
PRASA PROJECT


APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET


CONFIDENTIAL INFORMATION

This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 	
				TC1	M4	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR3000152645	AAD0001241093	Carshell Assembly TC	CB1210	X					X	PRA.CB1210.DTR3022331 9/3.V25	YES
<input type="checkbox"/>												

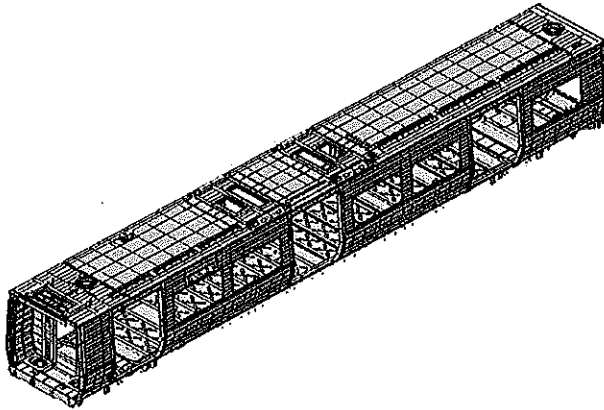
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	09/04/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	09/04/2018
			CHECKER	Nosizo Pindela	09/04/2018
			COMPILER	Thanyani Mathegu	06/04/2018
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	2018/05/18
			CHECKER	Nosizo Pindela	2018/05/18
			REVISED BY	Ramokone Motama	2018/05/18
2	2018/06/18	MODIFICATION CONTENT	APPROVER	Itumeleng Modiba	2018/06/18
			CHECKER	Nosizo Pindela	2018/06/18
			REVISED BY	Ramokone Motama	2018/06/18
3	2018/12/12	Additional checkpoints	APPROVER	Itumeleng Modiba	2018/12/12
			CHECKER	Nosizo Pindela	2018/12/12
			REVISED BY	Ramokone Motama	2018/12/12
5	22/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	22/01/2019
			CHECKER	Nosizo Pindela	22/01/2019
			REVISED BY	Vanessa Ntuli	22/01/2019
6	2019/11/03	Record D1 and D2 on Self - Inspection	APPROVER	Itumeleng Modiba	2019/11/03
			CHECKER	Nosizo Pindela	2019/11/03
			REVISED BY	Nosizo Pindela	2019/11/03
10	21/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	21/08/2019
			CHECKER	Nosizo Pindela	21/08/2019
			REVISED BY	Nosizo Pindela	21/08/2019
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
20	19/04/2020	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi Collins	17/08/2021
			CHECKER	Mpho Mulaudzi	
			REVISED BY	Mpho Mulaudzi	
25	21/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi Collins	21/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlamepe Amogelang	
			REVISED BY	Mohlamepe Amogelang	
27	27/07/2023	Added verification of loaded parts	APPROVER	Ngobeni Tyson	27/07/2023
			CHECKER	Mathapo Kelebane	
			REVISED BY	Mohlamepe Amogelang	
28	07/11/2023	Addition of welding traceability	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Andani Muthelo	
			REVISED BY	Ntokozo Zwane	
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
1234	TC2	Imelo 410081	19.06.24	SI.CB1210.322.V28	16

	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB1210.322.V28
		Date: 07/11/2023	

Car: TC1 & TC2	NCR:	Work station: CB1210
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Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	U	E	S	2	3	8					
DTR30223319/3						X	28		OK	N/A	19.06.24

I.2 - Instruments Control

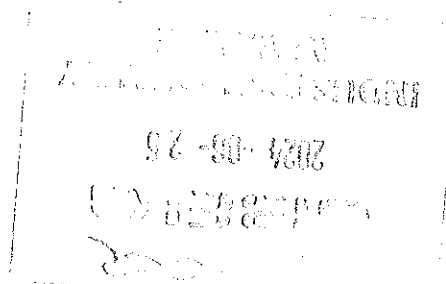
Monitoring and Measuring Instrument Control - Used for Special Process


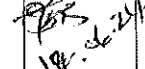

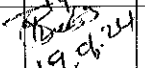
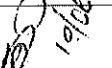
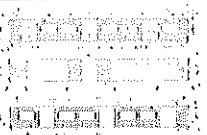
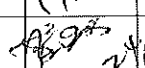
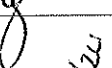
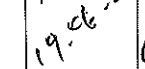

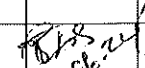
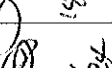
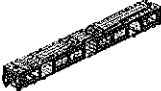
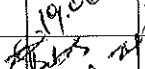

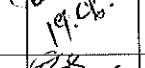

Instruments	Validation	Calibration or Verification Validation Date	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
INSTRUMENT	82823 -2	15/05/25	OK	19.06.24	
LEADER TAPE	125428924	08/11/25	OK	19.06.24	
(30m) TAPE	115TP0102	18/11/24	OK	19.06.24	

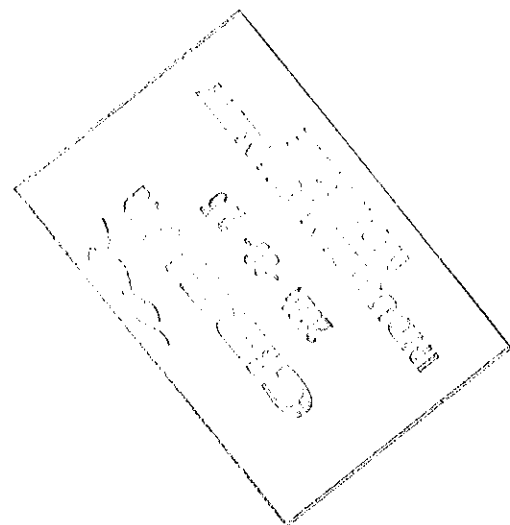
I.3 Consumables

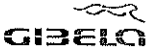
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308	314018-74097	MIG	OK	19.06.24	
ER 308L	294687-70822	TIG	OK	19.06.24	



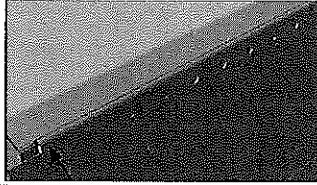
		DTR30223319/3 Carshell Assembly TC		Rev. V28	Project: PRASA	
				Date- 07/11/2023	SI.CB1210.322.V28	
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe)	DT00000284980	✓	 19.06.24	 19/06/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓	 19.06.24	 19/06/24
03		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓	 19.06.24	 19/06/24
04	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓	 19.06.24	 19/06/24
05	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	 19.06.24	 19/06/24
06		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓	 19.06.24	 19/06/24
07	N/A	Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658	✓	 19.06.24	 19/06/24



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Welder traceability

Roof ring welds



Boiler maker (Name & Sign): <u>Tunice Bebb</u>	Welder (Name & Sign): <u>Sipb Ly</u>
Boiler maker (Name & Sign): <u>Innocent Bebb</u>	Welder (Name & Sign): <u>Sipb Ly</u>

END 1

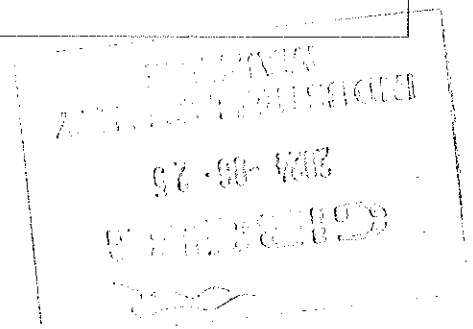
Boiler maker (Name & Sign): <u>Tunice Bebb</u>	Welder (Name & Sign): <u>Mtshwisi</u>
Boiler maker (Name & Sign): <u>Innocent Bebb</u>	Welder (Name & Sign): <u>Mtshwisi</u>


END 2



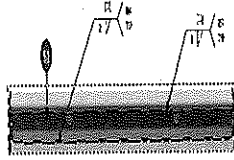
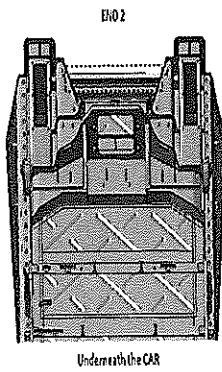
Boiler maker (Name & Sign): <u>Lunga</u>
Welder (Name & Sign): <u>Kerai Kweb</u>

Boiler maker (Name & Sign): <u>Lunga</u>
Welder (Name & Sign): <u>Kerai Kweb</u>



	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
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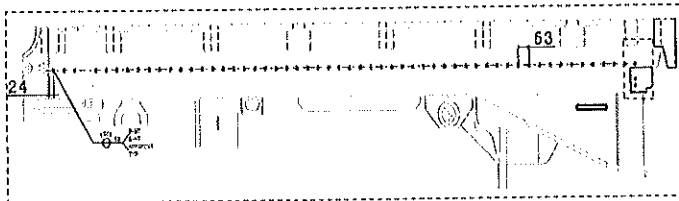
EUJ Reinforcement Plates



END 2

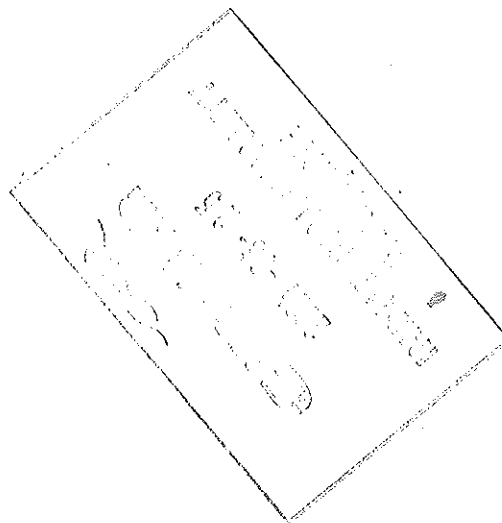
Boiler maker (Name & Sign): LUNGA MJO


Welder (Name & Sign): Thabang

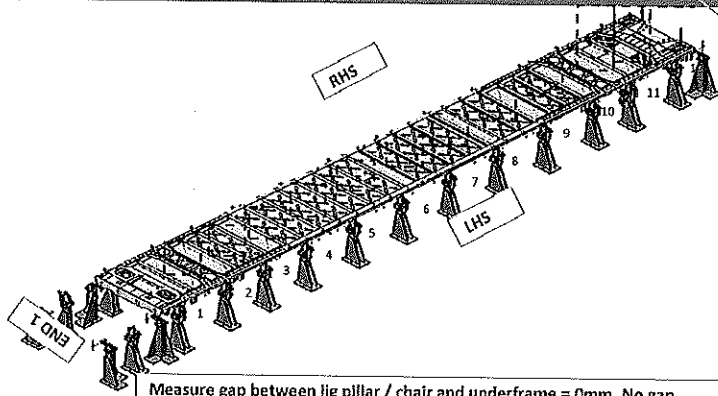


FEDOLI

Operator: Lawrence Mkgow




	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
		Date- 07/11/2023	SI.CB1210.322.V28
Specifications of Details for CBS measurement			



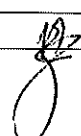
Fill in the gap foundon each jig pillars / chair and underframe should be 0mm.
After Loading Underframe and Clamping.

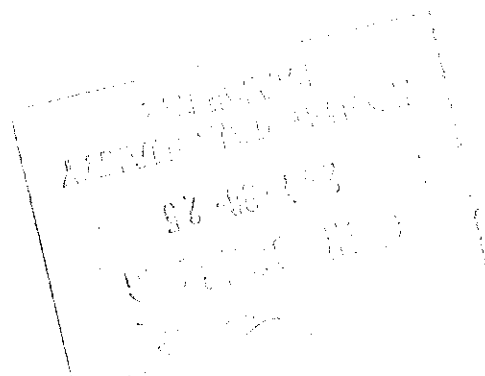
	1	2	3	4	5	6	7	8	9	10	11	12
Left Hand Side	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	0	0

Signature Operations:  Date: 19.06.24

After Welding.

	1	2	3	4	5	6	7	8	9	10	11	12
Left Hand Side	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	1	0

Signature Industrial Quality:  Date: 19/06/24



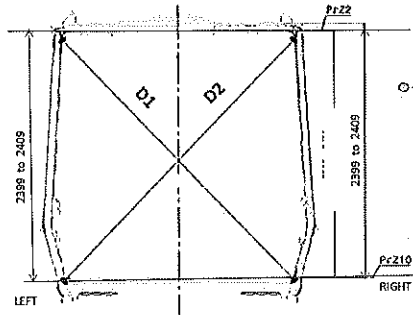
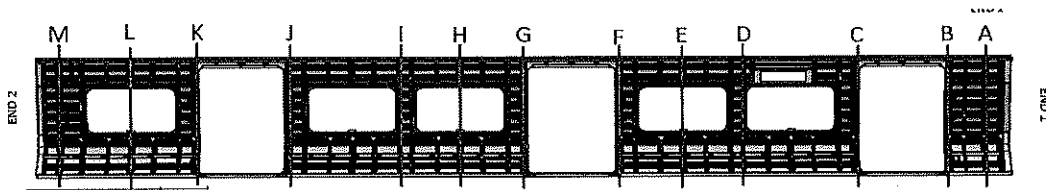


DTR30223319/3 Carshell Assembly TC

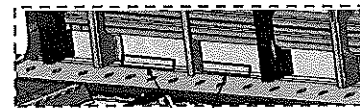
Rev.
V28
Date-
07/11/2023

Project: PRASA
SI.CB1210.322.V28

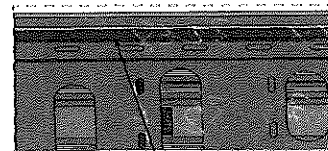
Specifications of Details for CBS measurement



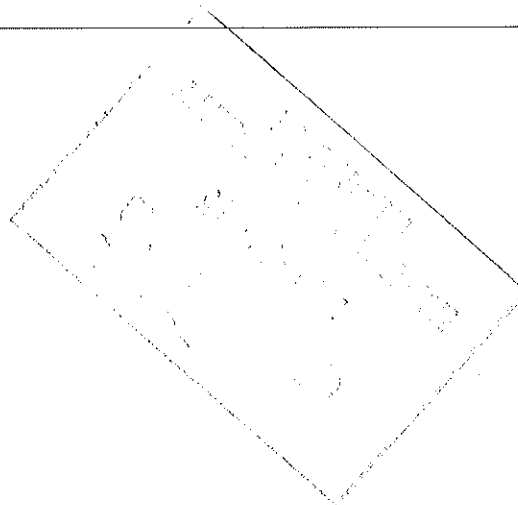
Measurement positions on roof rail and sidewall omega corner.




Measurement positions on sidewall and side sill corner.

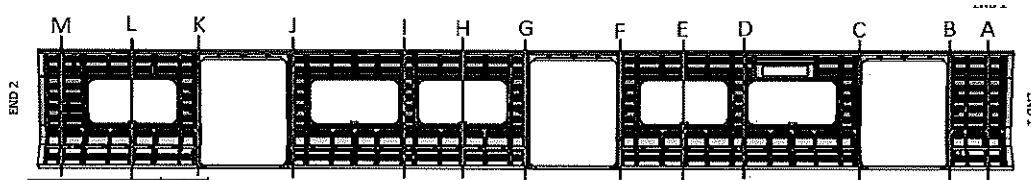


Reinforcement area measurement positions on roof reinforcement area.



	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB1210.322.V28
		Date- 07/11/2023	
Specifications of Details for CBS measurement			

BEFORE WELDING




PME: The difference in Height values measured on the LHS and RHS should be $\leq 2\text{MM}$ on each point.

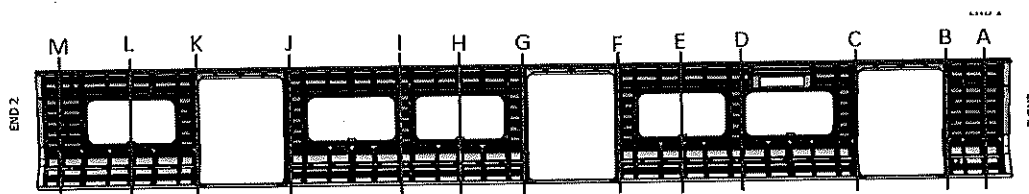
	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	8268	8268	0	2405	2405	0
B	8267	8267	0	2406	2406	0
C	8268	8268	0	2407	2406	1
D	8269	8270	1	2406	2406	0
E	8270	8271	1	2407	2408	1
F	8269	8269	0	2406	2406	0
G	8268	8268	0	2406	2408	1
H	8267	8266	1	2407	2406	1
I	8271	8269	2	2406	2406	0
J	8268	8268	0	2406	2406	0
K	8267	8266	1	2407	2406	1
L	8268	8269	1	2406	2406	0
M	8268	8267	1	2405	2406	1

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		Date- 07/11/2023	
Specifications of Details for CBS measurement			


AFTER WELDING



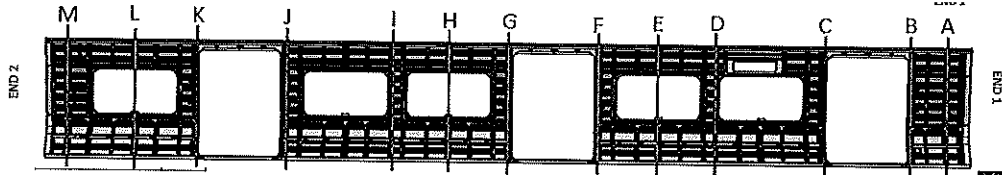
PME: The difference in Height values measured on the LHS and RHS should be $\leq 2\text{MM}$ on each point.

	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3270	3270	0	2405	2405	0
B	3268	3268	0	2406	2406	0
C	3267	3267	0	2405	2406	1
D	3271	3271	0	2407	2407	0
E	3270	3269	1	2406	2406	0
F	3268	3268	0	2406	2406	0
G	3267	3267	0	2406	2407	1
H	3270	3268	2	2406	2406	0
I	3271	3271	0	2407	2406	1
J	3267	3267	0	2406	2406	0
K	3268	3268	0	2406	2406	0
L	3269	3267	2	2408	2406	1
M	3268	3268	0	2405	2407	2

19.06.24

	DTR30223319/3 Carshell Assembly TC	Rev. V28 Date: 07/11/2023	Project: PRASA SI.CB1210.322.V28
CBS measurement			

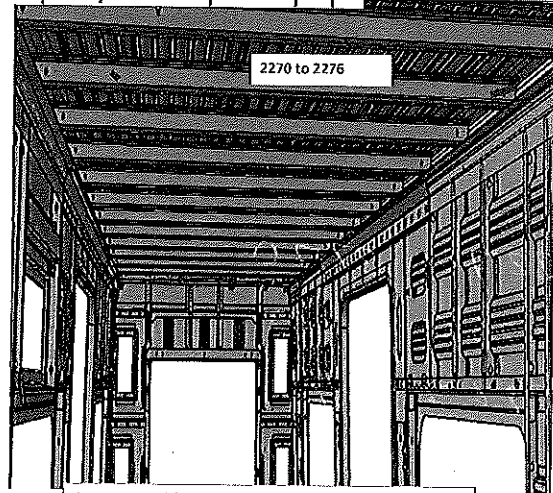
BEFORE WELDING



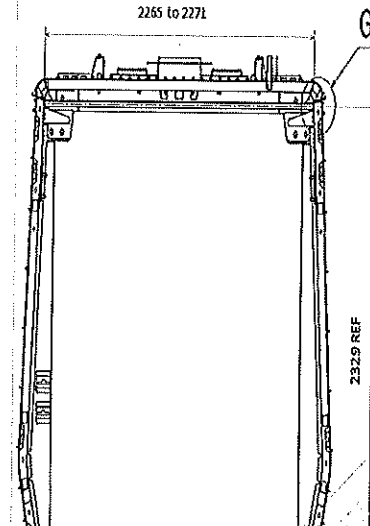
2270 to 2276

2268 a 2274

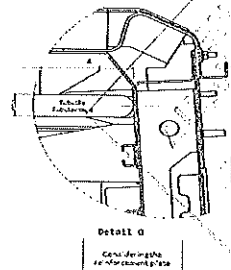
A	2271
B	2268
C	2269
D	2275
E	2273
F	2270
G	2272
H	2273
I	2276
J	2274
K	2272
L	2273
M	2272



Do not consider reinforcement (Take measurements top area of zee profile



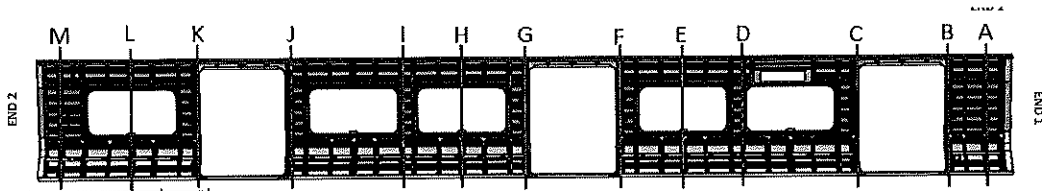
2265 to 2271



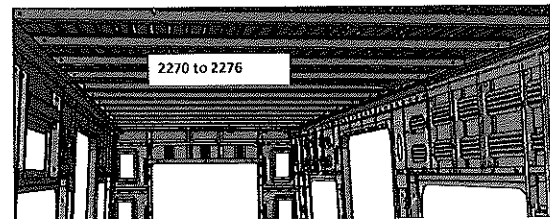
Detail a
Consider reinforcement

19.06.24

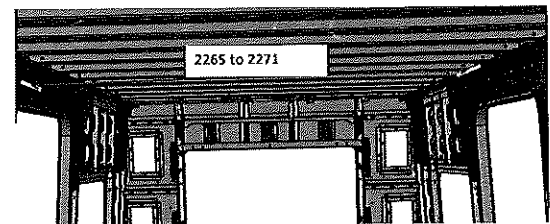
AFTER WELDING



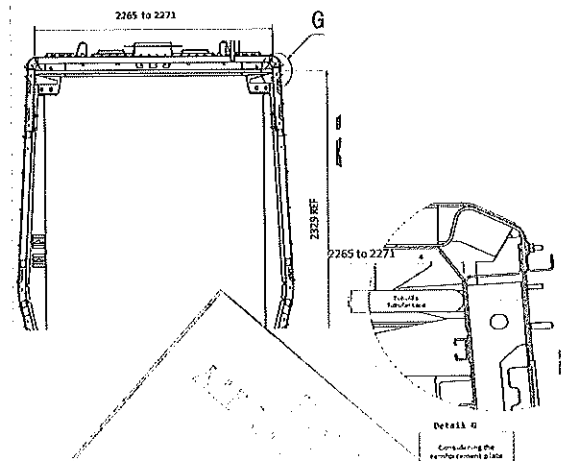
	2265 to 2271	2270 to 2276
A	N/A	2273
B	2268	N/A
C	2267	N/A
D	N/A	2276
E	N/A	2274
F	2269	N/A
G	2268	N/A
H	N/A	2273
I	N/A	2275
J	2267	N/A
K	2268	N/A
L	N/A	2274
M	2267	N/A



Do not consider reinforcement (Take measurements top area of zee profile



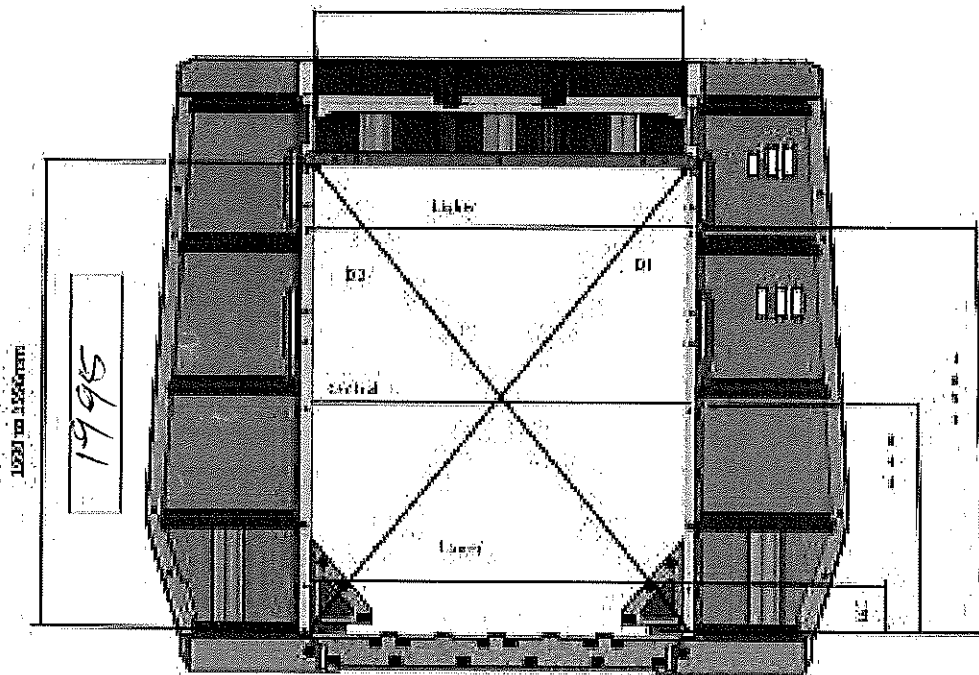
Take measurement close to radius (considering reinforcement)



19.06.24

Specifications of Details for CBS measurement

Endframe 2



TIED TO 1350mm

DIAGONAL DIFFERENCE D1-D2 = 30mm

Upper Dimension

1882

D1

2417

Central Dimension

1881

D2

2415

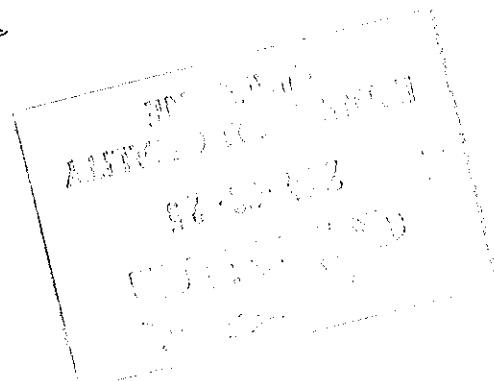
Lower Dimension

1881

D1-D2

2

19.06.24





DTR30223319/3 Carshell Assembly TC

Rev.

V28

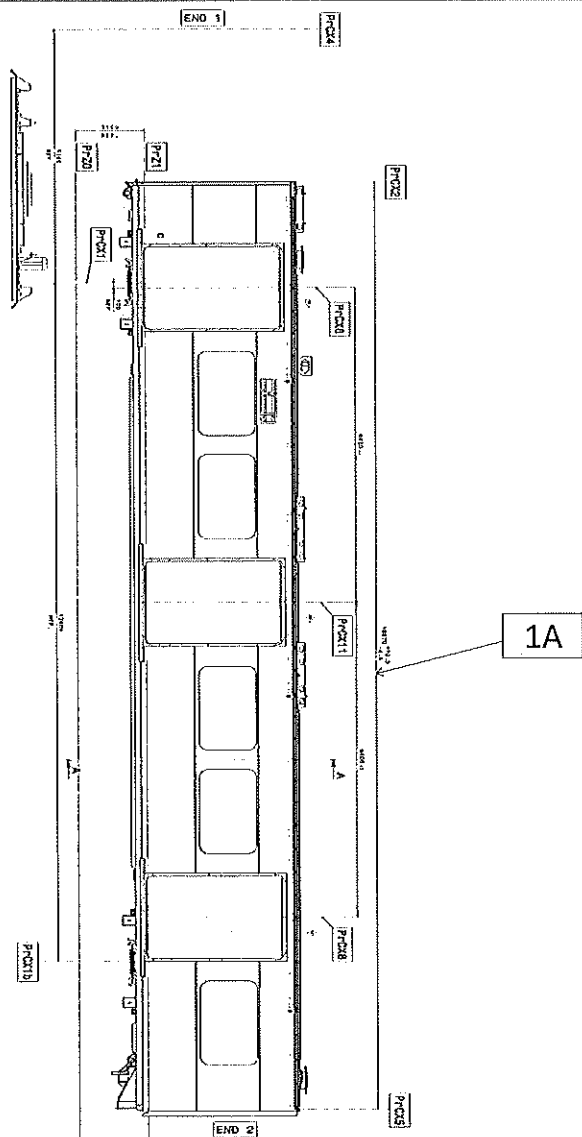
Project: PRA5A

Date-

07/11/2023

SI.CB1210.322.V28

Specifications of Details for CBS measurement



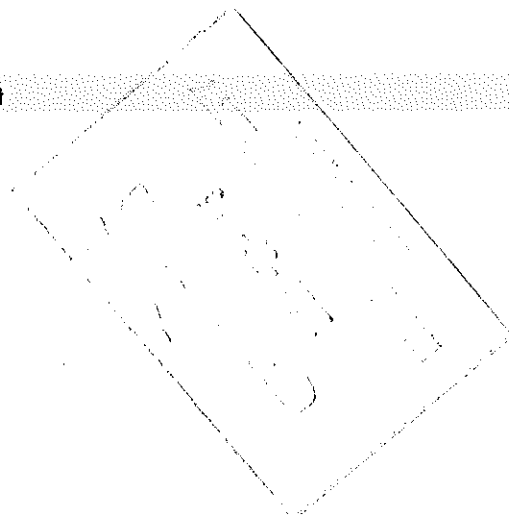
LEFT SIDE			
	SPECIFICATION SIZE	ACTUAL SIZE	
1A	18870	± 10.5 ± 4.5	18871

RIGHT SIDE			
	SPECIFICATION SIZE	ACTUAL SIZE	
1A	18870	± 10.5 ± 4.5	18868

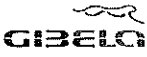
19.06.24

Dye penetrant test

Dye-penetration test to be performed by quality personnel

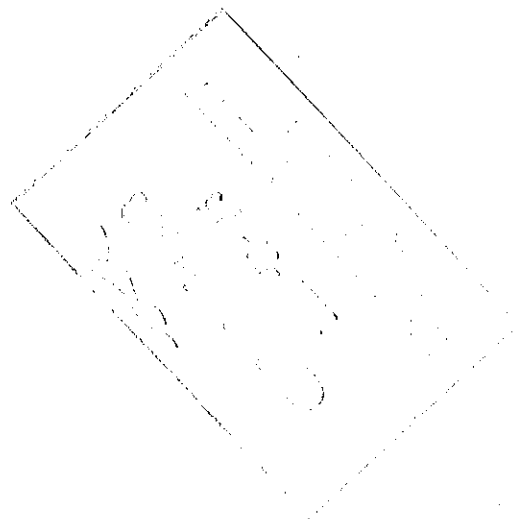



[illegible][illegible]

		DTR30223319/3 Carshell Assembly TC		Rev. V28	Project: PRASA	
				Date- 07/11/2023		
Self Inspection - Final Result						
Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT	GO	If activities are not complete, the missing activities must not impact the next stage!	19.06.24	Kuneda	Enoch	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	19/06/24	Ntokozo	PR	
		There are activities pending that impact/stop the activities of the next process Obs: (To describe problems below)				
		There are non-conformities impact the quality of the product and there is no corrective action defined yet)				
In case of "NO GO", describe blocking problems						
In case of "NO GO", the operations manager must define below action plan to ensure "GO":						
Item	Description	Action	Responsible	Due date	Status	

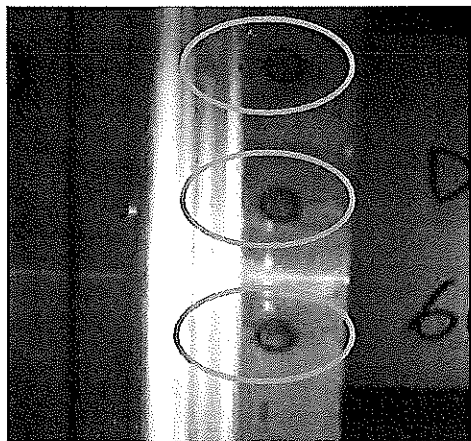
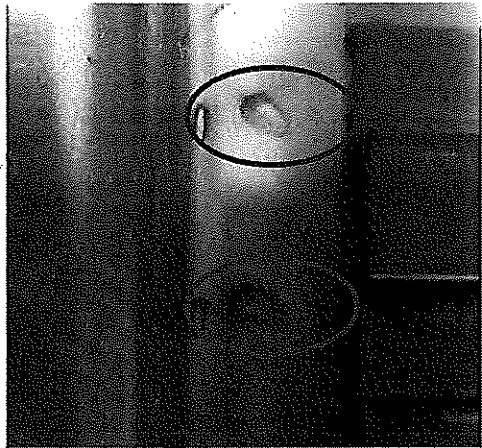
Operations


Quality



	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB1210.322.V28
		Date- 07/11/2023	

ANNEXURE A: Spot Welding Quality Acceptance Standard

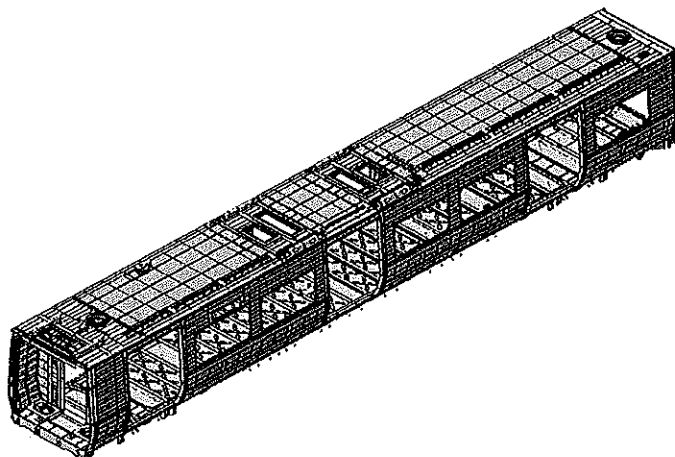


	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	

Carro Car:	TC1, TC2	NCR:	Work station:	CB2220
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Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4	TC2						
DTR30223319/2						*	21	22/06/24	✓		N/A	22/06/24

I.2 - Instruments Control

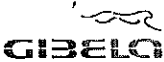
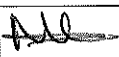

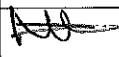

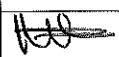

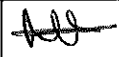

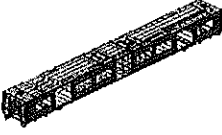
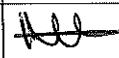

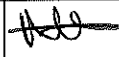

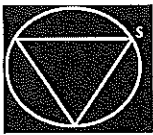




Monitoring and Measuring Instrument Control - Used for Special Process


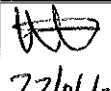

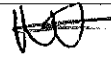

Instruments	Validation	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
Tubular	32823-2	15/03/25	✓		22/06/24	22/06/24
Tape measure	G5BTH0431	2025/04/17	✓		22/06/24	22/06/24

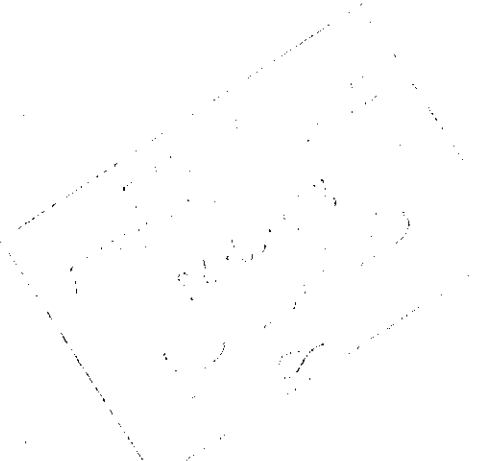
1.3 Consumables


Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
308	313779	308 MIG	✓		22/06/24	22/06/24

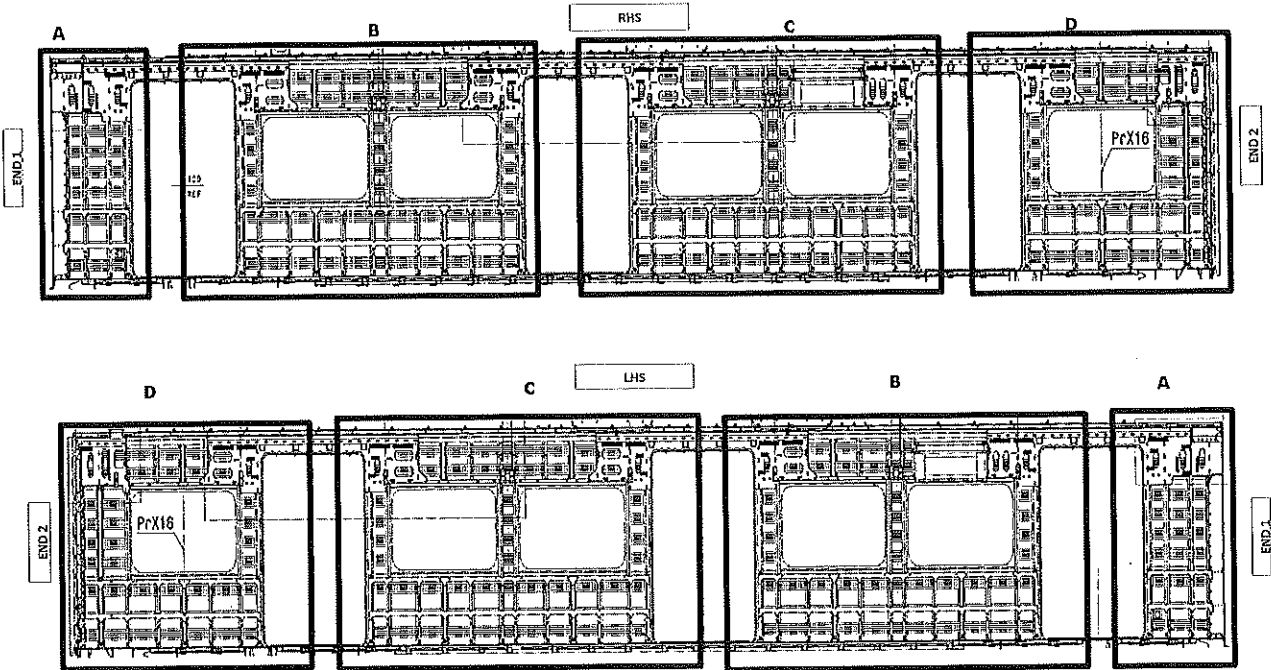
		DTR30223319/2 Carshell Assembly TC		Rev. 29 Date- 28/10/2023	Project: PRASA SI.CB2220.323.V29						
II - Control Activities of Production											
II.1 - Items to check											
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)				
01	N/A	Assembly according to Instruction Engineering n° PRACB2220.DTR30225407/2 Verification of fitment for all reinforcement brackets.	DTR30223319/2	✓		 22/06/24	 22/06/24				
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓		 22/06/24	 22/06/24				
03	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓		 22/06/24	 22/06/24				
04	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		 22/06/24	 22/06/24				
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		 22/06/24	 22/06/24				
06	N/A	Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓		 22/06/24	 22/06/24				
07		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658	✓		 22/06/24	 22/06/24				
08	N/A	<p>Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified:</p> <table border="1"> <tr> <td>Temperature Min - Max (°C)</td> <td>Min - Max</td> </tr> <tr> <td>Relative humidity Min - Max (%)</td> <td>Min - Max</td> </tr> </table>	Temperature Min - Max (°C)	Min - Max	Relative humidity Min - Max (%)	Min - Max	<p>Sealant Batch No: <u>B9438</u> Exp Date: <u>02/25</u></p> <p>Actuals Temperature: <u>11</u> Humidity: <u>58</u></p>	✓		 22/06/24	 22/06/24
Temperature Min - Max (°C)	Min - Max										
Relative humidity Min - Max (%)	Min - Max										

		DTR30223319/2 Carshell Assembly TC		Rev. 29	Project: PRASA			
				Date- 28/10/2023	SI.CB2220.323.V29			
09	NA	Verification of sealant application in certain regions in the drawing.	AAD0001241033	✓			 22/06/24	 22/06/24
10	NA	Verification of sealant application on the roof and sidewall finishers	Sealant must be: -Applied straight and even (1.5mm) -Free of gaps,cracks,damage and debris (flashes, dirt, dust) Refer to Annexure B	✓			 22/06/24	 22/06/24



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	

TC BRACKET INSTALLATION



QUANTITIES (TC)

RHS

	SECTION	QUANTITY	OK	NOK
C-RAILS	A	4	/	
	B	4	/	
	C	8	/	
	D	12	/	
SEAT BRACKETS	A	0	/	
	B	21	/	
	C	21	/	
	D	13		/
EARTH BUSH	A	1	/	
	B	4	/	
	C	5	/	
	D	4	/	

ROOF ENDS:
 C-RAILS 2 OFF END 2
 EARTH BUSH 4 OFF END 2
 VERIFICATION BY: Mthahozisi

LHS

	SECTION	QUANTITY	OK	NOK
C-RAILS	A	4	/	
	B	8	/	
	C	4	/	
	D	5	/	
SEAT BRACKETS	A	0	/	
	B	21	/	
	C	21	/	
	D	13	/	
EARTH BUSH	A	1	/	
	B	4	/	
	C	4	/	
	D	2	/	

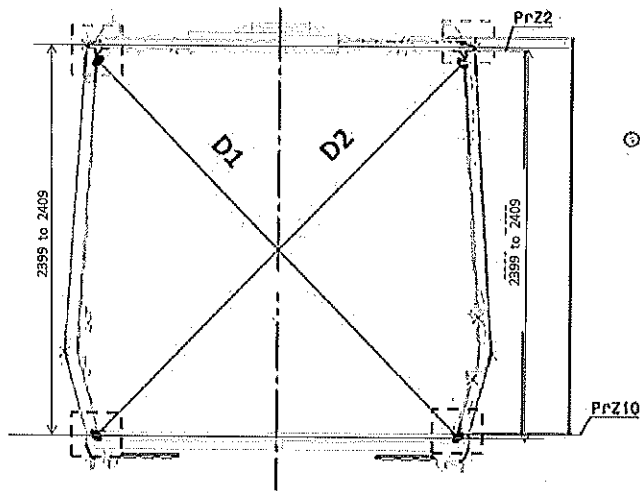
ROOF ENDS:
 C-RAILS 2 OFF END 2
 EARTH BUSH 4 OFF END 2
 VERIFICATION BY: Mthahozisi



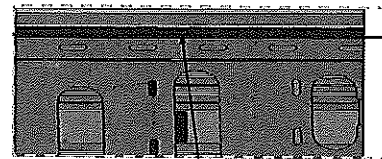
DTR30223319/2 Carshell Assembly TC

Rev.
29
Date-
28/10/2023

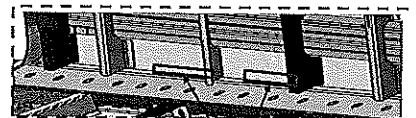
Project: PRASA
SI.CB2220.323.V29



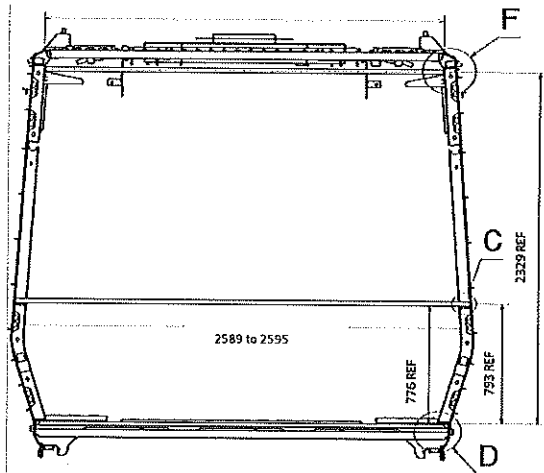
Measurement positions on roof rail and sidewall omega corner.



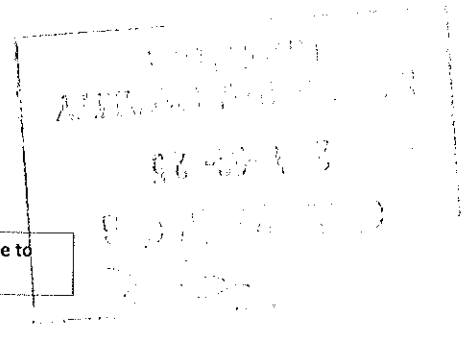
Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



Take measurement close to radius





DTR30223319/2 Carshell Assembly TC

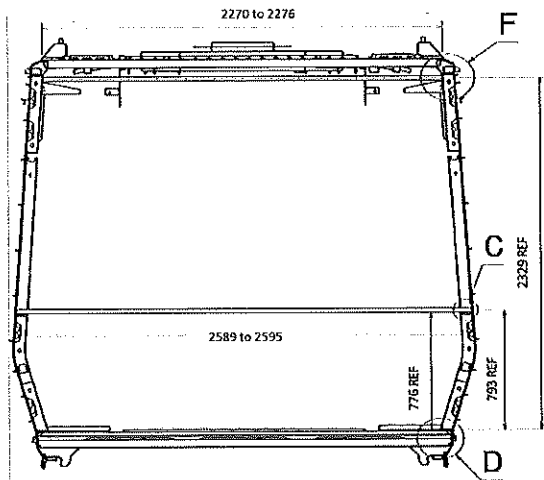
Rev.
29

Project: PRASA

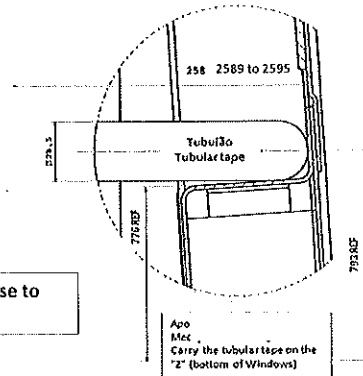
Date-

SI.CB2220.323.V29

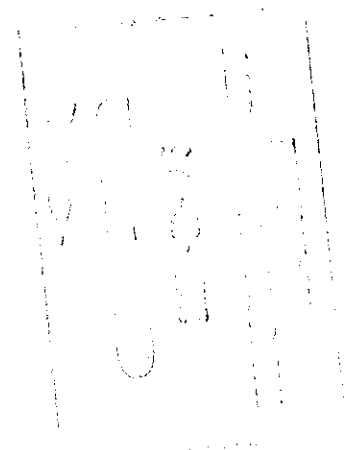
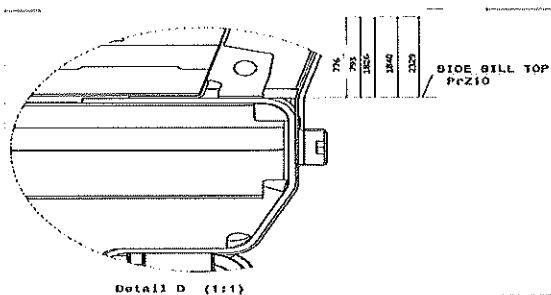
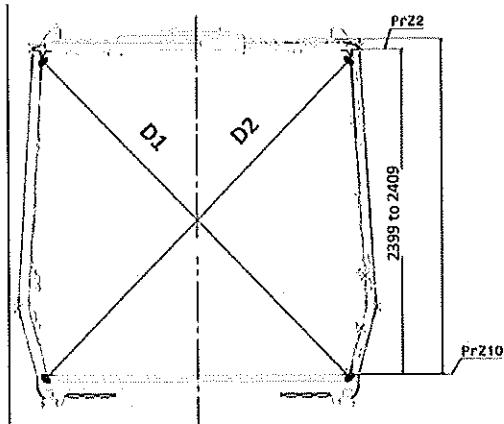
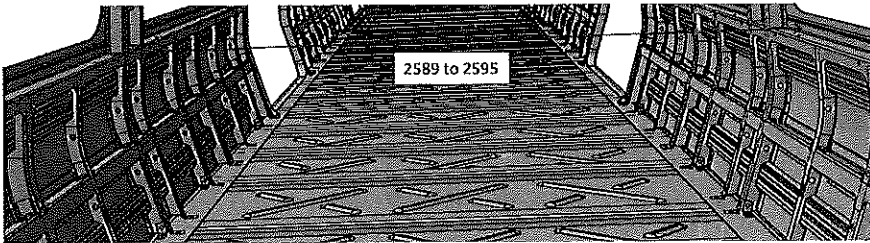
28/10/2023

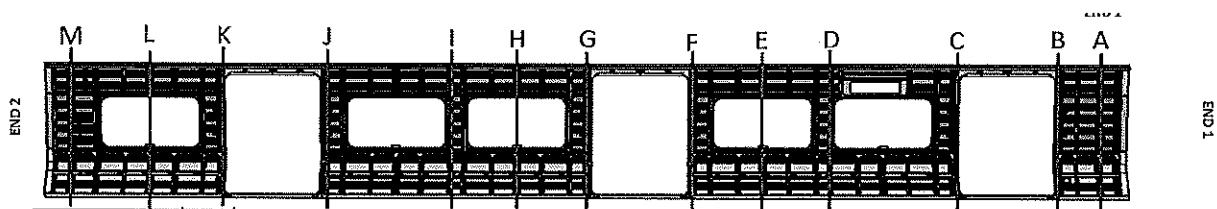


Take measurement close to
radius



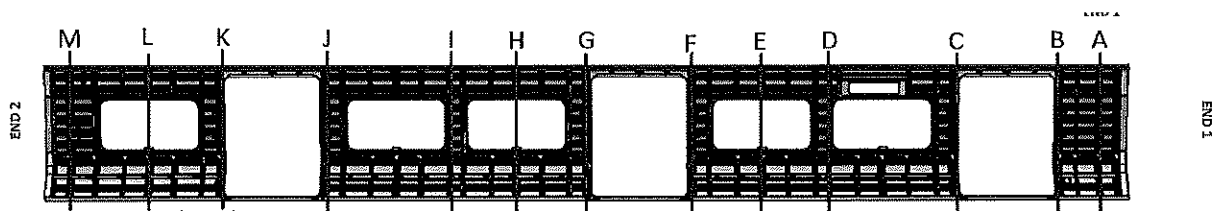
Detail C





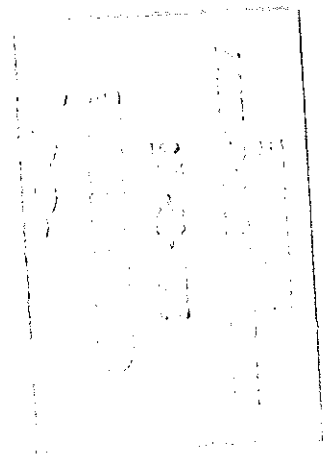
BEFORE WELDING

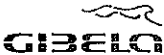
	Record D1 values	Record D2 values	D1-D2 \leq 5mm	2589 to 2595
A	3291	3290	1	-
B	3293	3297	4	-
C	3296	3291	5	-
D	3264	3263	1	-
E	3265	3265	0	-
F	3293	3292	1	-
G	3293	3293	0	-
H	3267	3267	0	-
I	3268	3267	1	-
J	3295	3297	2	-
K	3295	3296	4	-
L	3267	3267	0	-
M	3297	3297	0	-

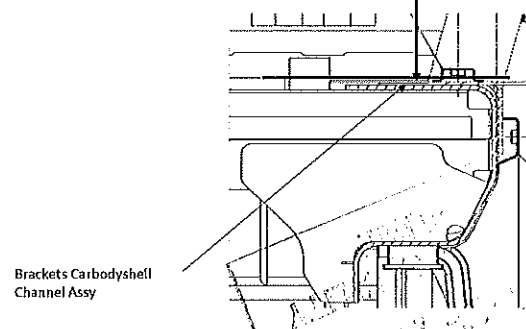
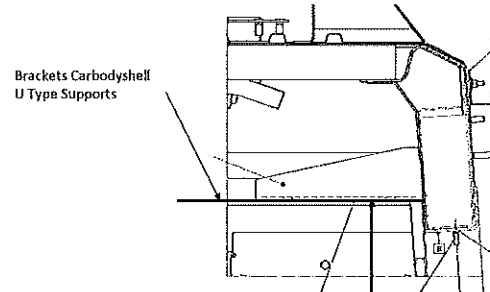
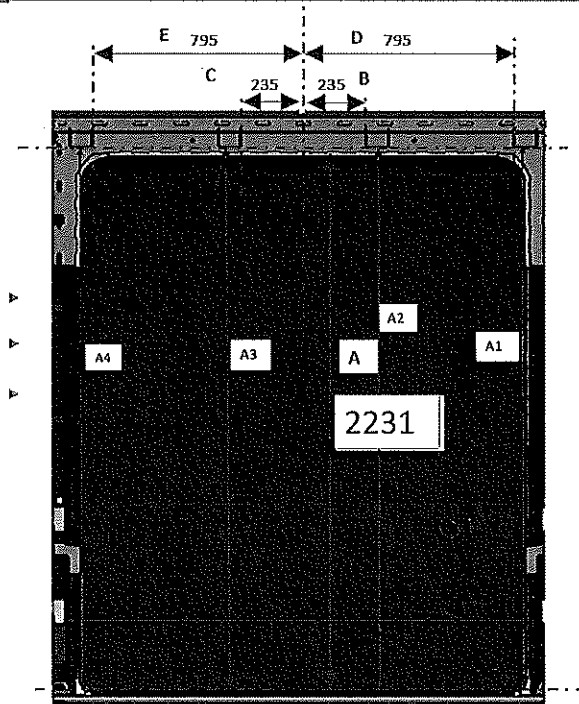


AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3251	3250	1	2595
B	3294	3295	1	2589
C	3291	3293	2	2590
D	3263	3264	1	2590
E	3263	3262	1	2595
F	3293	3295	2	2590
G	3290	3294	4	2590
H	3264	3260	4	2595
I	3260	3267	7	2591
J	3293	3298	5	2590
K	3290	3294	4	2589
L	3262	3267	5	2593
M	3295	3290	5	2595



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	
Specifications of Details for CBS measurement			



DOOR 1 - LHS

	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2232
A4	2230 to 2232	2232
B	234 to 236	234
C	234 to 236	236
D	794 to 796	794
E	794 to 796	796

DOOR 2 - LHS

	VALUE	ACTUAL
A1	2230 to 2232	2231
A2	2230 to 2232	2231
A3	2230 to 2232	2231
A4	2230 to 2232	2231
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

DOOR 3 - LHS

	VALUE	ACTUAL
A1	2230 to 2232	2230
A2	2230 to 2232	2230
A3	2230 to 2232	2230
A4	2230 to 2232	2230
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

DOOR 1 - RHS

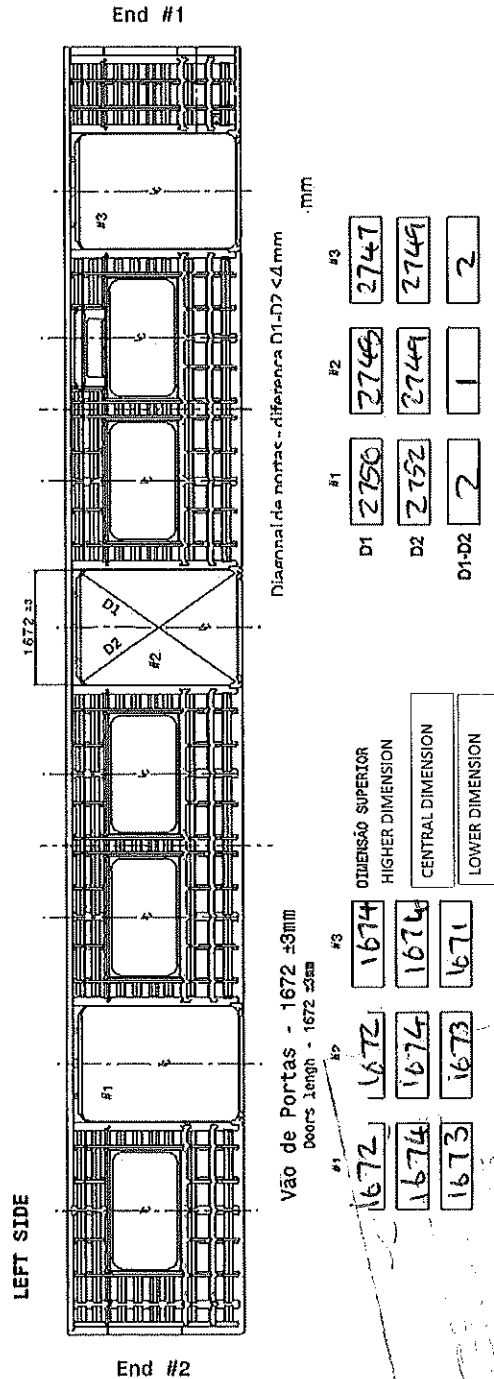
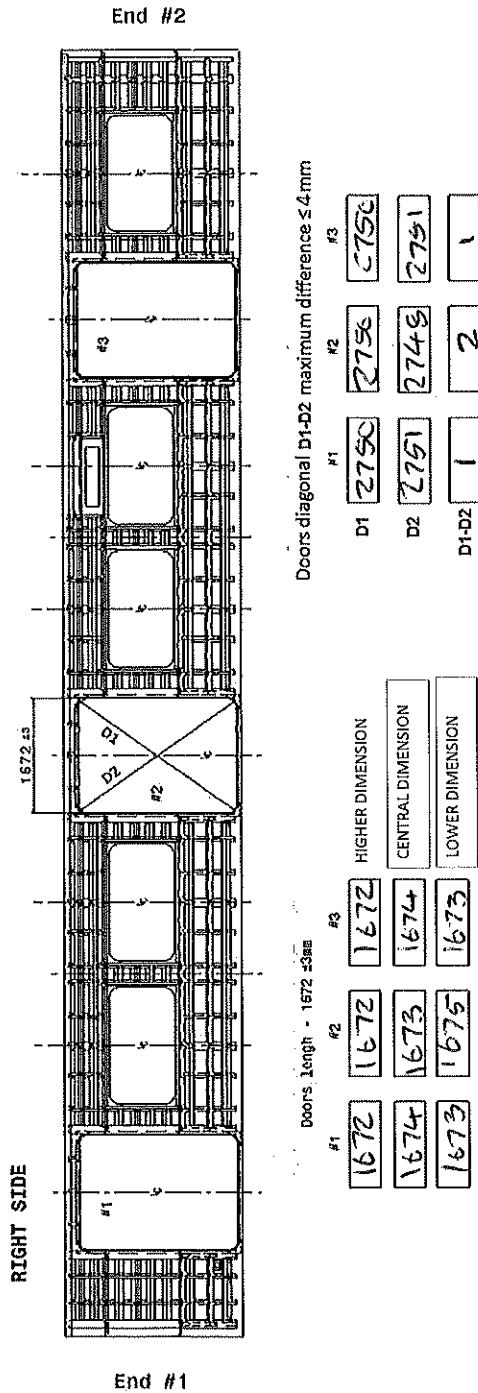
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2232
A4	2230 to 2232	2232
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795


DOOR 2 - RHS

	VALUE	ACTUAL
A1	2230 to 2232	2231
A2	2230 to 2232	2231
A3	2230 to 2232	2231
A4	2230 to 2232	2231
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

DOOR 3 - RHS

	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2232
A4	2230 to 2232	2232
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date-	
		28/10/2023	

Specifications of Details for CBS measurement

Dye penetrant test

Dye-penetration test to be performed by quality personnel



Item	Description of the Issue	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)

II.2 - Check List REX


Check List Items							
Item	Picture/Drawing	Description	Criteria /Record	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX				

11/10/2023

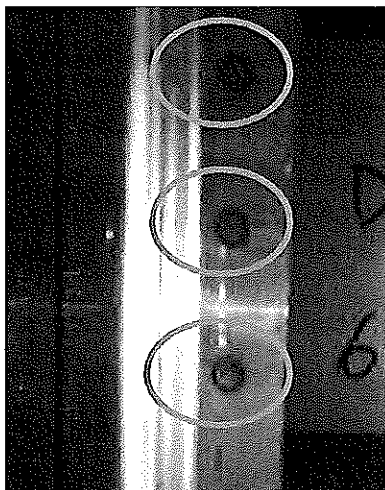
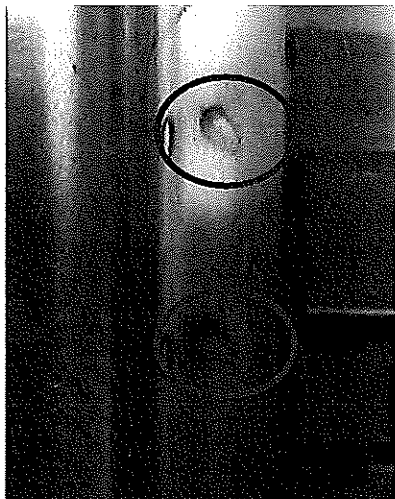
08:00:00


03/10/2023

222

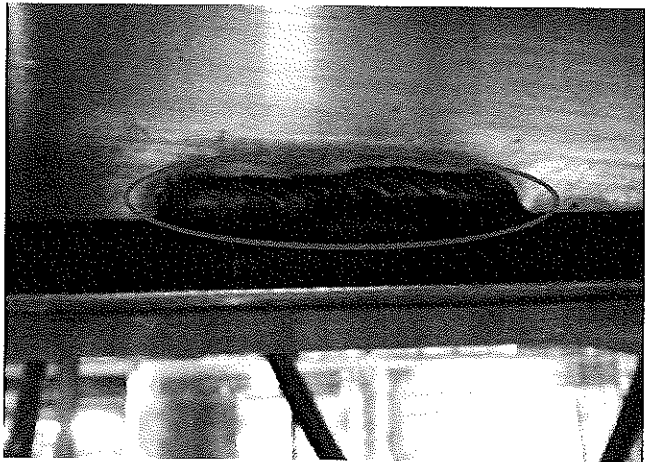
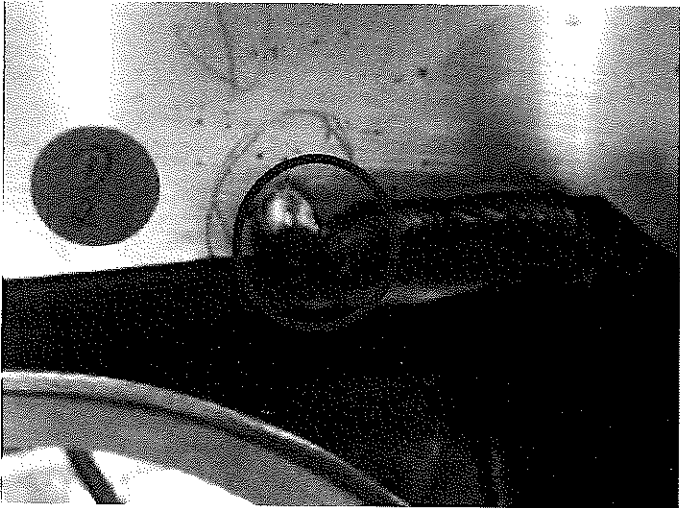
	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	


ANNEXURE A: Spot Welding Quality Acceptance Standard



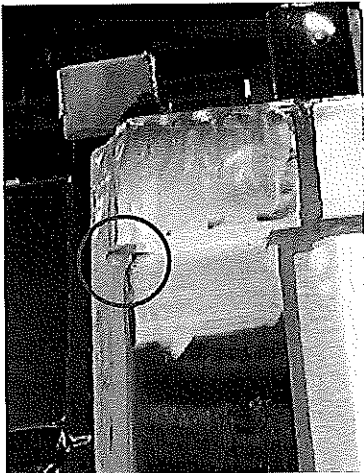
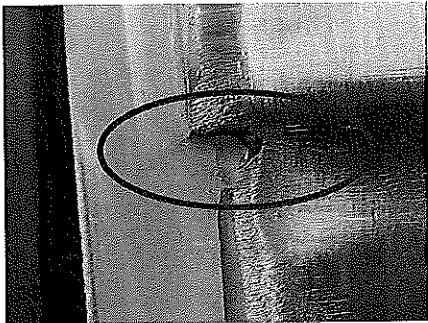
	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date-	
		28/10/2023	
		SI.CB2220.323.V29	

ANNEXURE B: Arc Welding Quality Acceptance Standard



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	

ANNEXURE B: Sealant



GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

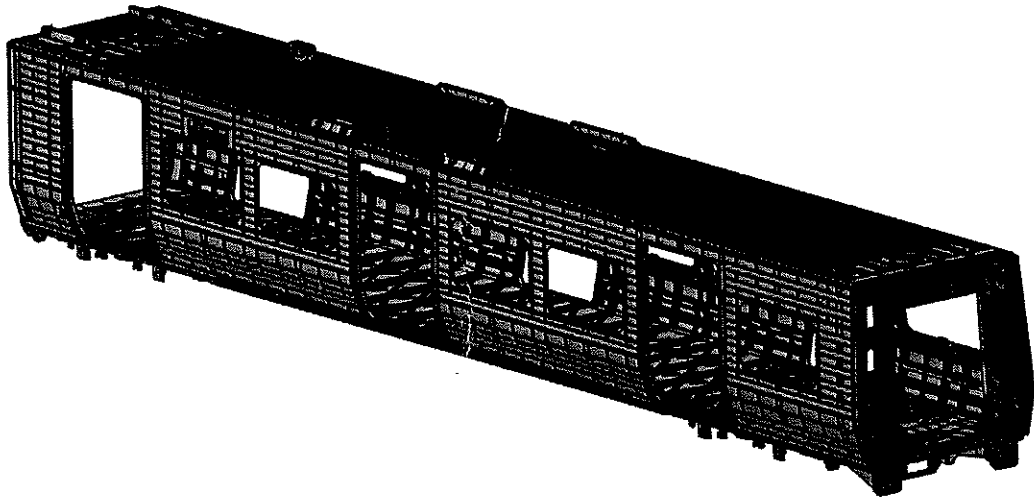
SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE												
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE							WORK INSTRUCTION	SAFETY
				TCL	MS	MS	MS	MS	MS	TCL		
DTR000152655	AAD0001238543	DT00000223559 Carshell Assembly TC	CB1230	X						(X)	PRA.CB1230.DT0000012 23319.V20	YES
REV	DATE	MODIFICATION CONTENT			RESPONSIBLE			NAME		DATE		
0	06/04/2018	GIBELA NEW CREATION			APPROVER			Itumeleng Modiba		09/04/2018		
					CHECKER			Nosizo Pindela		09/04/2018		
					COMPILER			Thanyani Mathegu		06/04/2018		
1	30/5/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager			APPROVER			Itumeleng Modiba		30/5/2018		
					CHECKER			Nosizo Pindela		30/5/2018		
					REVISED BY			Nosizo Pindela		30/5/2018		
2	05/07/2018	Certain dimensional checks moved to CB1220			APPROVER			Itumeleng Modiba		05/07/2018		
					CHECKER			Nosizo Pindela		05/07/2018		
					COMPILER			Ramokone Motama		05/07/2018		
5	24/01/2019	As per Baseline 10.2			APPROVER			Itumeleng Modiba		24/01/2019		
					CHECKER			Nosizo Pindela		24/01/2019		
					REVISED BY			Vanessa Ntuli		24/01/2019		
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements			APPROVER			Itumeleng Modiba		13/03/2019		
					CHECKER			Nosizo Pindela		13/03/2019		
					COMPILER			Nosizo Pindela		13/03/2019		
7	17/09/2019	Added Cab Fire Barrier Flatness Measurements			APPROVER			Itumeleng Modiba		17/09/2019		
					CHECKER			Nosizo Pindela		17/09/2019		
					COMPILER			Nosizo Pindela		17/09/2019		
10	20/09/2019	New Baseline 10.2.5			APPROVER			Itumeleng Modiba		20/09/2019		
					CHECKER			Nosizo Pindela		20/09/2019		
					COMPILER			Nosizo Pindela		20/09/2019		
15	28/01/2021	New Baseline 10.2.6			APPROVER			Timothy Maimela		28/01/2021		
					CHECKER			Bongane Masina		28/01/2021		
					COMPILER			Bongane Masina		28/01/2021		
20	19/04/2021	New Baseline change 10.3			APPROVER			Timothy Maimela		19/04/2021		
					CHECKER			Bongane Masina		19/04/2021		
					COMPILER			Bongane Masina		19/04/2021		
25	20/04/2022	New Baseline change 10.3.1			APPROVER			Collins Mbombhni		20/02/2022		
					CHECKER			Andani Muthelo		20/02/2022		
					COMPILER			Andani Muthelo		20/02/2022		
26	14/06/2022	Update minimum temperature requirement for sealant application			APPROVER			Collins Mbombhni		14/06/2022		
					CHECKER			Andani Muthelo		14/06/2022		
					COMPILER			Andani Muthelo		14/06/2022		
27	26/07/2022	Threshold measurements addition			APPROVER			Collins Mbombhni		26/07/2022		
					CHECKER			Andani Muthelo		26/07/2022		
					COMPILER			Andani Muthelo		26/07/2022		
28	17/10/2022	Addition of traceability for sealant application			APPROVER			Collins Mbombhni		17/10/2022		
					CHECKER			Ntokozo Zwane		17/10/2022		
					COMPILER			Amogelang Mohlampe		17/10/2022		
29	14/04/2023	Added sealant batch number & welding consumables traceability			APPROVER			Vanessa Ntuli		14/04/2023		
					CHECKER			Ntokozo Zwane		14/04/2023		
					COMPILER			Amogelang Mohlampe		14/04/2023		
30	06/11/2023	Added traceability for thresholds for boiler makers and welders			APPROVER			Tyson Ngobeni		06/11/2023		
					CHECKER			Andani Muthelo		06/11/2023		
					COMPILER			Ntokozo Zwane		06/11/2023		
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER		DATE	SELF INSPECTION NUMBER			PAGES				
234	TC2	Boitumelo Boitumelo		24/10/24	SI.CB1230.324.V28			14				

	DT00000223319 Carshell Assembly TC	Rev. 30	Project: PRASA SI.CB1230.324.V29
		Date- 06/11/2023	
Carro Car:	NCR:	Work station: CB1230	



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK		Signature/Date (Operations)	Signature/Date (Quality)
	T01	M1	M2	M3	M4	T02						
DT00000223319						X	09		X		N/A	24/06/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK		Signature/Date (Operations)	Signature/Date (Quality)
Tubular	10062-2	2025/02/19	X		24/06/24	
Combination Square	GIB050092	2025/05/20	X		24/06/24	24
Measuring Tape	GIB10040	2025/04/24	X		24/06/24	24

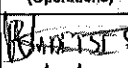
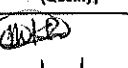





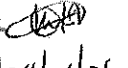






1.3 Consumables

Welding Consumable Control - Used for Special Process

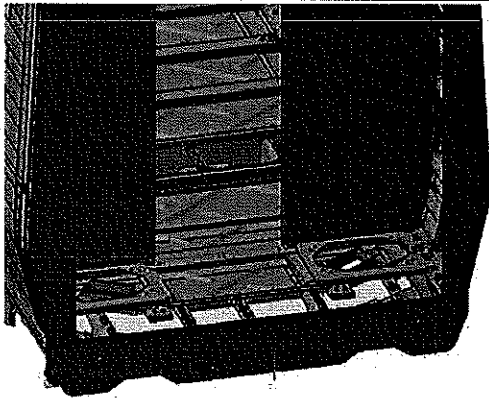
Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
308 Lsi	313179	Mig welding	X		24/06/24	
308 L	370221	Tig welding	X		24/06/24	24

II - Control Activities of Production

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° DT00000223319	DT00000223319	X	 24/06/24	 24/06/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	X	 24/06/24	 24/06/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 DTD0000210675	X	 24/06/24	 24/06/24
04	N/A	Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	X	 24/06/24	 24/06/24
05	N/A	Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658	X	 24/06/24	 24/06/24
06	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: <div> <div>Temperature Min - Max (1)</div> <div>Min-Max</div> <div>10°C - 35°C</div> </div> <div> <div>Relative humidity Min - Max (1)</div> <div>Min-Max</div> <div>25% - 80%</div> </div>	Sealant Batch No: <u>LSR 70-03</u> Exp Date: <u>07/07/24</u> Actuals Temperature: <u>15.3°C</u> Humidity: <u>54%</u>	X	 24/06/24	 24/06/24
07	N/A	Verification of sealant application in regions of roof and sideframe finishers.	Sealant must be: -Applied straight and even (1.5mm) -Free of gaps, cracks, damage and debris (flashes, dirt, dust) Refer to Annexure B	X	 24/06/24	 24/06/24

VIEW A



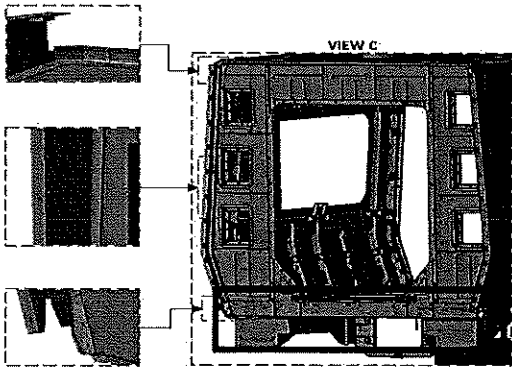
**END 1
SEALANT**

OPERATOR
(Name & sign):

Lerato (Signature)

OPERATOR
(Name & sign):

Lerato (Signature)



VIEW C

OPERATOR
(Name&sign):

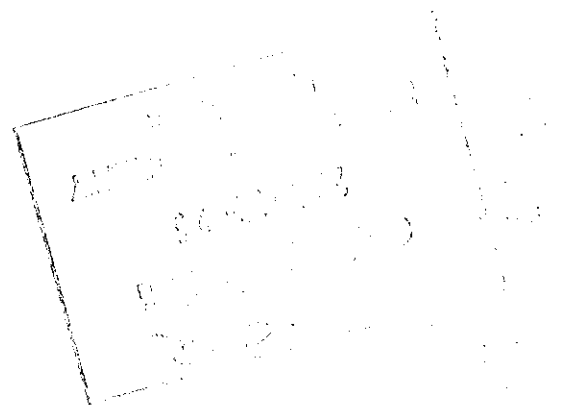
Boitumelo (Signature)

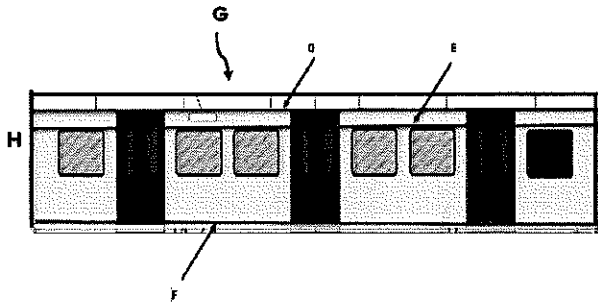
OPERATOR
(Name&sign):

Boitumelo (Signature)

OPERATOR
(Name&sign):

Boitumelo (Signature)





Area D,E,F,G,H,I

Operator (Name & sign):

LHS

RHS

Operator (Name & sign):

Operator (Name & sign):

Operator (Name & sign):

Operator (Name & sign):

Operator (Name & sign):

F.H.I. BONTOMVI

LERALO

(Signature)

D.I.E.G (H.I) TOP

Siwele

(Signature)

Tshenolo

F.H.I. BONTOMVI

LERALO

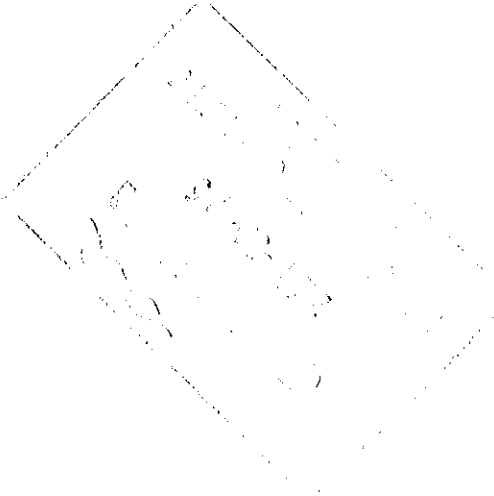
(Signature)

D.I.E.G (H.I) TOP

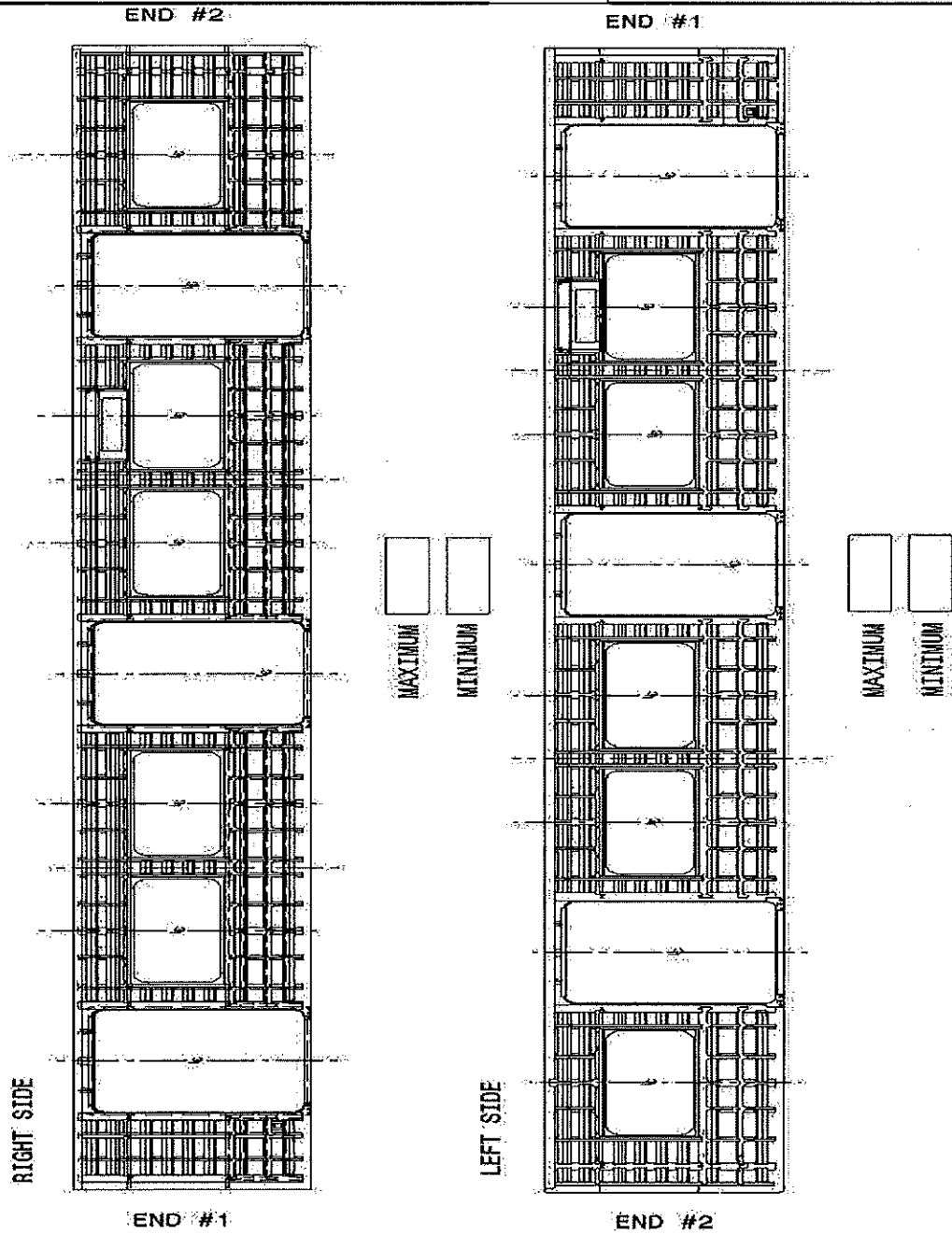
Siwele

(Signature)

Tshenolo

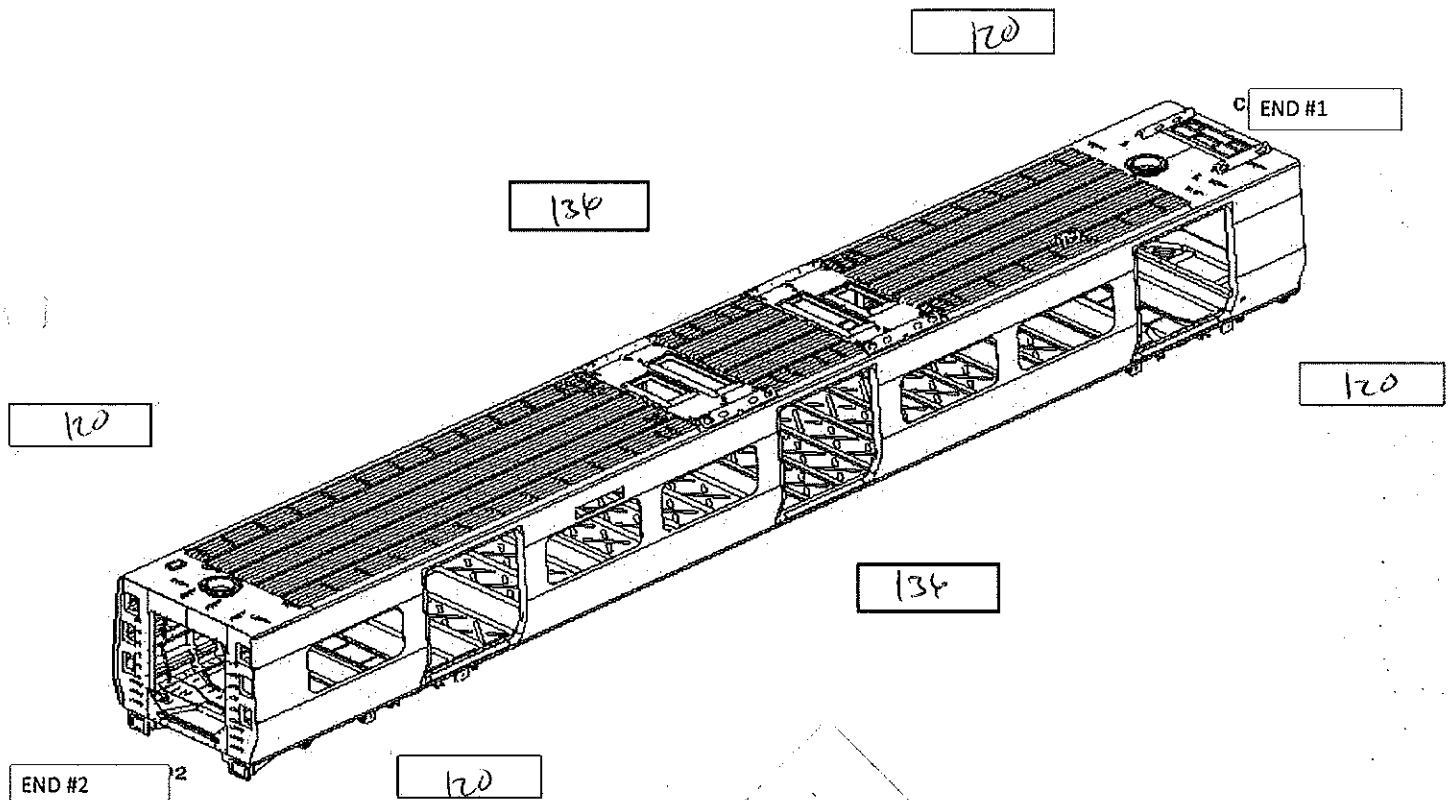


Flatness side left and right maximum of 2mm in the valley to peak measured in 900mm. Recod the maximum and minimum value foundand indicate the corresponding region.



Specifications of Details for CBS measurement CB1230

Specified Camber for car out of jig is 16mm (-0mm + 2mm)



MEASURED CAMBER VALUES

RIGHT

16

LEFT

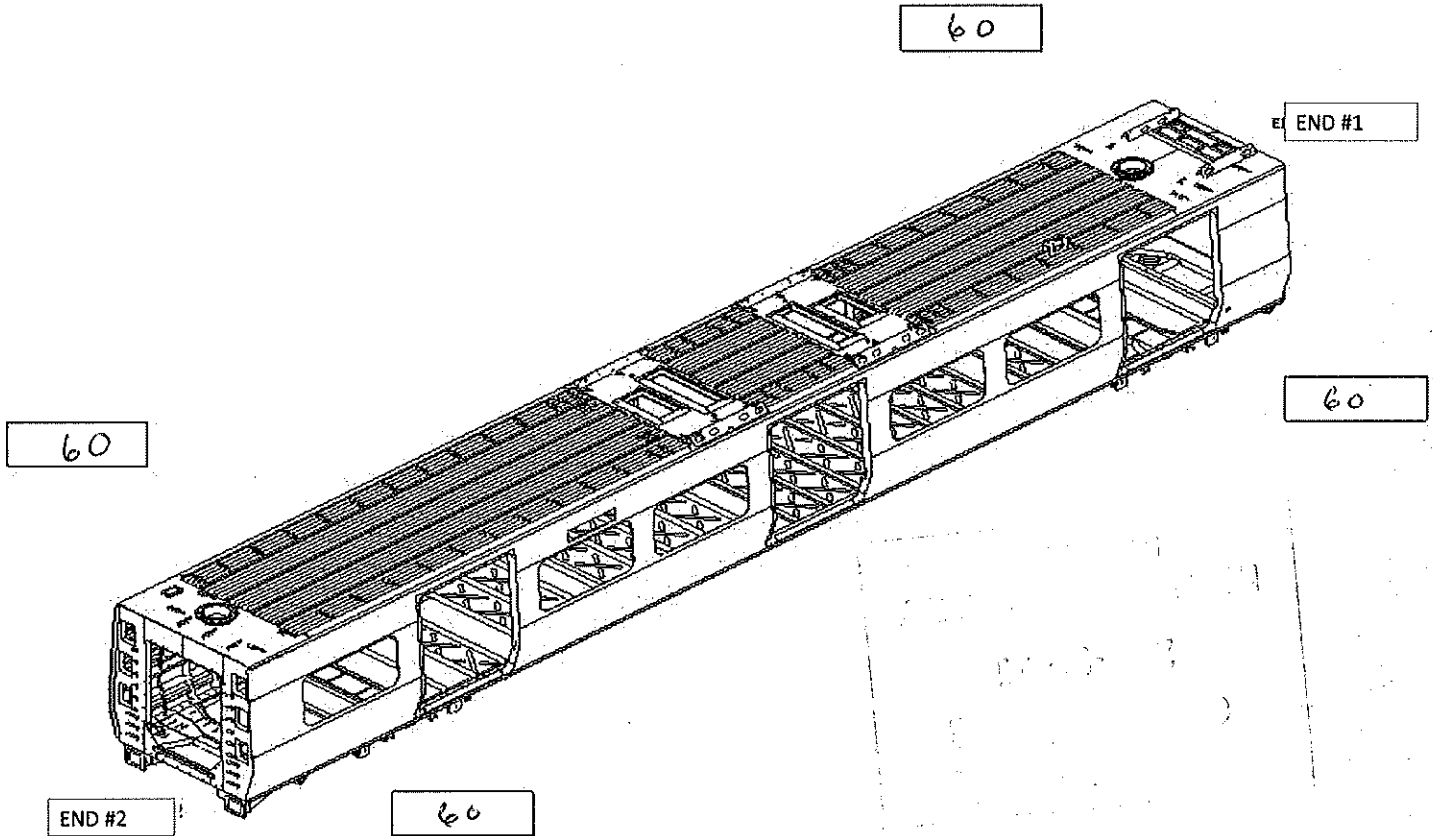
1

16

D1

Specifications of Details for CBS measurement CB1230

Twist measured in transversal and longitudinal = Maximum 3mm. Measure twist on air spring plates (LHS and RHS), both End 1 and End 2 following twist measurement document.



MEASURED TWIST VALUES END 1

LATERAL

0

LONGITUDINAL

0

MEASURED TWIST VALUES END 2

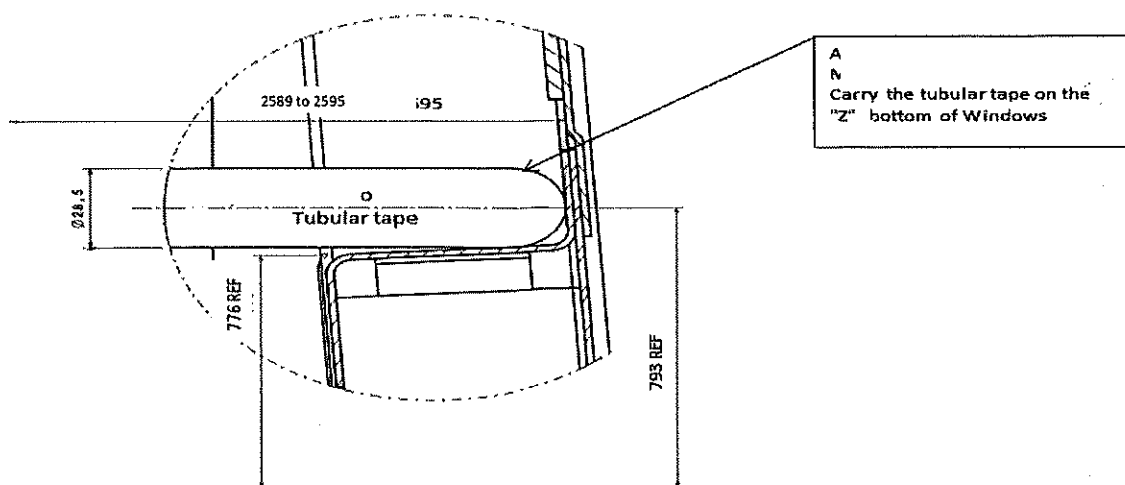
LATERAL

0

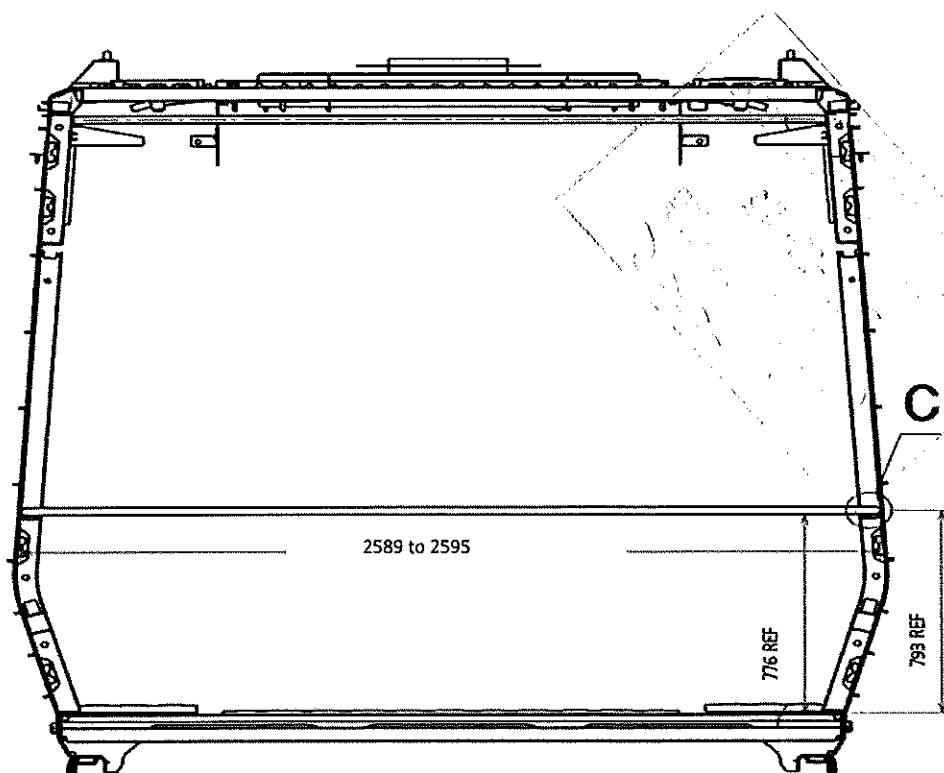
LONGITUDINAL

0

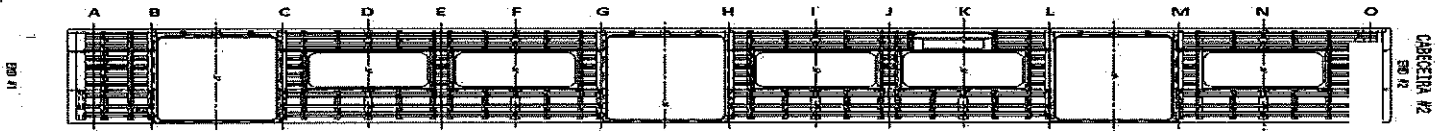
Details for measuring on the CB1230 stage, after completion of activities



Detail C



Specifications of Details for CBS measurement



2589 to 2595mm

A	2595
B	2589
C	2591
D	2595
E	2591
F	2595
G	2590
H	2589
I	2593
J	2591
K	2595
L	2590
M	2589
N	2595
O	2595



Threshold verification

Nominal value :38

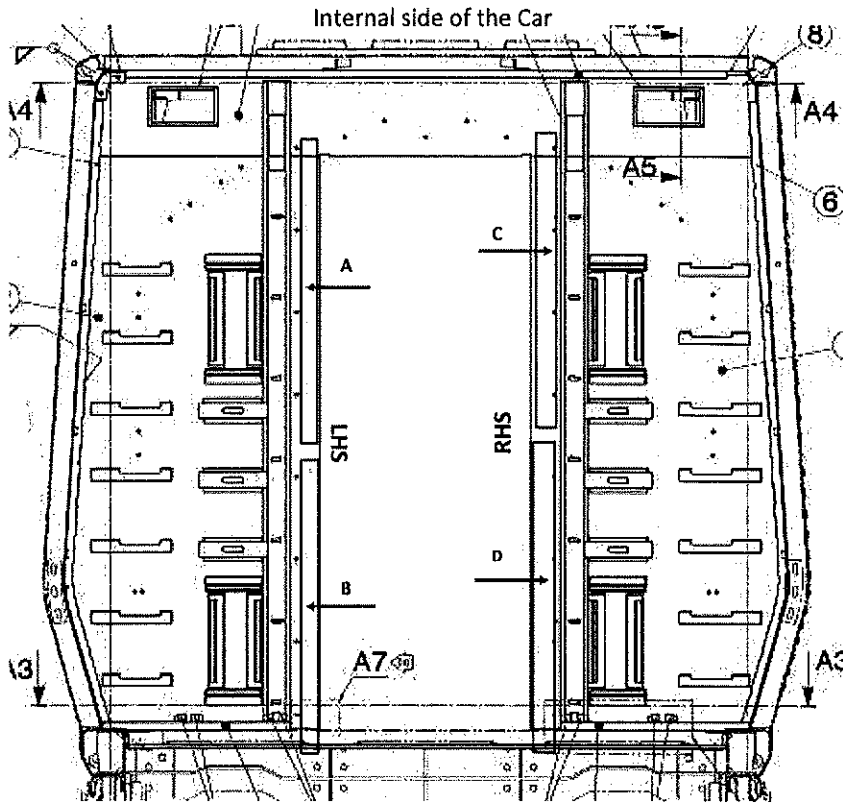
Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	38	37	38	38	39
Door 4		Door 5		Door 6	
L	R	L	R	L	R
39	37	38	38	39	37

BOILER MAKER: Mmathapelo *[Signature]*
WELDER: Mmathapelo *[Signature]*

Specifications of Details for CBS measurement


Measure the flatness on the Cab Fire Barrier after installation and welding. Measure positions A, B, C and D using 1000mm flatness ruler and taper gauge.

Specified Maximum Flatness deviation on Cab Fire Barrier = 2mm



Measured Values			
	Minimum	Maximum	Deviation
A	9	10	1
B	10	12	2
C	11,2	12	0,8
D	8,6	10	1,4



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		Date-	
		06/11/2023	

Dye penetrant test

Dye-penetration test to be performed by quality personnel



Item	Description of the Issue	OK	Signature/Date (Operations)	Signature/Date (Quality)

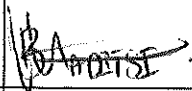

II.2 - Check List REX

Check List Items

Item	Picture/Drawing	Description	Criteria /Record	OK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX	X	24/06/04	

12-06-04
GIBELQ
24/06/04

Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT		GO	If activities are not complete, the missing activities must not impact the next stage!	24/06/24	Batumelo Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	24/06/24	Richmond Industrial Quality	
			There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

In case of "NO GO", the operations manager must define below action plan to ensure "GO":

Item	Description	Action	Responsible	Due date	Status


Operations

Quality

ANNEXURE A: Arc Welding Quality Acceptance Standard

