD11180		39.67	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1

SURFACE AR: A IN Sq.m.:2.352

WT/ASSY IN Kgs:

CROSS BEARER

SCALE
1:10SSE/D
CHD

ALT.

ALTD

DRN

Kunti Thokur

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600036

SHEET
1 OF 1

MEMU/DMC/3PH

74511018

A3

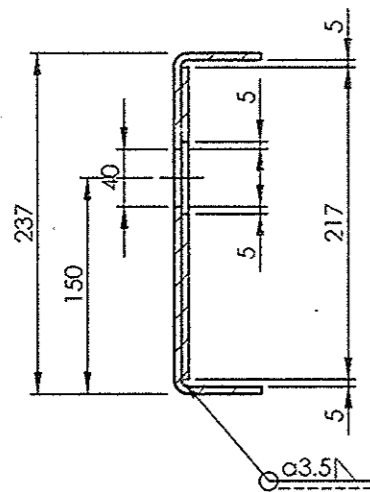
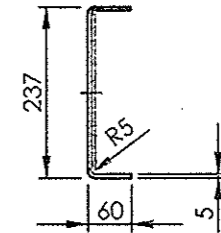
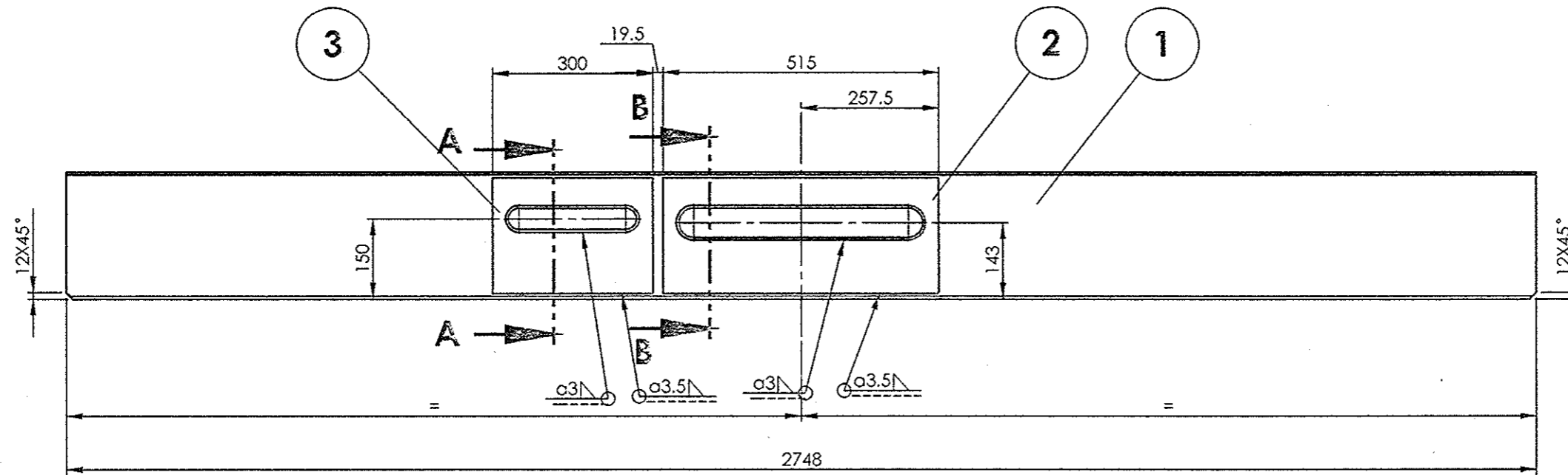
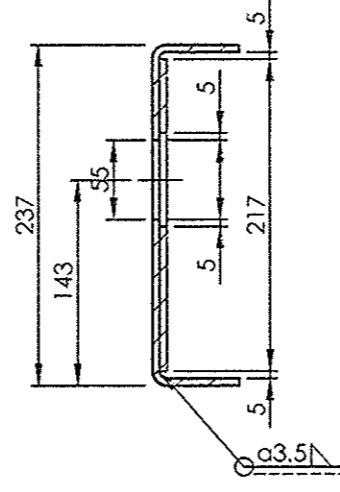
DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD 9.0.001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813 1986.
EIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

20-10-2017

74511019

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A
SCALE 1 : 5SECTION B-B
SCALE 1 : 5

1	PLATE		3	AAD11181		2.09	
1	PLATE		2	AAD11158		3.24	
1	CHANNEL		1	AAD11182		35.37	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1

SURFACE AREA IN Sq.m.:2.132

WT/ASSY IN Kgs:

CROSS BEARER

SCALE
1:10SSE/D
CHD

ALT.

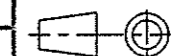
ALTD

DRN

Kunti Thakur

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

MEMU/DMC/3PH

74511019

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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

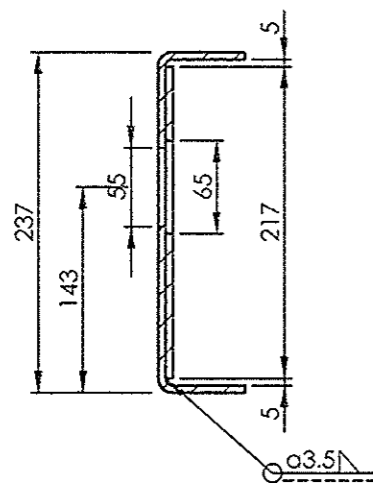
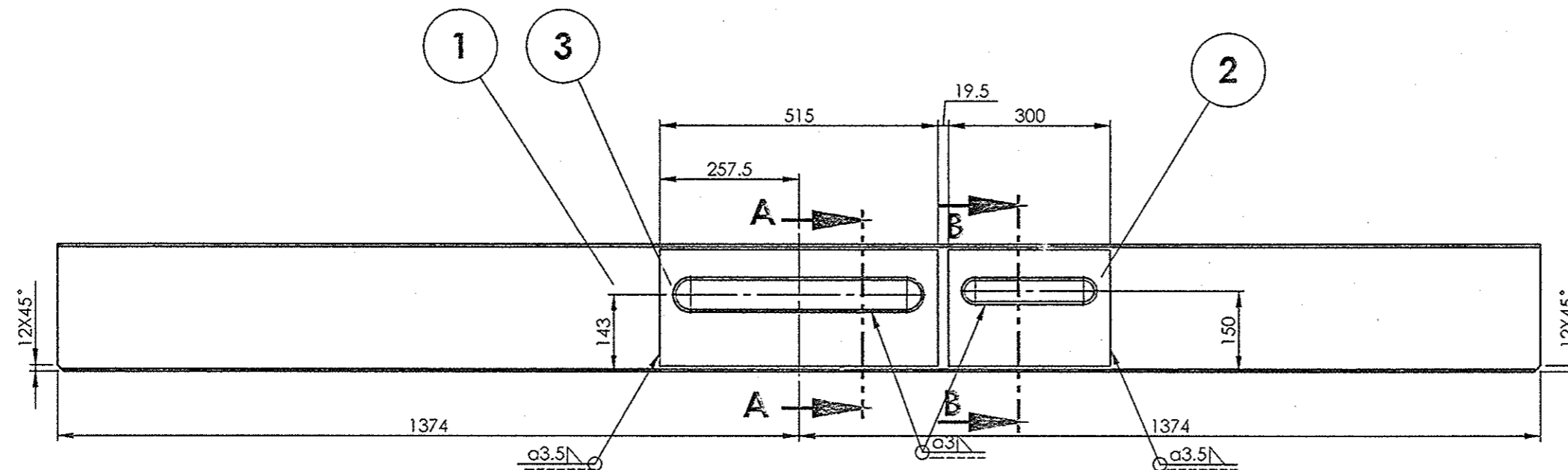
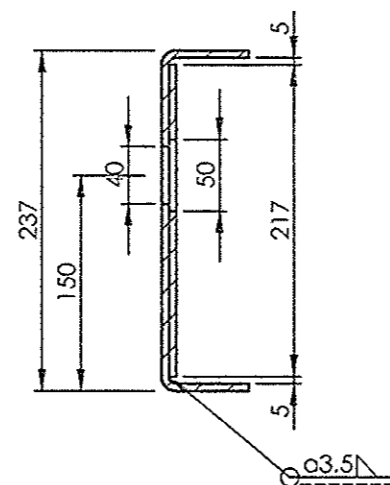
REF.DRG.NO.574-1-1-011/COL-6

	20-10-2017	6.10.2017
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

74511020

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A
SCALE 1 : 5SECTION B-B
SCALE 1 : 5

1	PLATE		3	AAD11158		3.24	
1	PLATE		2	AAD11181		2.09	
1	CHANNEL		1	AAD11183		35.37	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1

SURFACE AREA IN Sq.m.: 2.132

WT/ASSY IN Kgs:

CROSS BEARER

SCALE 1:10	SSE/D	
	CHD	
ALT.	ALTD	Kunti Thakur
	DRN	

MEMU/DMC/3PH

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

74511020

A3

REF.DRG.NO.574-1-1-011/COL-5

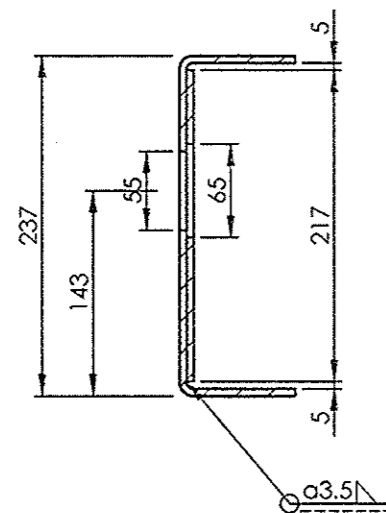
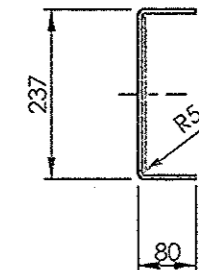
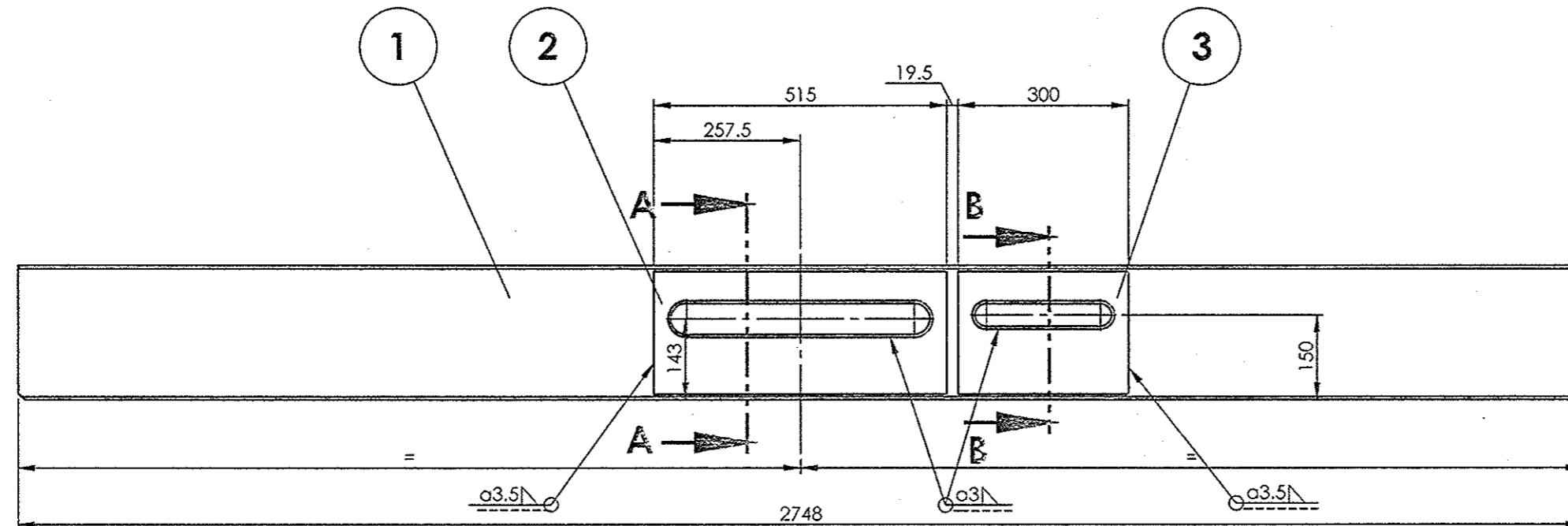
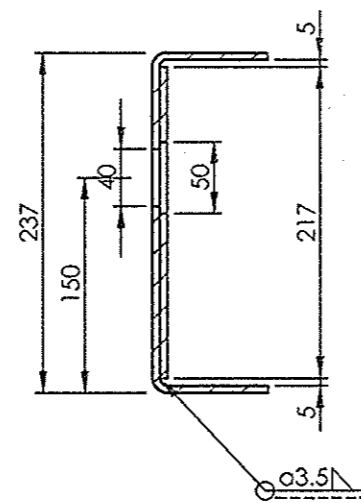
	20-10-2017	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUNDNESS VALUES, REFER DRAWING NO IC7/SID 9.0.001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER S. 8.3.1986.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

74511021

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A
SCALE 1 : 5SECTION B-B
SCALE 1 : 5

1	PLATE		3	AAD11181		2.09	
1	PLATE		2	AAD11158		3.24	
1	CHANNEL		1	AAD11184		39.67	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1

SURFACE AREA IN Sq.m.: 2.352

WT/ASSY IN Kgs:

CROSS BEARER

SCALE 1:10	SSE/D	
	CHD	
ALT.	ALTD	Kunti Thokur
	DRN	

	MEMU/DMC/3PH
--	--------------

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

74511021

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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

REF.DRG.NO.574-1-1-011/COL-3

DATE OF LATEST ALT.

20-10-2017

DATE OF FIRST ISSUE

AME/SM

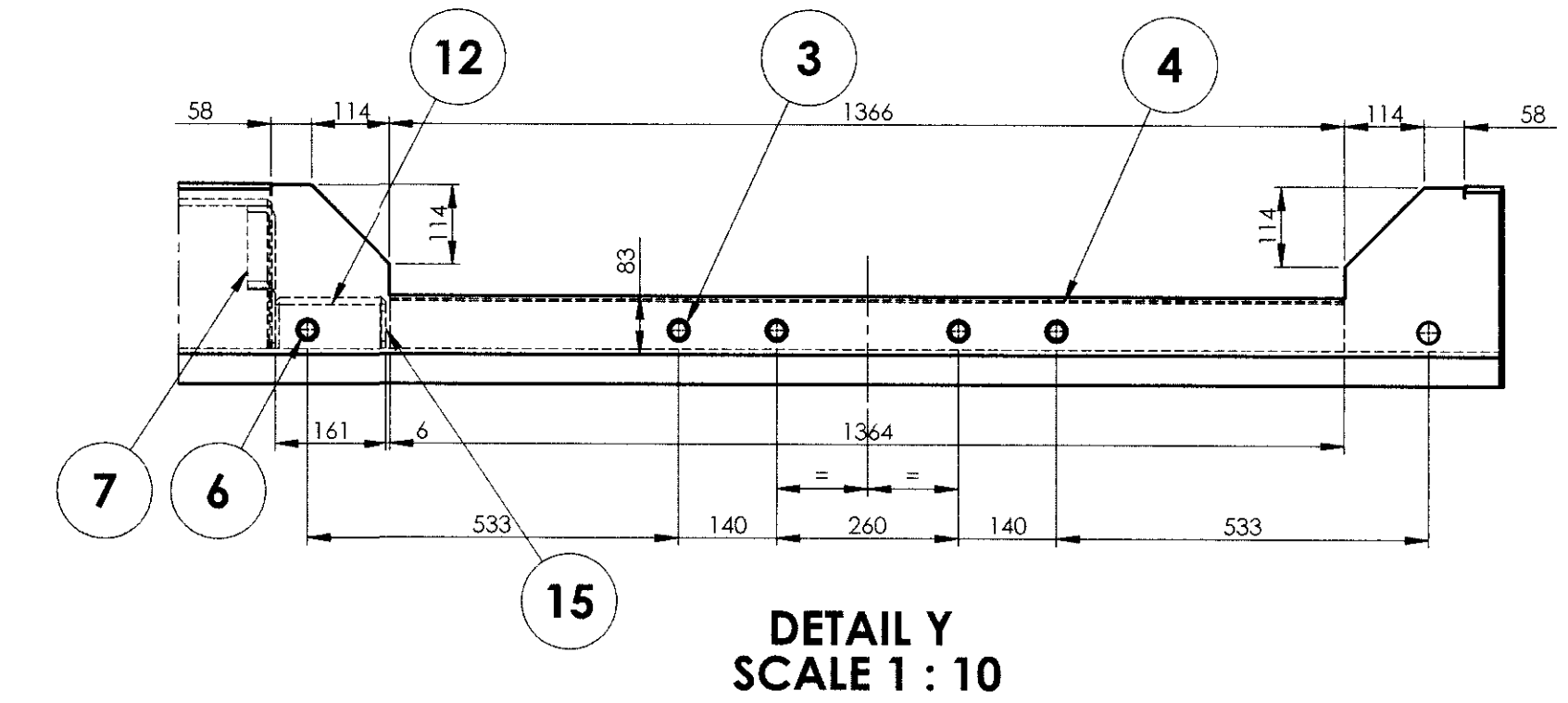
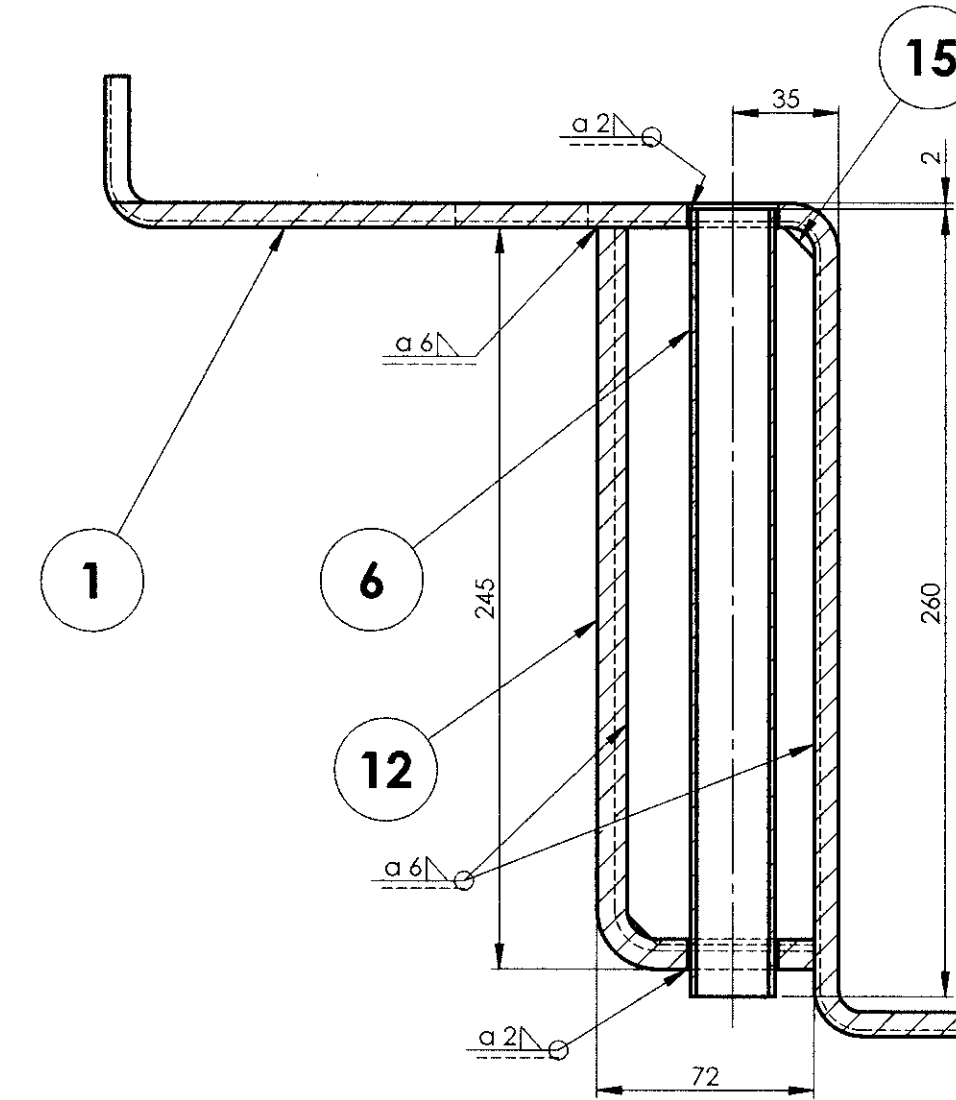
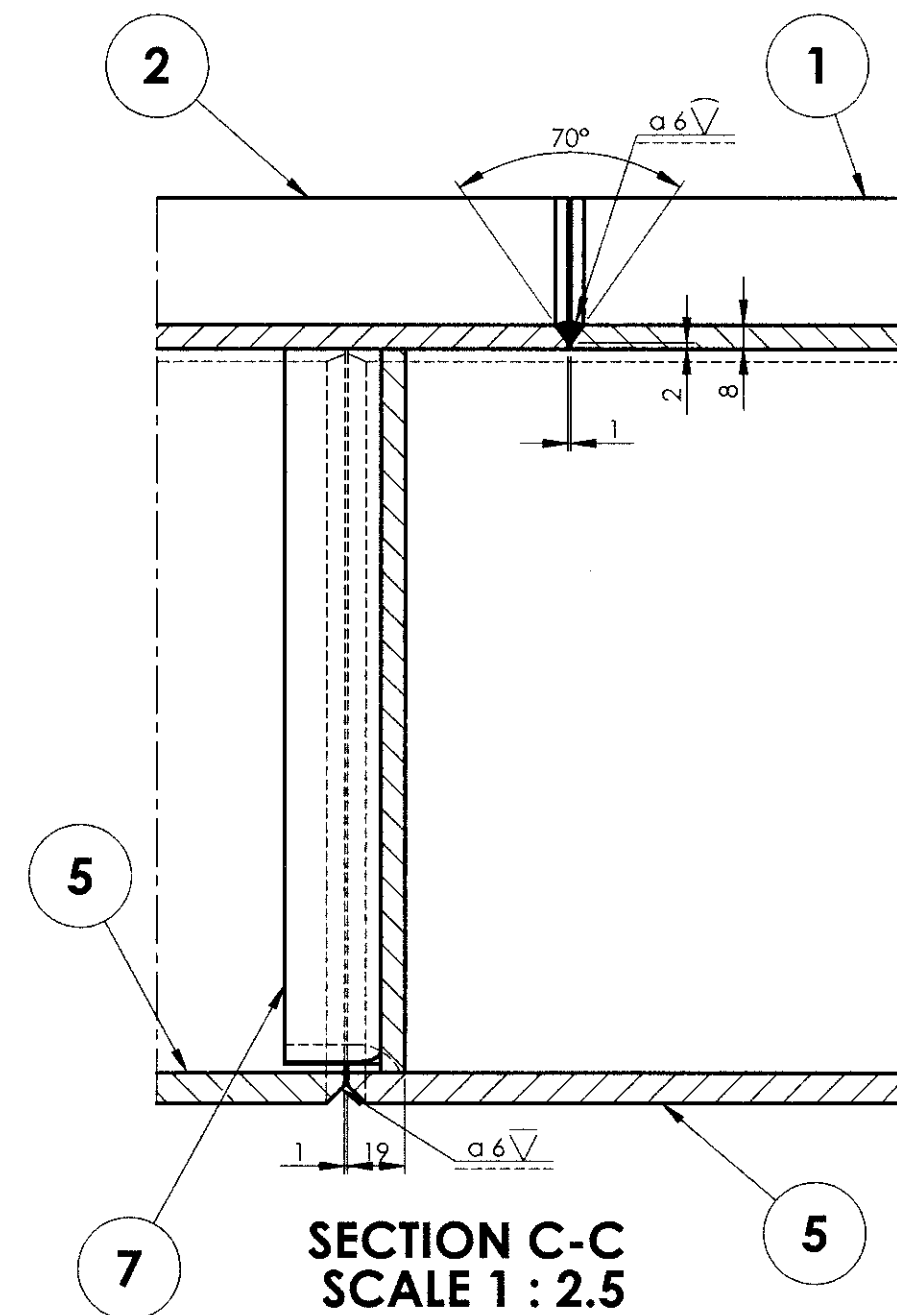
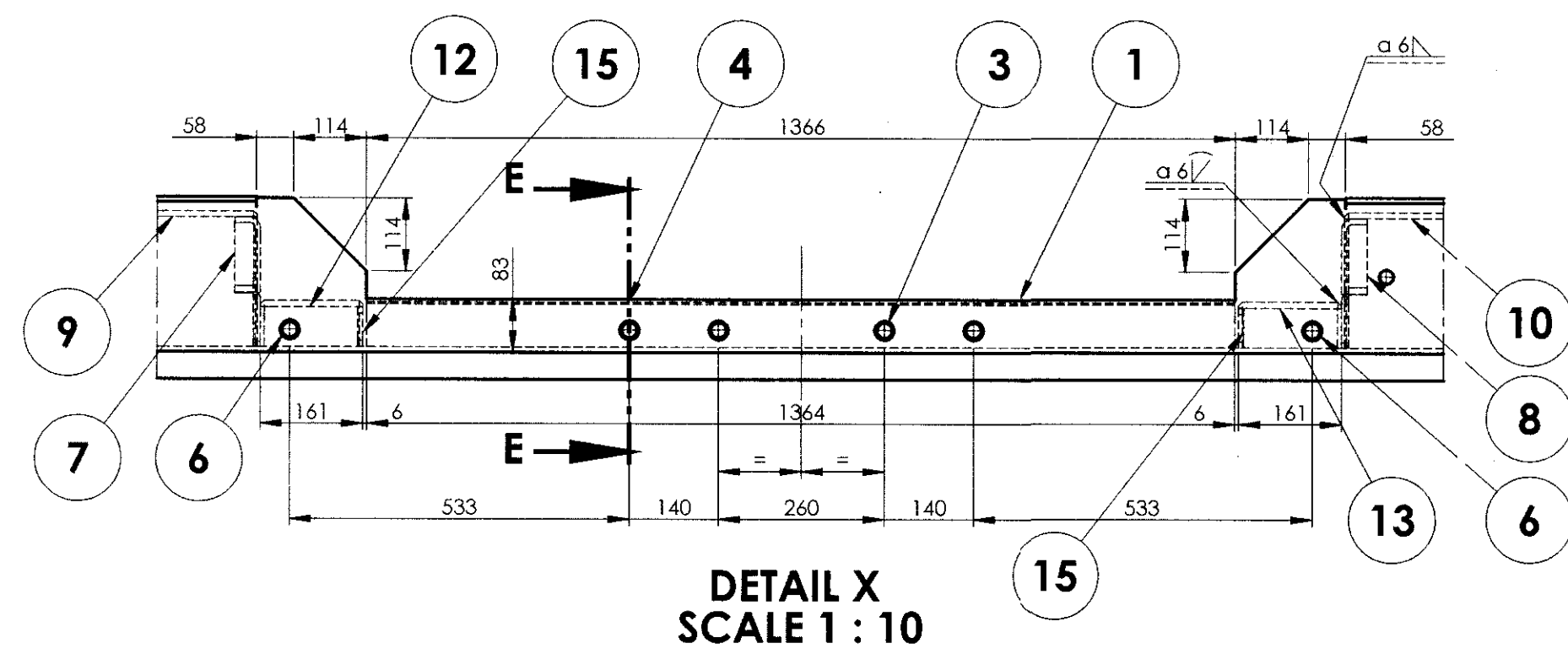
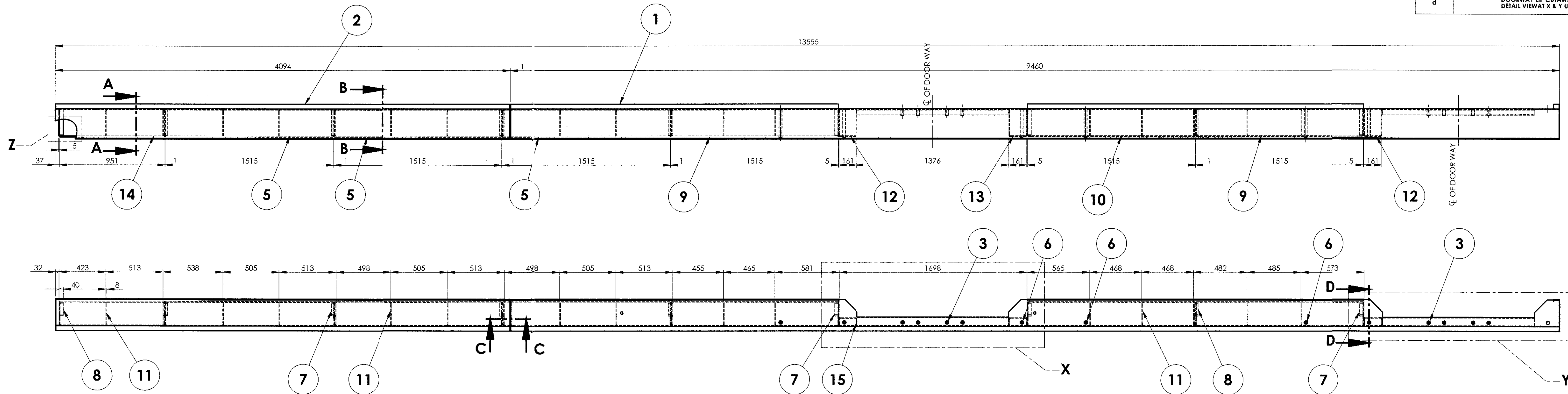
74511022

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

⑪ ROUGH CLEANED
⑫ BURRS REMOVED
⑬ CHAMFERED

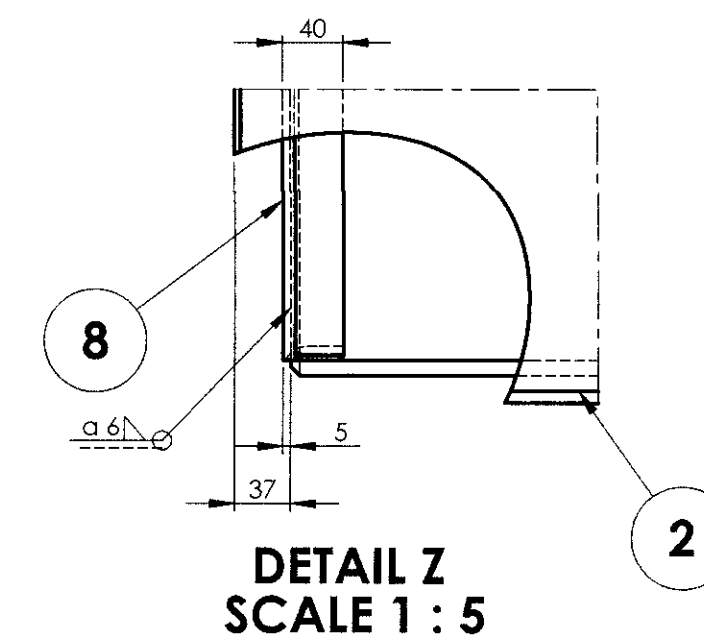
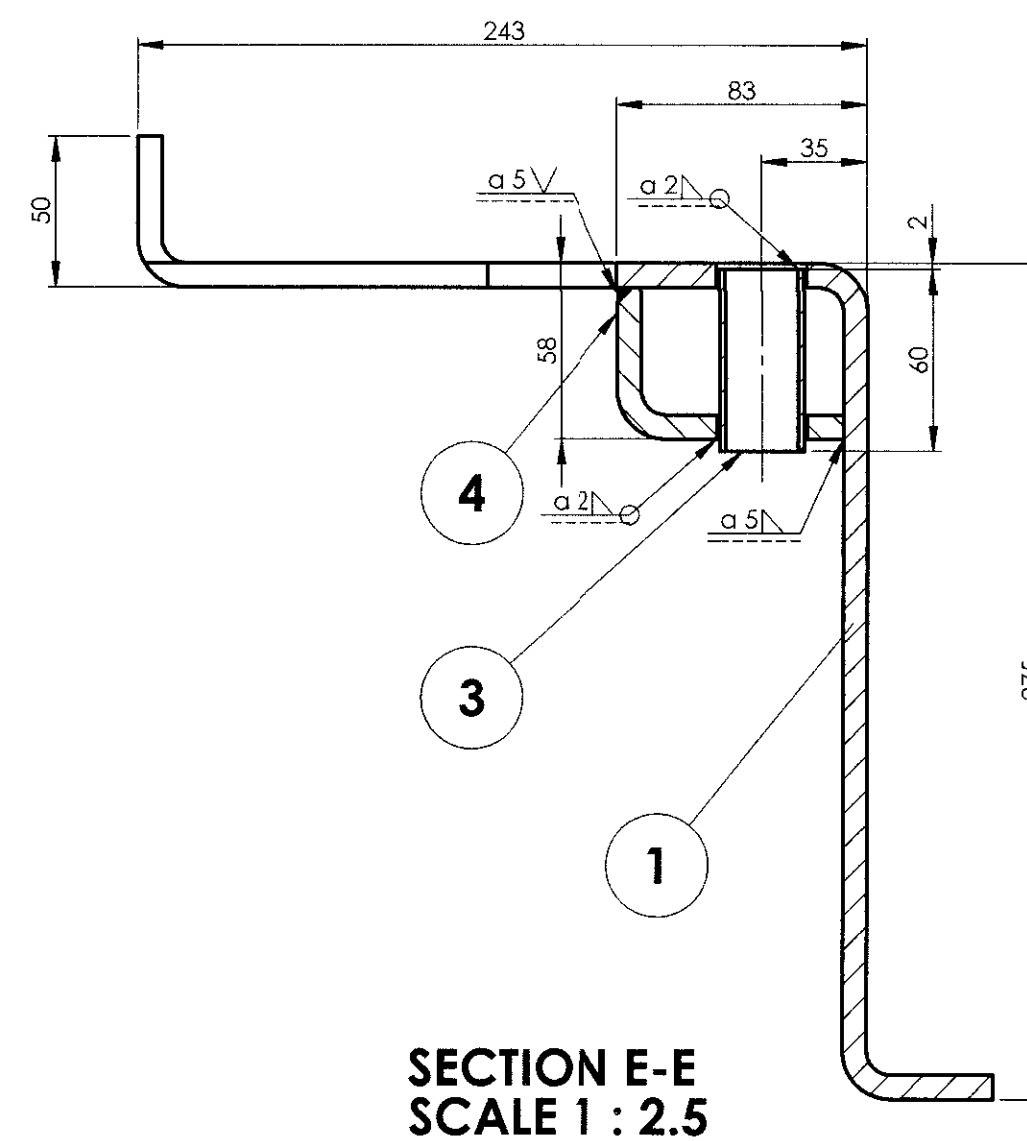
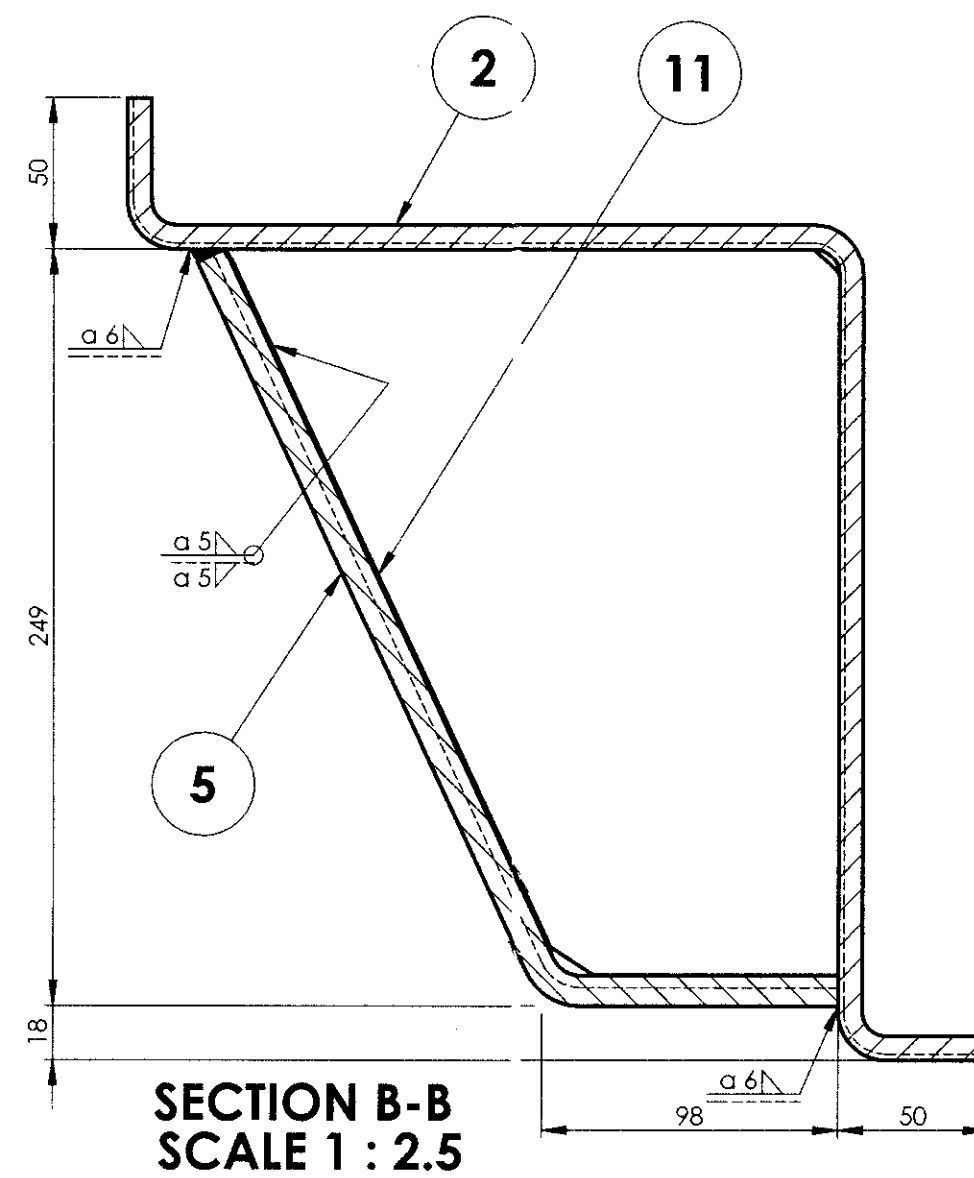
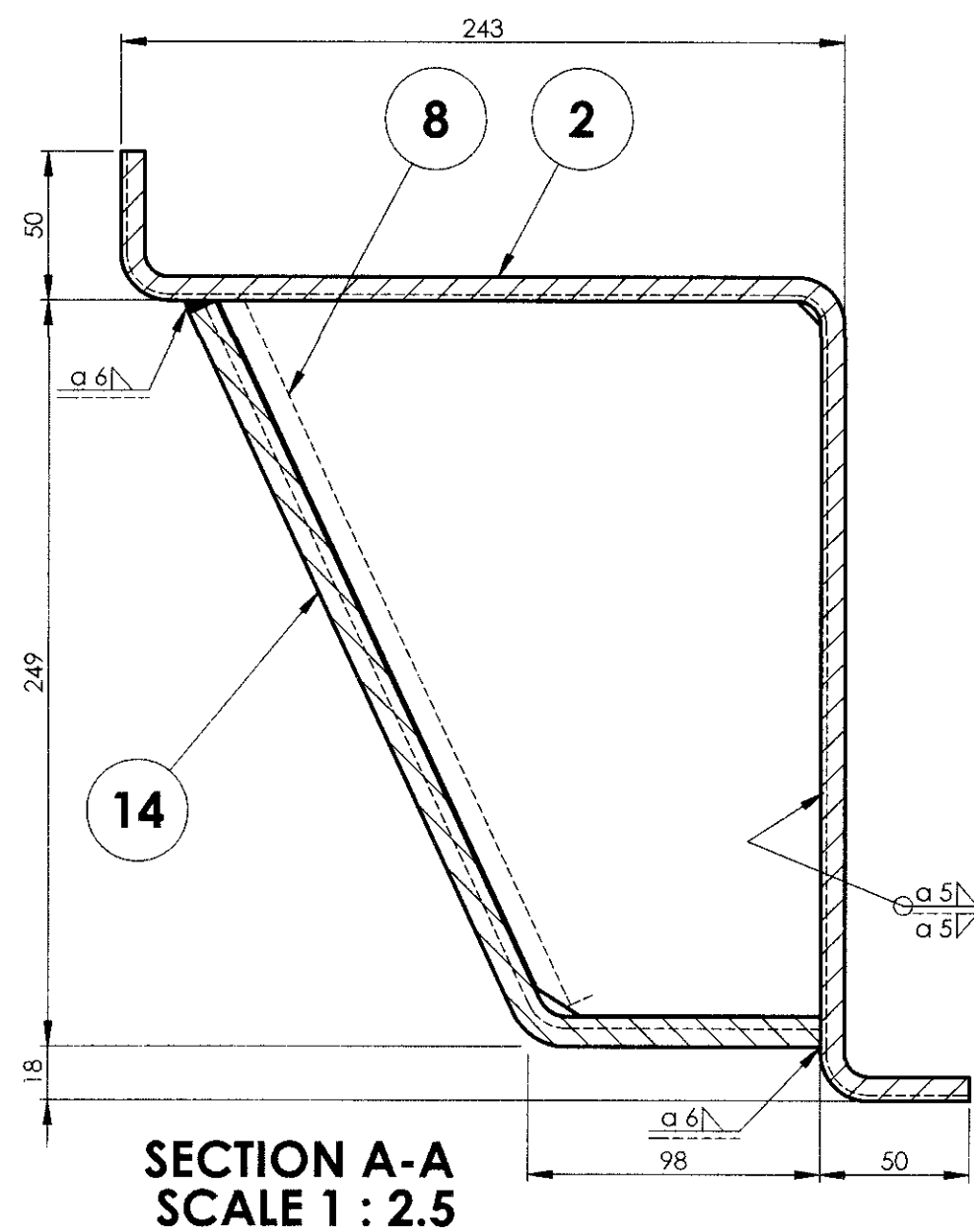
REVISIONS

ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NOTE-1 ADDED.	-sd-
b		NOTE-2 ADDED.	-sd-
c		LOCATING DIMENSION OF Ø30 HOLES AT DOORWAYS REVISED. NOTE-3 ADDED.	-sd-
d		DOORWAY UP CUTAWAY ALTD FROM 10 TO 58 ACCORDINGLY DETAIL VIEWAT X & Y UPDATED.	



NOTE:-

- * 1. DWG.NO./CF/SK3-1-1-223 TO BE REFERRED FOR INHOUSE MANUFACTURING OF ITEMS-1 & 2.
2. ITEMS- 5,6,7,8,9,10,11,12,13,14 &15 TO BE SUPPLIED LOOSE AND WELDED AT UNDER FRAME TRESTLE STAGE AS SHOWN.
3. Ø30 HOLES TO BE CUT ON ITEM-1 AT LOCATIONS CORRESPONDING TO THE HOLES ON ITEM-4 AT SITE TO SUIT TO KEEP ITEM-3 IN PLACE AND WELD.



Default	DESCRIPTION	DIMENSIONS	ITEM NO	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
3	RIB		15	AAD11228		0.92	
1	COVER SHEET		14	AAD11267		26.76	
1	ANGLE		13	AAD11270		3.66	
2	ANGLE		12	AAD11271		3.66	
13	RIB		11	AAD11555		2.197	
1	COVER SHEET		10	AAD11559		42.63	
2	COVER SHEET		9	AAD11558		42.63	
4	RIB		8	AAD11554		2.632	
5	ANGLE		7	AAD11553		2.632	
6	STEEL TUBE		6	AAD11230		0.34	
3	COVER SHEET		5	AAD11220		42.69	
2	DOOR WAY ANGLE		4	AAD11216		9.27	
8	STEEL TUBE		3	AAC11077		0.08	
1	LONGITUDINAL BEAM		2	AAD11152		148.63	*
1	LONGITUDINAL BEAM		1	AAD11151		342.86	*

GROUP: 1-1	SURFACE AREA IN Sq.m.: 25.382	WT/ASSY IN Kgs:
SCALE 1:20	SSE/D	P. Sange
ALT. d...	ALTD B.SARAVANAN	
DRN	K.SETHURAMAN	
INDIAN RAILWAY STANDARDS	SHEET 1 OF 1	MEMU/DMC/3PH
INTEGRAL COACH FACTORY, CHENNAI - 600038	74511022	A1

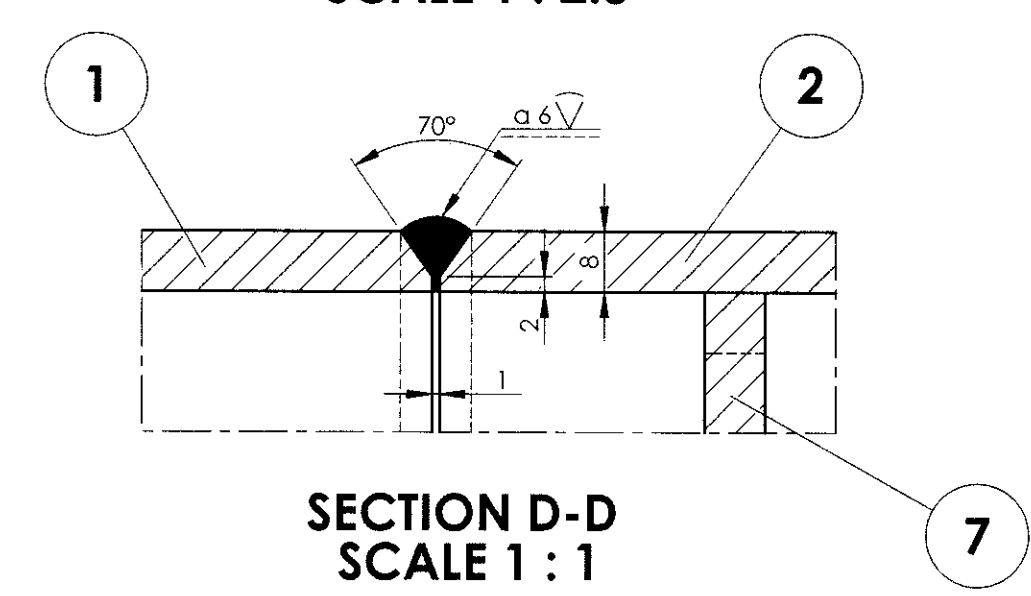
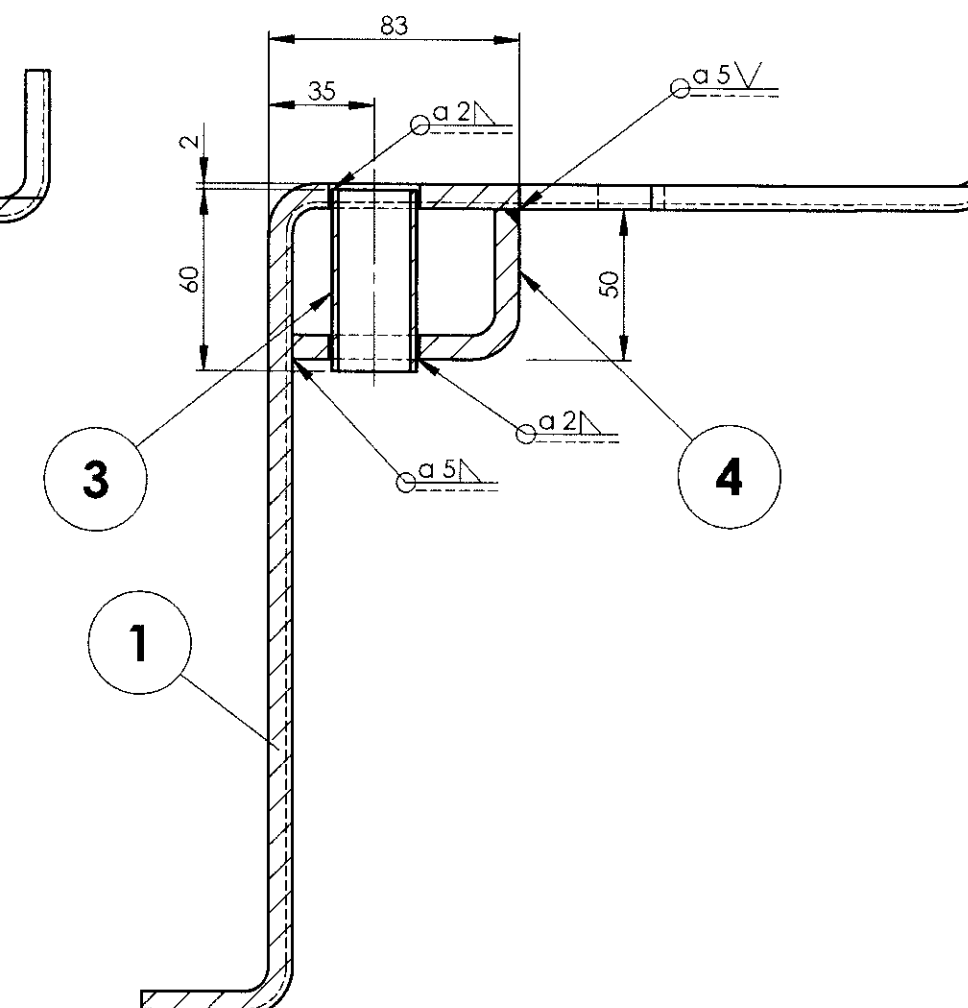
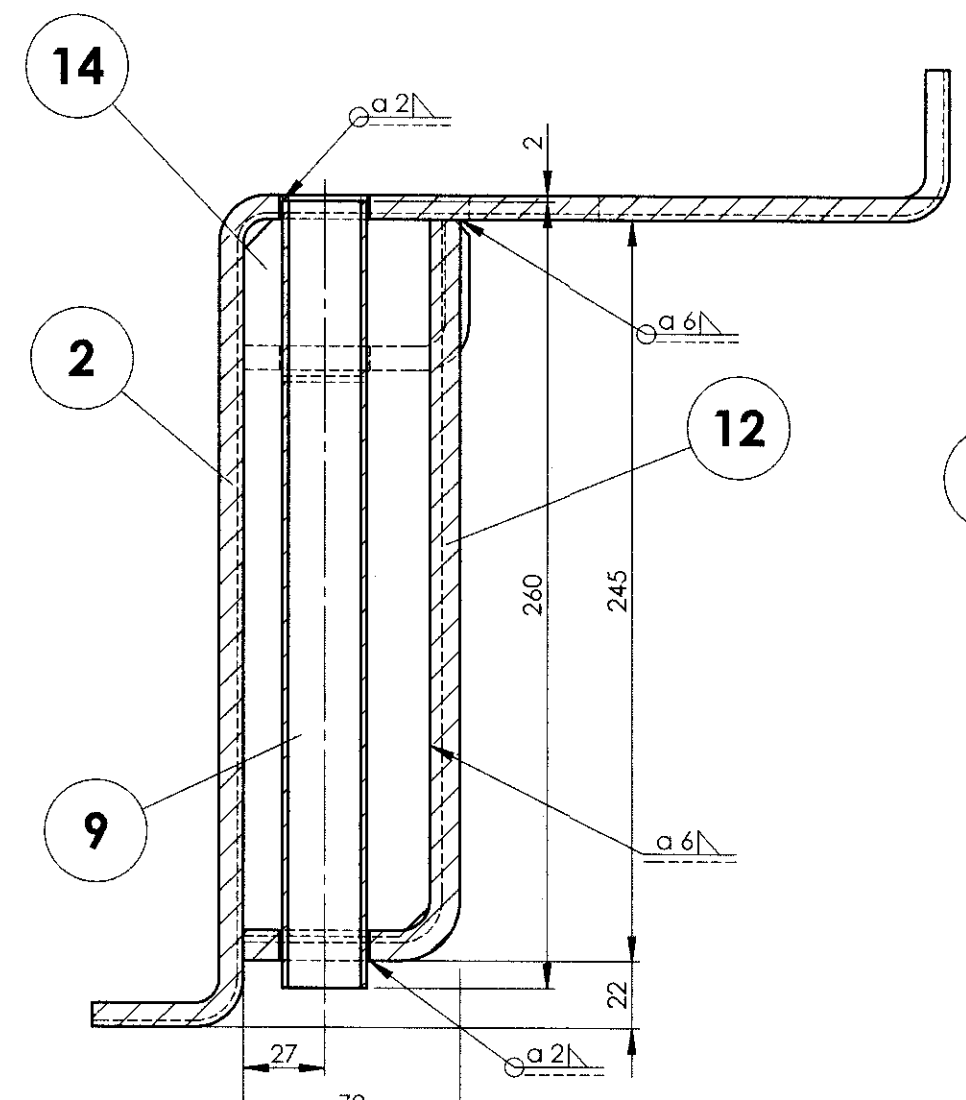
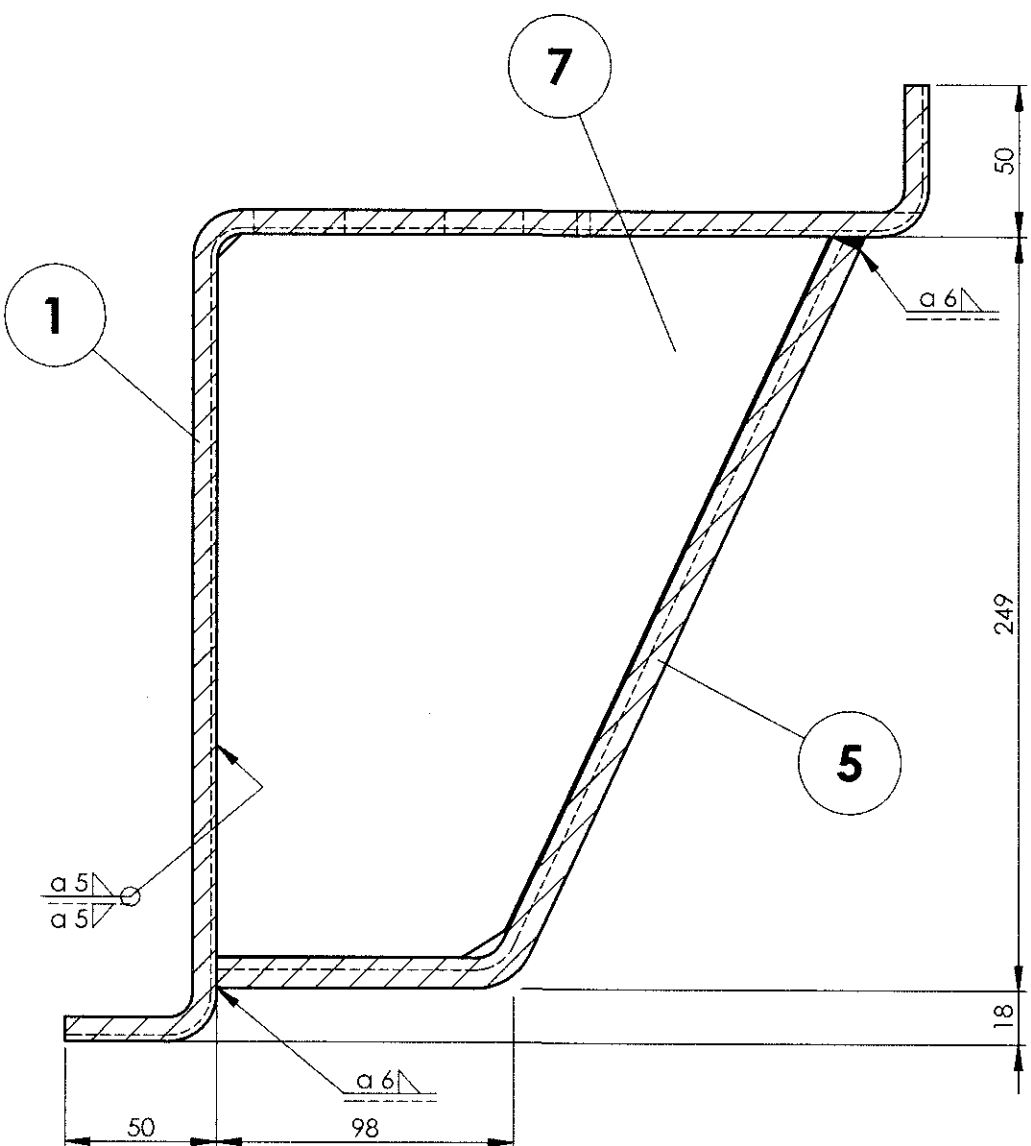
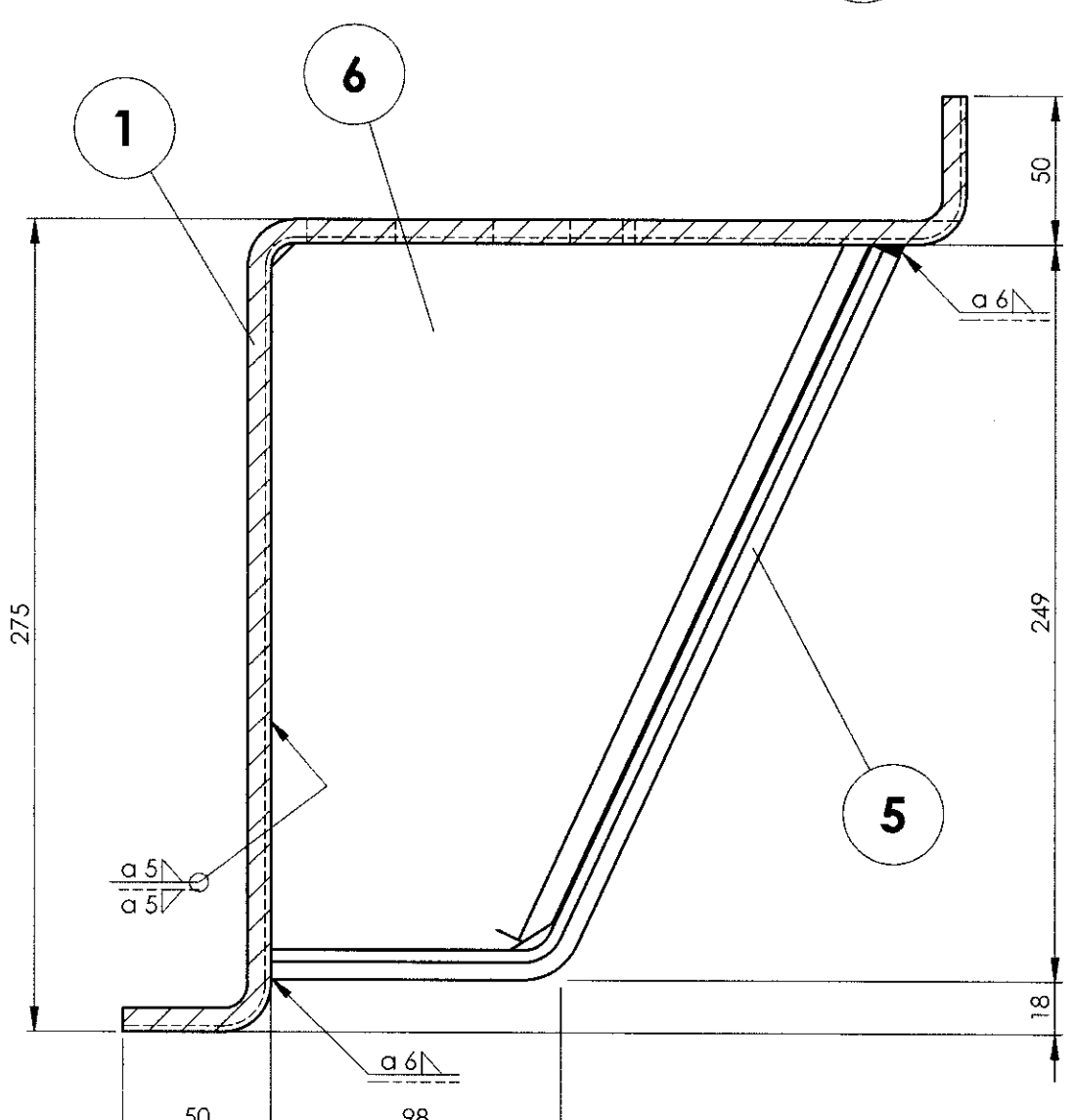
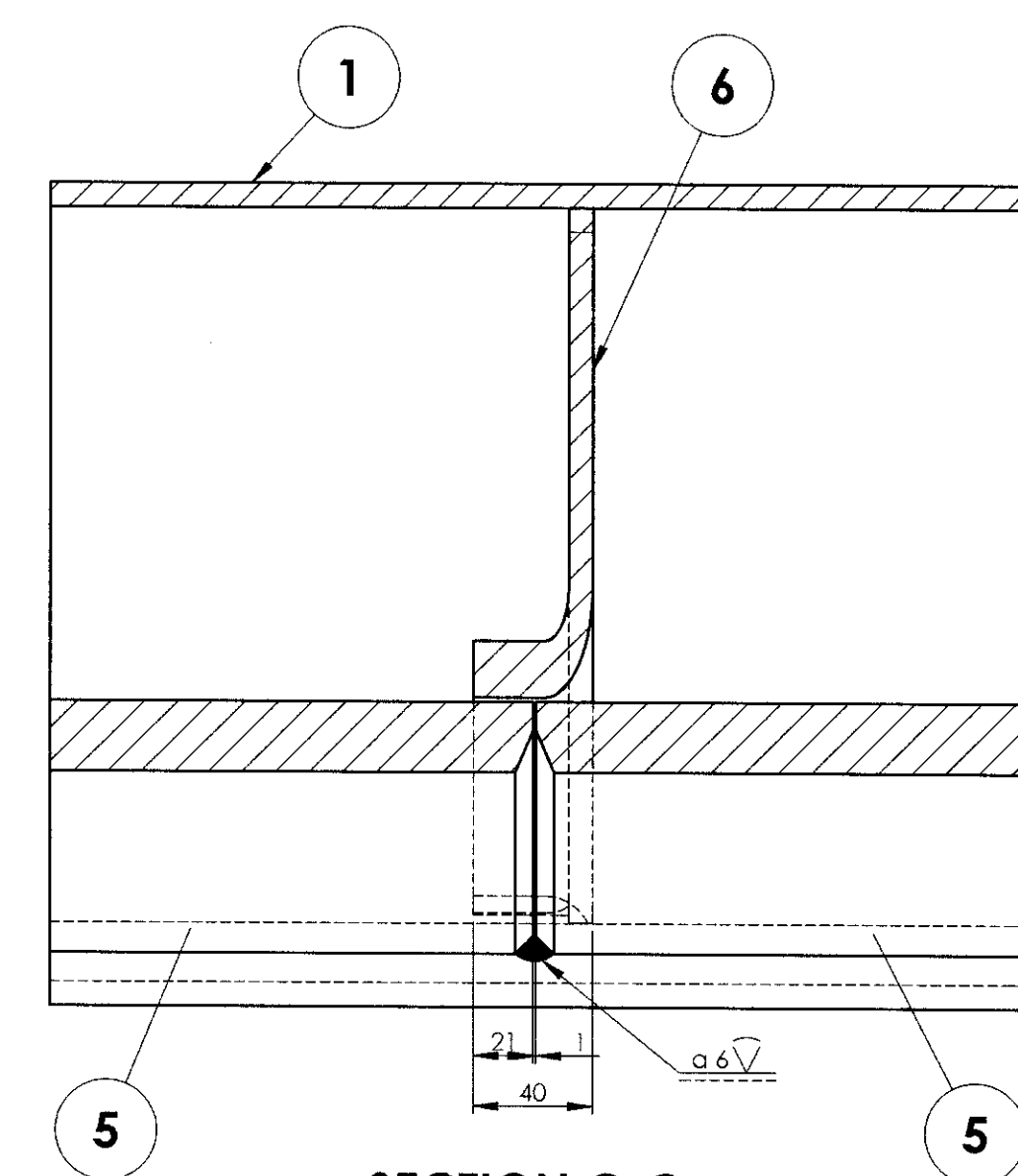
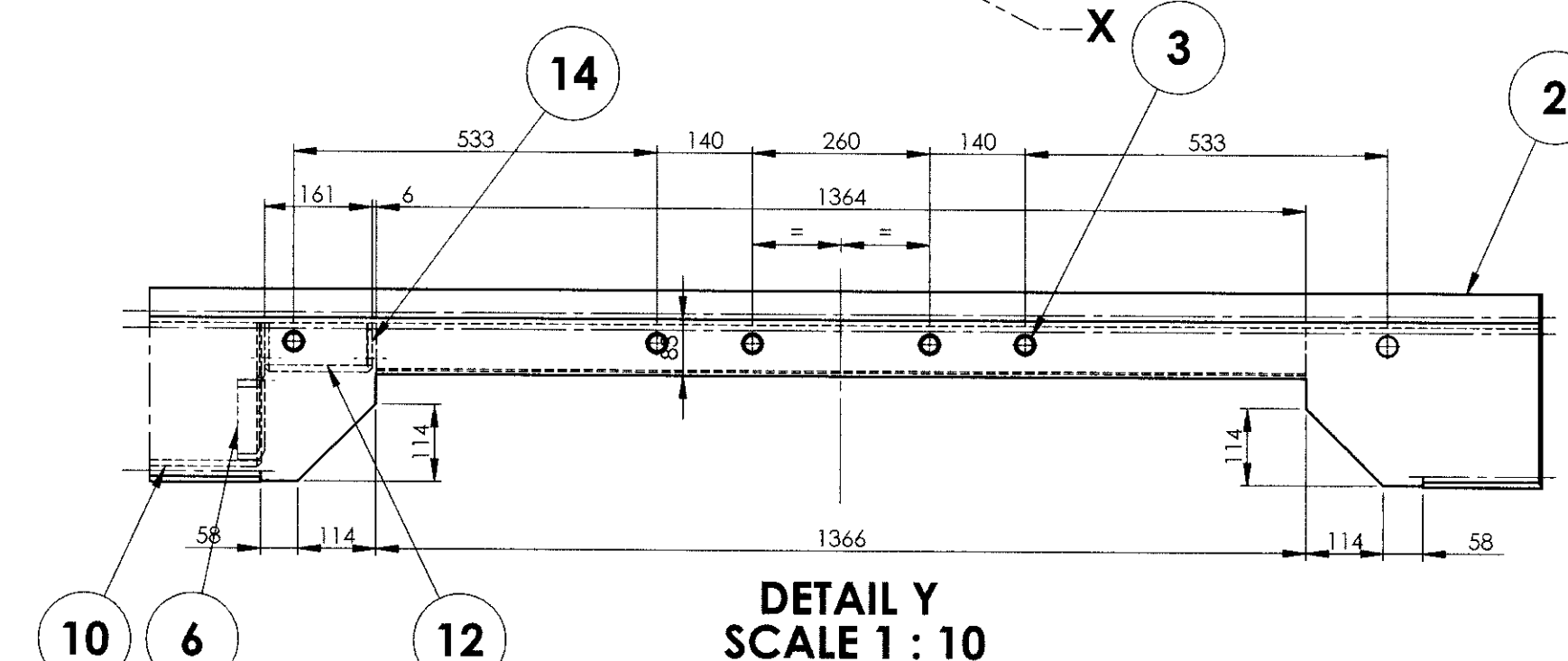
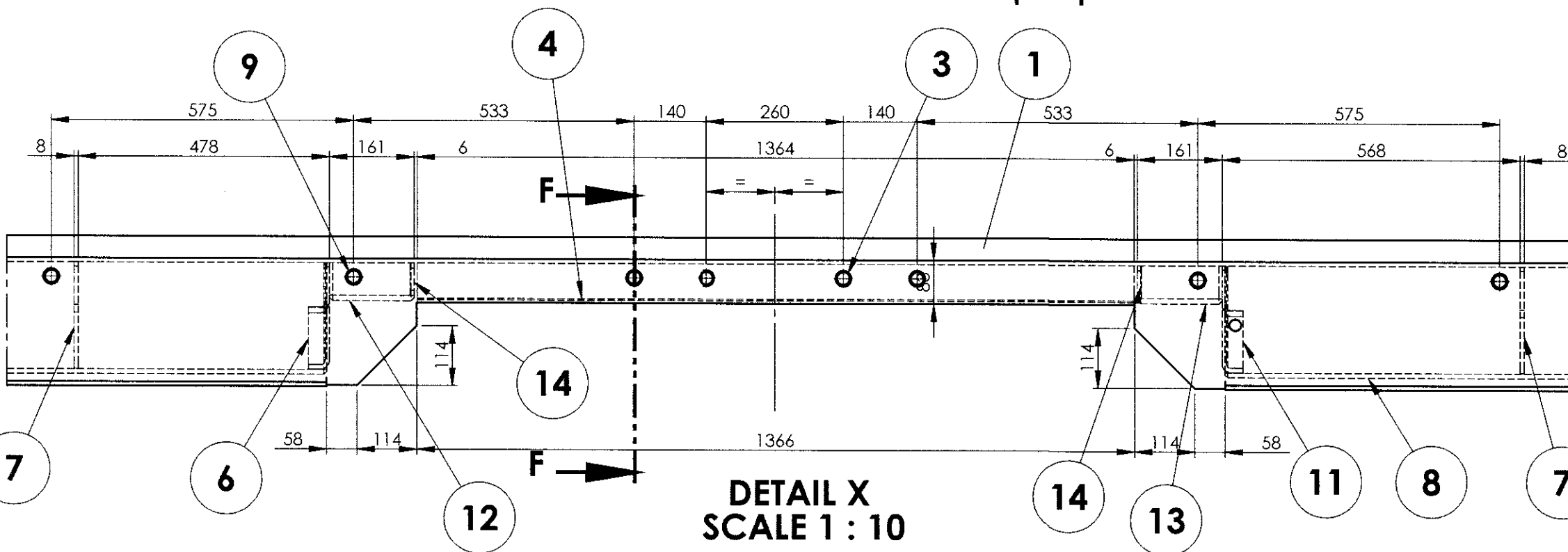
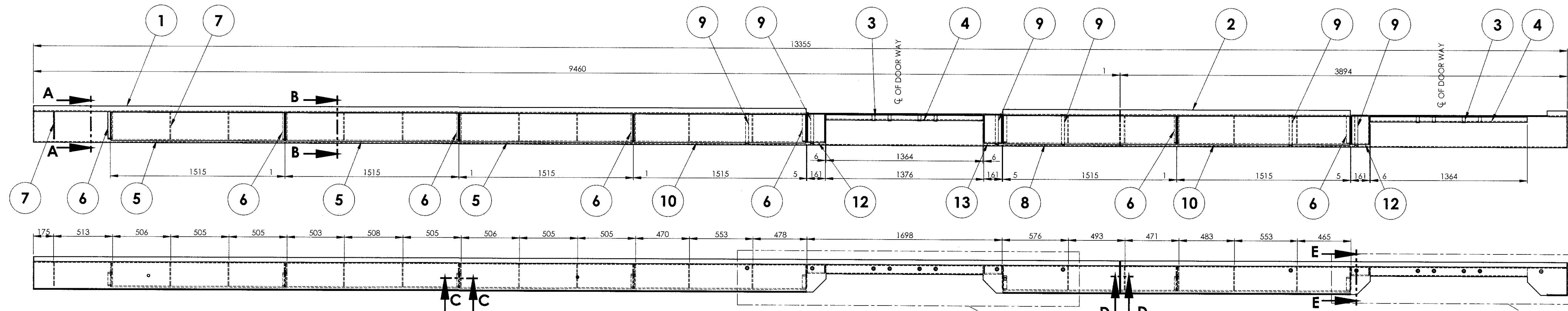
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-01. ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS 813:1986. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

74511023

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

① ROUGH CLEANED
② BURRS REMOVED
③ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NOTE-1 ADDED.	-sd-
b		NOTE-2 ADDED.	-sd-
c		LOCATING DIMENSION OF Ø 30 HOLES AT DOORWAYS REVISED. NOTE-3 ADDED.	-sd-
d		DOORWAY UP CUTAWAY ALTD FROM 10 TO 58.ACCORDINGLY DETAIL VIEW X & Y UPDATED.	-sd-



NOTE:-

- DWG.NO:ICF/SK3-1-1-224 TO BE REFERRED FOR IN HOUSE MANUFACTURING OF ITEMS-1 & 2.
- ITEMS- 5,6,7,8,9,10,11,12,13 & 14 TO BE SUPPLIED LOOSE AND WELDED AT UNDER FRAME TRESTLE STAGE AS SHOWN.
- Ø 30 HOLES TO BE CUT ON ITEM-1 AT LOCATIONS CORRESPONDING TO THE HOLES ON ITEM-4 AT SITE TO SUIT TO KEEP ITEM-3 IN PLACE AND WELD.

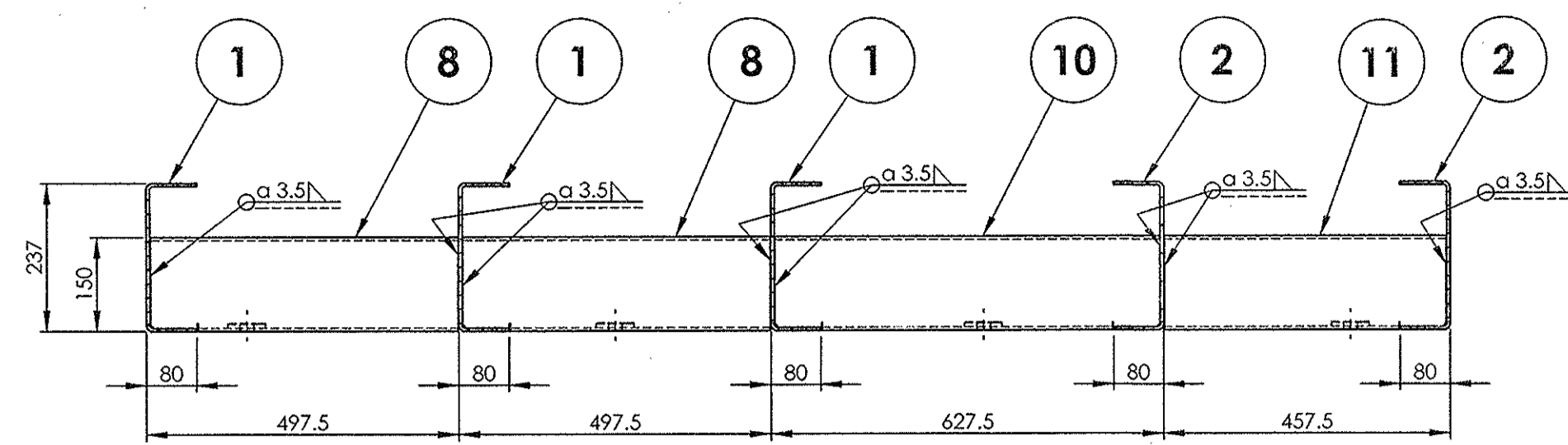
3	RIB		14	AAD11228		0.92	
1	ANGLE		13	AAD11271		3.66	
2	ANGLE		12	AAD11270		3.66	
1	ANGLE		11	AAD11553		2.632	
2	COVER SHEET		10	AAD11559		42.63	
6	STEEL TUBE		9	AAD11230		0.34	
1	COVER SHEET		8	AAD11558		42.63	
13	RIB		7	AAD11555		2.197	
7	RIB		6	AAD11554		2.632	
3	COVER SHEET		5	AAD11220		42.69	
2	DOOR WAY ANGLE		4	AAD11216		9.27	
8	STEEL TUBE		3	AAC11077		0.08	
1	LONGITUDINAL BEAM		2	AAD11153		141.06	*
1	LONGITUDINAL BEAM		1	AAD11232		343.17	*
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT	REMARKS

GROUP: 1-1		SURFACE AREA IN Sq.m.: 24.349		WT/ASSY IN Kgs:	
SCALE 1:20		SSE/D		CHD	
ALT. d		ALTD		DRN	
INDIAN RAILWAY STANDARDS		MEMU/DMC/3PH		74511023	
INTEGRAL COACH FACTORY, CHENNAI - 600038		SHEET 1 OF 1		A1	

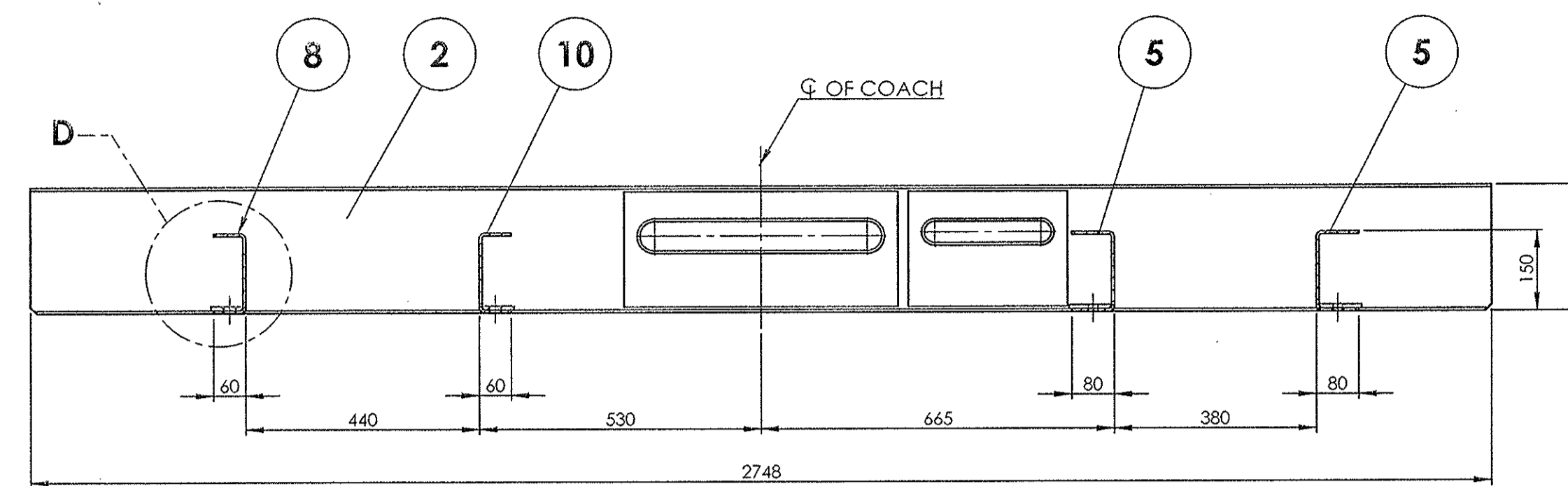
74511024

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

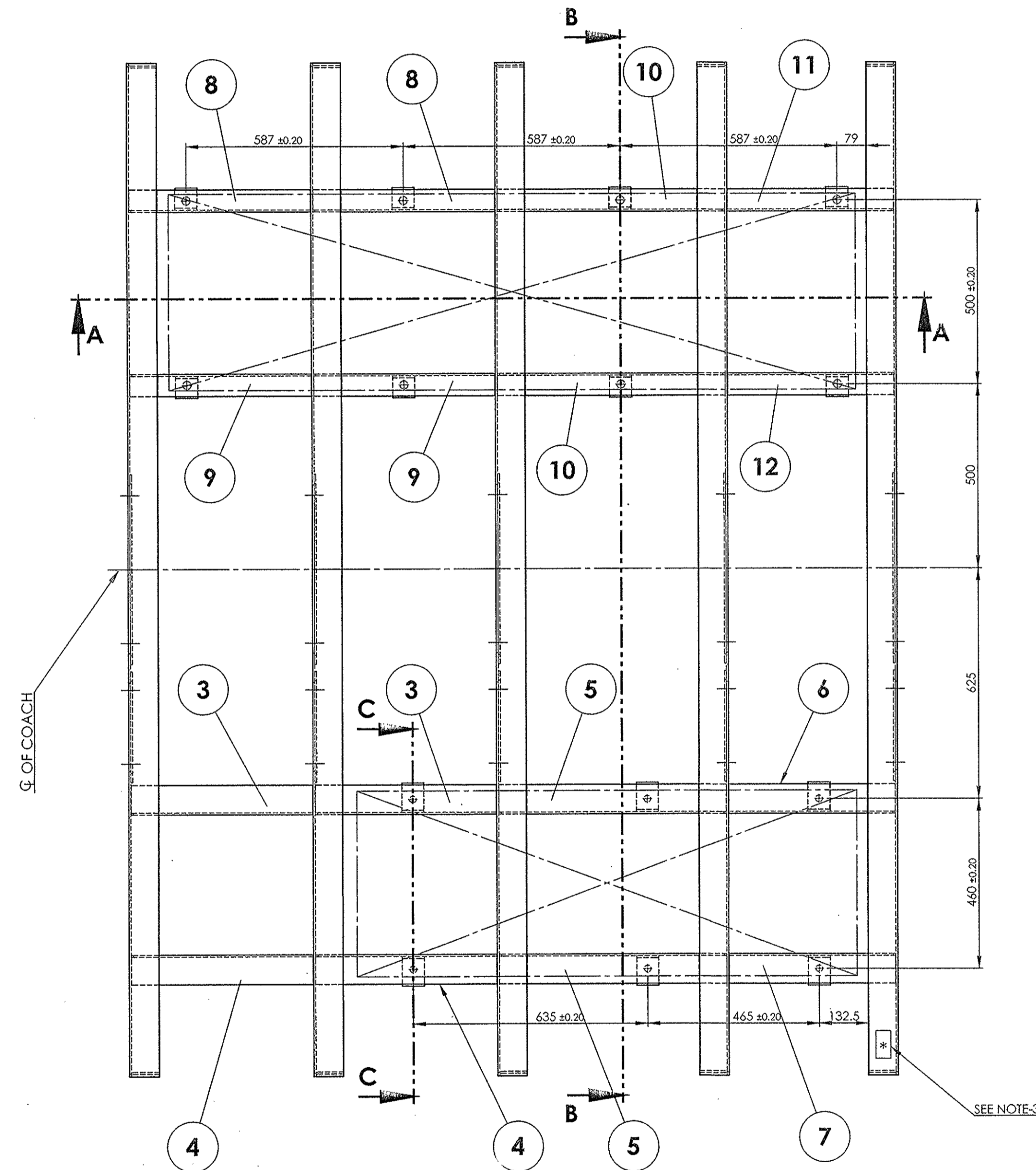
REVISIONS				APPROVED & DATE
ALT.	ZONE	DESCRIPTION		



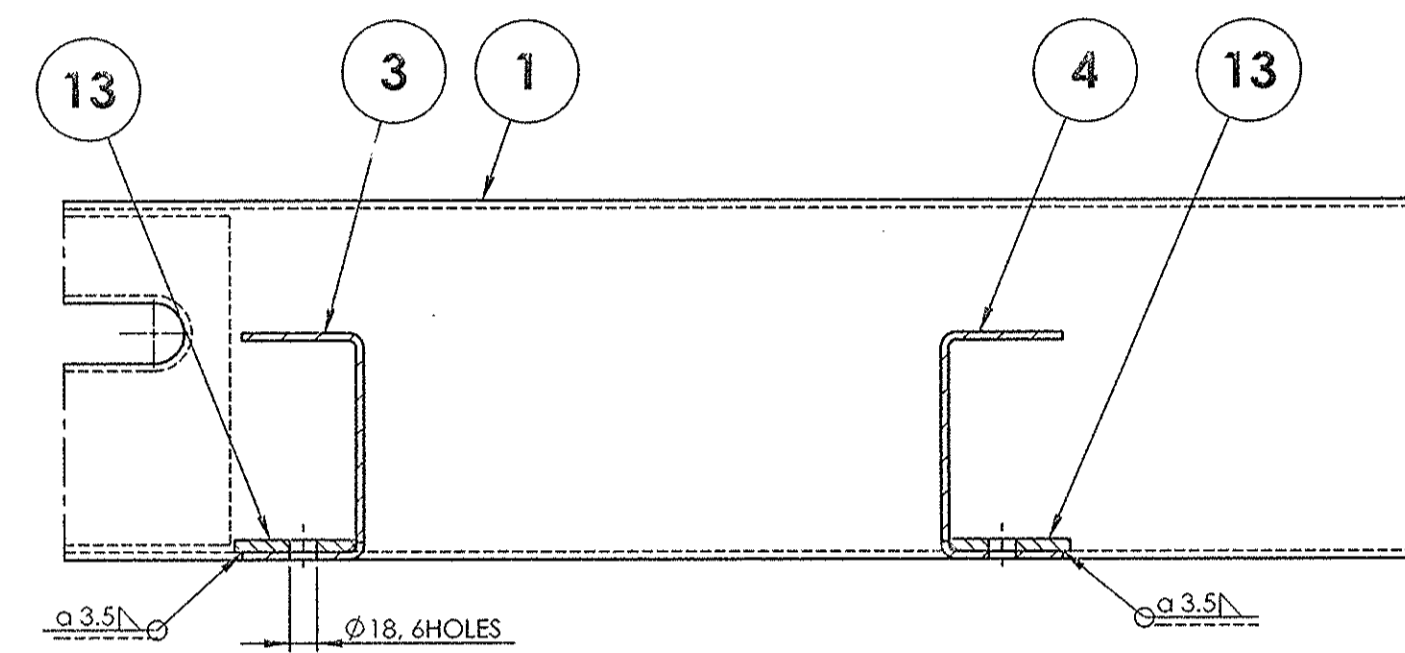
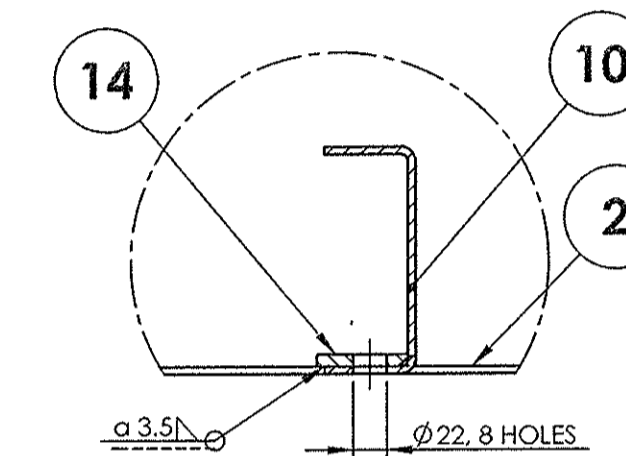
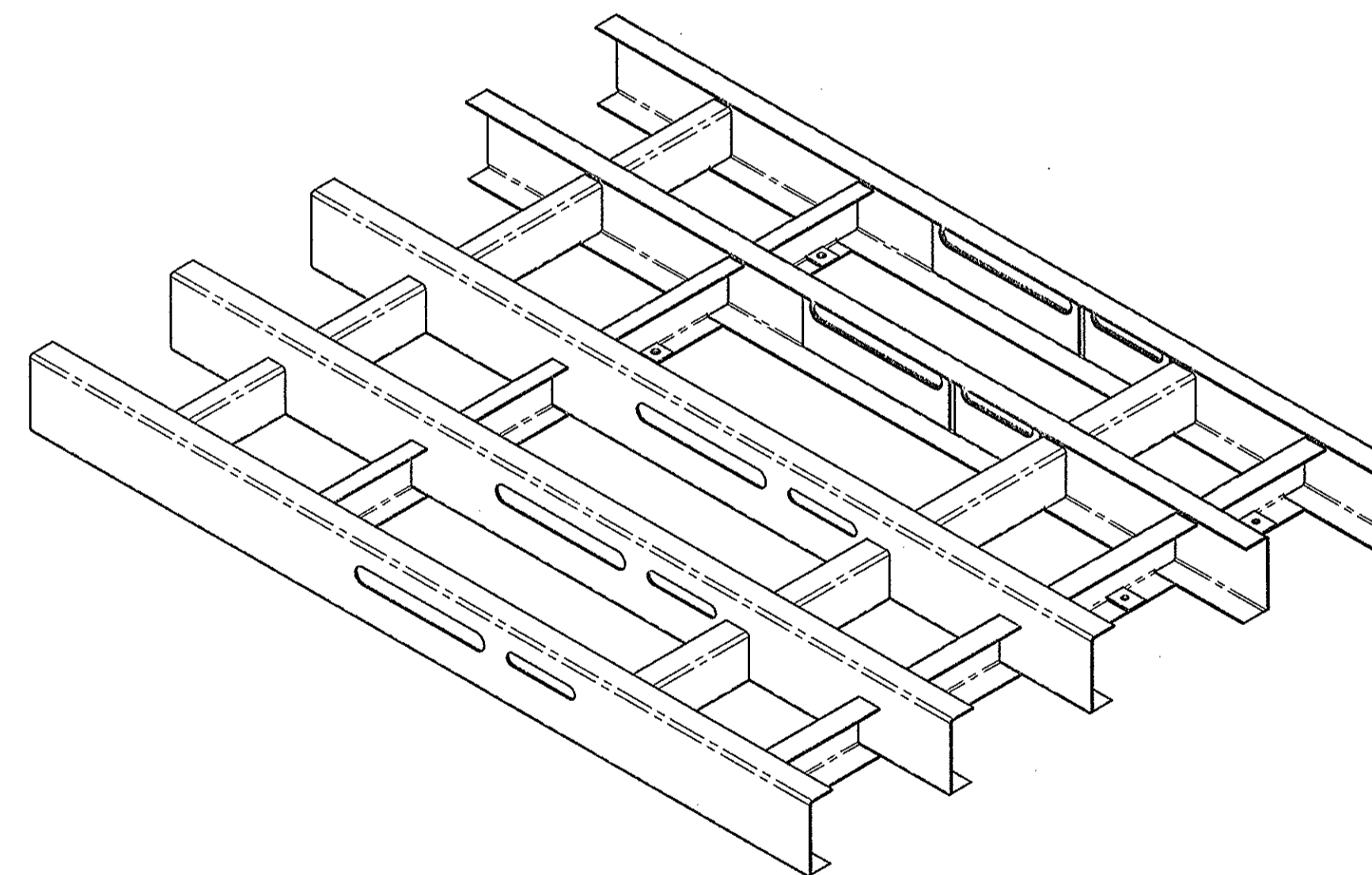
SECTION A-A



SECTION B-B



SEE NOTE-3

SECTION C-C
SCALE 1 : 5DETAIL D
SCALE 1 : 5

ISOMETRIC VIEW

NOTE:

- ALL THE HOLES TO BE JIG DRILLED.
- FINISHED COMPONENT SHALL BE THOROUGHLY CLEANED AND APPLIED WITH TWO COATS OF RED OXIDE ZINC CHROMATE PRIMER TO IS:2074-92 TO A DFT OF MINIMUM 35 MICRONS WITH SMOOTH & MATT FINISH.
- MANUFACTURER'S NAME, RUNNING SLNO. AND MONTH & YEAR OF MANUFACTURE SHALL BE PUNCHED 6mm HEIGHT & 1mm DEEP ON THE SPACE PROVIDED.

8	SCREWING PIECE		14	AAD11286		0.22	
6	SCREWING PIECE		13	AAB11864		0.29	
1	CHANNEL		12	AAD11195		4.318	
1	CHANNEL		11	AAD11196		4.318	
2	CHANNEL		10	AAD11197		5.790	
2	CHANNEL		9	AAD11285		4.716	
2	CHANNEL		8	AAD11284		4.716	
1	CHANNEL		7	AAD11273		4.970	
1	CHANNEL		6	AAD11290		4.967	
2	CHANNEL		5	AAD11194		6.638	
2	CHANNEL		4	AAD11193		5.430	
2	CHANNEL		3	AAD11192		5.430	
2	CROSS BEARER		2	74511021		44.991	
3	CROSS BEARER		1	74511018		44.991	
QTY	DESCRIPTION	DIMENSIONS	ITEM	REF.DRGS.	MATL	WT/UNIT	REMARKS

GROUP: 1-1		SURFACE AREA IN Sq.m.: 16.300		WT/ASSY IN Kgs:	
SCALE 1:10		SSE/D		CHD	
ALT.		ALTD		DRN	
				K.SETHURAMAN	
				MEMU/DMC/3PH	
				74511024	
				A1	

INDIAN RAILWAY STANDARDS
INTEGRAL COACH FACTORY, CHENNAI - 600038SHEET
1 OF 1

74511024

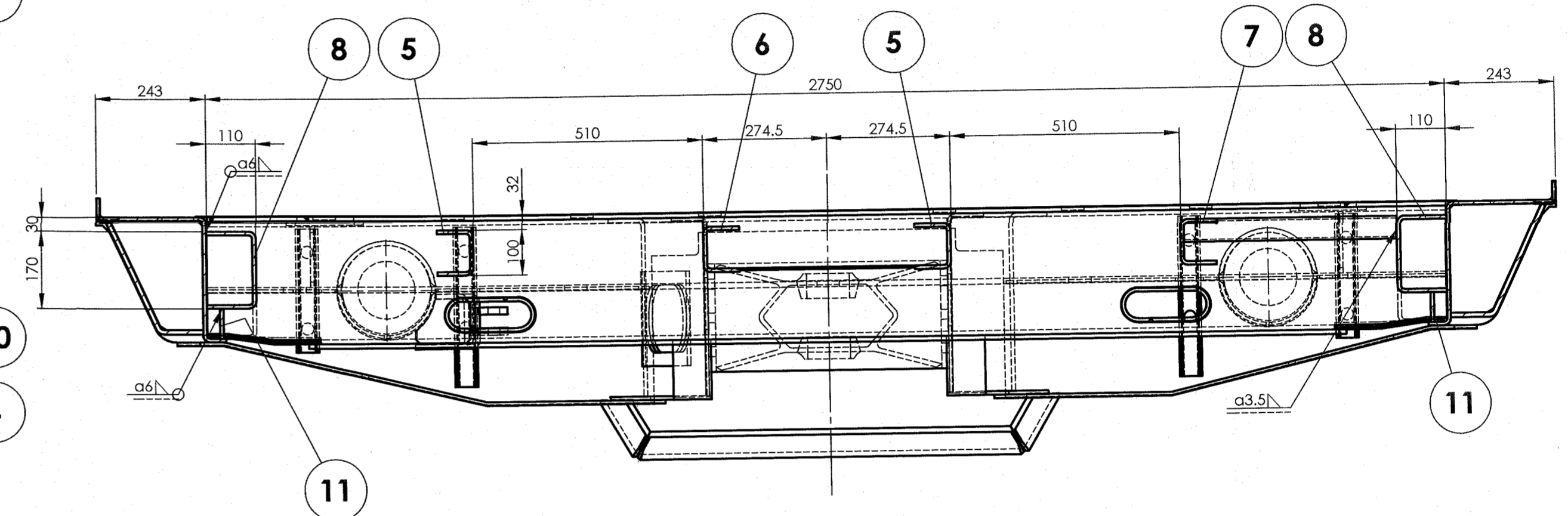
A1

REF.DRG.NO.

DATE OF LATEST ALT.	23-10-2017	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 IC/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.

ALL DIMENSIONS ARE IN INCH UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. IC7F35 D-9-0001.



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

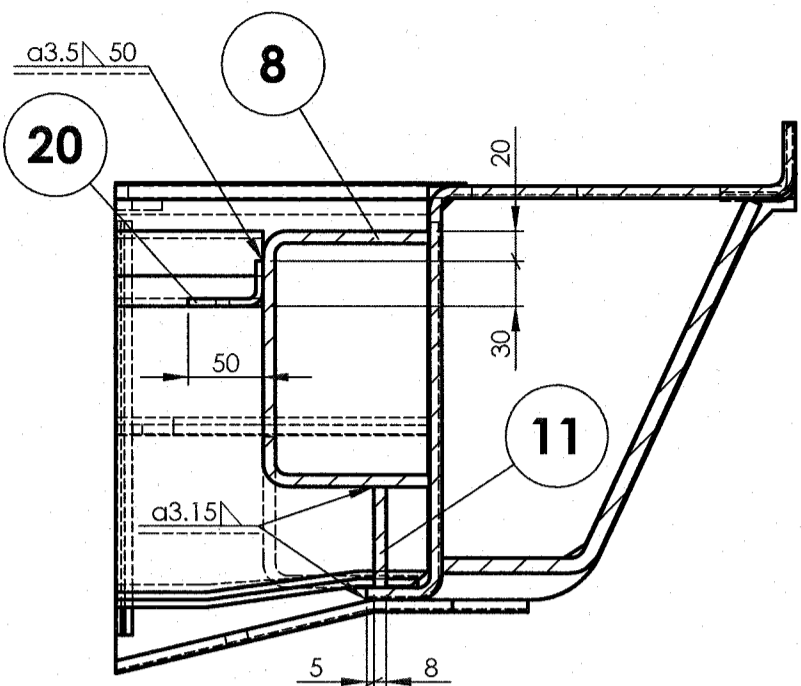
30-10-2018	10-10-2017	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/S

GROUP: 1-1		SURFACE AREA IN Sq.m.: 62.587		WT/ASSY IN Kgs:	
END PART (NON DRIVING END)		SCALE 1:20		SSE/D 	
		CHD			
		ALT. c		ALTD P.MURUGAN	
		DRN		P.MURUGAN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038		SHEET 1 OF 2		MEMU/DMC/3PH	
		74511027		A1	

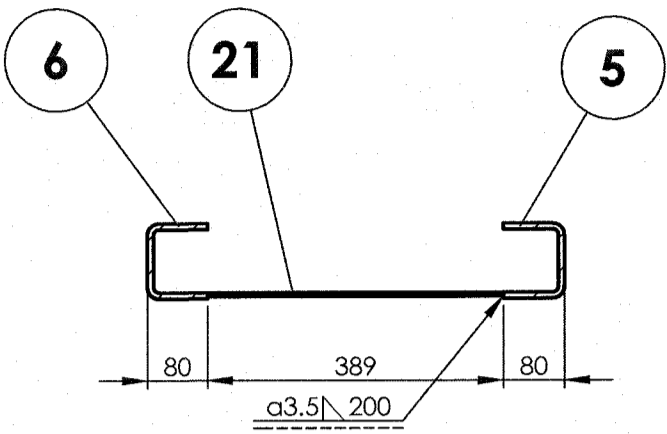
▽	ROUGH MACHINED
▽▽	FINISH MACHINED
▽▽▽	FINE FINISH MACHINED

⑪	ROUGH CLEANED
⑪①	BURRS REMOVED
⑱	CHAMFERED

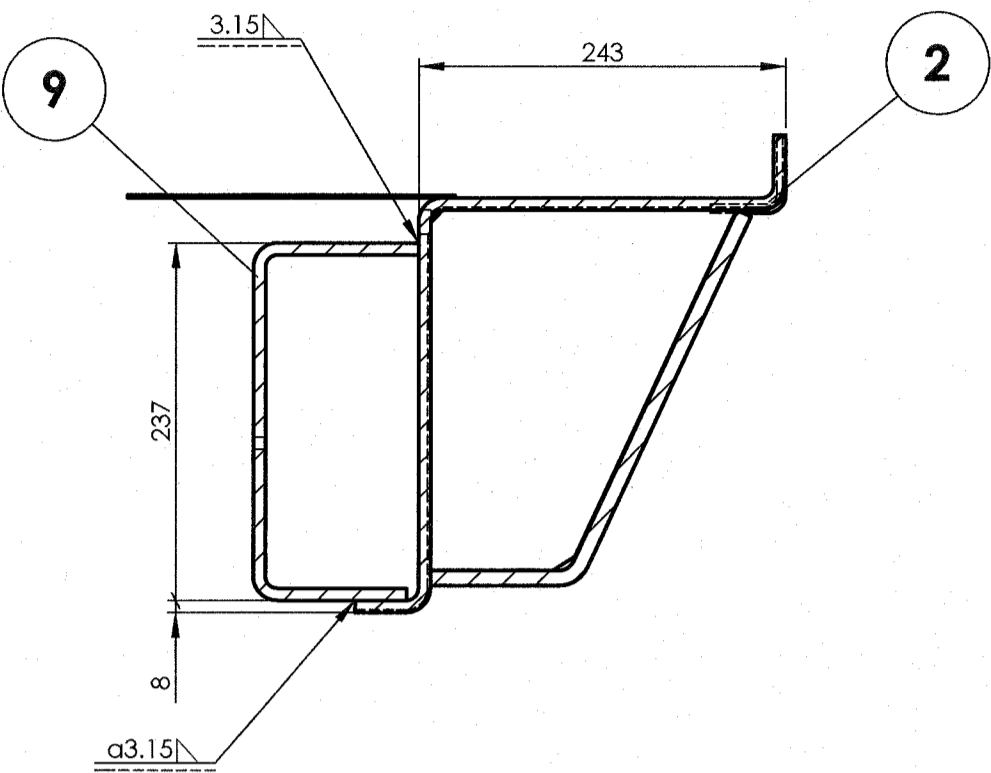
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		LOCATING DIMENSION FOR ITEM-17 & 18 ADDED.	-Sd-
b		LOCATING DIMENSION FOR ITEM-19 ADDED.	-Sd-
c		NOTE-2 ALTERED.LOCATING DIMENSION FOR ITEM-11 ADDED.	



SECTION G-G
SCALE 1 : 5



SECTION H-H
SCALE 1 : 10



SECTION D-D
SCALE 1 : 5

NOTE:

1. TOLERANCES ON DIMENSIONS SHALL BE AS PER DRG.NO.ICF/STD-9-0-001 WHEREVER NOT MENTIONED.
2. FINISHED COMPONENT SHALL BE THOROUGHLY CLEANED AND APPLIED WITH TWO COATS OF RED OXIDE ZINC CHROMATE PRIMER TO IS:2074/92 TO A DPT OF MINIMUM 35 MICRONS WITH SMOOTH & MATT FINISH EXCEPT FOR ITEM-4 FOR WHICH EPOXY COATING HAS BEEN SPECIFIED IN THE RESPECTIVE DRAWING.
3. ITEM SHALL BE OFFERED FOR PROTOTYPE INSPECTION BY ICF BEFORE TAKING UP BULK MANUFACTURE. MINOR DESIGN CHANGES LIKE CHANGE OF LOCATION OF MEMBERS, SIZE AND WELDING REQUIREMENTS HAVE TO BE ACCOMODATED. THESE CHANGES SHALL BE IMPLEMENTED IN CONSULTATION WITH DESIGN DEPARTMENT OF ICF.
4. MANUFACTURER'S NAME, RUNNING SERIAL No. & MONTH & YEAR OF MANUFACTURE SHALL BE PUNCHED IN 6mm HEIGHT & 1mm DEEP ON THE SPACE PROVIDED.

1	PLATE	21	AAD11236		3.05	
1	FIXING ANGLE	20	AAD11278		0.14	
1	CHANNEL	19	AAD11277		2.33	
2	CHANNEL	18	AAD11276		3.40	
2	CHANNEL	17	AAD11275		2.67	
1	HEAD STOCK COVER SHEET.(NON DRIVING END)	16	74511035		39.462	
2	SIDE BEARER COMPLETE	15	56711031		23.212	
2	CHANNEL	14	AAD11217		2.06	
2	CHANNEL	13	AAD11206		2.12	
3	CHANNEL	12	AAD11210		2.47	
2	SUPPORT PLATE	11	AAD11215		6.71	
1	CHANNEL	10	AAD11129		20.42	
1	CHANNEL	9	AAD11131		20.39	
2	DOORWAY STIFFENER	8	AAD11130		38.95	
1	CHANNEL ASSEMBLY	7	74511037		25.523	
1	CHANNEL	6	AAD11639		26.41	
2	CHANNEL	5	AAD11101		26.41	
1	HEADSTOCK ARRGT.(NON DRIVING END)	4	74512001		809.114	
1	BODY BOLSTER ASSY.	3	66311053		569.618	
1	LONGITUDINAL BEAM ASSEMBLY	2	74511029		238.473	
1	LONGITUDINAL BEAM ASSEMBLY	1	74511028		242.882	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGs.	MATL	WT/UNIT

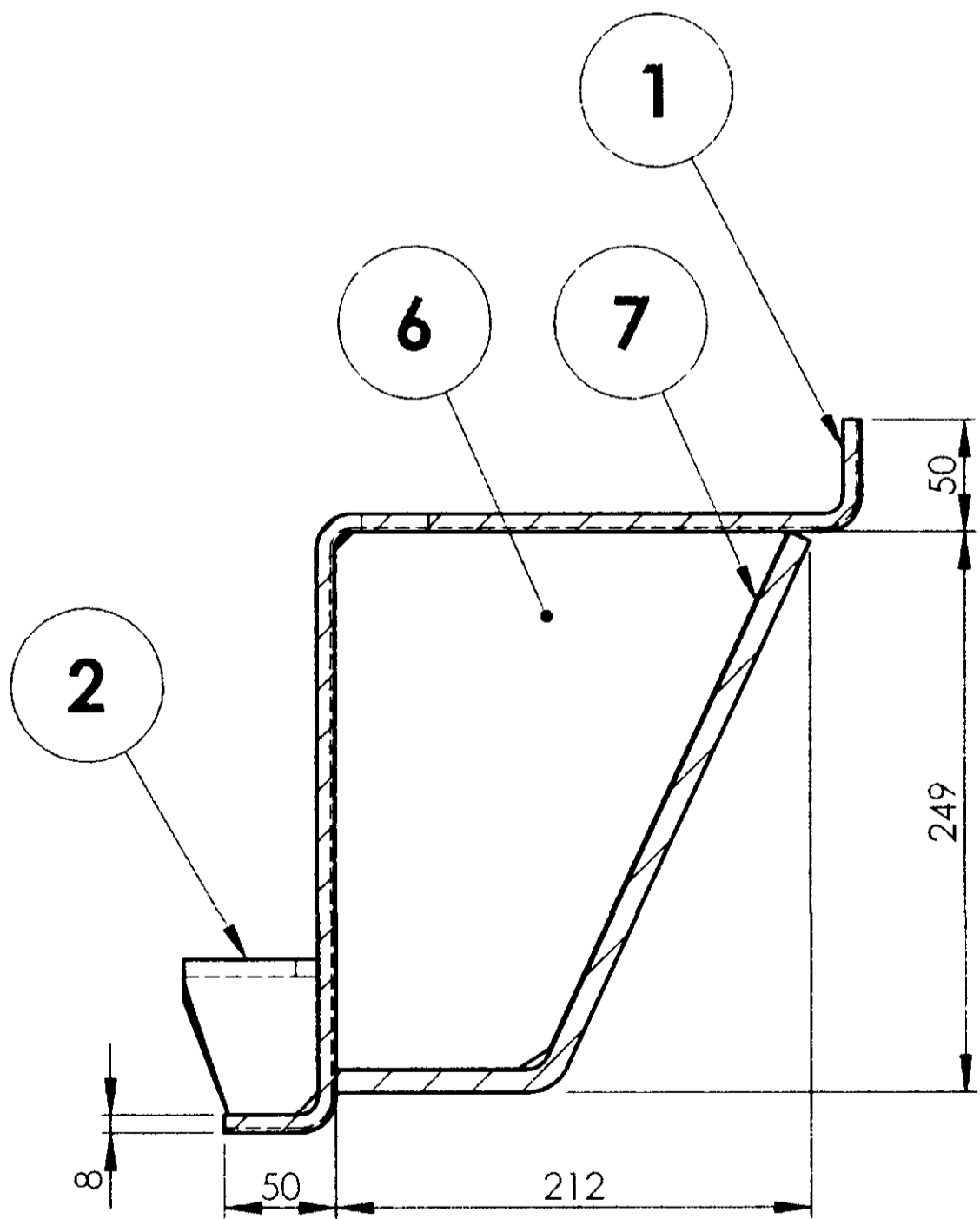
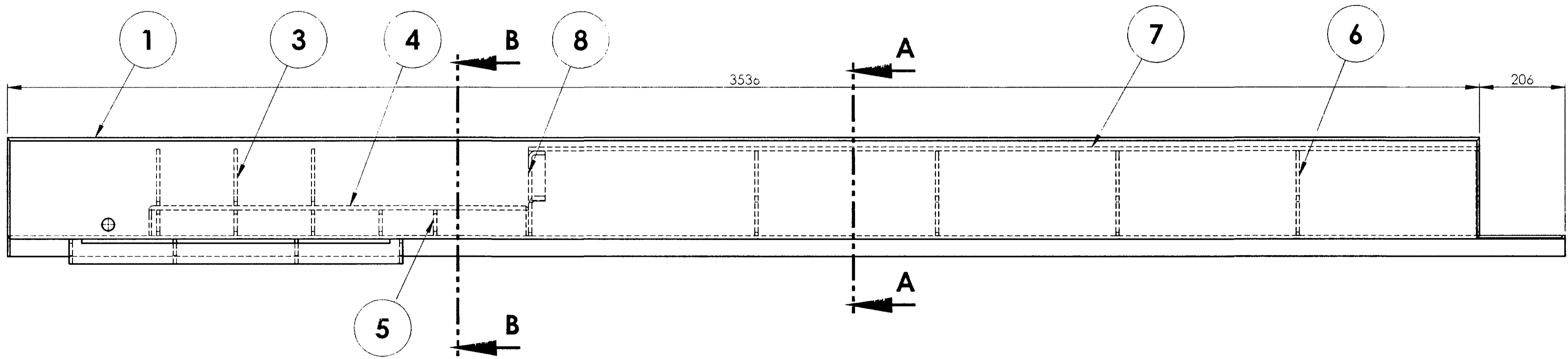
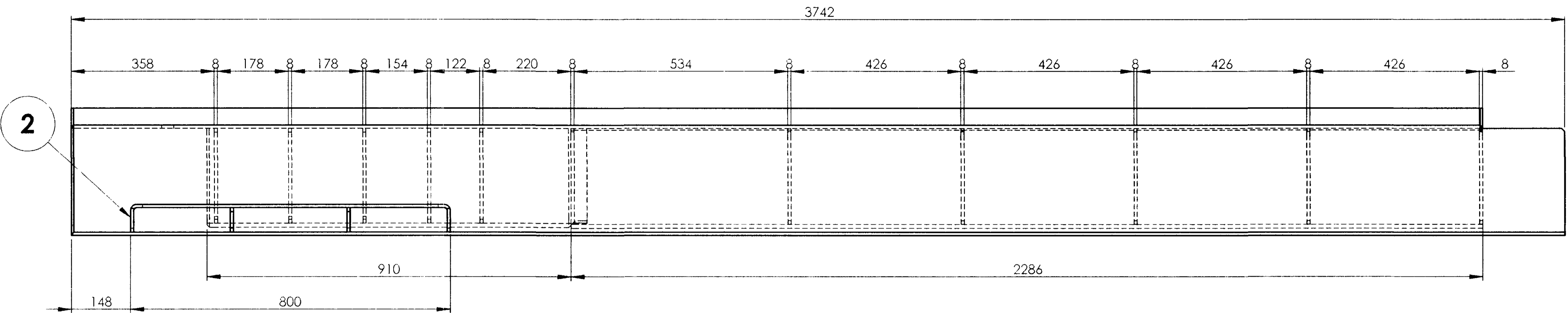
GROUP: 1-1		SURFACE AREA IN Sq.m.: 62.587		WT/ASSY IN Kgs:	
END PART (NON DRIVING END)		SCALE 1:20	SSE/D		
		CHD			
		ALT.	ALTD		
		C	DRN		
INDIAN RAILWAY STANDARDS		SHEET 2 OF 2		MEMU/DMC/3PH	
INTEGRAL COACH FACTORY, CHENNAI - 600038		74511027		A1	

30-10-2018	10-10-2017	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

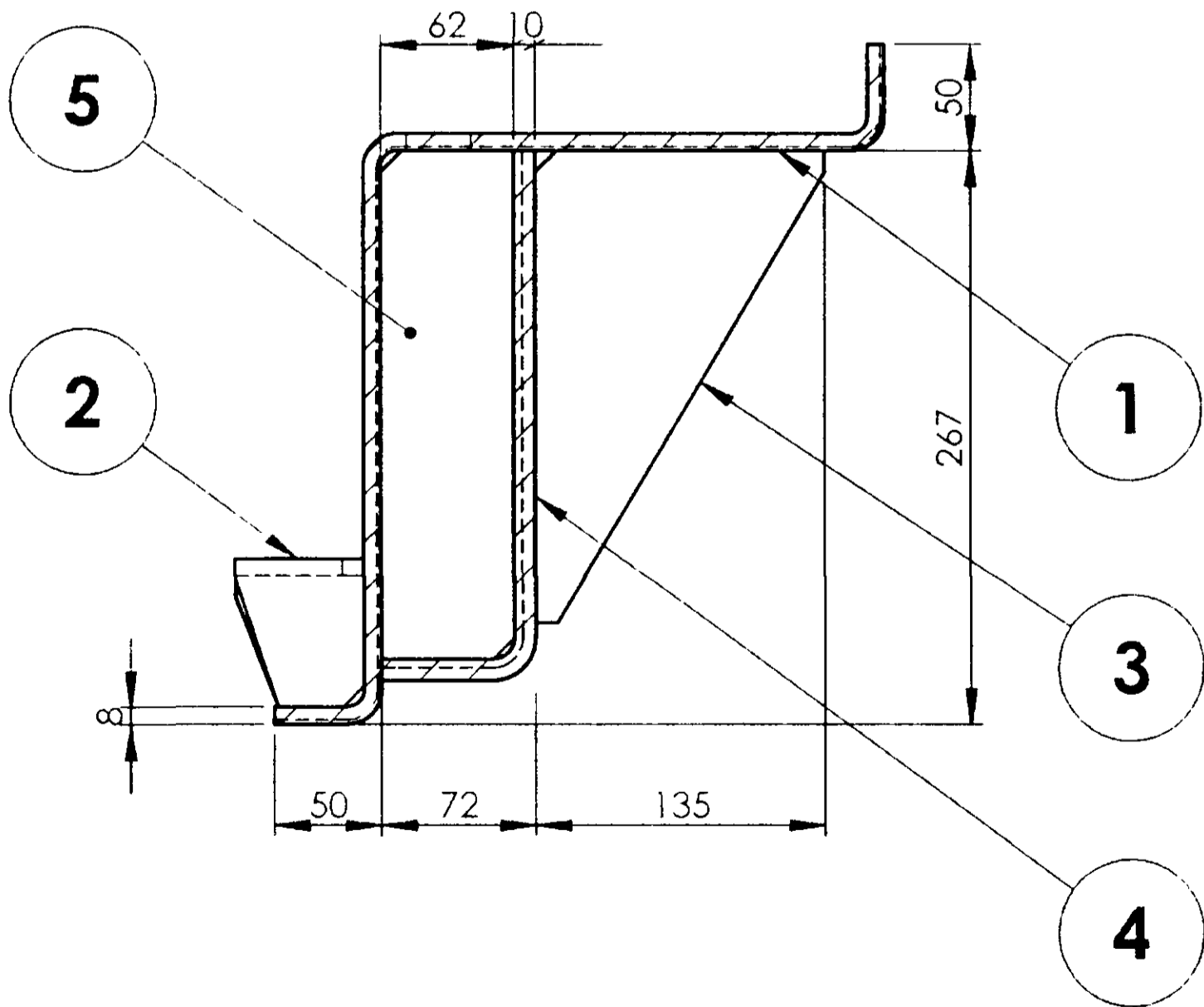
74511028

▽ ROUGH MACHINED	⑦ ROUGH CLEANED
▽▽ FINISH MACHINED	⑥ BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	⑧ CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NOTE-1 ADDED.	-sd-
b		NOTE-2 ADDED.	-sd-
c		REFERENCE DRAWING FOR ITEM-2 ALTERED FROM 56711004 TO 74511054.	<i>K. Sethuraman</i>



SECTION A-A
SCALE 1 : 5



SECTION B-B
SCALE 1 : 5

NOTE:-

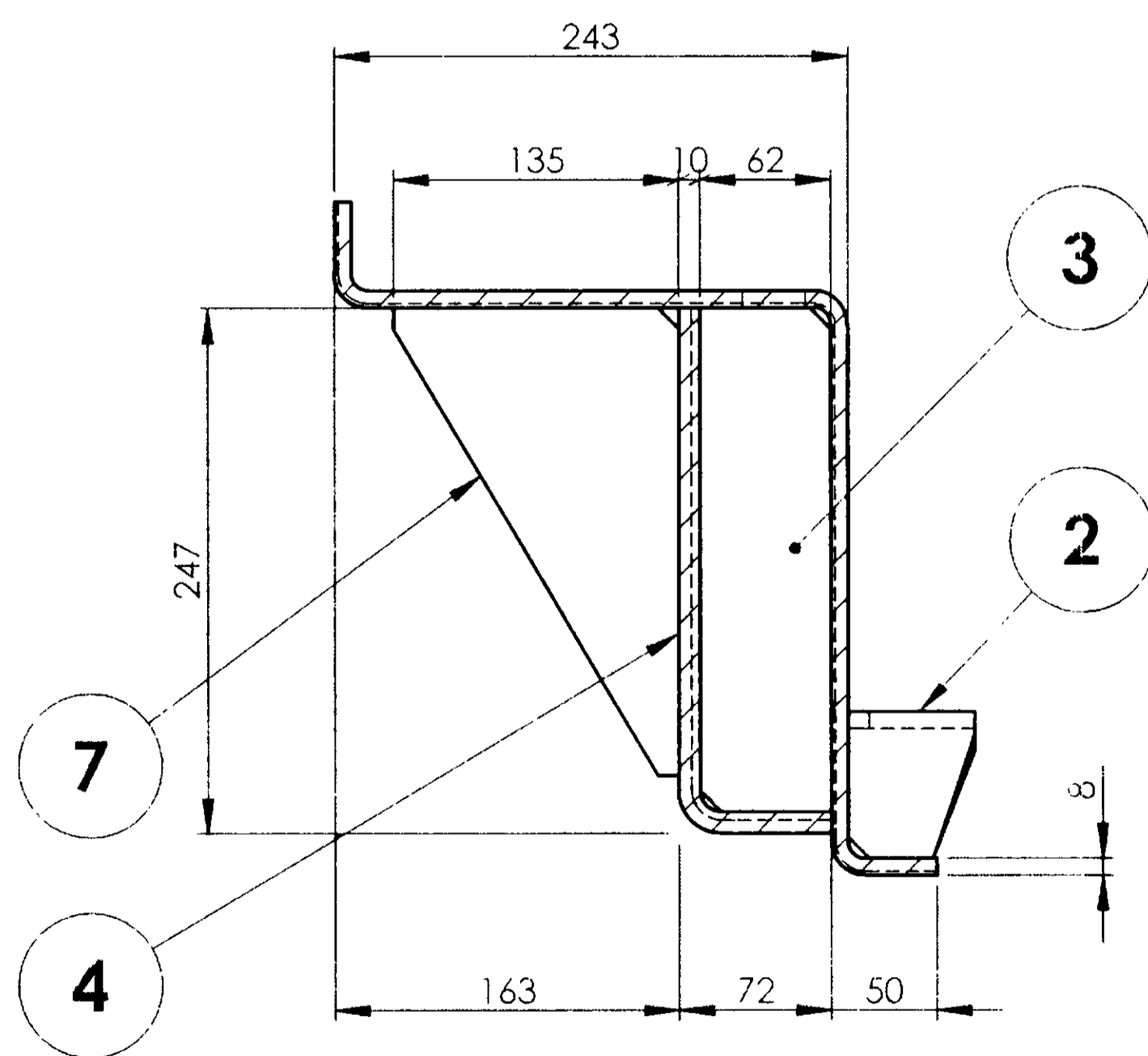
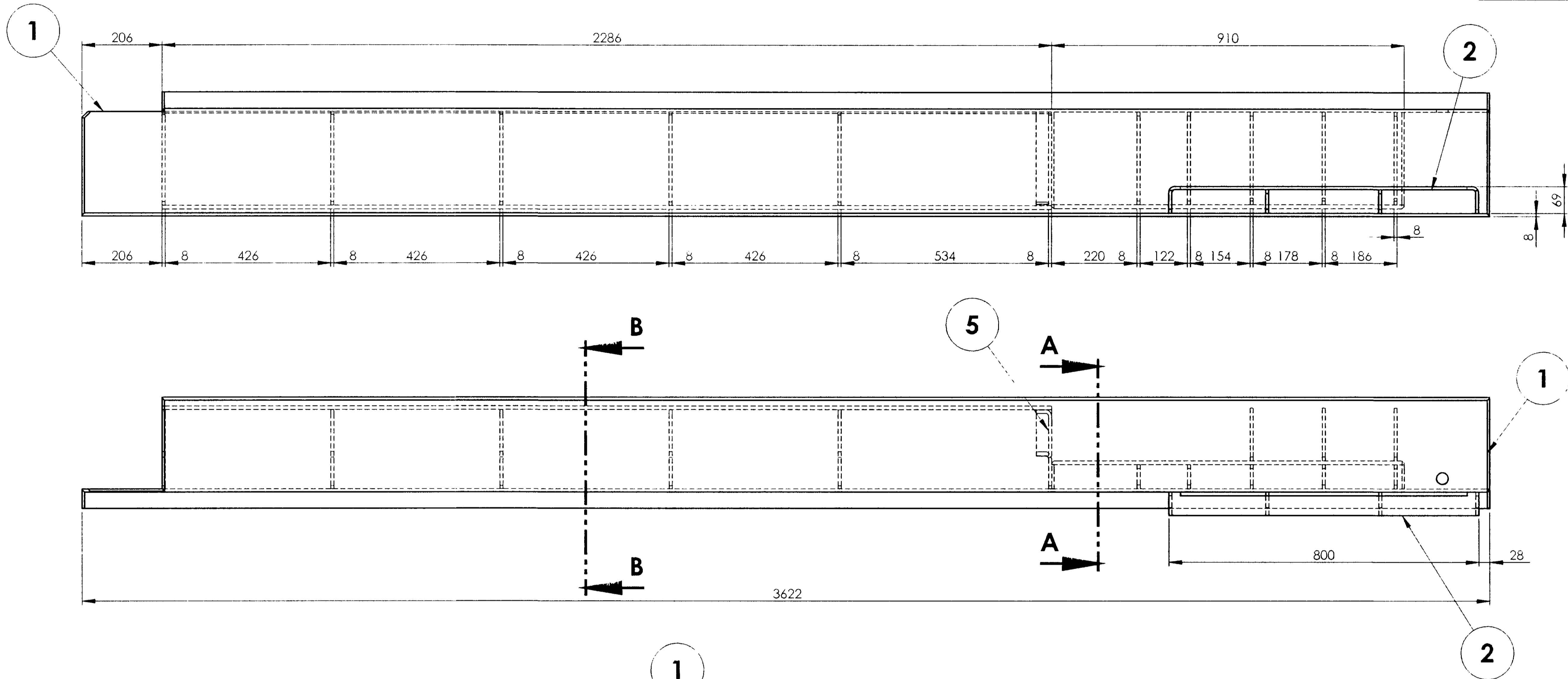
- * 1. DWG.NO:ICF/SK3-1-1-225/COL-1 TO BE REFERRED FOR IN HOUSE MANUFACTURING OF ITEM-1.
- 2. ITEMS- 3,4,5,6,7&8 TO BE SUPPLIED LOOSE AND WELDED AT UNDER FRAME TRESTLE STAGE AS SHOWN.

1	RIB		8	AAD11554		2.632	
1	ANGLE		7	AAD11229		64.56	
5	RIB		6	AAD11555		2.197	
5	RIB		5	AAD11228		0.92	
1	ANGLE		4	AAD11223		21.53	
3	RIB		3	AAD11208		1.04	
1	SUPPORT		2	74511054		3.280	
1	LONGITUDINAL BEAM		1	AAD11111		132.23	*
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-1 Under Frame				SURFACE AREA IN Sq.m.: 7.431		WT/ASSY IN Kgs:	
LONGITUDINAL BEAM ASSEMBLY				SCALE 1:10	SSE/D CHD	<i>P. Sange</i>	
				ALT c	ALTD DRN	K.Sethuraman	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				MEMU/DMC/3PH		74511028	
				SHEET 1 OF 1		A2	

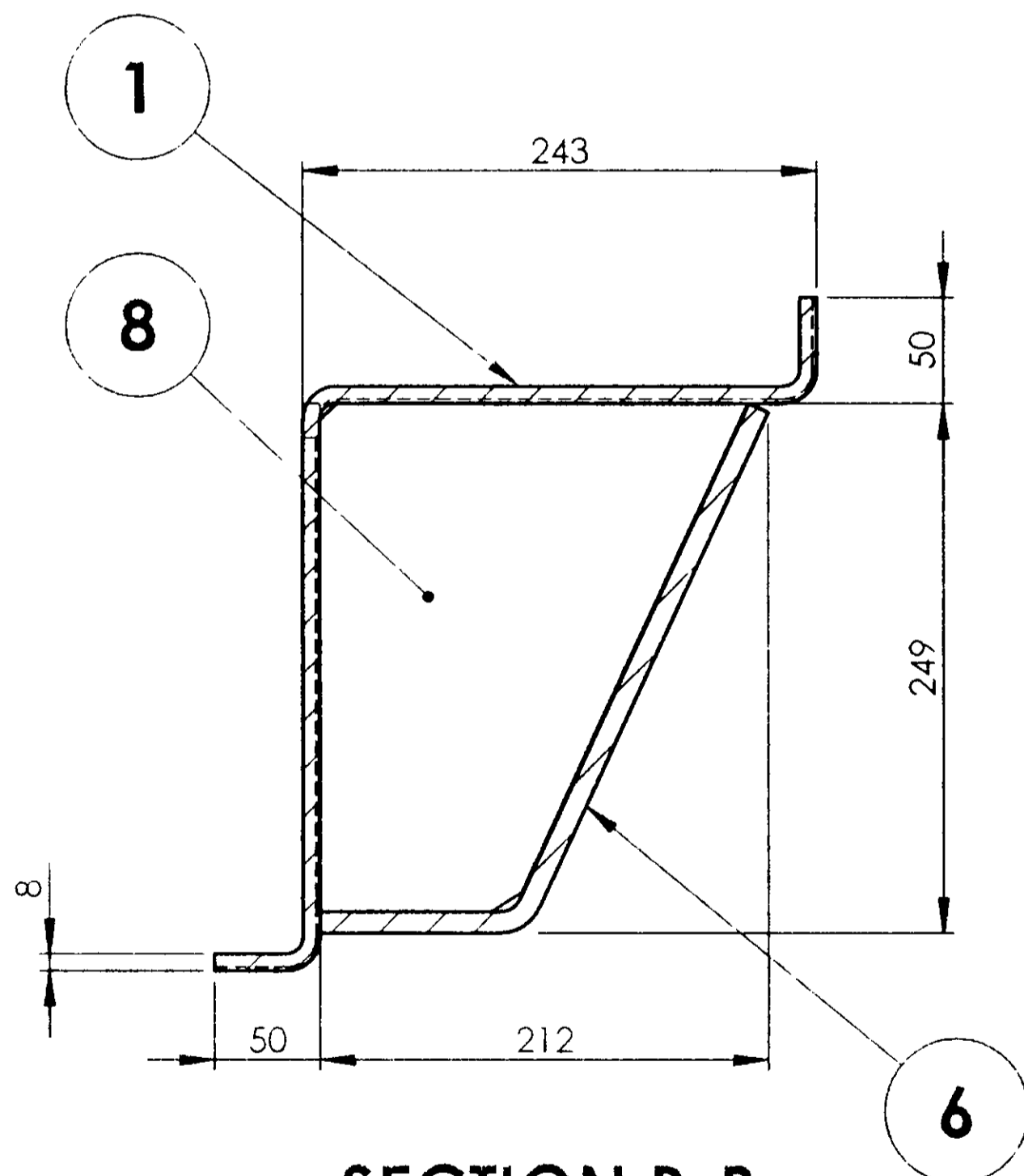
74511029

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		NOTE-1 ADDED.	-sd-
b		NOTE-2 ADDED.	-sd-
c		REFERENCE DRAWING FOR ITEM-2 ALTERED FROM 56711004 TO 74511054.	<i>[Signature]</i>



SECTION A-A
SCALE 1 : 5


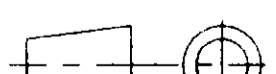


SECTION B-B
SCALE 1 : 5

NOTE:-

- * 1. DWG.NO:ICF/SK3-1-1-225/COL-2 TO BE REFERRED FOR IN HOUSE MANUFACTURING OF ITEM-1.
- 2. ITEMS- 3,4,5,6,7& 8 TO BE SUPPLIED LOOSE AND WELDED AT UNDER FRAME TRESTLE STAGE AS SHOWN.

5	RIB		8	AAD11555		2.197	
3	RIB		7	AAD11208		1.04	
1	ANGLE		6	AAD11229		64.56	
1	ANGLE		5	AAD11553		2.632	
1	ANGLE		4	AAD11223		21.53	
5	RIB		3	AAD11228		0.92	
1	SUPPORT		2	74511054		3.280	
1	LONGITUDINAL BEAM		1	AAD11112		127.82	*

GROUP: 1-1 Under Frame		SURFACE AREA IN Sq.m.: 7.289		WT/ASSY IN Kgs:		
LONGITUDINAL BEAM ASSEMBLY				SCALE 1:10	SSE/D	
					CHD	
				ALT c	ALTD	K.Sethuraman
					DRN	K.Sethuraman
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					MEMU/DMC/3PH	
					74511029	
				SHEET 1 OF 1	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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

REF.DRG.NO.

01-01-2025	10-10-2017	<i>[Signature]</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/AM

74511030

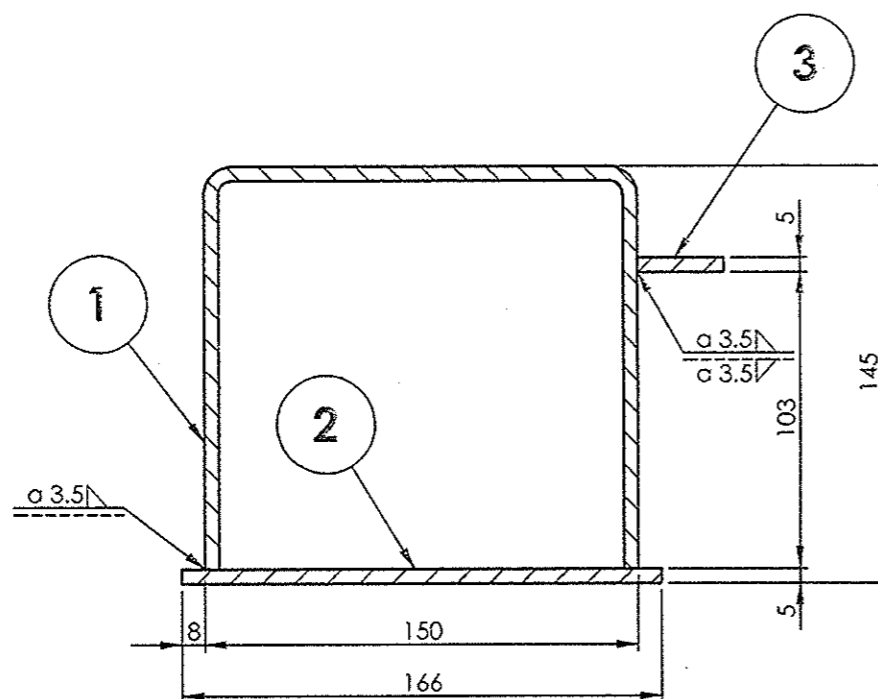
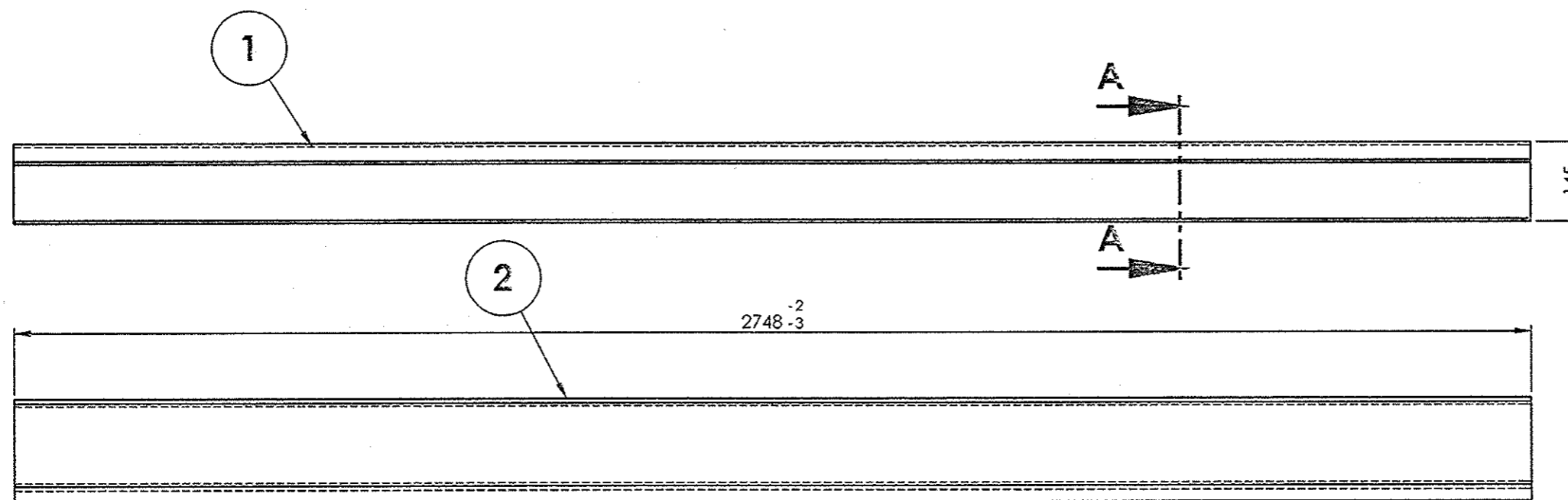
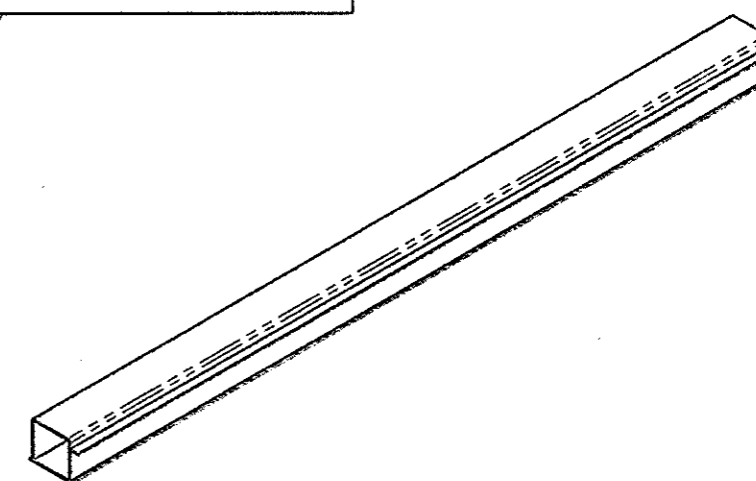
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &
DATESECTION A-A
SCALE 1 : 2.5

ISOMETRIC VIEW

1	PLATE		3	AAD11240		3.24	
1	BOTTOM PLATE		2	AAD11239		17.90	
1	CHANNEL		1	AAD11238		44.61	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: UNDER FRAME

SURFACE AREA IN Sq.m.: 3.439

WT/ASSY IN Kgs:

CROSS BEARER COMPLETE

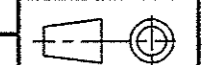
SCALE
1:10SSE/D
CHD

ALT.

ALTD

DRN

K.SETHURAMAN



MEMU/DMC/3PH

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600036

SHEET
1 OF 1

74511030

A3

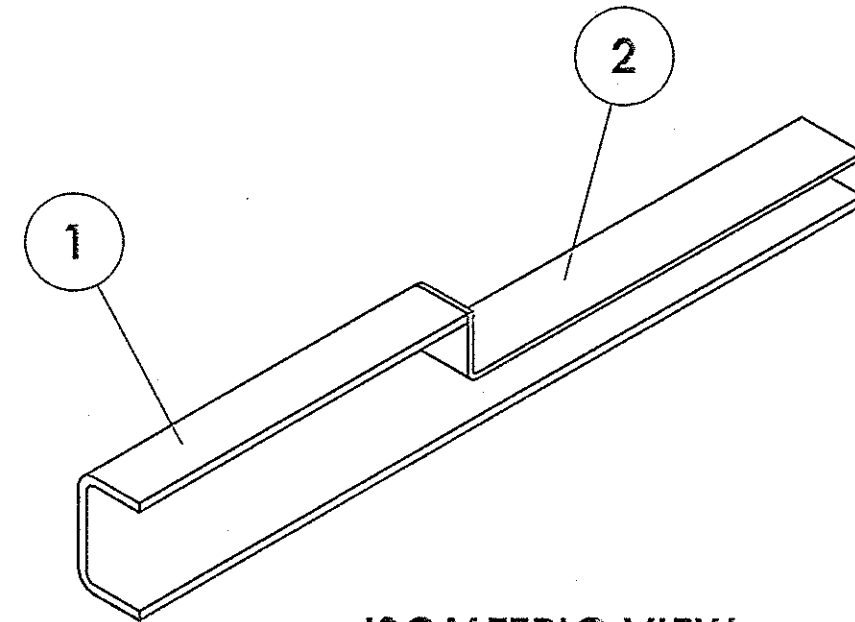
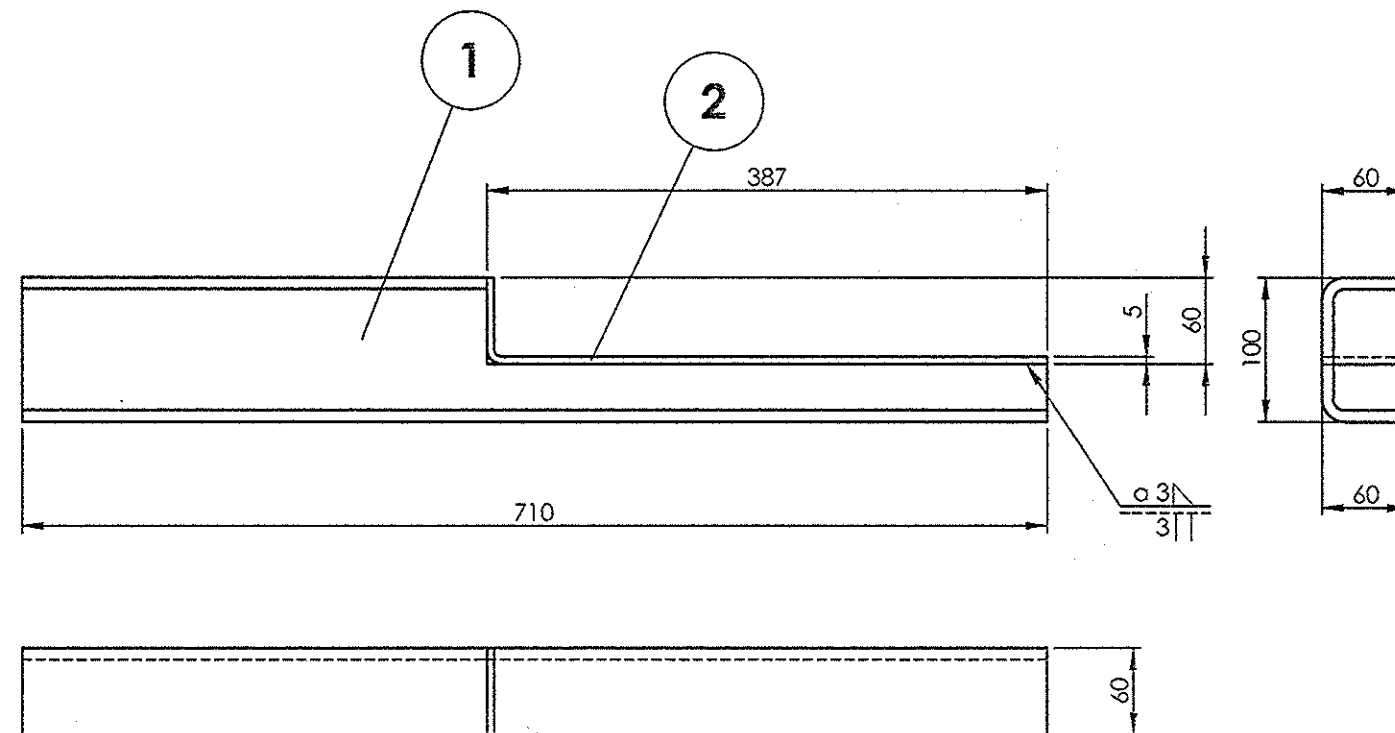
DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO ICF/STD-9-0-001.
MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS: 813-1986.
RIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

20-10-2017

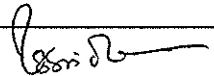
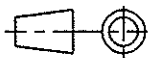
74511031

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

REVISIONS				APPROVED & DATE	
ALT.	ZONE	DESCRIPTION			



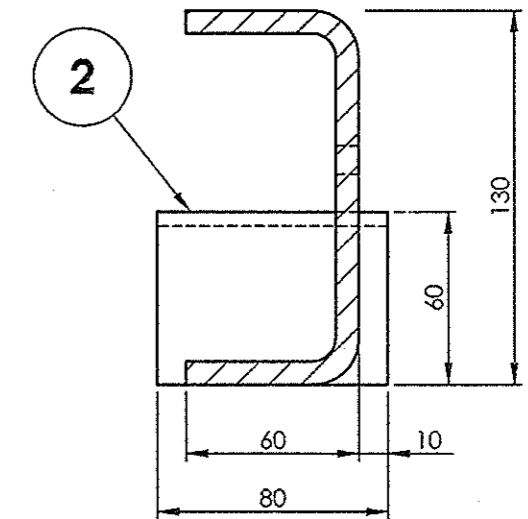
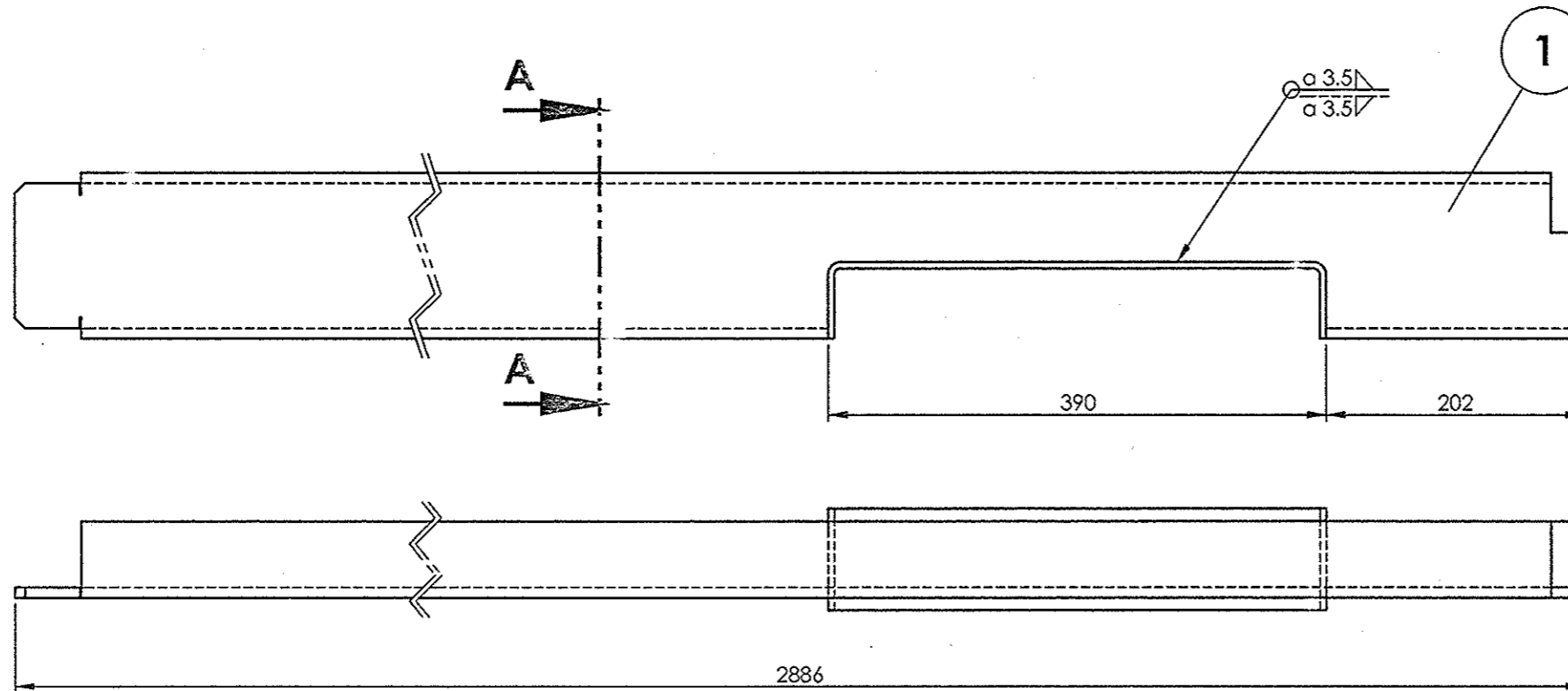
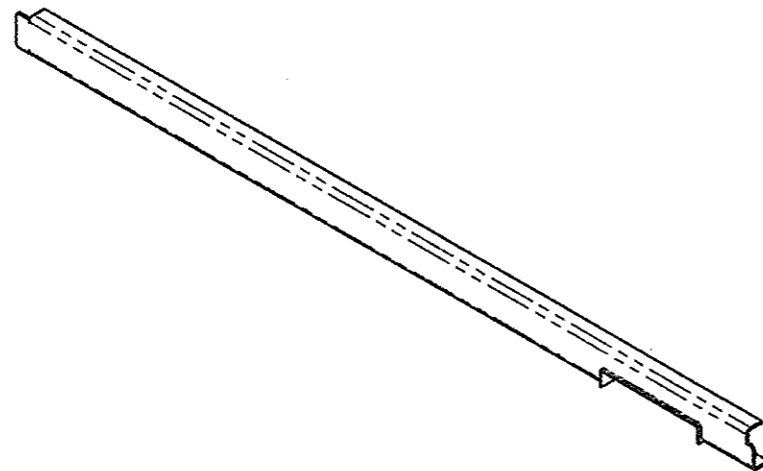
ISOMETRIC VIEW

1	ANGLE	5x60x439	2		IRS M-41-1997	1.03	
1	CHANNEL	8x188x710	1		IRS M-41-1997	6.04	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF. DRGS	MATL.SPEC.	WT/UNIT IN KGS	REMARKS
GROUP: 1-1		SURFACE AREA IN Sq.m.:0.264			WT/ASSY IN Kgs:		
CHANNEL ASSEMBLY					SCALE	SSE/D	
					1:5	CHD	
					ALT.	ALTD	
						DRN	P.MURUGAN
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038							MEMU/DMC/3PH
					SHEET 1 OF 1		74511031
							A3

74511032

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION A-A
SCALE 1 : 2.5

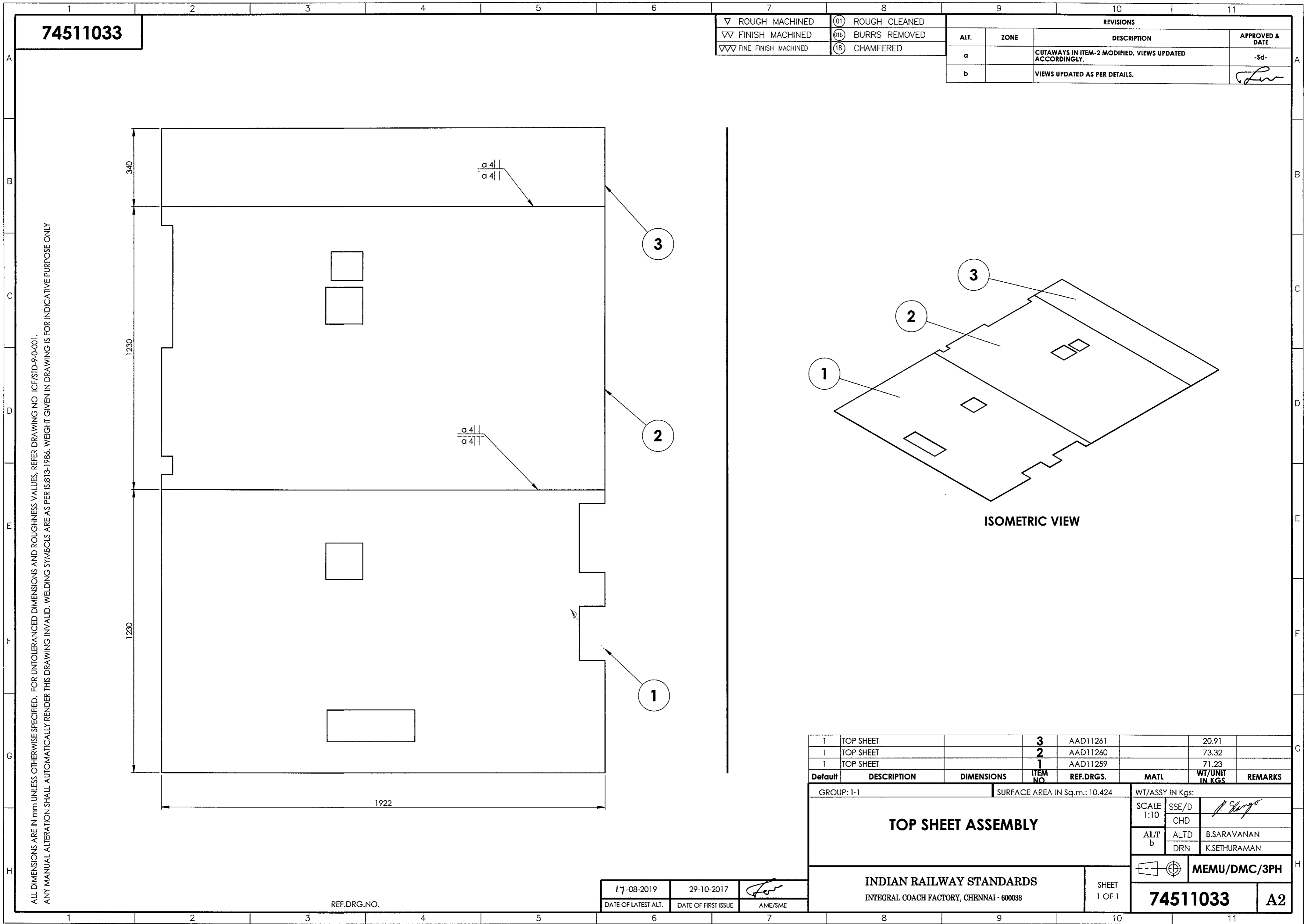
ISOMETRIC VIEW

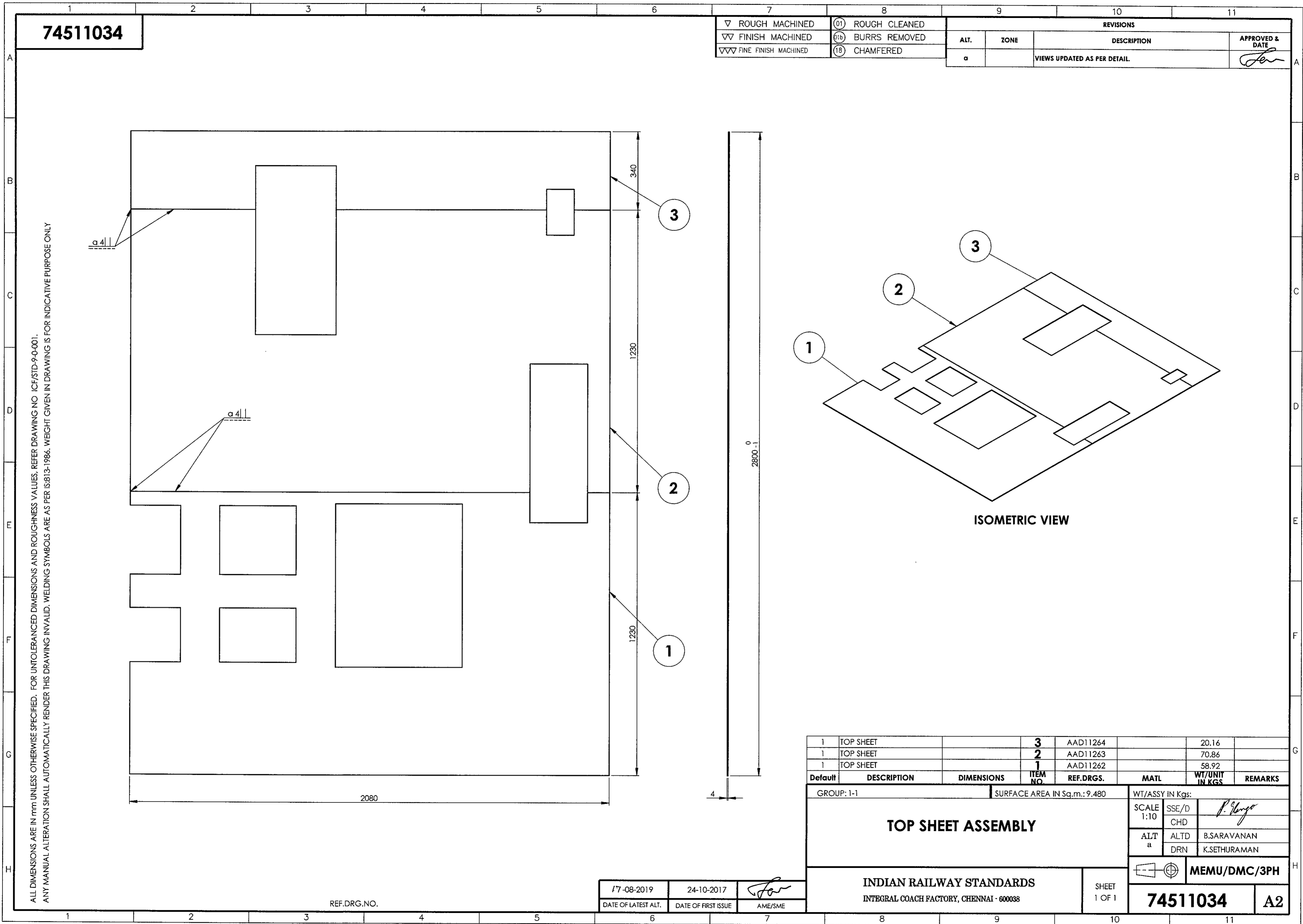
1	STIFFENING CHANNEL		2	AAD11246		1.55	
1	CHANNEL		1	AAD11245		37.41	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: UNDER FRAME				SURFACE AREA IN Sq.m.: 1.328		WT/ASSY IN Kgs:	
CROSS BEARER COMPLETE					SCALE	SSE/D	K.SETHURAMAN
					1:5	CHD	
					ALT.	ALTD	
						DRN	K.SETHURAMAN
INDIAN RAILWAY STANDARDS					MEMU/DMC/3PH		
					74511032		
INTEGRAL COACH FACTORY, CHENNAI - 600038					A3		
SHEET 1 OF 1							

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

REF.DRG.NO.

	23 -09-2017	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME





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

1		2		3		4		5		6		7		8	
74511036				▽ ROUGH MACHINED		③ ROUGH CLEANED		REVISIONS							
				▽▽ FINISH MACHINED		④ BURRS REMOVED		ALT.		ZONE		DESCRIPTION		APPROVED & DATE	
				▽▽▽ FINE FINISH MACHINED		⑧ CHAMFERED		a				REF. DRG FOR ITEM -1 ALTD FROM DMU/DPC/SS-1-0-018 TO AAD11680 AND REMARKS DELETED.			

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

8	FLAT		2	DMU/DPC/SS-1-1-018		1.44	ITEM-2
1	COVER SHEET		1	AAD11680		33.42	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-1				SURFACE AREA IN Sq.m.:3.971		WT/ASSY IN Kgs:	
COVER PLATE FOR HEADSTOCK(DRIVING END)						SCALE 1:10	SSE/D CHD
						ALT. a	ALTD P.MURUGAN
INDIAN RAILWAY STANDARDS						DRN	P.MURUGAN
						MEMU/DMC/3PH	
INTEGRAL COACH FACTORY, CHENNAI - 600038						SHEET 1 OF 1	
74511036						A3	

22-11-2017

03-10-2017

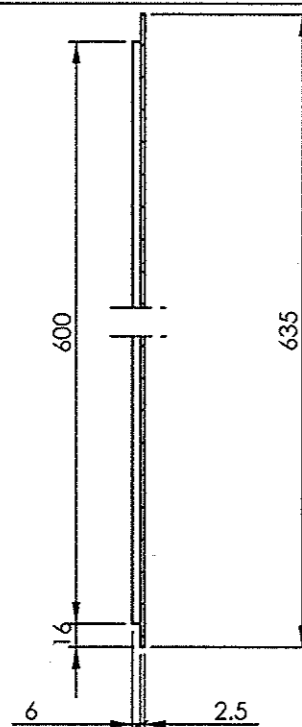
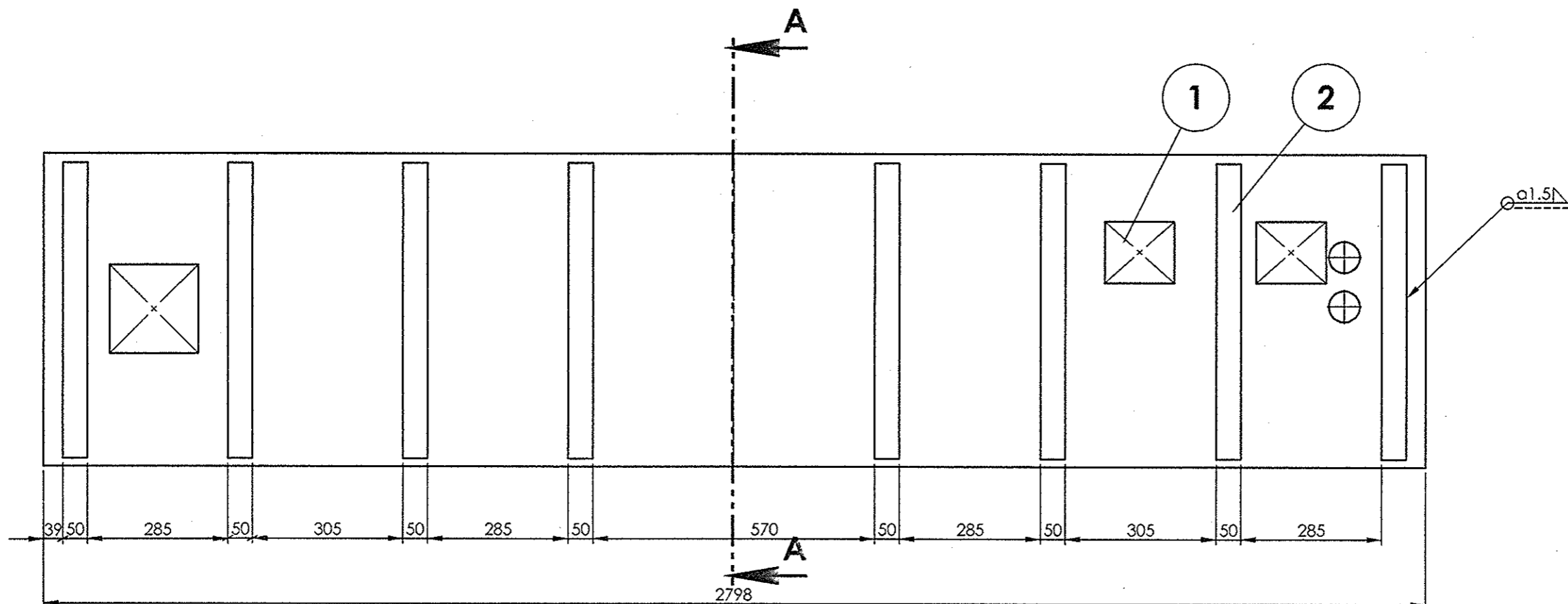
DATE OF LATEST ALT.

DATE OF FIRST ISSUE

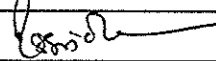

AME/SME

REF.DRG.NO.DMU/DPC/SS-1-1-018

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		REF. DRG FOR ITEM -1 ALTD FROM DMU/DPC/SS-1-0-018 TO AAD11680 AND REMARKS DELETED.	



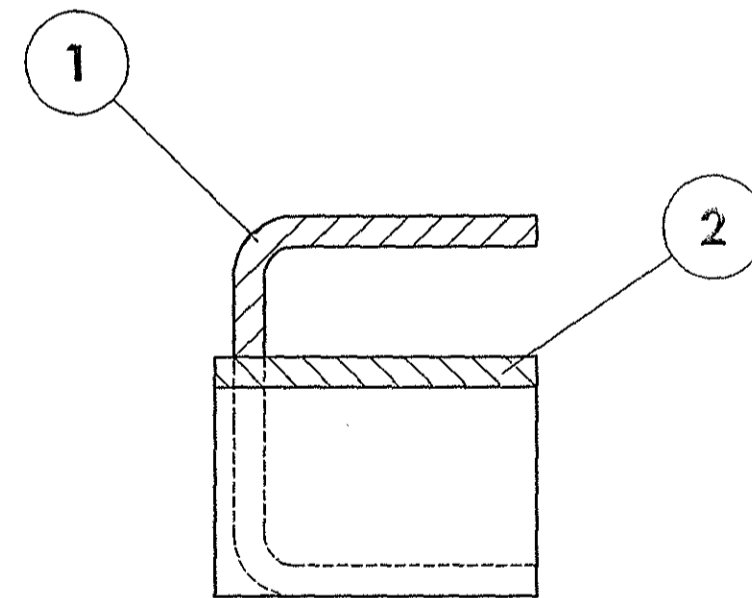
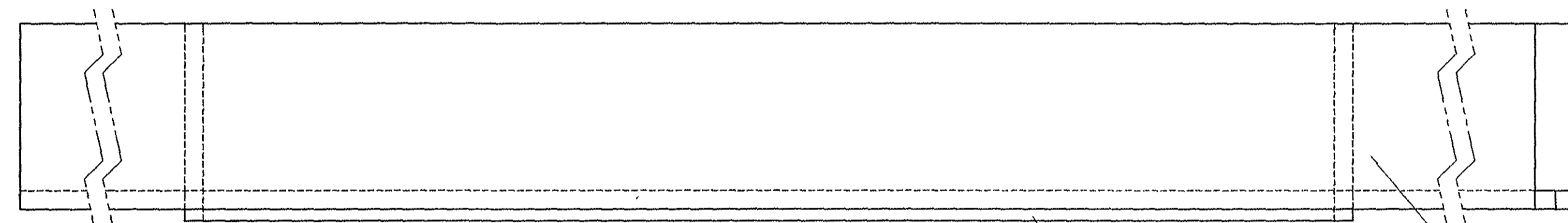
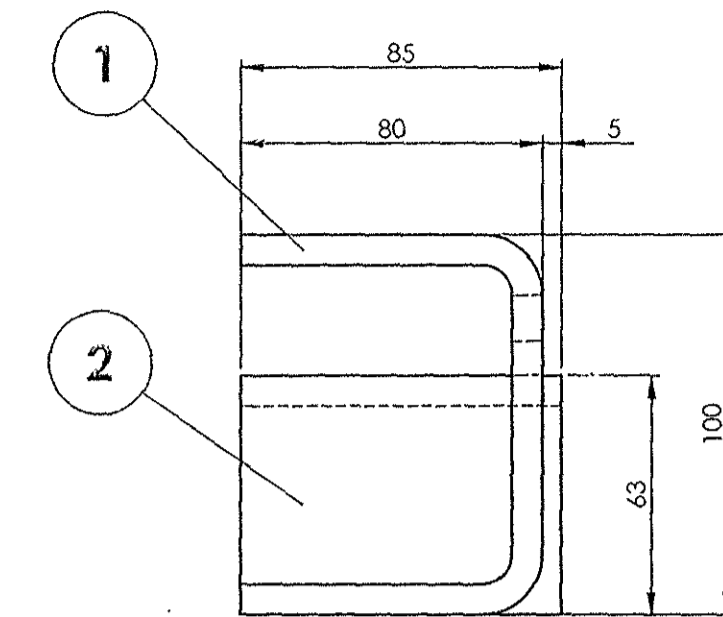
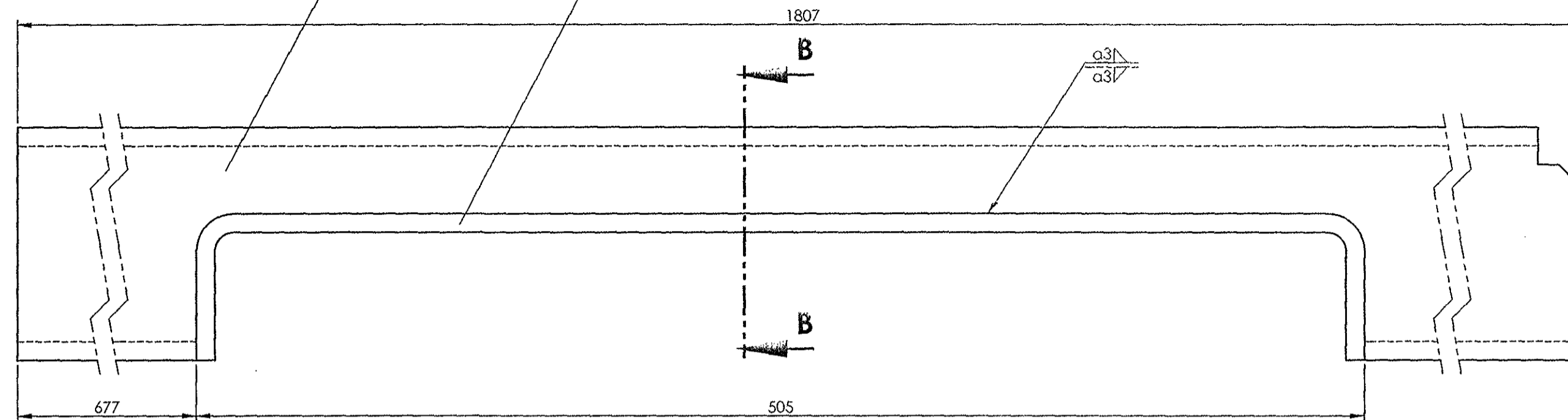
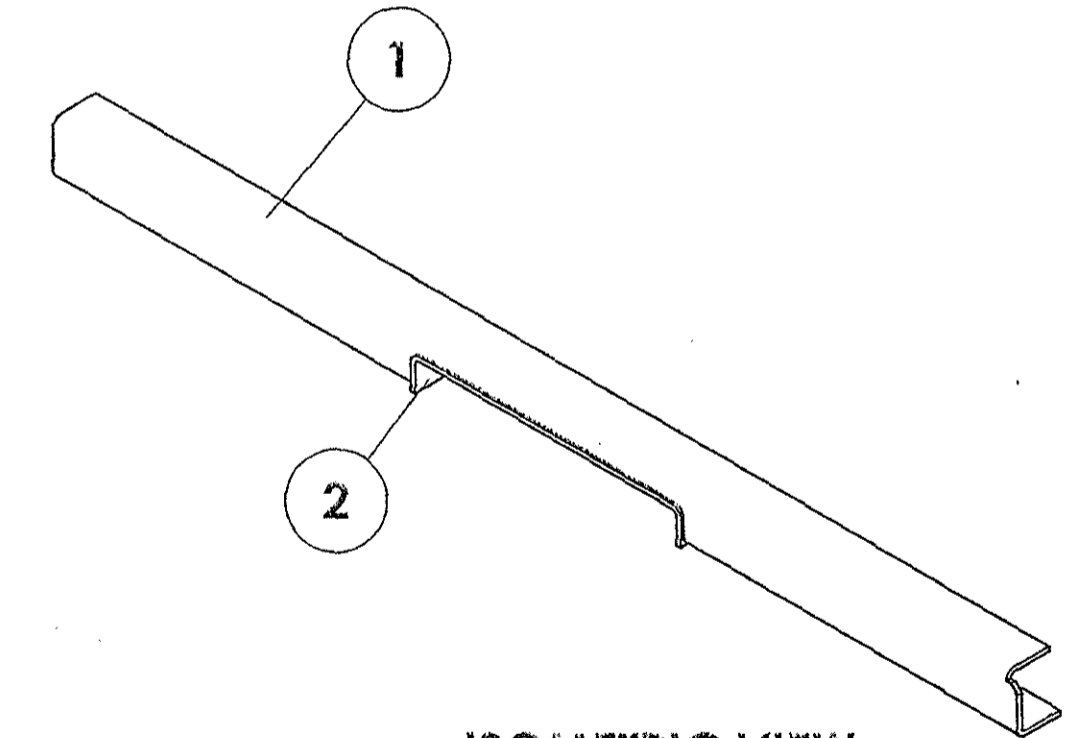
SECTION A-A
SCALE 1 : 5

8	FLAT		2	DMU/DPC/SS-1-1-018		1.44	ITEM-2
1	COVER SHEET		1	AAD11680		33.42	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-1		SURFACE AREA IN Sq.m.:3.971			WT/ASSY IN Kgs:		
COVER PLATE FOR HEADSTOCK(DRIVING END)					SCALE	SSE/D	
					1:10	CHD	
					ALT. a	ALTD	P.MURUGAN
						DRN	P.MURUGAN
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1			MEMU/DMC/3PH
					74511036		A3

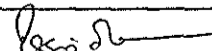
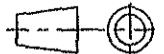
74511037

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE

SECTION B-B
SCALE 1 : 2

ISOMETRIC VIEW

1	STIFFENING CHANNEL		2	AAD11280		3.23		
1	CHANNEL		1	AAD11279		22.30		
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS	
GROUP: I-1			SURFACE AREA IN Sq.m.: 0.858		WT/ASSY IN Kgs:			
CHANNEL ASSEMBLY					SCALE 1:5	SSE/D		
						CHD		
					ALT	ALTD		
						DRN		K.SETHURAMAN
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038						MEMU/DMC/3PH		
						74511037		
					SHEET 1 OF 1		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. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY.

REF.DRG.NO.DMU/DPC/SS-1-1-006/COL-II

DATE OF LATEST ALT.	10 -10-2017	AME/SME
---------------------	-------------	---------

74511038

▽ ROUGH MACHINED

① ROUGH CLEANED

▽▽ FINISH MACHINED

② BURRS REMOVED

▽▽▽ FINE FINISH MACHINED

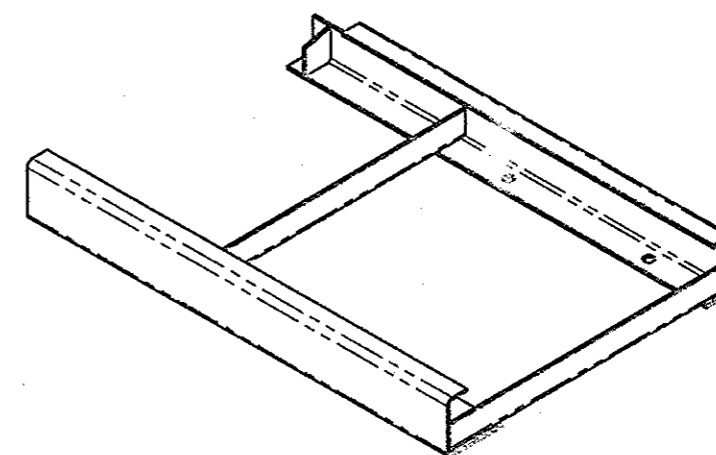
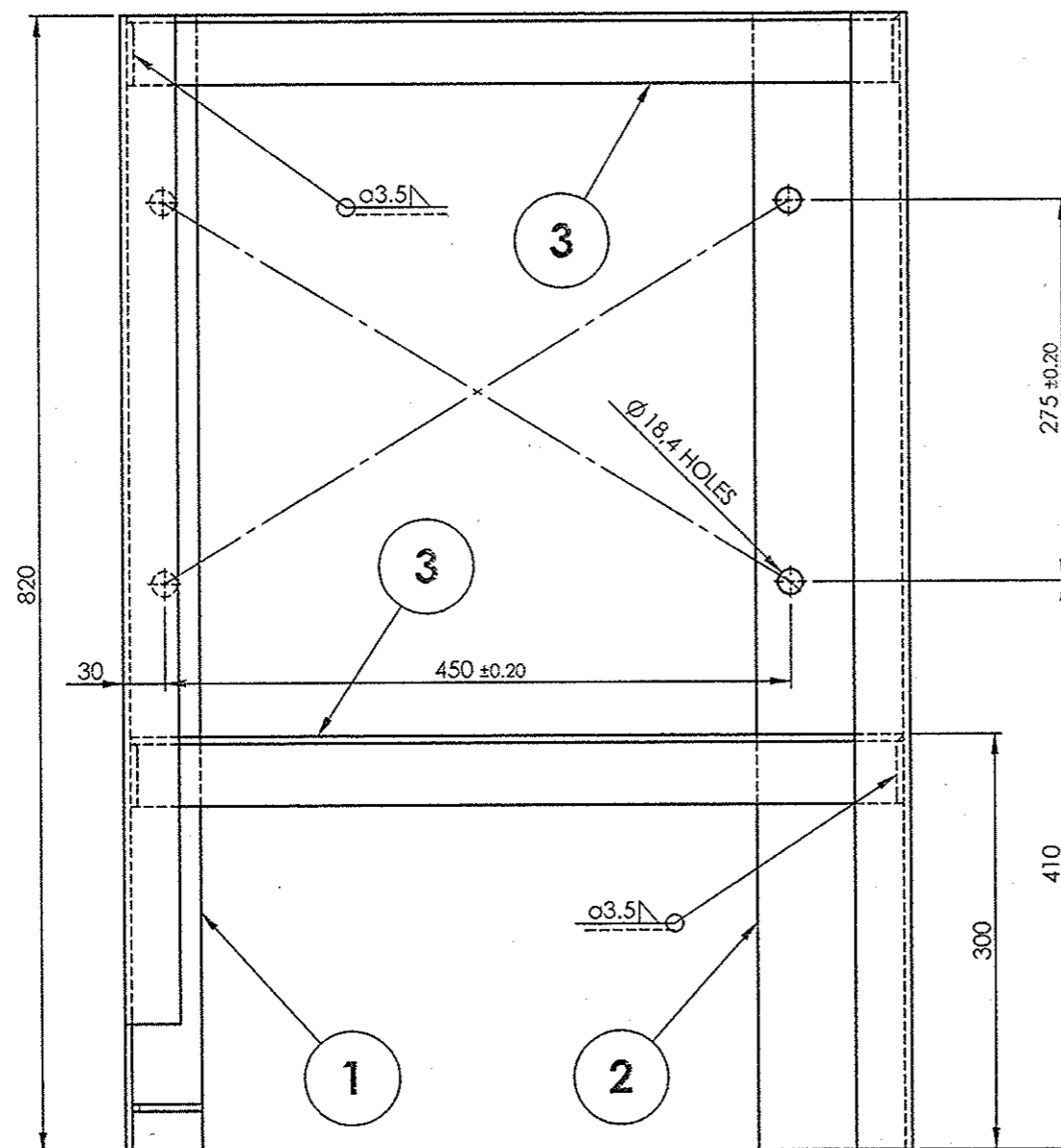
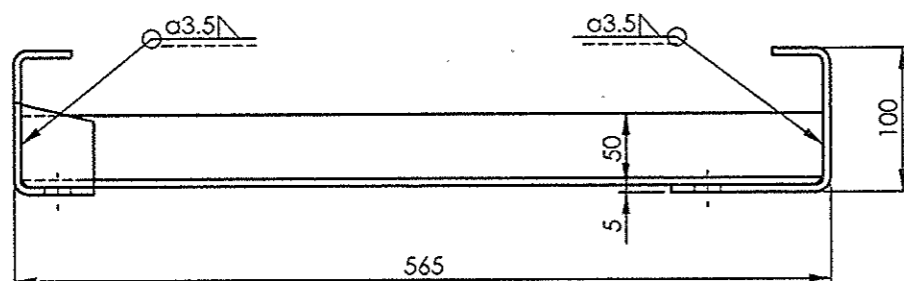
③ CHAMFERED

REVISIONS

ALT.

ZONE

DESCRIPTION

APPROVED &
DATE

ISOMETRIC VIEW

NOTE:

1. ALL HOLES ARE TO BE JIG DRILLED.
2. FINISHED COMPONENT SHALL BE THOROUGHLY CLEANED AND APPLIED WITH TWO COATS OF RED OXIDE ZINC CHROMATE PRIMER TO IS:2074-92 TO A DFT OF MINIMUM 35 MICRONS WITH SMOOTH AND MATT FINISH.

2	ANGLE		3	AAC11122		1.990	
1	CHANNEL		2	AAC11121		7.517	
1	BRACKET		1	SSA11055		5.601	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: UNDERFRAME

SURFACE AREA IN Sq.m.:0.905

WT/ASSY IN Kgs:

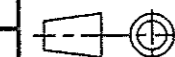
SUB MODULE FOR HORN RESERVOIRSCALE
1:5SSE/D
CHD

ALT.

ALTD

DRN

K.Sethuramon



MEMU/DMC/3PH

INDIAN RAILWAY STANDARDS

INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

74511038

A3

REF.DRG.NO.

DATE OF LATEST ALT.

23 -10-2017

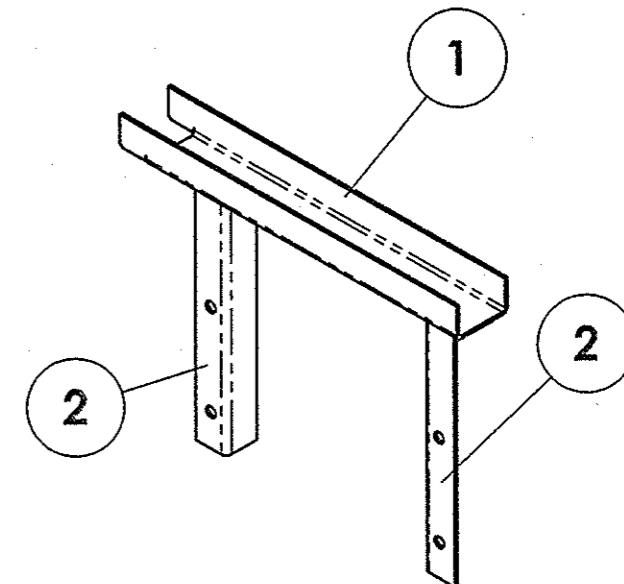
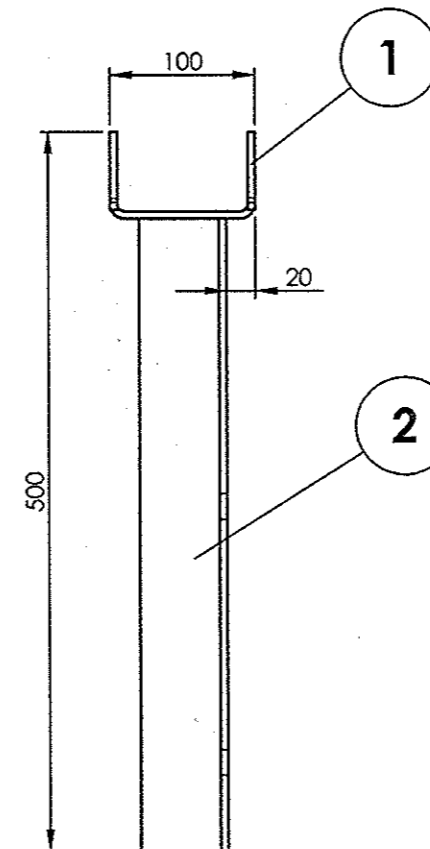
DATE OF FIRST ISSUE

AME/SM

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNIFORMED 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.
WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

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

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE




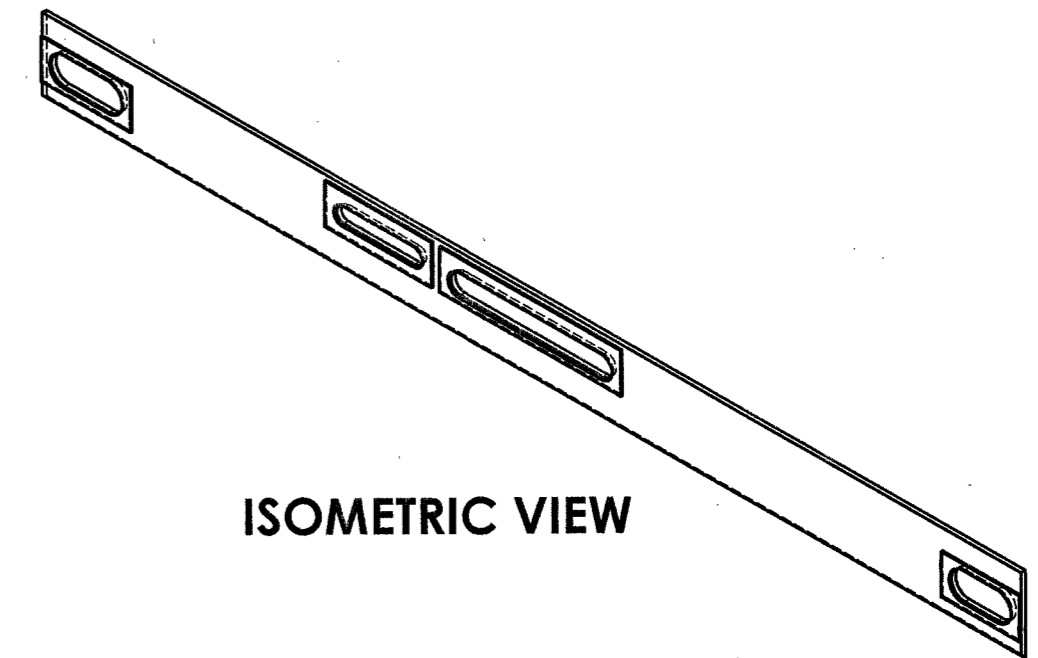
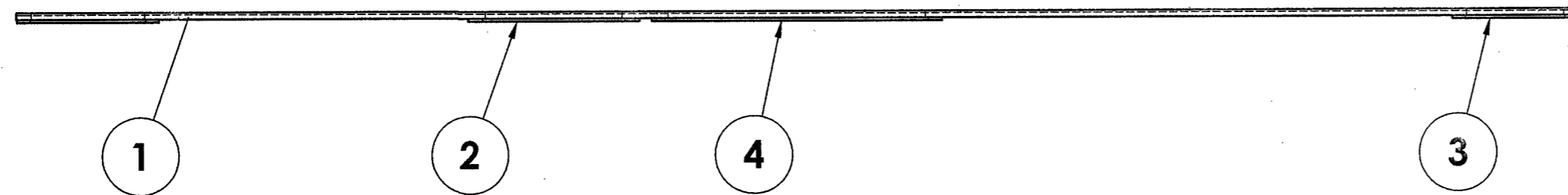
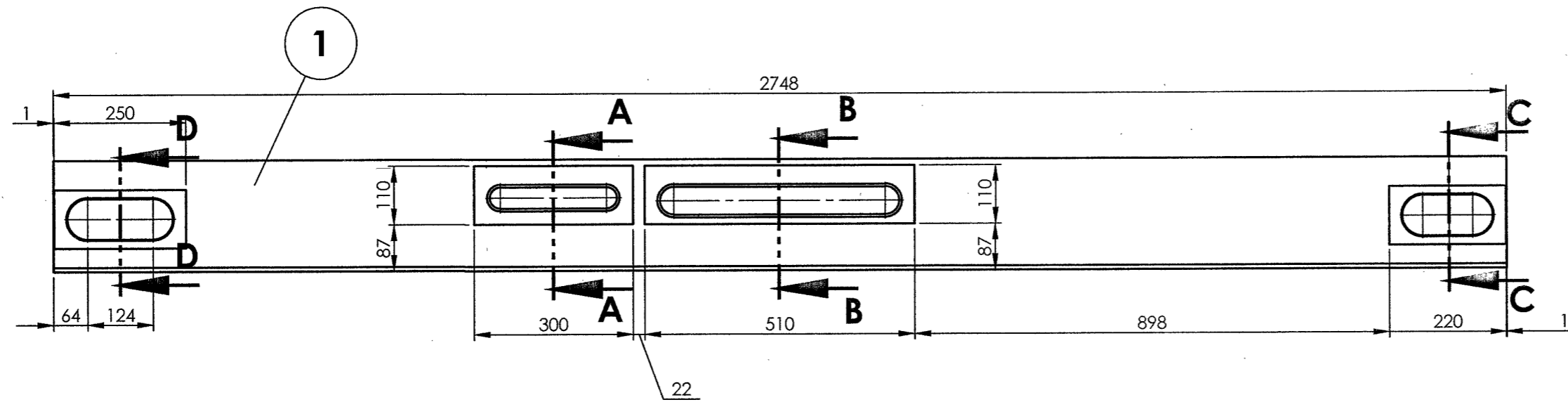
ISOMETRIC VIEW

REF.DRG.NO.576-1-1-007/COL.-2

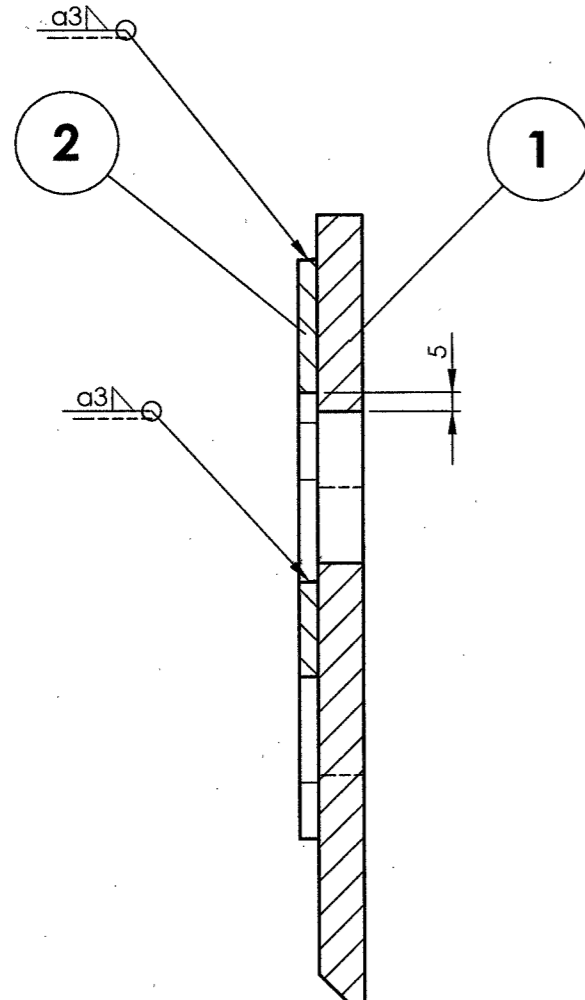
74511040

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

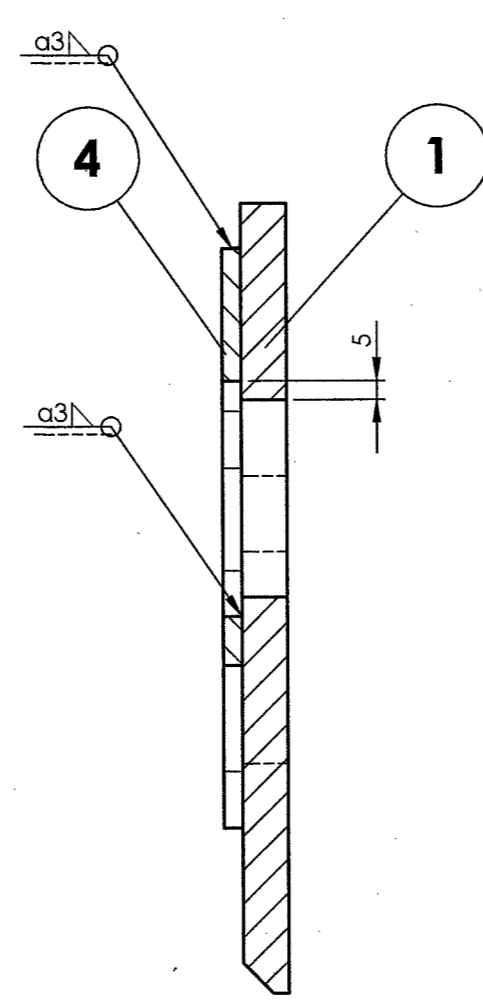
REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		DESIGN REVISED.	



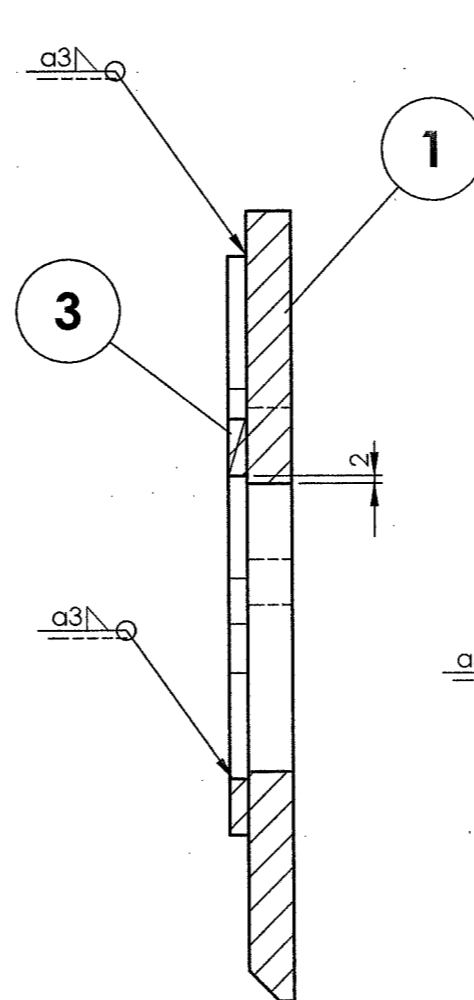
ISOMETRIC VIEW



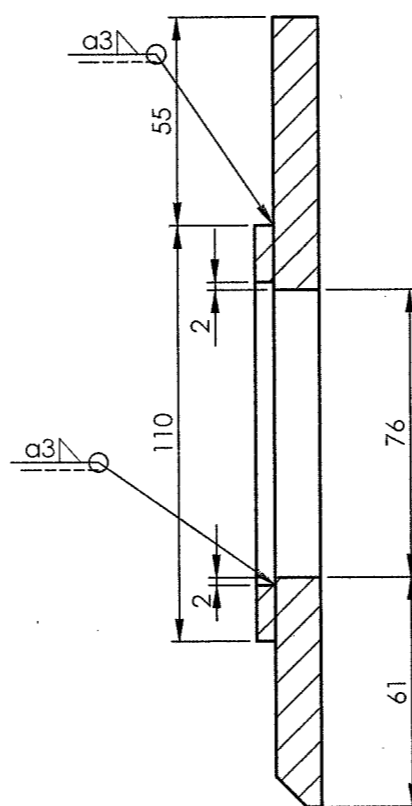
SECTION A-A
SCALE 1 : 2



SECTION B-B
SCALE 1 : 2



SECTION C-C
SCALE 1 : 2



SECTION D-D
SCALE 1 : 2

1	PLATE		5	AAE11800		0.49	
1	PLATE		4	AAE11718		1.11	
1	PLATE		3	AAE11717		0.46	
1	PLATE		2	AAE11719		0.83	
1	WEB		1	AAE11805		47.97	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1		SURFACE AREA IN Sq.m.: 1.297		WT/ASSY IN Kgs:	
WEB COMPLETE		SCALE 1:10	SSE/D	P.MURUGAN	
		CHD			
		ALT a	ALTD DRN	P.MURUGAN	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038		SHEET 1 OF 1		MEMU/DMC/3PH	
		74511040		A2	

REF.DRG.NO.ICF/MRVC/M/SS-1-1-014, COL-3

19-04-2018	16-03-2018	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME

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

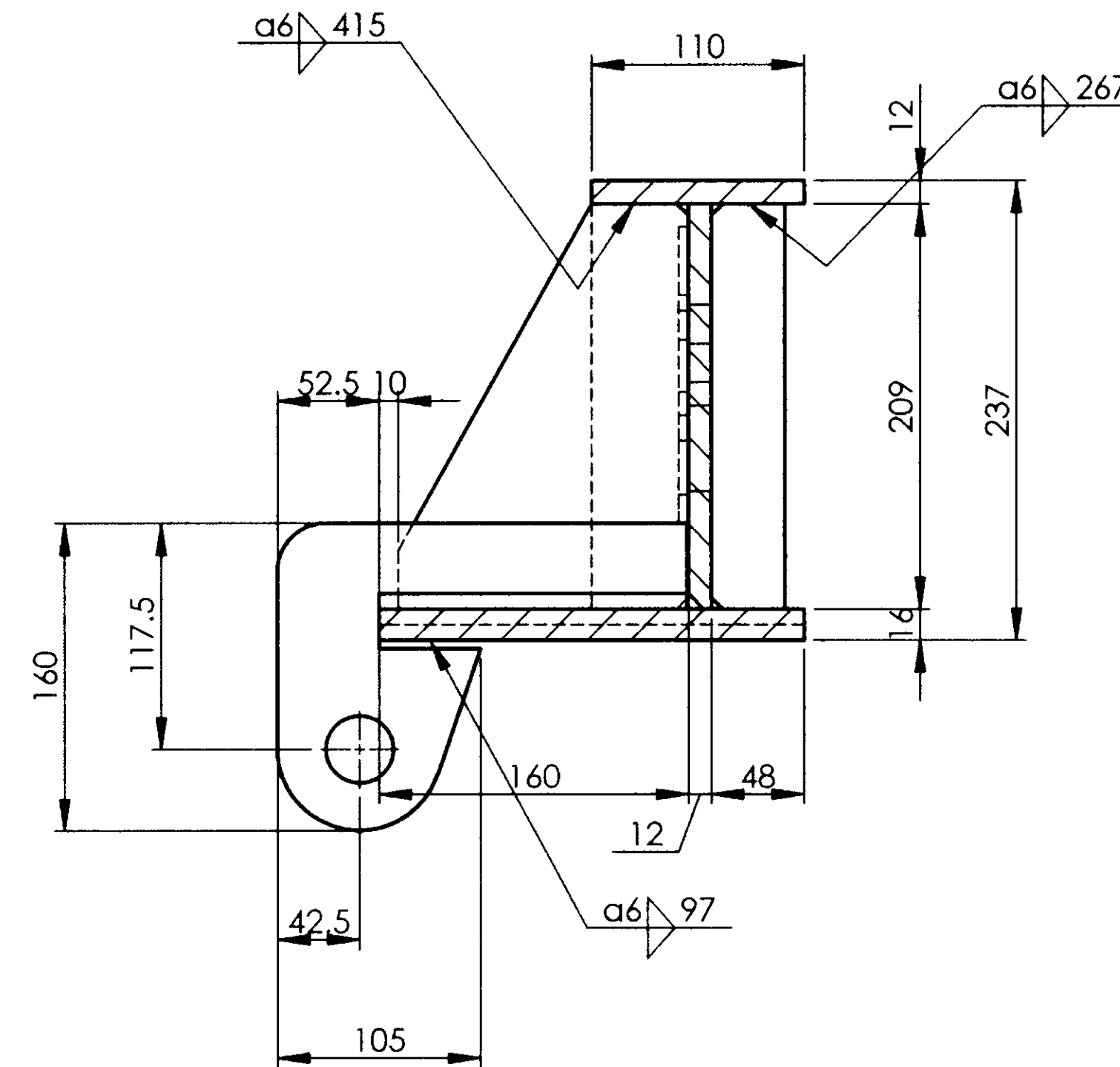
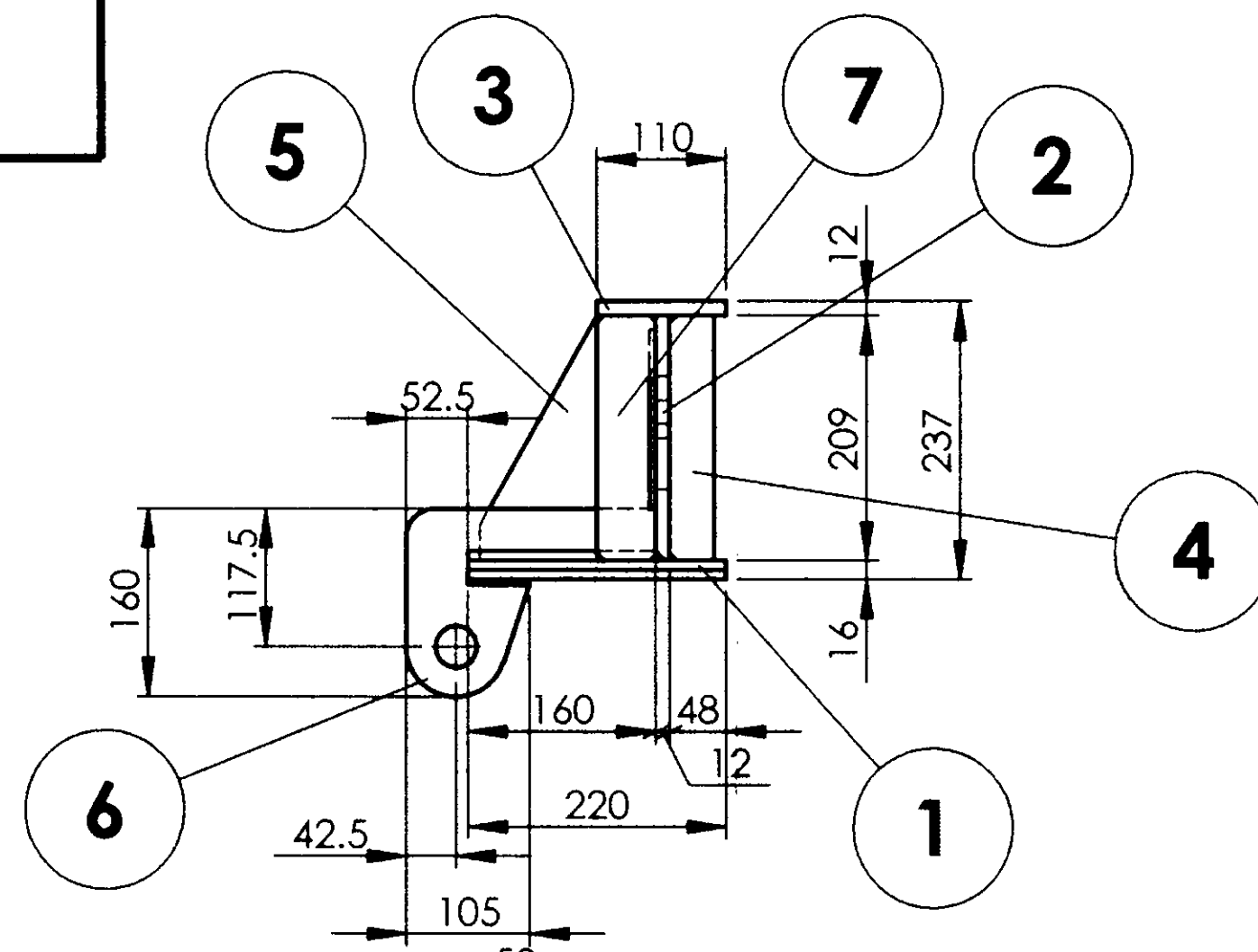
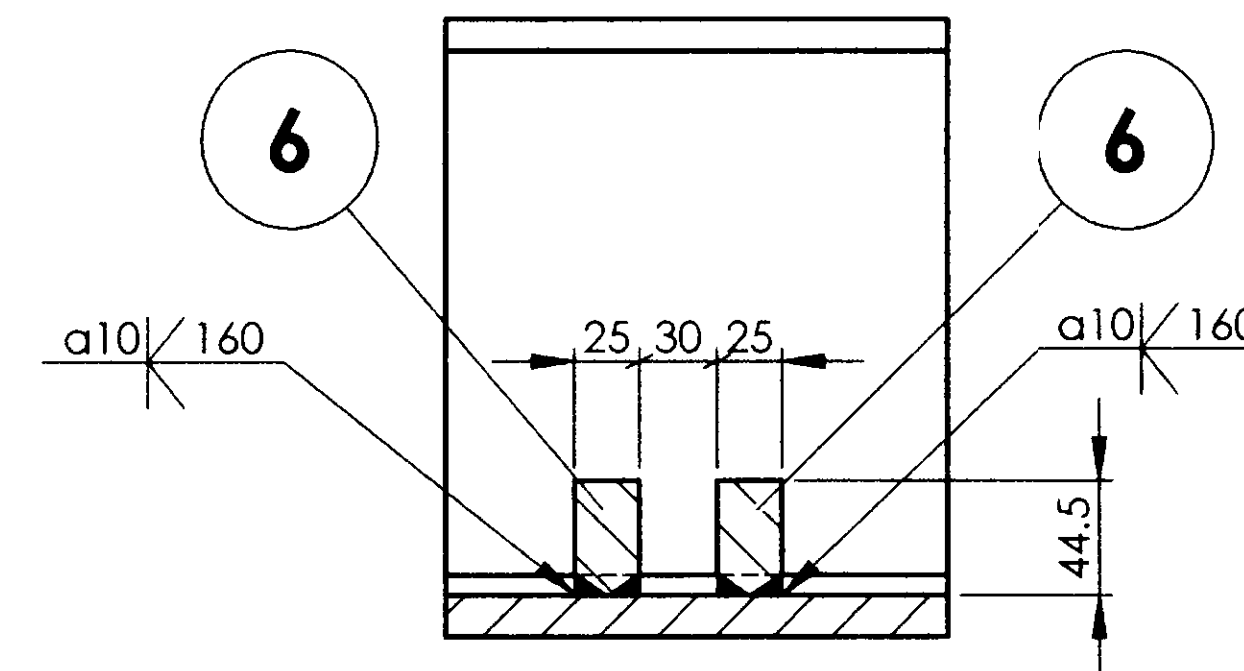
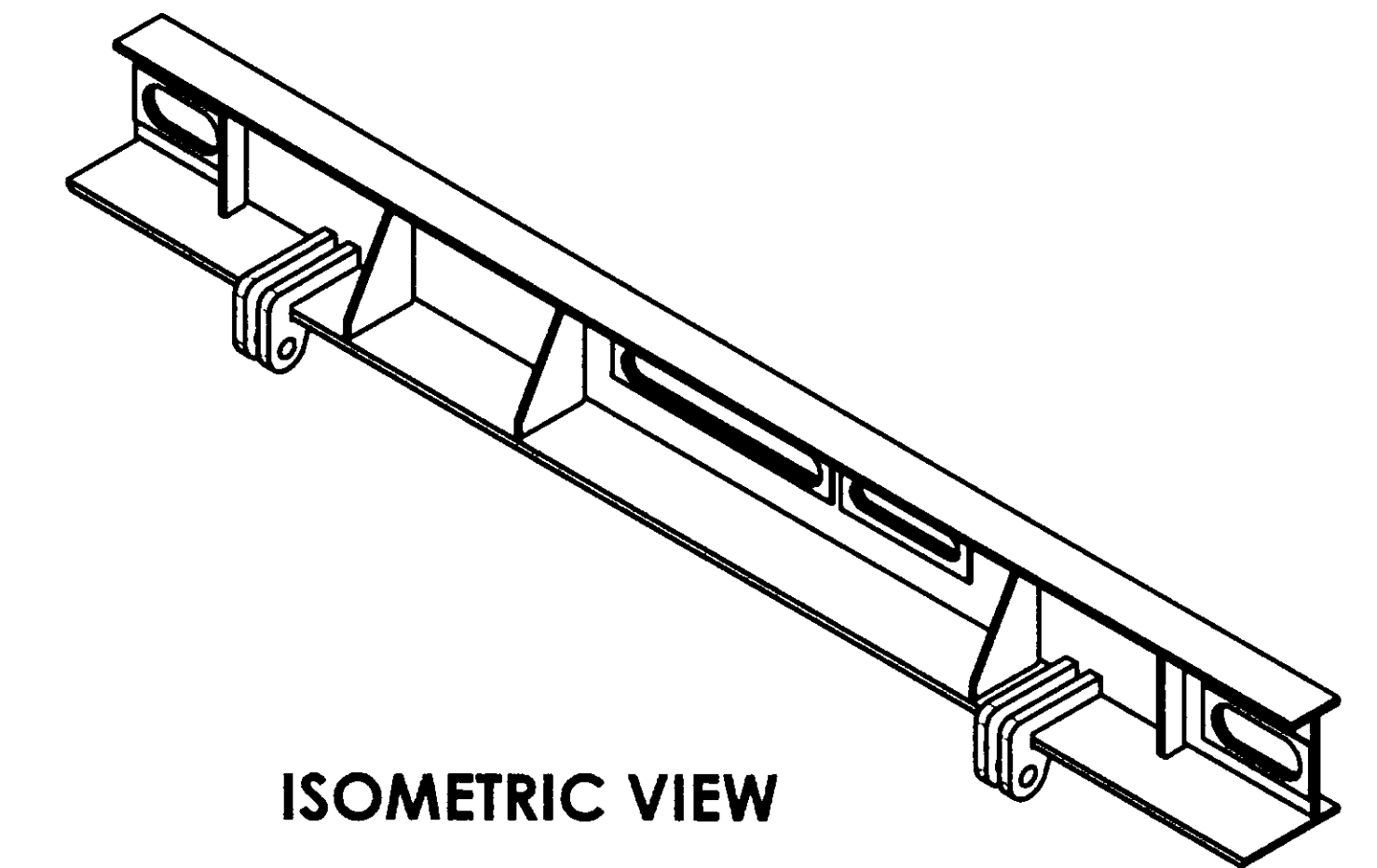
74511041

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

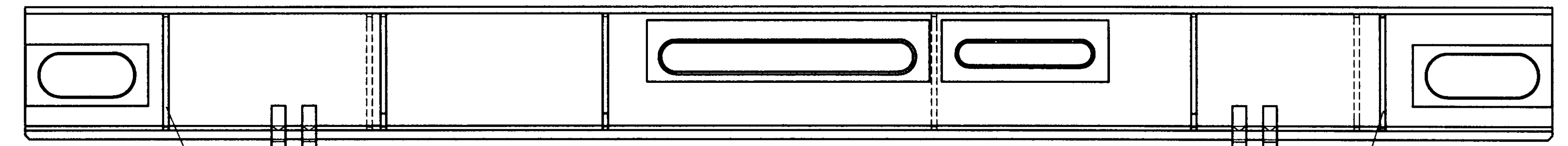
① ROUGH CLEANED
② BURRS REMOVED
③ CHAMFERED

REVISIONS

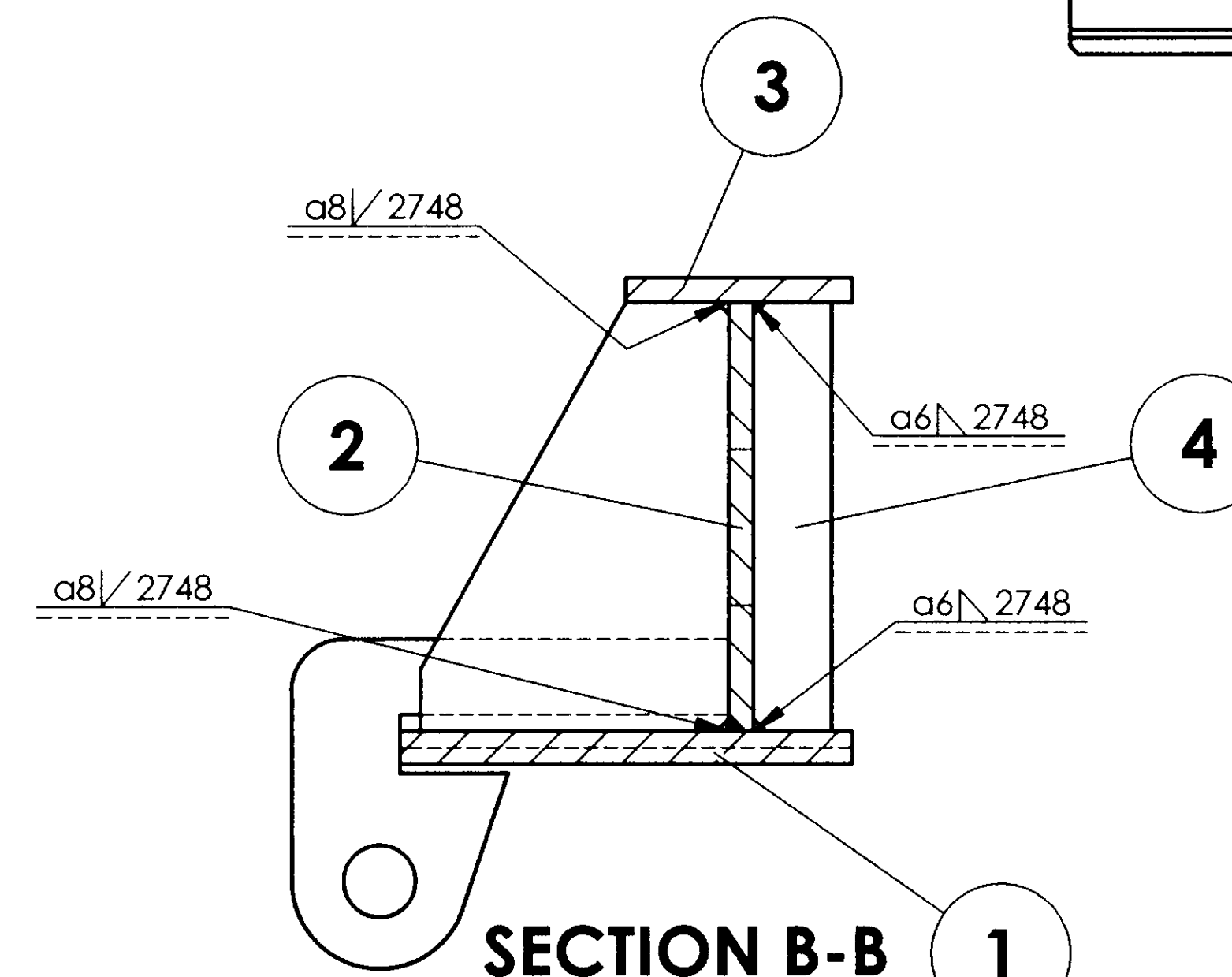
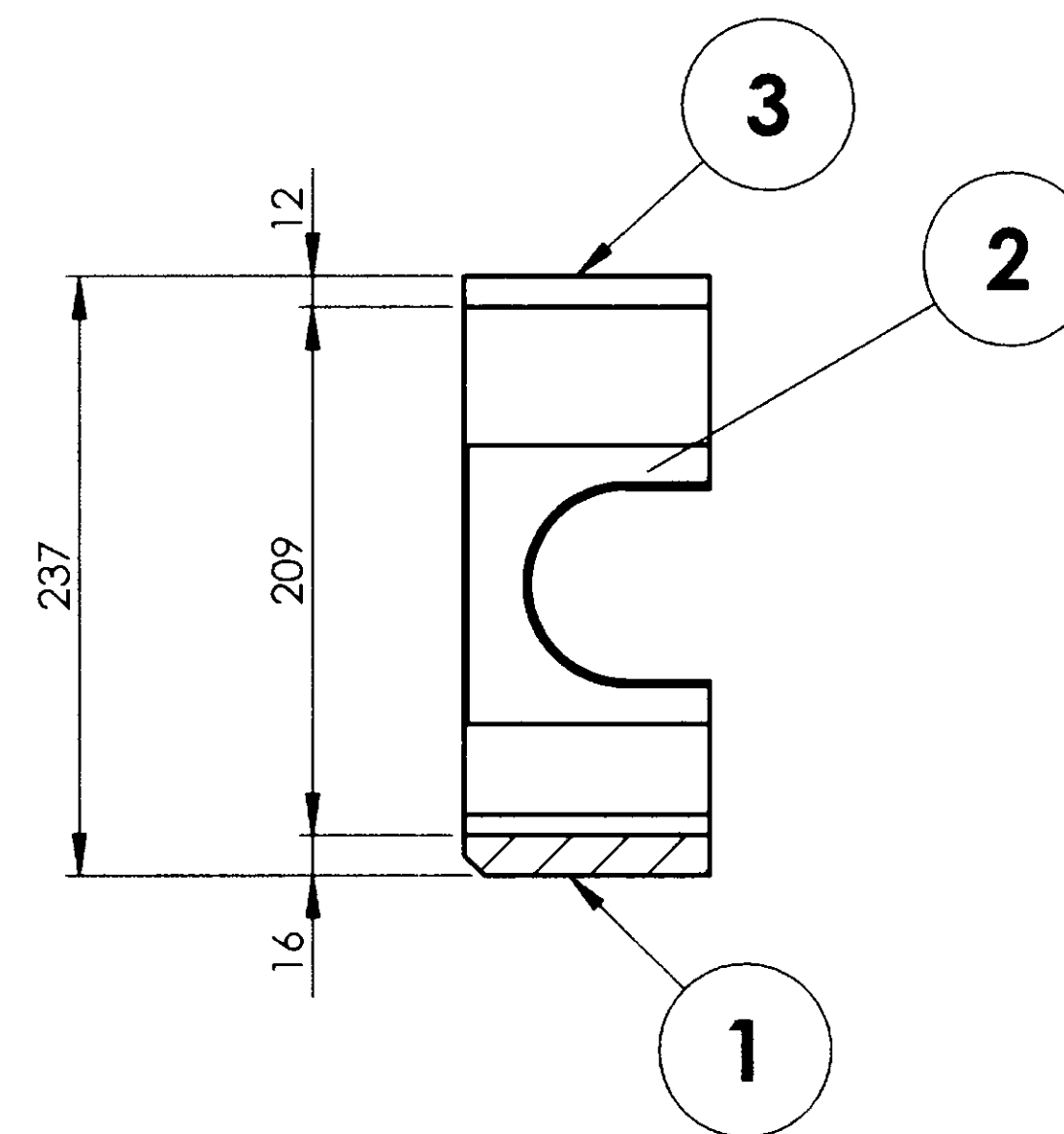
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		DESIGN REVISED.	-sd-
b		QTY FOR ITEM- 4 ALTD FROM 7 TO 5. VIEWS UPDATED ACCORDINGLY.	-sd-
c		QUANTITY FOR ITEM-5 ALTD FROM 5 TO 3 AND ITEM-7 ADDED.	<i>[Signature]</i>

SECTION A-A
SCALE 1 : 5SECTION C-C
SCALE 1 : 5

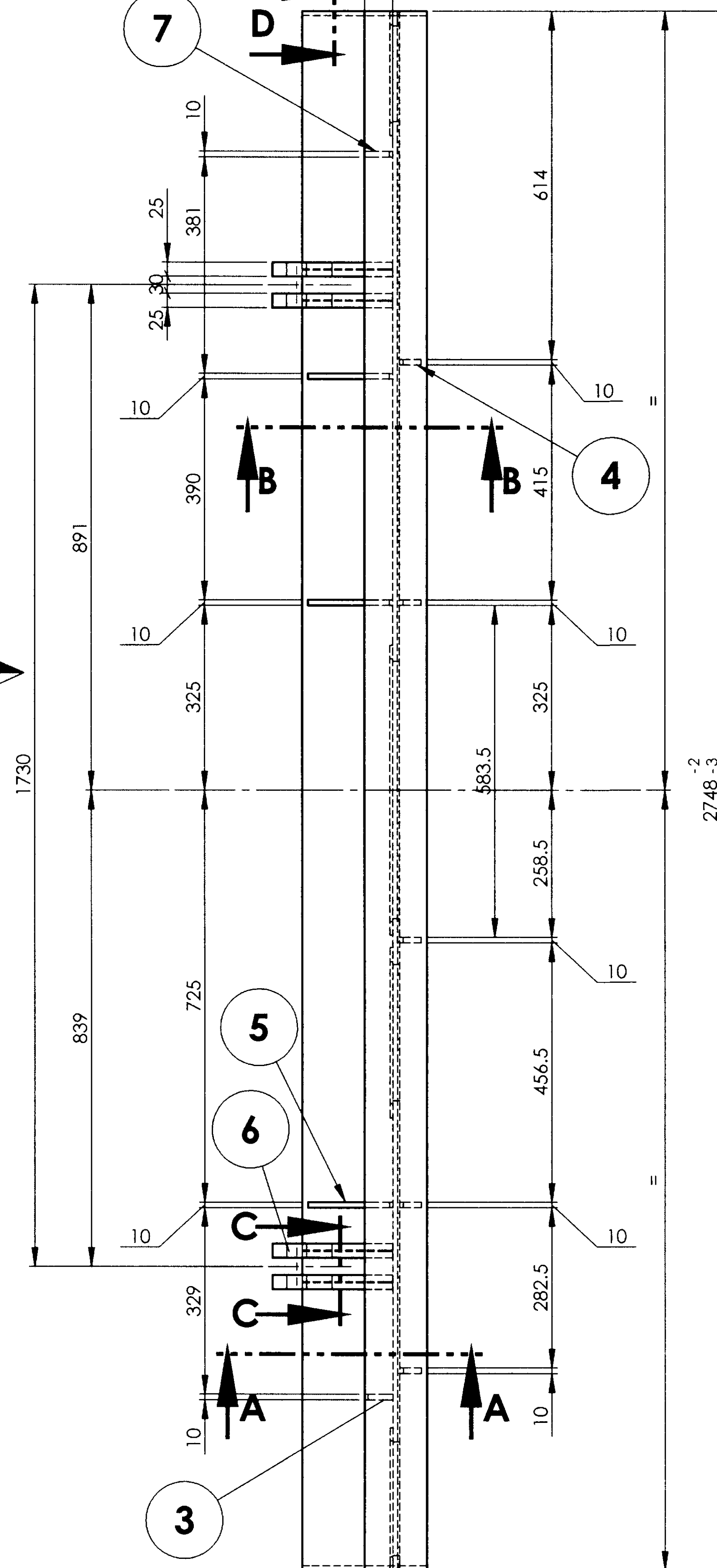
ISOMETRIC VIEW



VIEW FROM -H

SECTION B-B
SCALE 1 : 5SECTION D-D
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.ICF/MRVC/M/SS-11-014-COL-3

2	RIB		7	AAG11151		0.82	
4	LUG		6	ICF/MRVC/M-1-1-003		3.28	ITEM-6
3	RIB		5	AAE11725		1.76	
5	RIB		4	AAE11726		0.62	
1	TOP SHEET		3	AAE11715		28.47	
1	WEB COMPLTE		2	74511044		50.851	
1	BOTTOM PLATE		1	AAE11722		75.82	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1, UNDER FRAME

SURFACE AREA IN Sq.m.: 3.801

WT/ASSY IN Kgs:

**DETAILS OF TRANSFORMER MODULE
(MEMU/DMC 3PH WITH MEDHA
ELECTRICS)**

SCALE
1:10SSE/D
CHD*[Signature]*ALT
cALTD
DRNSATISH KUMAR
B.SARAVANAN

MEMU/DMC/3PH

MEMU/DMC/3PH

INDIAN RAILWAY STANDARDS
INTEGRAL COACH FACTORY, CHENNAI - 600038

SHEET
1 OF 1

74511041


A2

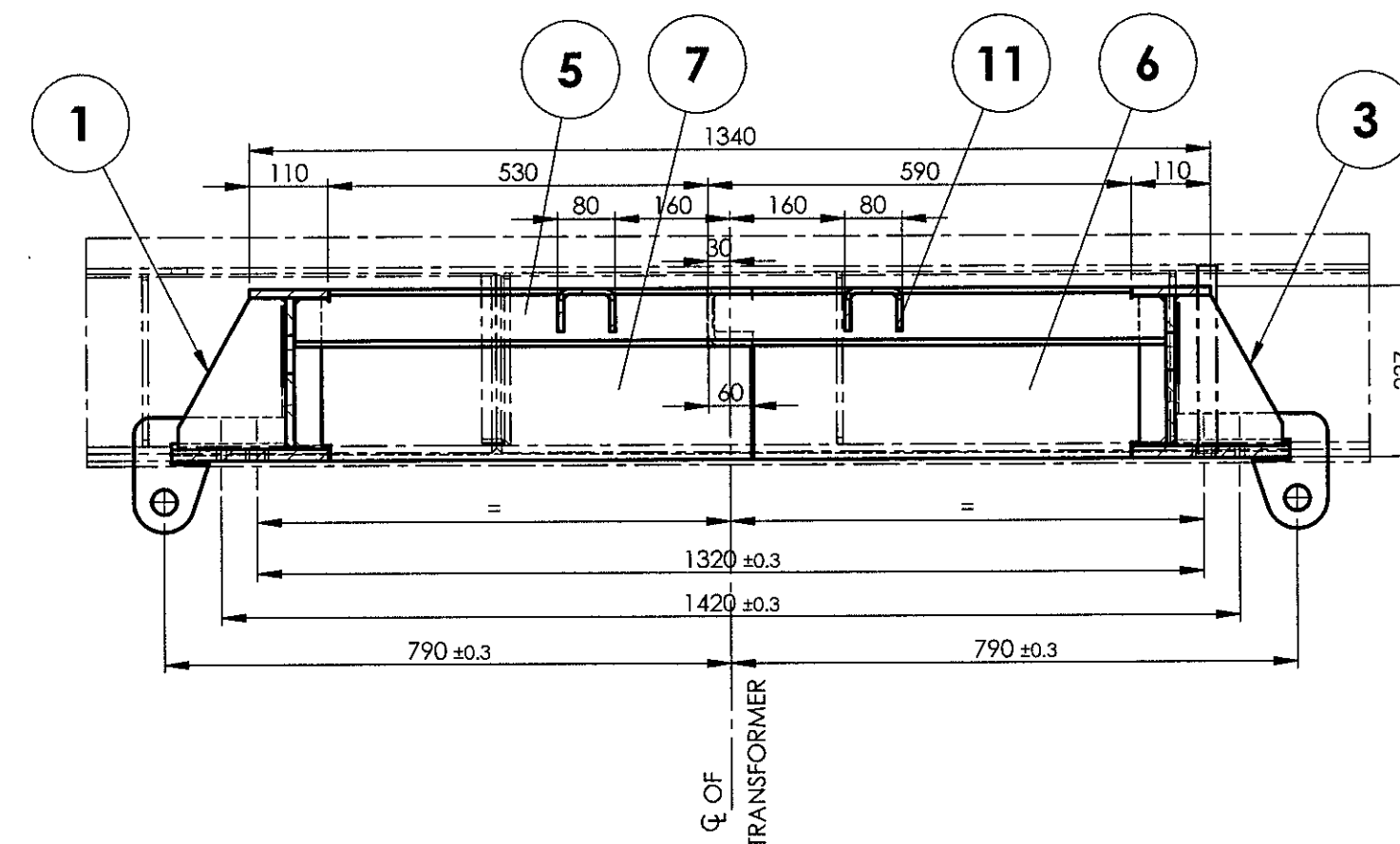
24-09-2019
DATE OF LATEST ALT.

16-03-2018
DATE OF FIRST ISSUE

[Signature]
AME/SME

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO IC/STD-9-0-001.

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		HEIGHT OF FRAME ALTERED FROM 247 TO 237. VERTICAL LOCATION ALTERED. VIEWS UPDATED AS PER DETAILS.	-Sd-
b		BETWEEN CENTRES DISTANCE ALTERED TO 1320±0.3. IN SECTION-AA.	-Sd-
c		ITEM-4 DELETED. ITEMS-10 & 11 ADDED. QTY FOR ITEM-5 ALTD FROM 1 TO 2 & R.M. SIZE OF ITEM-2 ALTD. VIEWS UPDATED AS PER DETAILS.	-Sd-
d		Ø14-M6 HOLES ADDED.	




Technical drawing of a reinforced concrete beam cross-section. The drawing shows a rectangular beam with a total height of 237. The reinforcement details are indicated by numbered circles 1 through 7. The beam is shown with a top view and a side view. The top view shows the reinforcement layout, including top bars (1, 2, 3, 4, 5, 6, 7) and bottom bars (8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The side view shows the beam's profile and the reinforcement layout. The drawing includes dimensions for the beam's height (237) and the reinforcement layout. The reinforcement details are indicated by numbered circles 1 through 7. The beam is shown with a top view and a side view. The top view shows the reinforcement layout, including top bars (1, 2, 3, 4, 5, 6, 7) and bottom bars (8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The side view shows the beam's profile and the reinforcement layout. The drawing includes dimensions for the beam's height (237) and the reinforcement layout. The reinforcement details are indicated by numbered circles 1 through 7.


[illegible]

NOTE:-

1. ALL THE HOLES TO BE JIG DRILLED.
2. FOR OPEN TOLERANCE REFER ICF/STD-9-0-001.
3. FINISHED COMPONENT SHALL BE THOROUGHLY CLEANED AND APPLIED WITH TWO COATS OF RED OXIDE ZINC CHROMATE PRIMER TO IS:2074-92/1 TO A DFT OF MINIMUM 35 MICRONS WITH SMOOTH & MATT FINISH.
4. MANUFACTURER'S NAME, RUNNING SERIAL NO. & MONTH & YEAR OF MANUFACTURE SHALL BE PUNCHED IN 6mm HEIGHT & 1mm DEEP ON THE SPACE PROVIDED.
5. ITEM SHALL BE OFFERED FOR PROTOTYPE INSPECTIN BY ICF BEFORE TAKING UP BULK MANUFACTURE. SINCE THE ITEM IS DEVELOPED FOR THE FIRST TIME, MINOR DESIGN CHANGES LIKE CHANGE OF LOCATION OF MOUNTING SIZE AND WELDING REQUIREMENTS HAVE TO BE ACCOMMODATED. THESE CHANGES SHALL BE IMPLEMENTED IN CONSULTATION WITH DESIGN DEPARTMENT OF ICF.
6. FOR WELDING PROCEDURE, REFER DRG. NO.: ICF/STD-1-1-999.

DRIVING END

17-08-2019	16-03-2018	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	A.M.E./S.M.E.

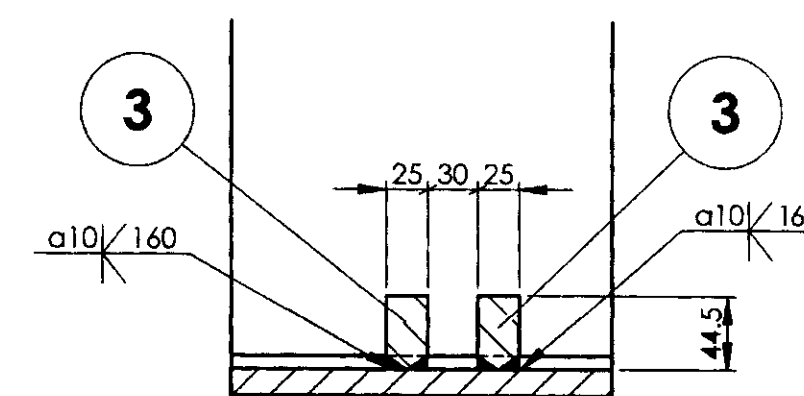
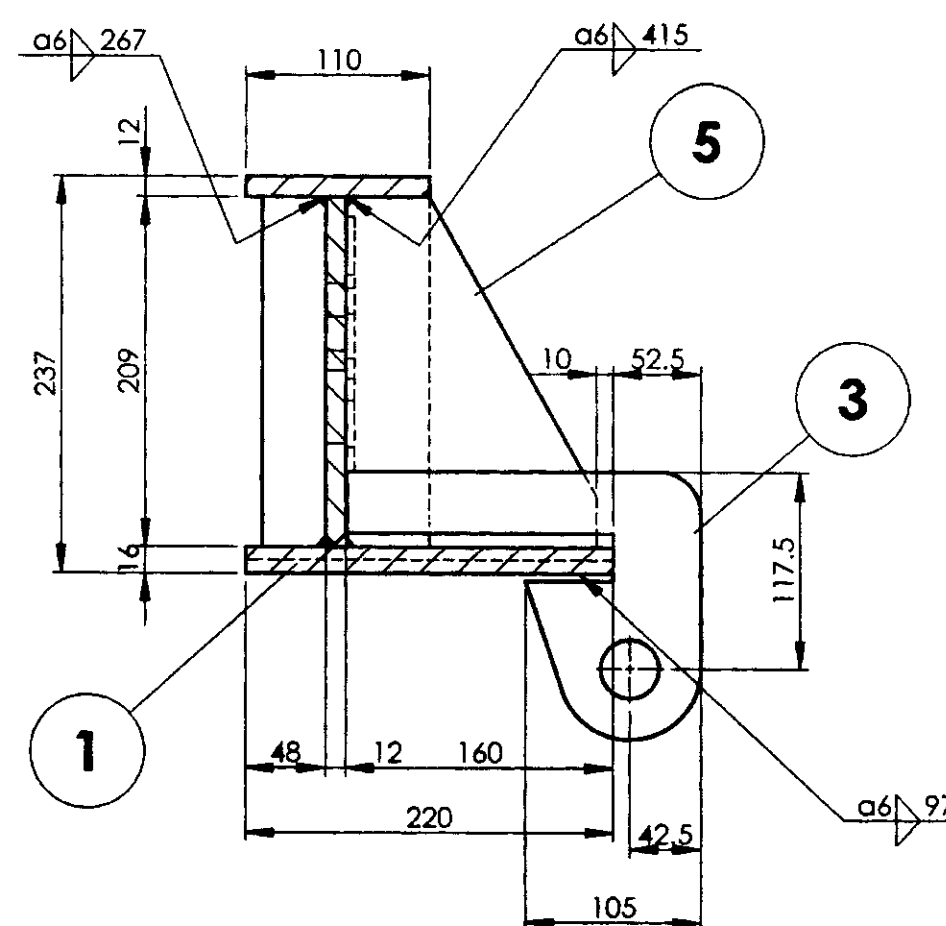
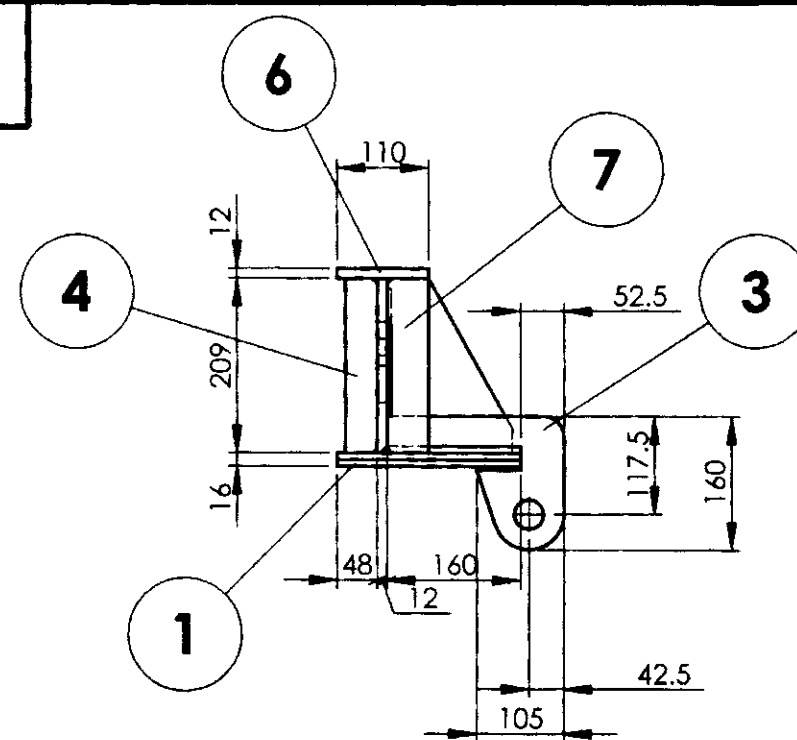
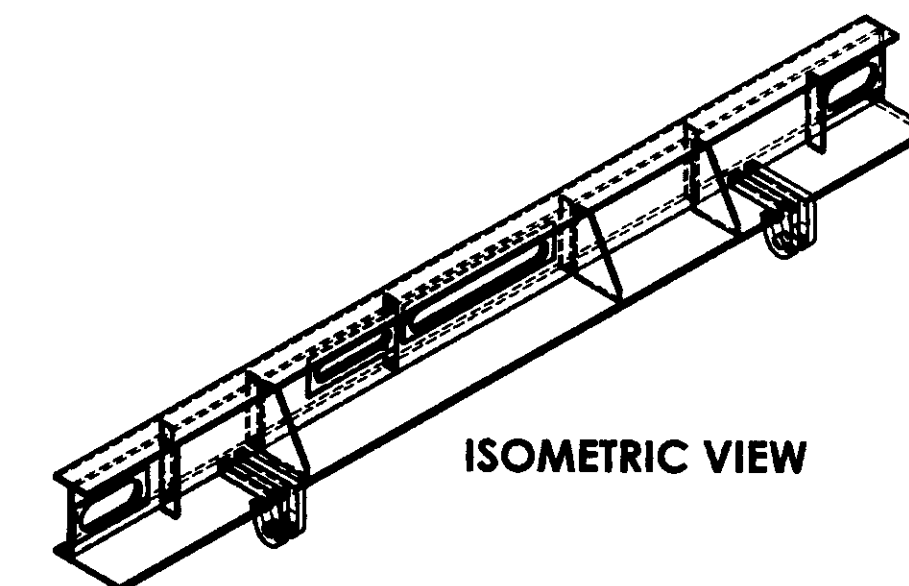
m.: 11.657		WT/ASSY IN Kgs:	
SCALE 1:10		SSE/D	<i>P. Sange</i>
		CHD	
		ALT.	B.SARAVANAN
		d	30-V.S.SRIDHARAN, 20-SATISH KUMAR
		MEMU/DMC/3PH	
SHEET 1 OF 1		74511042	
		A1	

74511043

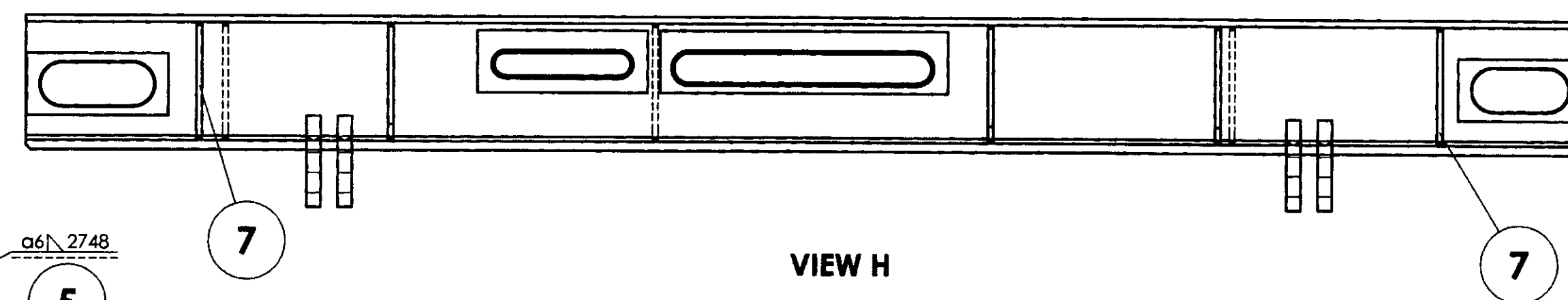
▽ ROUGH MACHINED	(01) ROUGH CLEANED
▽▽ FINISH MACHINED	(01b) BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	(18) CHAMFERED

REVISIONS

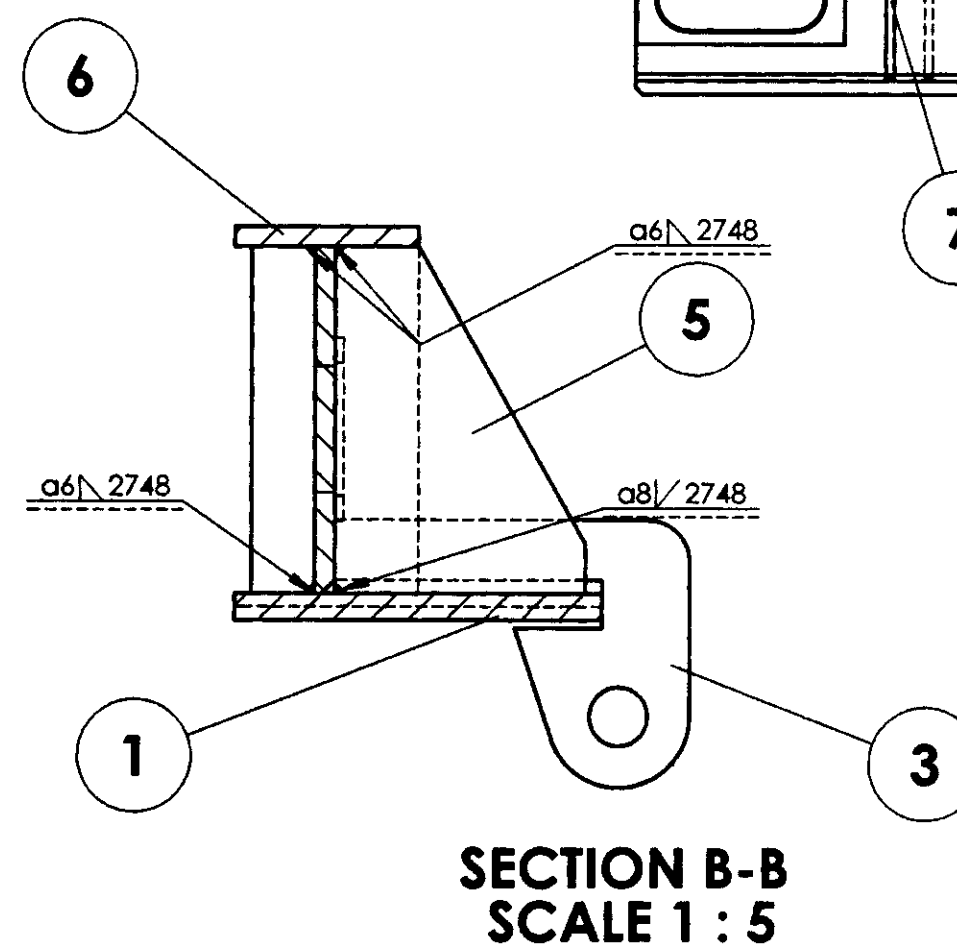
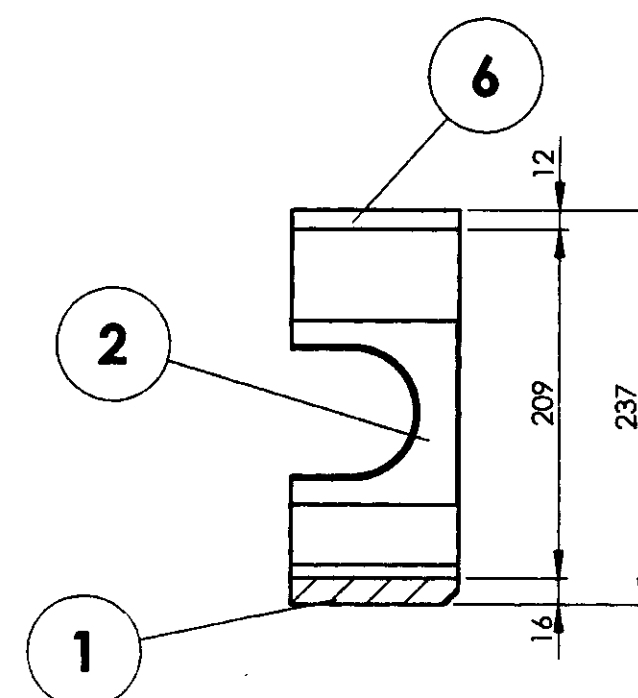
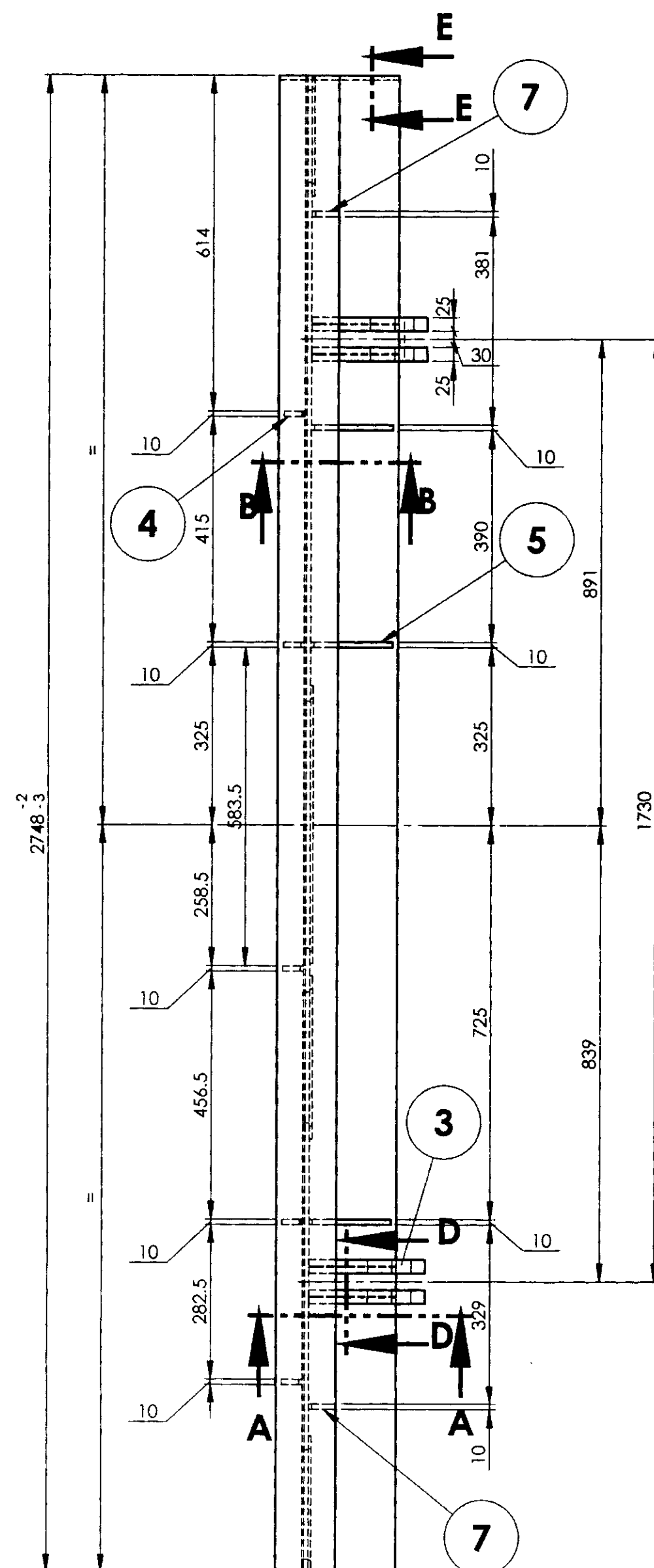
ALT.	ZONE	DESCRIPTION	APPROVED & DATE
a		LOCATION OF CENTRE LINE MARKED IN THE PLAN VIEW CORRECTED & ALL RELATED DIMENSION REVISED.	-sd-
b		DESIGN REVISED.	-sd-
c		QTY FOR ITEM - 4 ALTD FROM 7 TO 5. VIEWS UPDATED ACCORDINGLY.	-sd-
d		QUANTITY FOR ITEM-5 ALTD FROM 5 TO 3 AND ITEM-7 ADDED.	<i>[Signature]</i>

SECTION D-D
SCALE 1 : 5

ISOMETRIC VIEW

SECTION A-A
SCALE 1 : 5

VIEW H

SECTION B-B
SCALE 1 : 5SECTION E-E
SCALE 1 : 5

REF.DRG.NO.ICF/MRVC//M/SS-11-014

2	RIB		7	AAG11151		0-817...	
1	TOP SHEET		6	AAE11715		28.47	
3	RIB		5	AAE11725		1.76	
5	RIB		4	AAE11726		0.62	
4	LUG		3	ICF/MRVC/M-1-1-003		3.28	ITEM-6
1	WEB COMPLETE		2	74511040		50.851	
1	BOTTOM PLATE		1	AAE11722		75.82	
Default	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS

GROUP: 1-1 UNDER FRAME

SURFACE AREA IN Sq.m.:

WT/ASSY IN Kgs:

DETAILS OF TRANSFORMER MODULE
(MEMU/DMC 3PH WITH MEDHA ELECTRICS)

SCALE 1:10	SSE/D	<i>[Signature]</i>
ALT d	CHD	
	ALTD	B.SARAVANAN
	DRN	30-V.S.SRIDHARAN 2D-SATISH KUMAR

MEMU/DMC/3PH

INDIAN RAILWAY STANDARDS
INTEGRAL COACH FACTORY, CHENNAI - 600038SHEET
1 OF 1

74511043

A2

20-09-2019

20-03-2018

DATE OF LATEST ALT.

DATE OF FIRST ISSUE

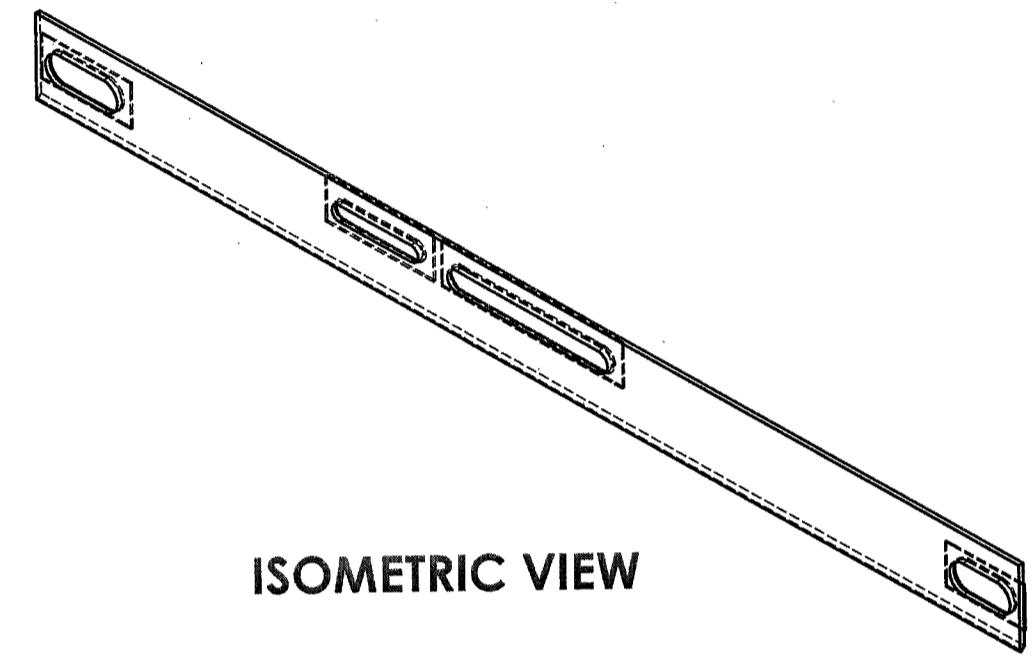
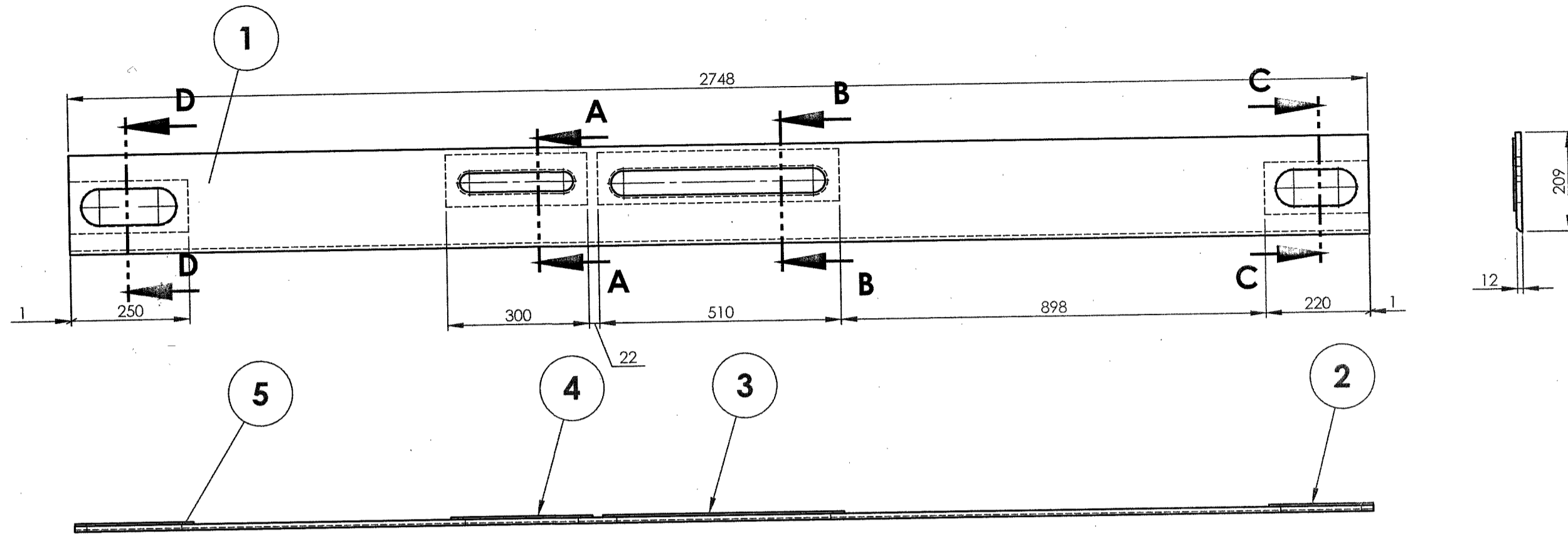
AME/SME

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED. FOR UNTOLERANCED DIMENSIONS AND ROUGHNESS VALUES, REFER DRAWING NO. ICF/STD-9-0-001.
ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID. WELDING SYMBOLS ARE AS PER IS:813:1984. WEIGHT GIVEN IN DRAWING IS FOR INDICATIVE PURPOSE ONLY

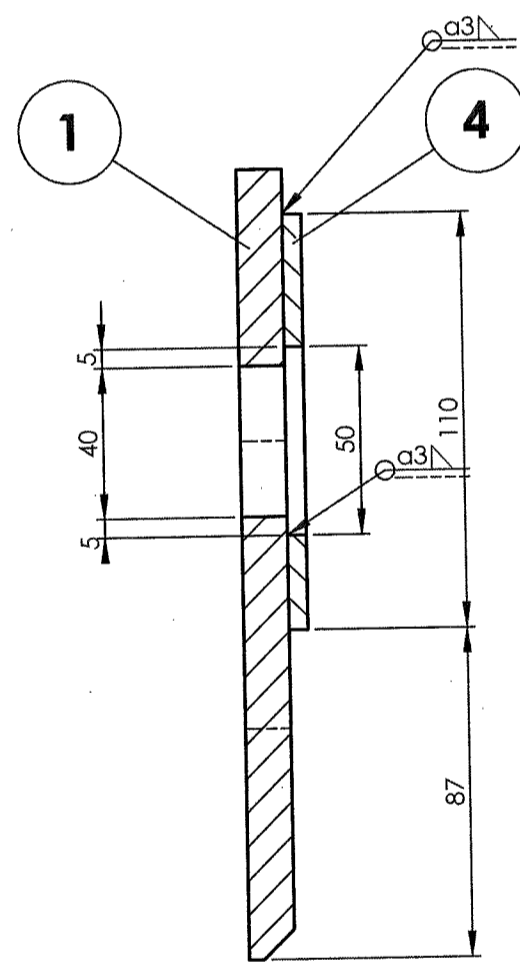
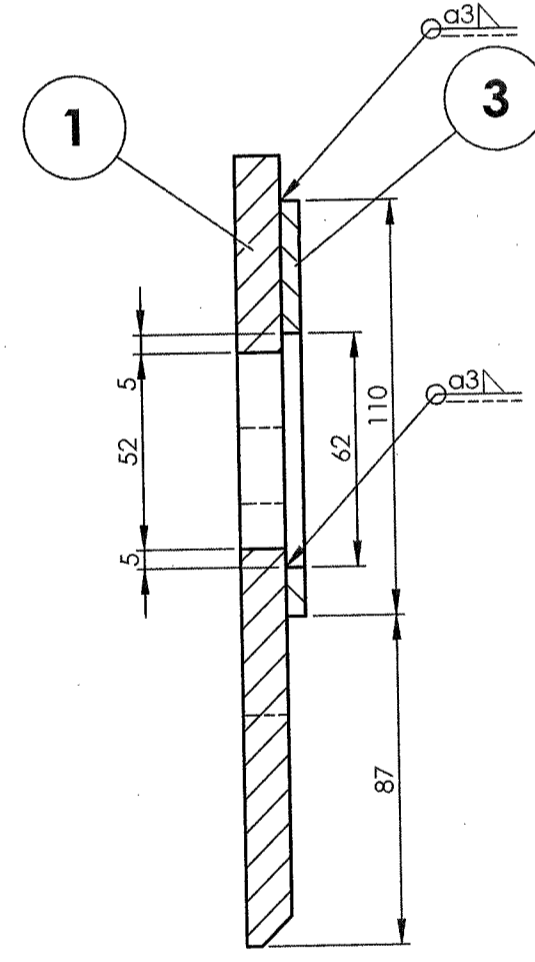
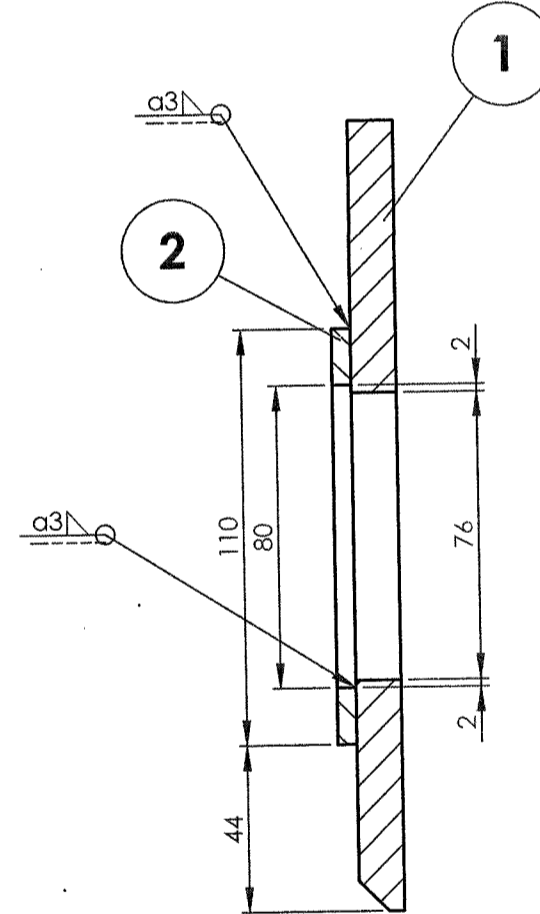
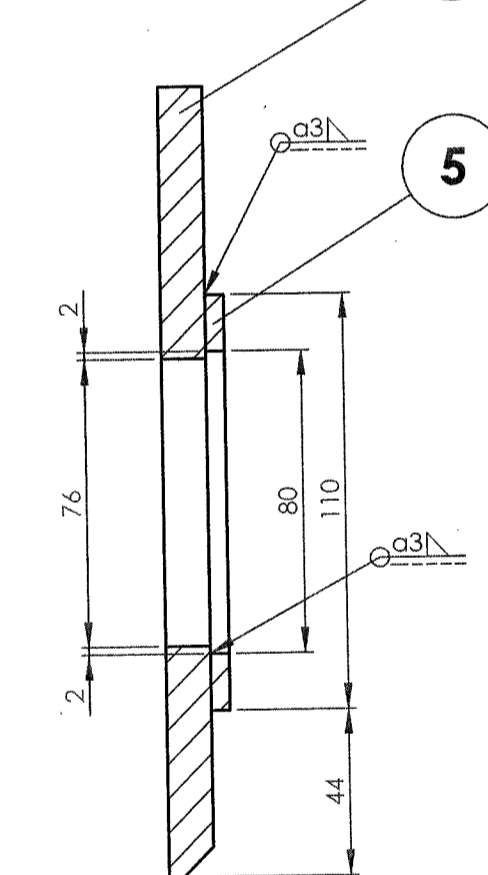
74511044

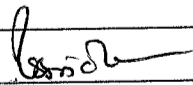
▽ ROUGH MACHINED	① ROUGH CLEANED
▽▽ FINISH MACHINED	② BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	③ CHAMFERED

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



ISOMETRIC VIEW

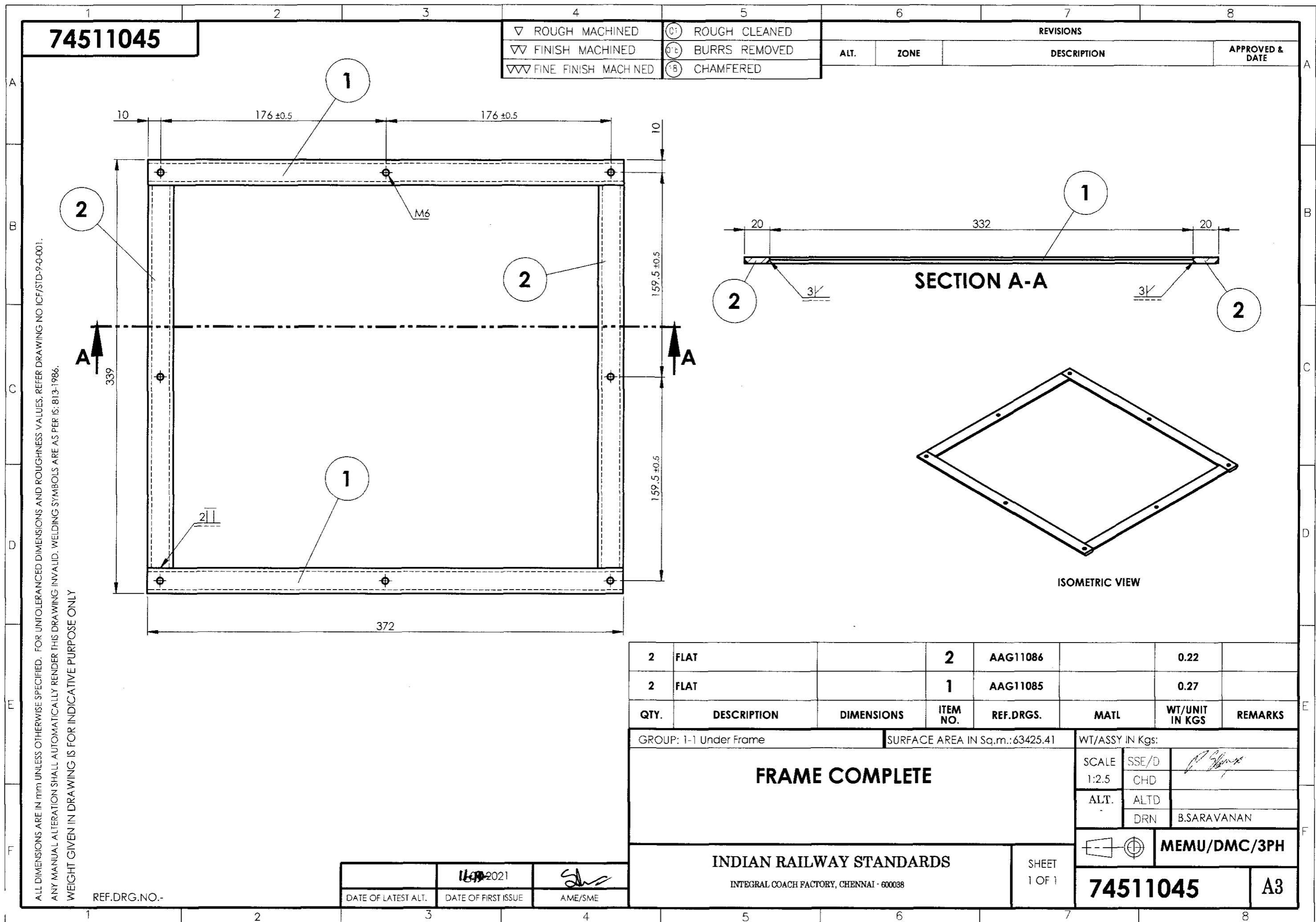
SECTION A-A
SCALE 1 : 2SECTION B-B
SCALE 1 : 2SECTION C-C
SCALE 1 : 2SECTION D-D
SCALE 1 : 2

1	PLATE		5	AAE11800		0.49	
1	PLATE		4	AAE11719		0.83	
1	PLATE		3	AAE11718		1.11	
1	PLATE		2	AAE11717		0.46	
1	WEB		1	AAE11716		47.97	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-1			SURFACE AREA IN Sq.m.: 1.297		WT/ASSY IN Kgs: 		
WEB COMPLETE					SCALE 1:10	SSE/D CHD	
					ALTA	ALTD DRN	P.MURUGAN SATISH KUMAR
						MEMU/DMC/3PH	
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038				SHEET 1 OF 1	74511044		A2

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REF.DRG.NO.

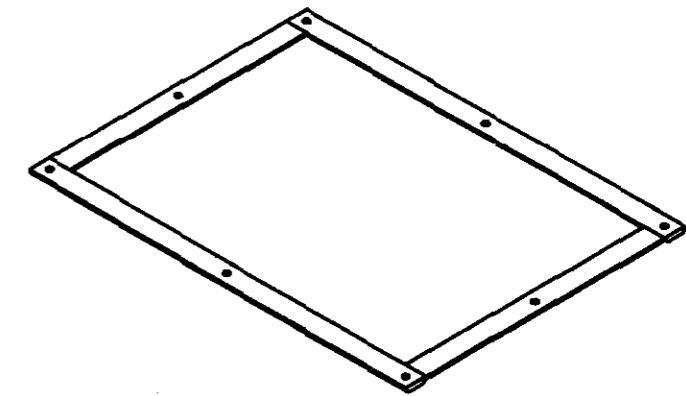
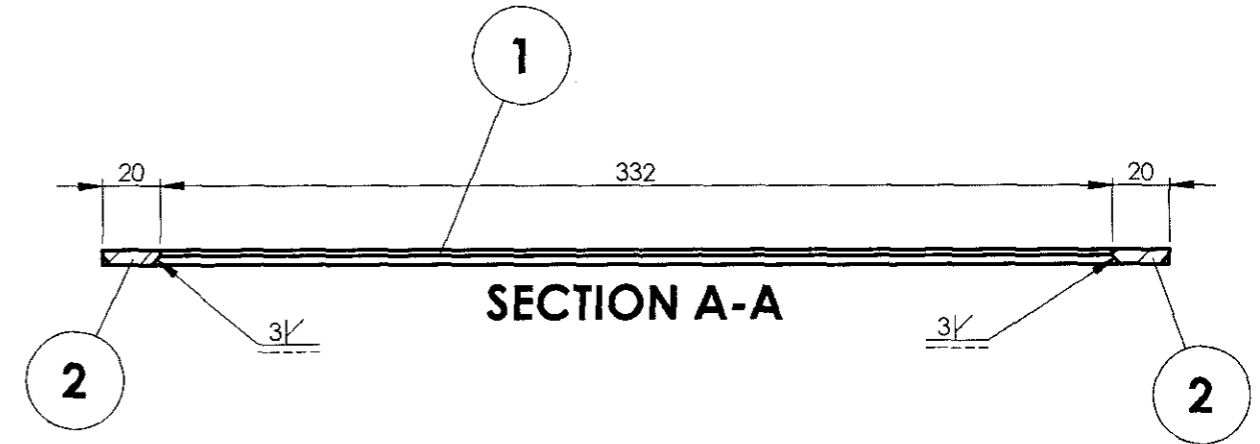
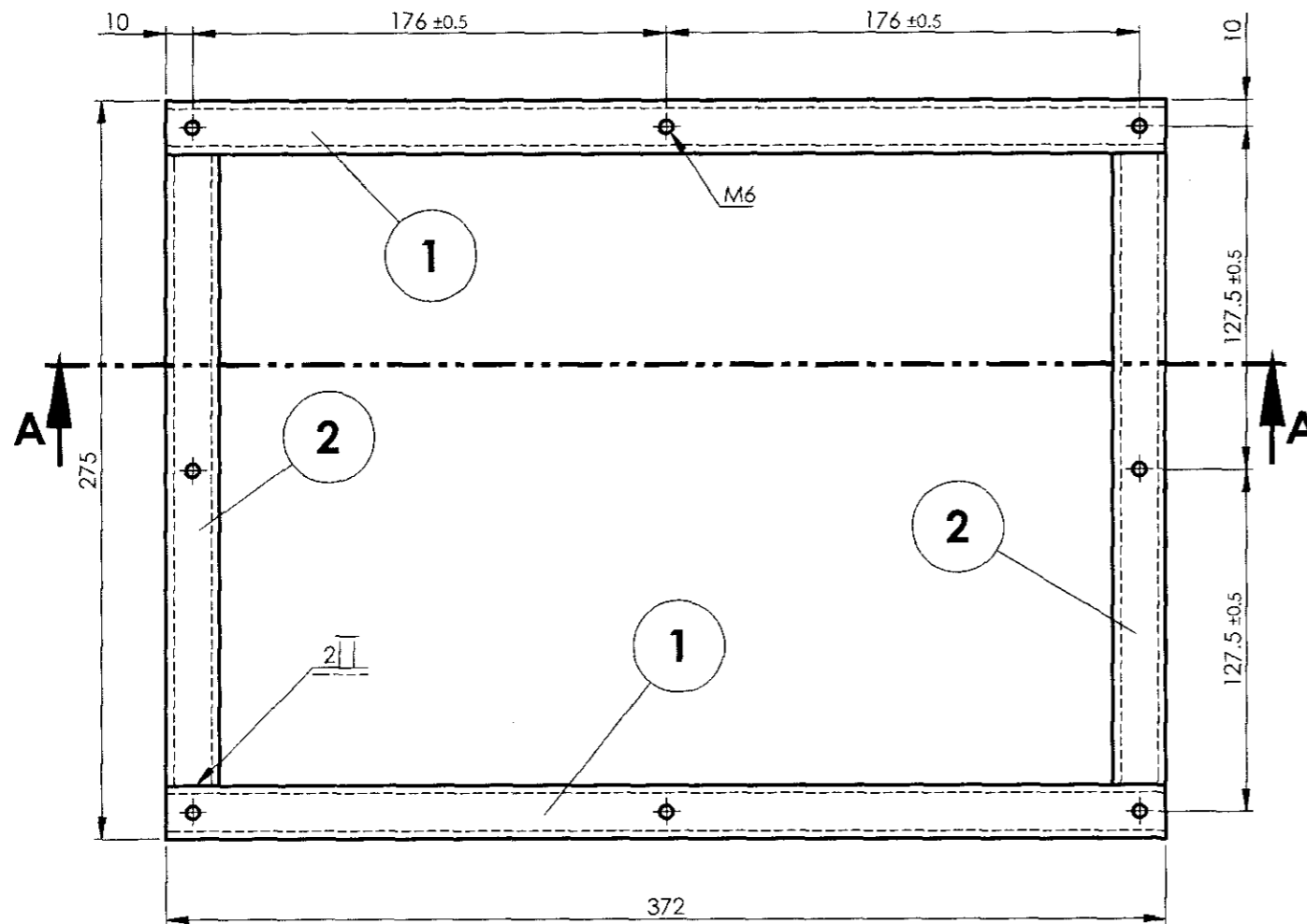
19-04-2018	16-03-2018	<i>Handwritten signature</i>
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME



74511046

▽ ROUGH MACHINED	(31) ROUGH CLEANED
▽▽ FINISH MACHINED	(31b) BURRS REMOVED
▽▽▽ FINE FINISH MACHINED	(18) CHAMFERED

REVISIONS			
ALT.	ZONE	DESCRIPTION	APPROVED & DATE



ISOMETRIC VIEW

2	FLAT		2	AAG11088		0.17	
2	FLAT		1	AAG11085		0.27	
QTY.	DESCRIPTION	DIMENSIONS	ITEM NO.	REF.DRGS.	MATL	WT/UNIT IN KGS	REMARKS
GROUP: 1-1 Under Frame				SURFACE AREA IN Sq.m.: 57475.29		WT/ASSY IN Kgs:	
FRAME COMPLETE					SCALE	SSE/D	
					1:2.5	CHD	
					ALT.	ALTD	
						DRN	B.SARAVANAN
INDIAN RAILWAY STANDARDS INTEGRAL COACH FACTORY, CHENNAI - 600038					MEMU/DMC/3PH		
					SHEET 1 OF 1	74511046	A3

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REF.DRG.NO.-

	161042021	
DATE OF LATEST ALT.	DATE OF FIRST ISSUE	AME/SME