

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 ? 	
				TC1	M4	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR30223319/3	AAD0001241033	Carshell Assembly TC	CB1210	<input checked="" type="checkbox"/>					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 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	06/08/2020
			REVISED BY	Bongane Masina	06/08/2020
20	19/04/2020	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2020
			CHECKER	Bongane Masina	19/04/2020
			REVISED BY	Bongane Masina	19/04/2020
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi Collins	17/08/2021
			CHECKER	Mpho Mulaudzi	17/08/2021
			REVISED BY	Mpho Mulaudzi	17/08/2021
25	21/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi Collins	21/02/2022
			CHECKER	Andani Muthelo	21/02/2022
			REVISED BY	Andani Muthelo	21/02/2022
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlampe Amogelang	14/04/2023
			REVISED BY	Mohlampe Amogelang	14/04/2023
27	27/07/2023	Added verification of loaded parts	APPROVER	Ngobeni Tyson	27/07/2023
			CHECKER	Mathapo Kelebone	27/07/2023
			REVISED BY	Mohlampe Amogelang	27/07/2023
28	07/11/2023	Addition of welding traceability	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Andani Muthelo	07/11/2023
			REVISED BY	Ntokozo Zwane	07/11/2023

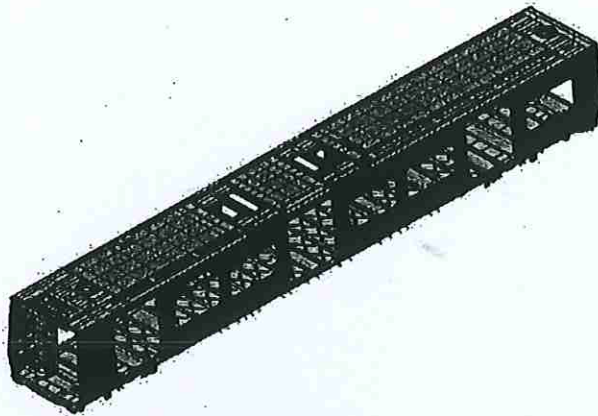
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
216	TC1	WINGA 471497	01/05/24	SI.CB1210.322.V28	16

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

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



I - Documentation and Instruments

I.1 - Documentation Control

Doc. ID	Doc. Name	Doc. Type	Doc. Status	Doc. Version	Doc. Date	Doc. Author	Doc. Reviewer	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30223319/3	X							2	N/A

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process






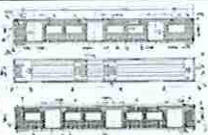











Instrument Name	Instrument ID	Instrument Date	Instrument Status	Signature/Date (Manufacturing)	Signature/Date (Quality)
TUBULAR	22713	04/10/23	✓	01/08/24	
30 M TAPE	6187P0084	23/03/31	✓	01/03/24	
LASER TAPE	125425924	08/01/24	✓	01/03/24	

1.3 Consumables


Welding Consumable Control - Used for Special Process

Consumable Name	Consumable ID	Consumable Date	Consumable Status	Signature/Date (Manufacturing)	Signature/Date (Quality)
AUTROD 308LSI	E221880	MIG	✓	01/05/24	
ER 309 LSI	318394	MIG	✓	01/05/24	

Signature _____
2024-03-15

		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	Not OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe)	DT00000284980	✓		 01/03/24	 01/02/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓		 01/03/24	 01/02/24
03		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓		 01/03/24	 01/02/24
04	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓		 01/03/24	 01/02/24
05	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		 01/03/24	 01/02/24
06		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		 01/03/24	 01/02/24
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	✓		 01/03/24	 01/02/24



	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB1210.322.V28
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Welder traceability

Roof ring welds

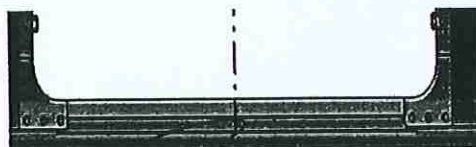


LHS Boiler maker (Name & Sign): <u>PONTISO</u>	Welder (Name & Sign): <u>KEITH K. NOD</u>
RHS Boiler maker (Name & Sign): <u>PONTISO</u>	Welder (Name & Sign): <u>KEITH K. NOD</u>

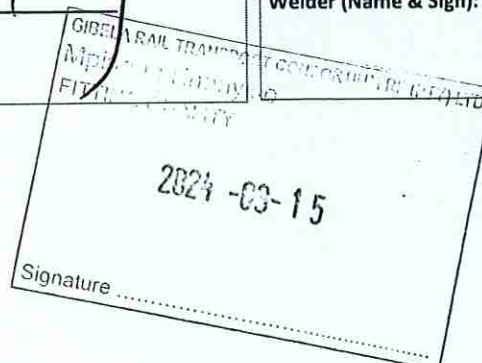
END 1


LHS Boiler maker (Name & Sign): <u>PONTISO</u>	Welder (Name & Sign): <u>KEITH K. NOD</u>
RHS Boiler maker (Name & Sign): <u>PONTISO</u>	Welder (Name & Sign): <u>KEITH K. NOD</u>

END 2

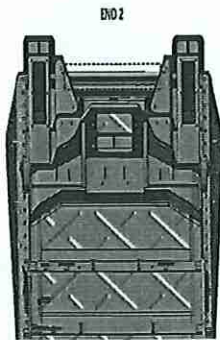


LHS Boiler maker (Name & Sign): <u>TEBOGO</u>	RHS Boiler maker (Name & Sign): <u>LAWRENCE</u>
Welder (Name & Sign): <u>GIFT</u>	Welder (Name & Sign): <u>GIFT</u>

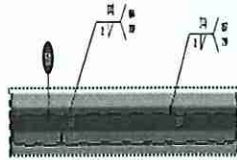


	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
		Date- 07/11/2023	SI.CB1210.322.V28

EUFR Reinforcement Plates



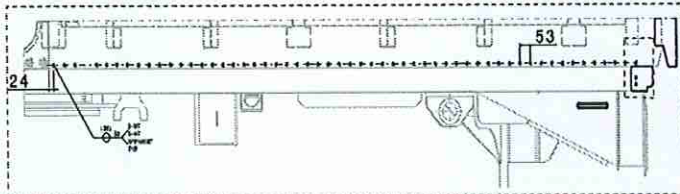
Underneath the CAR



END 2

Boiler maker (Name & Sign): Tim Ruder


Welder (Name & Sign): Thabang Kado



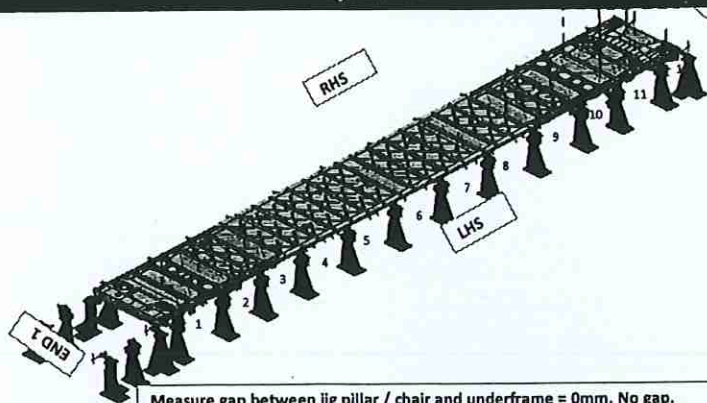
FEDOLI

Operator: LAURENCE Molyee



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

Specifications of Details for CBS measurement



Measure gap between jig pillar / chair and underframe = 0mm. No gap.

Fill in the gap found on 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						NA						
Right Hand Side												

Signature Operations:

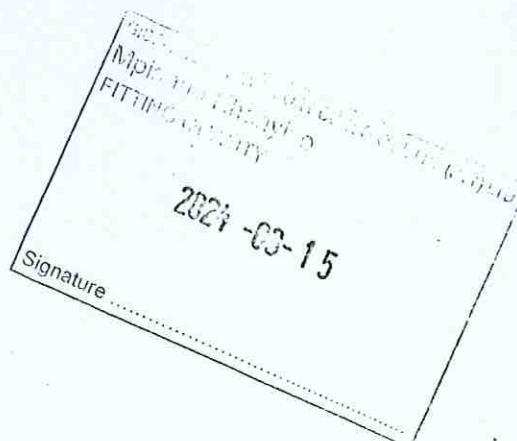
Date: 01/03/24

After Welding.

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

Signature Industrial Quality:

Date:





DTR30223319/3 Carshell Assembly TC

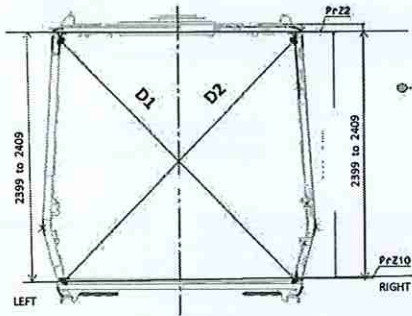
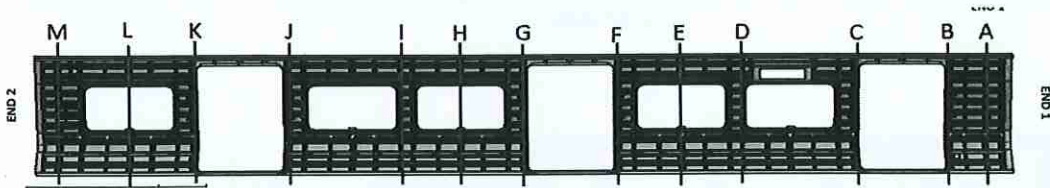
Rev.
V28

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07/11/2023

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Specifications of Details for CBS measurement



Measurement positions on roof rail and sidewall omega corner.




Measurement positions on sidewall and side sill corner.

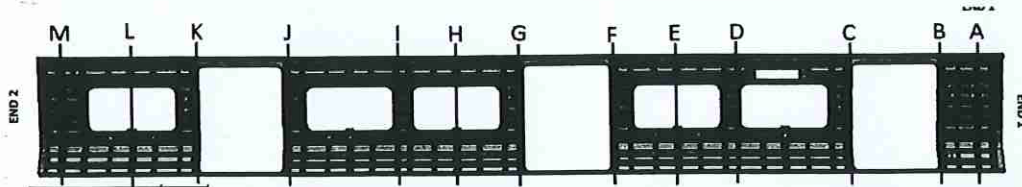


Reinforcement area measurement positions on roof reinforcement area.

Signature
2024-03-15
FITTING QUALITY
CONSORTIUM REPTO LTD


	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



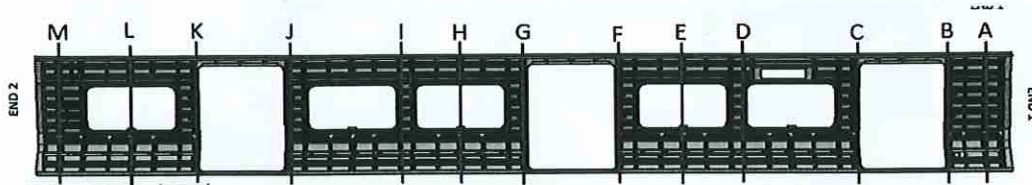
PME: The difference in Height values measured on the LHS and RHS should be $\leq 2\text{MM}$ on each point.

	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3268	3269	1	2404	2405	1
B	3268	3269	1	2405	2405	0
C	3269	3267	2	2406	2404	2
D	3266	3266	0	2405	2406	1
E	3265	3265	0	2404	2404	0
F	3269	3269	0	2404	2406	2
G	3268	3267	1	2407	2406	1
H	3265	3266	1	2405	2405	0
I	3266	3266	0	2406	2405	1
J	3268	3269	1	2404	2406	2
K	3268	3268	0	2405	2407	2
L	3266	3268	2	2406	2406	0
M	3269	3268	1	2408	2407	1

Signature: 
01/03/24
2324-03-15

	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB1210.322.V28
		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.

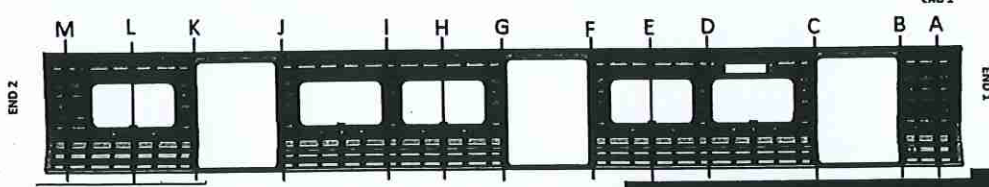
	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3268	3268	0	2405	2405	0
B	3296	3295	1	2404	2406	2
C	3296	3296	0	2405	2403	2
D	3266	3266	0	2404	2404	0
E	3265	3266	1	2405	2406	1
F	3294	3296	2	2406	2404	2
G	3296	3295	1	2403	2404	1
H	3264	3265	1	2406	2406	0
I	3266	3266	0	2405	2407	2
J	3294	3295	1	2406	2405	1
K	3295	3295	0	2404	2404	0
L	3264	3268	4	2406	2405	1
M	3296	3295	1	2407	2408	1

01/03/24

2024-03-15

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

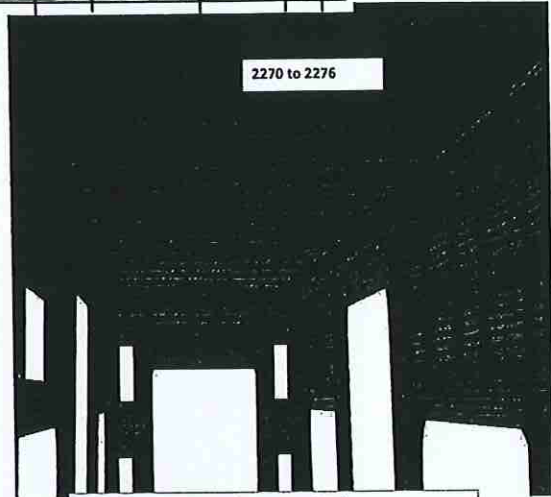
BEFORE WELDING



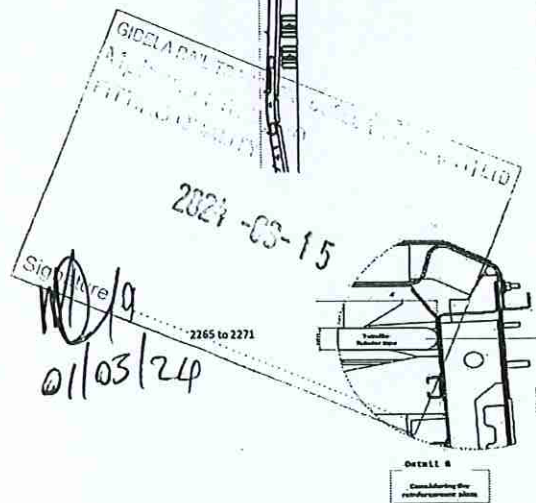
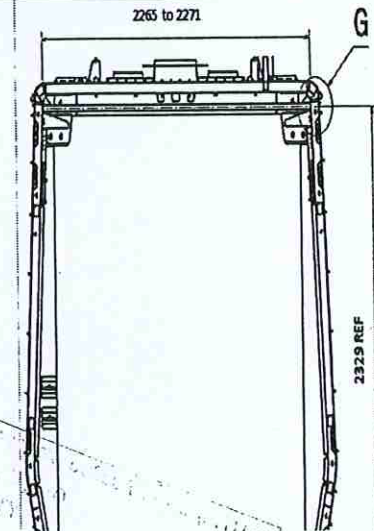
2270 to 2276

2268 to 2274

A	2275
B	2272
C	2274
D	2276
E	2276
F	2273
G	2272
H	2275
I	2277
J	2271
K	2273
L	2274
M	2272



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



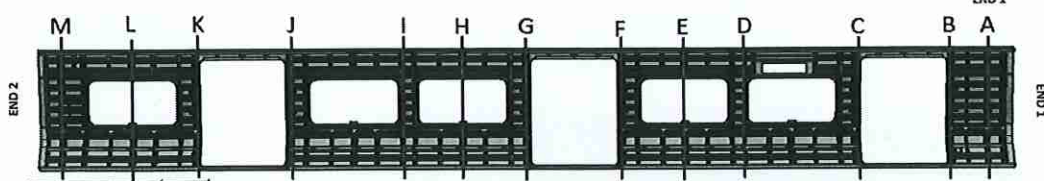


DTR30223319/3 Carshell Assembly TC

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V28
Date-
07/11/2023Project: PRASA
SI.CB1210.322.V28

Specifications of Details for CBS measurement

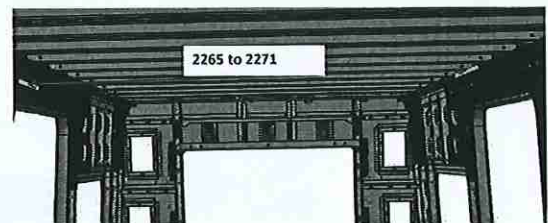
AFTER WELDING



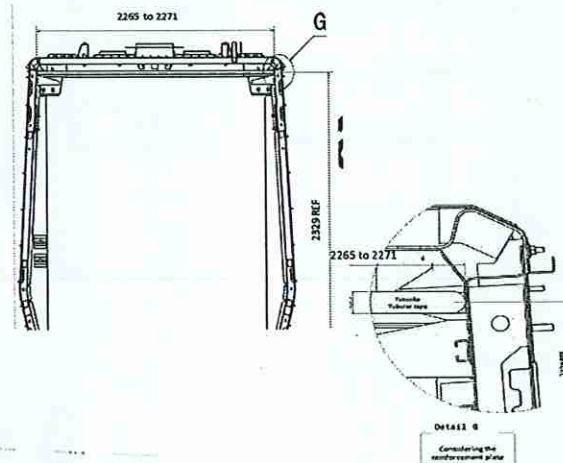
	2265 to 2271	2270 to 2276
A	NA	2274
B	2265	NA
C	2268	NA
D	NA	2276
E	NA	2275
F	2269	NA
G	2268	NA
H	NA	2276
I	NA	2276
J	2265	NA
K	2268	NA
L	NA	2273
M	2269	NA



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



Take measurement close to radius (considering reinforcement)



01/08/24

2271-08-15



DTR30223319/3 Carshell Assembly TC

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V28

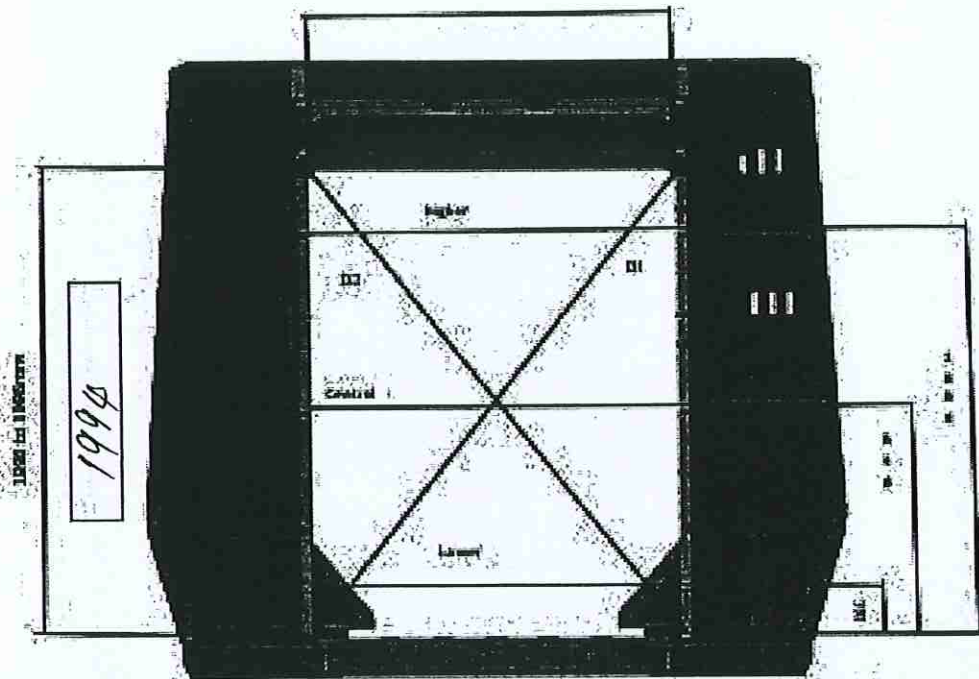
Project: PRASA

Date:
07/11/2023

SI.CB1210.322.V28

Specifications of Details for CBS measurement

Endframe 2



1280 to 1380 mm

DIAGONAL DIFFERENCE D1-D2 \leq 3mm

Higher Dimension

1381

D1

2414

Central Dimension

1381

D2

2413

Lower Dimension

1380

D1-D2

1

01/03/24

Signature

2024-03-15

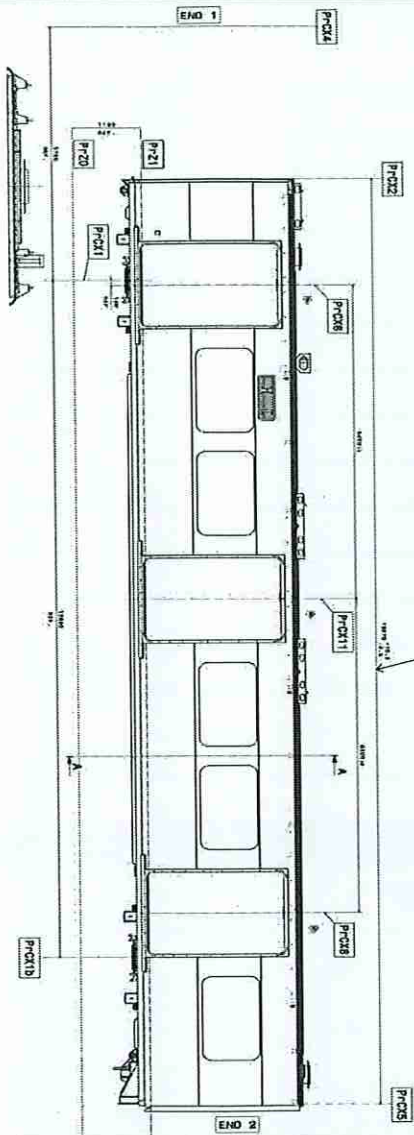


DTR30223319/3 Carshell Assembly TC

Rev.
V28
Date-
07/11/2023

Project: PRASA
SI.CB1210.322.V28

Specifications of Details for CBS measurement



1A

LEFT SIDE

	SPECIFICATION SIZE	ACTUAL SIZE
1A	18870 $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$	18872

RIGHT SIDE

	SPECIFICATION SIZE	ACTUAL SIZE
1A	18870 $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$	18872


Dye penetrant test

Dye-penetration test to be performed by quality personnel



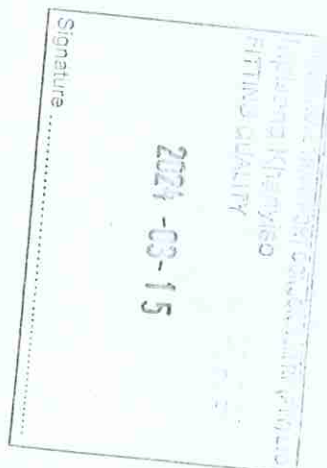
2024-03-15


QUALITY
CONSTRUCTION
LIMITED

		DTR30223319/3 Carshell Assembly TC		Rev. V28	Project: PRASA	
				Date- 07/11/2023	SI.CB1210.322.V28	
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!	01/03/24	hynGA Operations	[Signature]	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	01/03/24	Richmond Quality	[Signature]	
	NO GO	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)			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

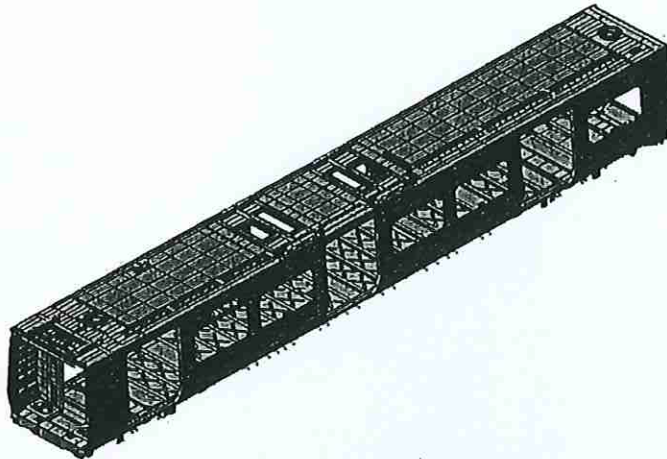


	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB1220.323.V29
		Date-	
		28/10/2023	

Carro Car: TC1, TC2	NCR:	Work station: CB1220
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Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car					Revision	Observation	Status	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4					
DTR30223319/2						29	28/10/2023	X	N/A	04/02/24 LBB

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date		Signature/Date (Manufacturing)	Signature/Date (Quality)
Measuring Taylor	GIBTA0003	29/11/2023-29/11/2023	LX	04/02/24 LBB	04/03/24
Tubular	2231-1	30/05/2023-30/05/2023	X	04/02/24 LBB	04/03/24

1.3 Consumables


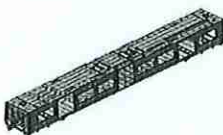
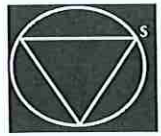
Welding Consumable Control - Used for Special Process





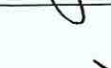
Filler Material	Heat Number	Welding Process		Signature/Date (Manufacturing)	Signature/Date (Quality)
Welding 308LSI	B221880	Mig	X	04/02/24 LBB	04/03/24

GIBEL ARMA
VPT
RITTA

2024-03-15

Signature

		DTR30223319/2 Carshell Assembly TC		Rev. 29	Project: PRASA									
				Date-	SI.CB1220.323.V29									
				28/10/2023										
II - Control Activities of Production														
II.1 - Items to check														
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NG	Revised	Signature/Date (Manufacturing)	Signature/Date (Quality)						
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	DTR30223319/2	✓			04/03/24 LJB	04/03/24						
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓			04/03/24 LJB	04/03/24						
03	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓			04/03/24 LJB	04/03/24						
04	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓			04/03/24 LJB	04/03/24						
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓			04/03/24 LJB	04/03/24						
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.	✓			04/03/24 LJB	04/03/24						
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	✓			04/03/24 LJB	04/03/24						
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 (I)</td> <td>Min-Max</td> <td>10°C - 35°C</td> </tr> <tr> <td>Relative humidity Min - Max (I)</td> <td>Min-Max</td> <td>25% - 60%</td> </tr> </table>	Temperature Min - Max (I)	Min-Max	10°C - 35°C	Relative humidity Min - Max (I)	Min-Max	25% - 60%	<p>Sealant Batch No: LV20-33 Exp Date: 05/24</p> <p>Actuals Temperature: 30 Humidity: 70</p>	✓			04/03/24	04/03/24
Temperature Min - Max (I)	Min-Max	10°C - 35°C												
Relative humidity Min - Max (I)	Min-Max	25% - 60%												

		DTR30223319/2 Carshell Assembly TC		Rev. 29	Project: PRASA			
				Date-				
				28/10/2023	SI.CB1220.323.V29			
09	NA	Verification of sealant application in certain regions in the drawing.	AAD0001241033	✓			 04/03/24	 04/03/24
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	✓			 04/03/24	 04/03/24





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SI.CB1220.323.V29

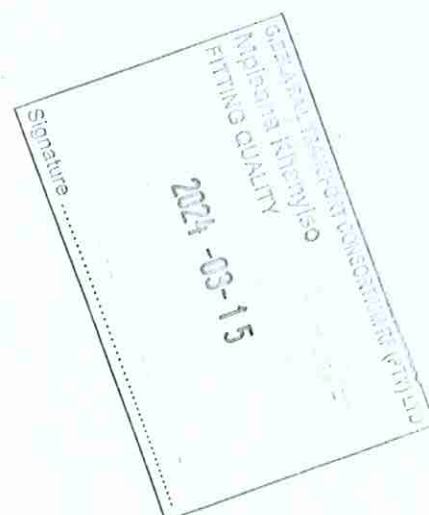
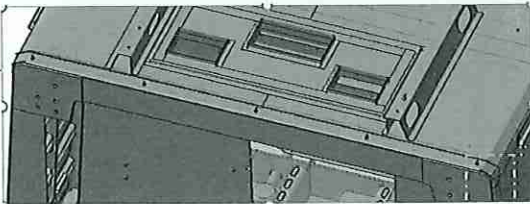
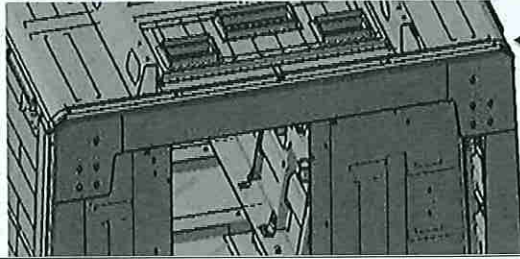
END 1
SEALANT


OPERATOR
(Name & sign):

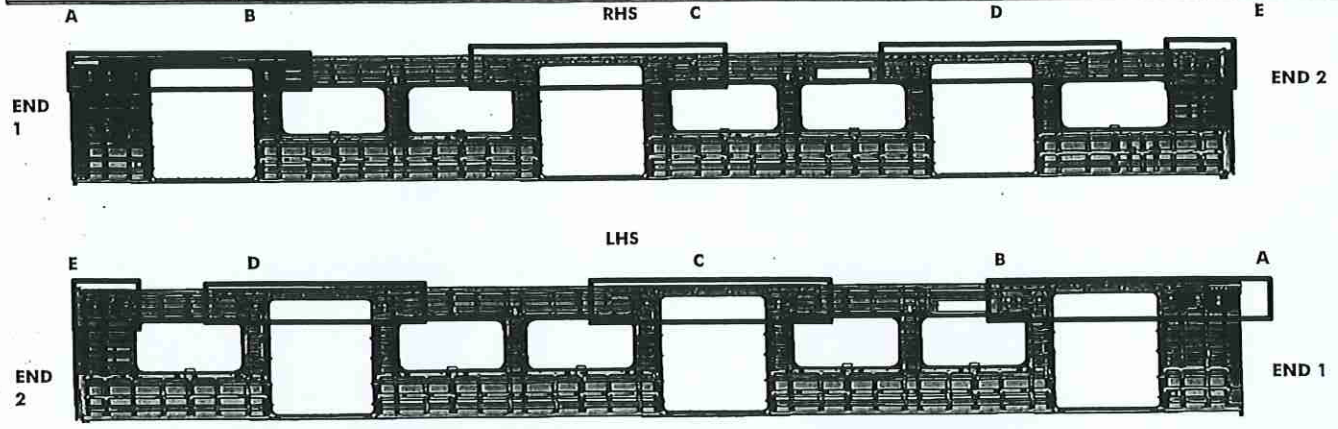
Mthokoza 

OPERATOR
(Name & sign):










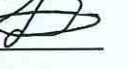
Mthokoza 




	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB1220.323.V29
		Date-	
		28/10/2023	

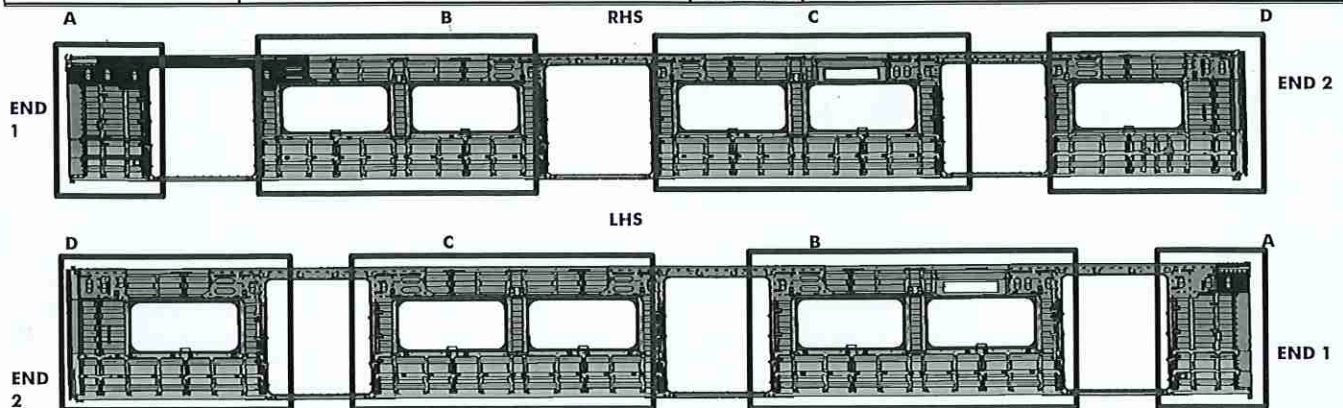


REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>LINDO</u> 	<u>LINDO</u> 
B	Operator (Name&sign): <u>Xulin</u> 	<u>Xulin</u> 
C	Operator (Name&sign): <u>S. A. A. A.</u> 	<u>S. A. A. A.</u> 
D	Operator (Name&sign): <u>Mashudh</u> 	<u>Sibiga</u> 
E	Operator (Name&sign): <u>Mashudh</u> 	<u>Sibiga</u> 

2021-08-15
 Signature

	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB1220.323.V29
		Date- 28/10/2023	



BRACKETING

C-RAILS:	Operator:	INSTALLATION <u>Priscilla</u>
	Operator:	
DOOR MECHANISMS:	Operator:	<u>Priscilla</u>
	Operator:	
TAPPING PADS	Operator:	
	Operator:	<u>LINDO END2</u>
INSTALLATION & VERIFICATION		
SEAT & LUGGAGE BRACKETS:	Operator:	<u>Madini Xulu S. Mame</u>
	Operator:	<u>Mashudu Mashudu</u>
SEAT BRACKETS VERIFICATION:	Operator:	<u>Tetelo</u>
	Operator:	


AREA		WELDING	
		LHS	
A	(Seat brackets)	: Operator (Name&sign):	<u>LINDO</u>
END1 BRACKETS			
(C-rails, Luggage and earth bushes)		: Operator (Name&sign):	<u>LINDO</u>
B	(Seat brackets)	: Operator (Name&sign):	<u>Tetelo</u>
(C-rails, Luggage and earth bushes)		: Operator (Name&sign):	<u>Mashudu</u>
C	(Seat brackets)	: Operator (Name&sign):	<u>Mashudu</u>
(C-rails, Luggage and earth bushes)		: Operator (Name&sign):	<u>Madini</u>
D	(Seat brackets)	: Operator (Name&sign):	<u>Sibiyi</u>
(C-rails, Luggage and earth bushes)		: Operator (Name&sign):	<u>Sibiyi</u>

RHS	
: Operator (Name&sign):	<u>LINDO</u>
: Operator (Name&sign):	<u>LINDO</u>
: Operator (Name&sign):	<u>S. Mashudu</u>
: Operator (Name&sign):	<u>Tetelo</u>
: Operator (Name&sign):	<u>Mashudu</u>
: Operator (Name&sign):	<u>Sibiyi</u>
: Operator (Name&sign):	<u>Mashudu</u>

Signature.....

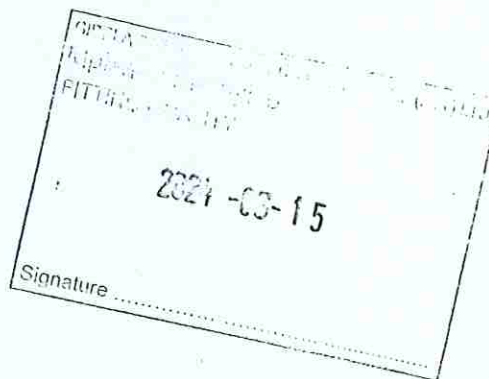
2023-03-15

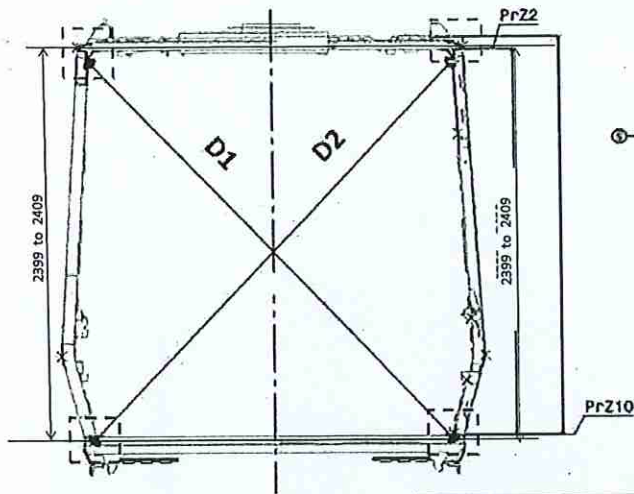
GIBEL PROJECT
Mphahlele (Kanyo) Jico
FITTING QUALITY

	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB1220.323.V29
		Date-	
		28/10/2023	

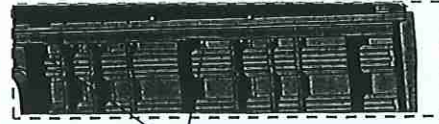
ENDS

END 2 TAPPING PADS WELDING: Operator (Name&sign): Lin RM





Take measurement close to radius



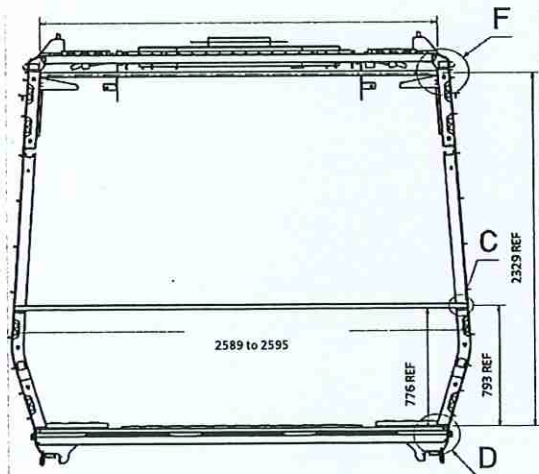
Measurement positions on roof rail and sidewall omega corner



Reinforcement area measurement positions on roof reinforcement areas



Measurement positions on sidewall and side sill corner



Take measurement close to radius

2024-03-15



DTR30223319/2 Carshell Assembly TC

Rev.

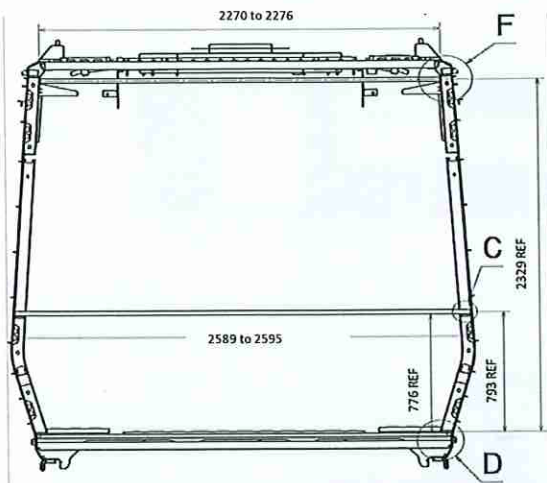
29

Date-

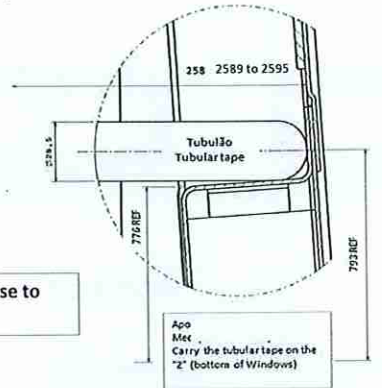
28/10/2023

Project: PRASA

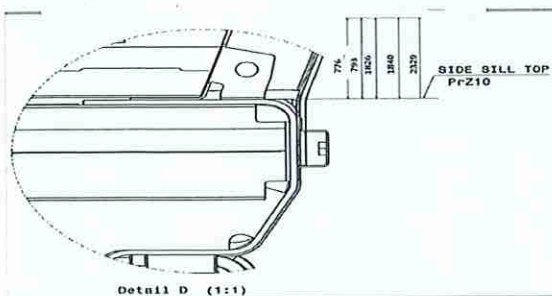
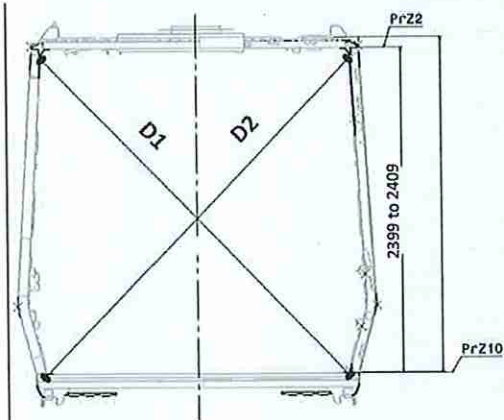
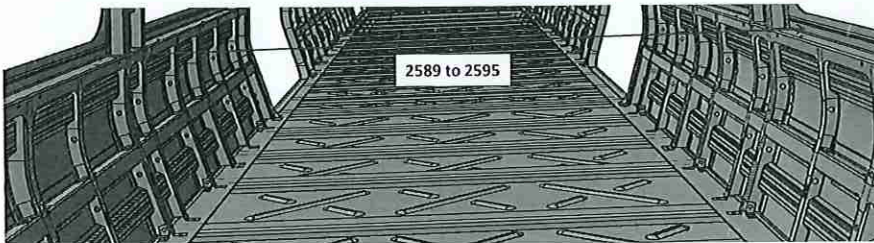
SI.CB1220.323.V29



Take measurement close to radius



Detail C





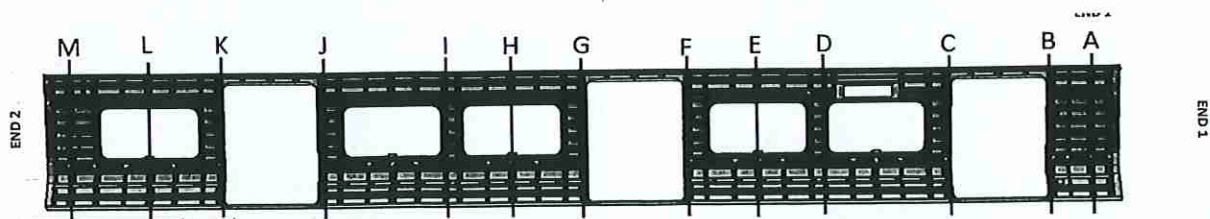
DTR30223319/2 Carshell Assembly TC

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29

Project: PRASA

Date-
28/10/2023

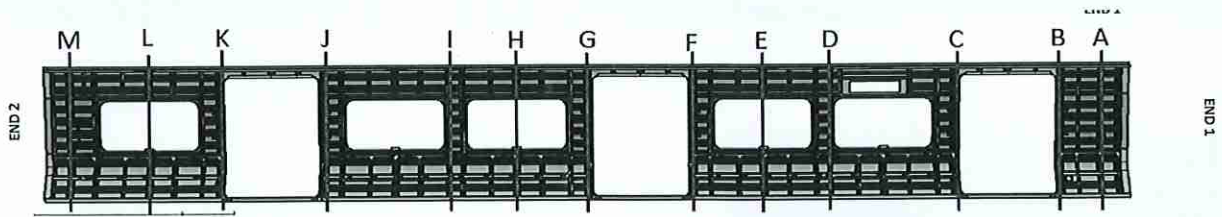
SI.CB1220.323.V29

**BEFORE WELDING**

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3295	3298	3	—
B	3295	3299	4	—
C	3295	3297	2	—
D	3264	3265	1	—
E	3263	3265	2	—
F	3297	3295	2	—
G	3295	3295	0	—
H	3265	3264	1	—
I	3266	3265	1	—
J	3299	3295	4	—
K	3295	3294	1	—
L	3266	3268	2	—
M	3297	3299	2	—

Signature


2024-08-15



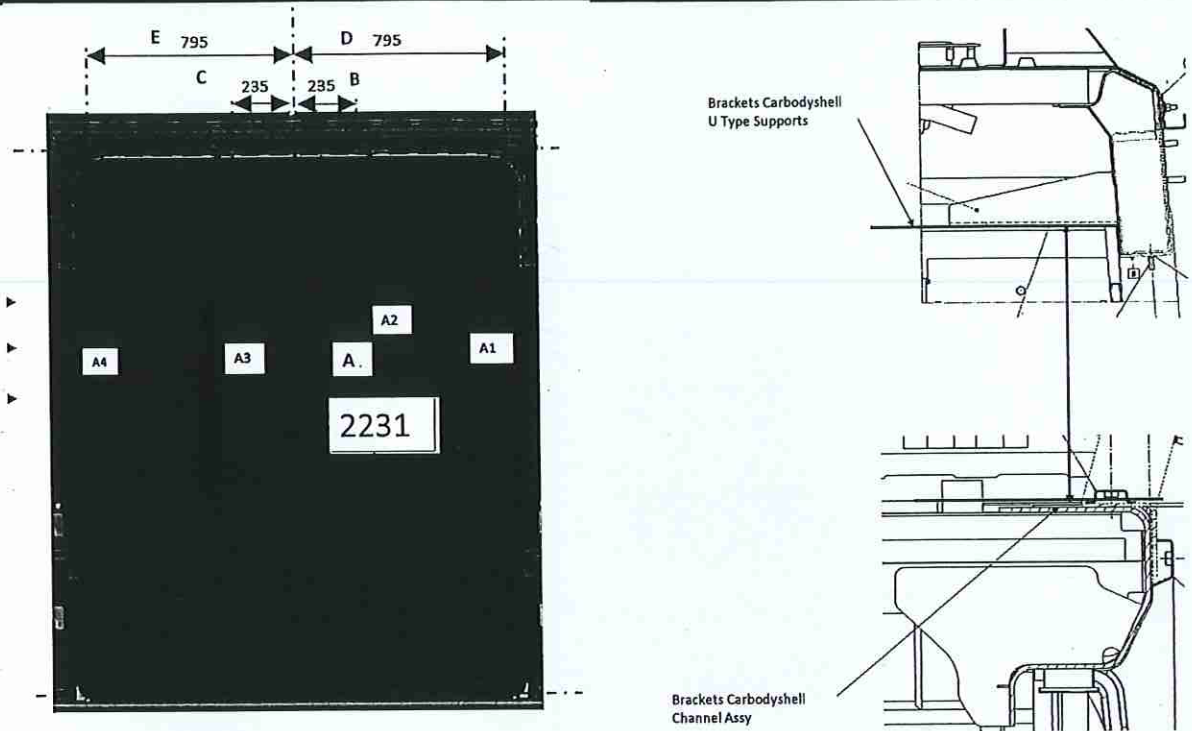
AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3285	3284	1	2593
B	3290	3294	4	2547
C	3297	3295	2	2595
D	3262	3264	2	2595
E	3265	3264	1	2592
F	3299	3300	1	2595
G	3297	3292	5	2594
H	3263	3261	2	2594
I	3267	3264	3	2593
J	3298	3300	2	3295
K	3293	3298	5	2590
L	3267	3266	1	2592
M	3296	3298	2	2595



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		Date-	
		28/10/2023	

Specifications of Details for CBS measurement



DOOR 1 - LHS			DOOR 2 - LHS			DOOR 3 - LHS		
	VALUE	ACTUAL		VALUE	ACTUAL		VALUE	ACTUAL
A1	2230 to 2232	2230	A1	2230 to 2232	2231	A1	2230 to 2232	2231
A2	2230 to 2232	2231	A2	2230 to 2232	2230	A2	2230 to 2232	2230
A3	2230 to 2232	2231	A3	2230 to 2232	2231	A3	2230 to 2232	2231
A4	2230 to 2232	2231	A4	2230 to 2232	2230	A4	2230 to 2232	2230
B	234 to 236	235	B	234 to 236	235	B	234 to 236	236
C	234 to 236	235	C	234 to 236	235	C	234 to 236	234
D	794 to 796	795	D	794 to 796	795	D	794 to 796	796
E	794 to 796	795	E	794 to 796	795	E	794 to 796	794
DOOR 1 - RHS			DOOR 2 - RHS			DOOR 3 - RHS		
	VALUE	ACTUAL		VALUE	ACTUAL		VALUE	ACTUAL
A1	2230 to 2232	2230	A1	2230 to 2232	2231	A1	2230 to 2232	2236
A2	2230 to 2232	2231	A2	2230 to 2232	2230	A2	2230 to 2232	2230
A3	2230 to 2232	2230	A3	2230 to 2232	2231	A3	2230 to 2232	2231
A4	2230 to 2232	2231	A4	2230 to 2232	2230	A4	2230 to 2232	2230
B	234 to 236	235	B	234 to 236	235	B	234 to 236	234
C	234 to 236	235	C	234 to 236	795	C	234 to 236	794
D	794 to 796	795	D	794 to 796	795	D	794 to 796	794
E	794 to 796	795	E	794 to 796		E	794 to 796	796

Signature



DTR30223319/2 Carshell Assembly TC

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29

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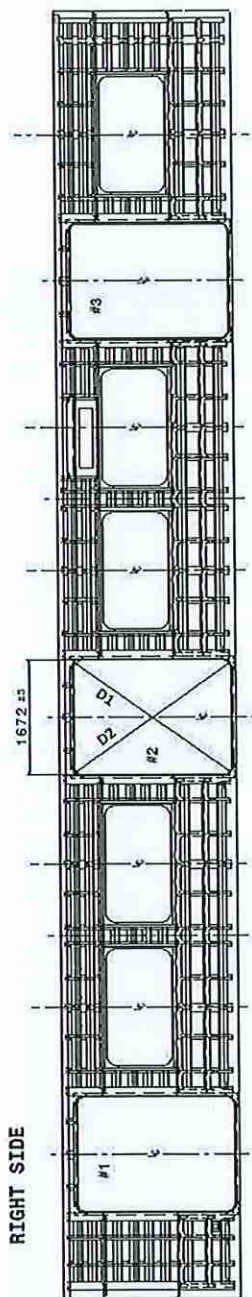
Date-

28/10/2023

SI.CB1 220.323.V29

Specifications of Details for CBS measurement

End #2



End #1

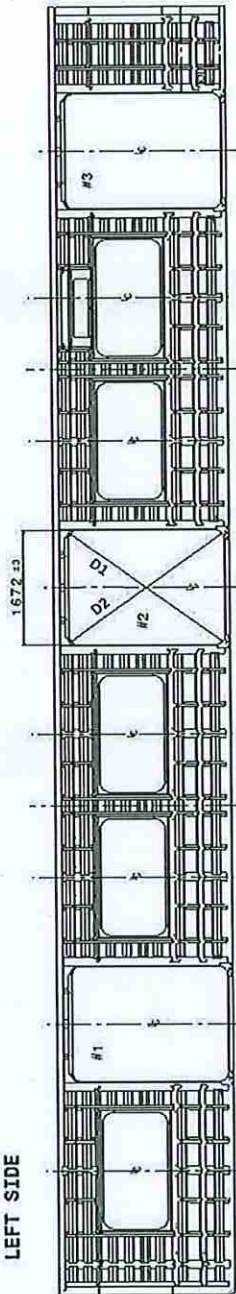
Doors diagonal D1-D2 maximum difference ≤ 4 mm

	#1	#2	#3
D1	2749	2748	2749
D2	2747	2746	2748
D1-D2	2	2	0

Doors length - 1672 ±3mm

	#1	#2	#3
HIGHER DIMENSION	1671	1672	1671
CENTRAL DIMENSION	1672	1671	1672
LOWER DIMENSION	1670	1672	1670

End #1



LEFT SIDE


Diagonal de portas - diferença D1-D2 ≤ 4 mm

	#1	#2	#3
D1	2748	2749	2749
D2	2746	2747	2748
D1-D2	2	2	2

Vão de Portas - 1672 ±3mm

	#1	#2	#3
DIMENSÃO SUPERIOR	1671	1672	1671
HIGHER DIMENSION	1671	1672	1672
CENTRAL DIMENSION	1671	1672	1672
LOWER DIMENSION	1671	1672	1672



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		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		Signature/Date (Manufacturing)	Signature/Date (Quality)

II.2 - Check List REX



Check List Items

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



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB1220.323.V29
		Date-	
		28/10/2023	

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!	04/03/24	Lemi Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	04/03/24	Ntobeko Industrial Quality	
		NO GO	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

Signature

2024-03-15

T. Khenyiso
 INDUSTRIAL QUALITY




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"/> DT00000223319	A/D000123353	DT00000223319 Carshell Assembly TC	CB1230	X					X	PRA.CB1230.DT0000012 23319.V20	YES
<input type="checkbox"/>											

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 Mbhomhhi	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 Mbhomhhi	14/06/2022
			CHECKER	Andani Muthelo	14/06/2022
			COMPILER	Andani Muthelo	14/06/2022
27	26/07/2022	Threshold measurements addition	APPROVER	Collins Mbhomhhi	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 Mbhomhhi	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
216	TC1	Sine 426955	06/03/24	SI.CB1230.324.V28	14

OPERATOR
 NAME & ALPS NUMBER
 FITTING QUALITY

 2024-03-15
 Signature



DT00000223319 Carshell Assembly TC

Rev.
30

Date-

06/11/2023

Project: PRASA

SI.CB1230.324.V29

Carro
Car:

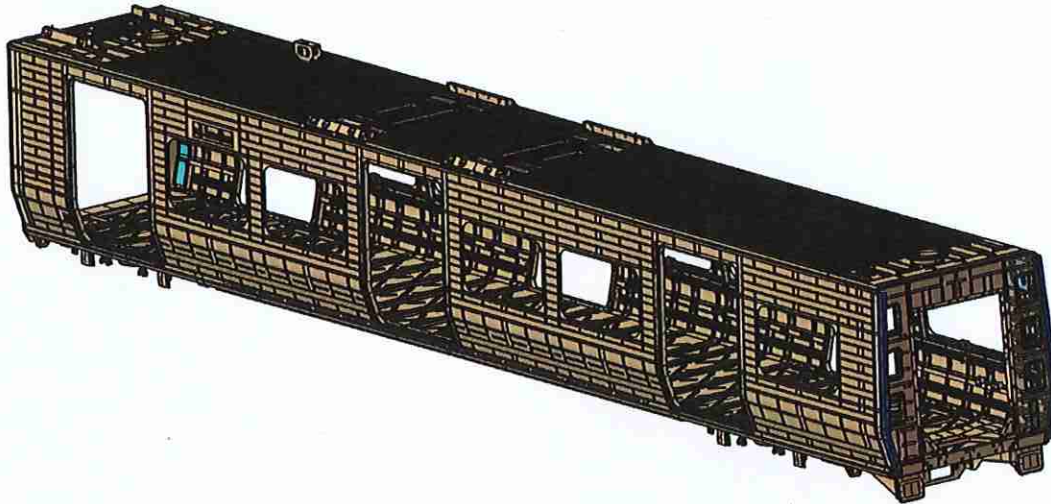
NCR:

Work station:

CB1230



Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car						Revision	Obsevation	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4	TC2							
DT00000223319							30		OK		N/A	8. 05/03/24	05/03/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK	NOK	Signature/Date (Operations)	Signature/Date (Quality)
Combination Square	GIBCS 0134	2024/06/10	OK		8. 05/03/24	05/03/24
Measuring Tape	GIBTA 0394	2024/04/10	OK		8. 05/03/24	05/03/24
Tubular	22713-1	29/11/24	OK		8. 05/03/24	05/03/24

1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 L1	310180	Mig Welding	OK		8. 05/03/24	05/03/24
ER 308 L31	29967	Tig Welding	OK		8. 05/03/24	05/03/24



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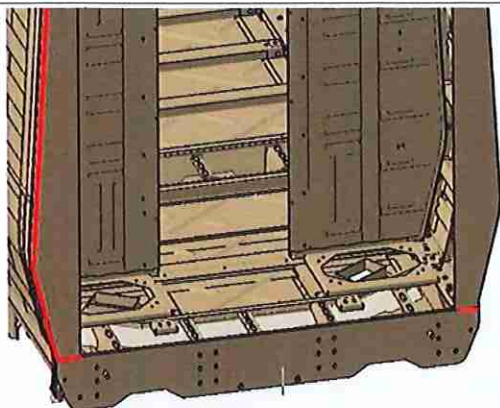
Project: PRASA
SI.CB1230.324.V29

II - Control Activities of Production

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° DT00000223319	DT00000223319	OK			05/03/24	05/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	OK			05/03/24	05/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 DTD0000210675	OK			05/03/24	05/03/24
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.	OK			05/03/24	05/03/24
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	OK			05/03/24	05/03/24
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>ISR 70-03</u> Exp Date: <u>1 05/1/24</u> Actuals Temperature: <u>21°C</u> Humidity: <u>63%</u>	OK			05/03/24	05/03/24
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	OK			05/03/24	05/03/24

VIEW A



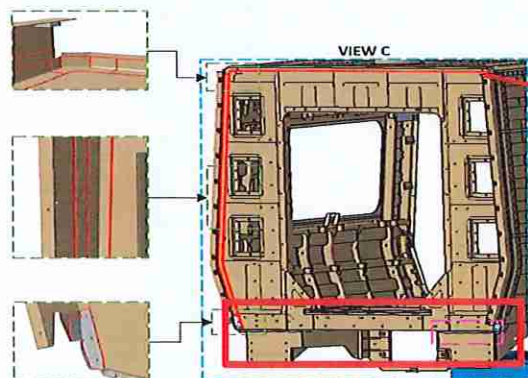
**END 1
SEALANT**

OPERATOR
(Name & sign):

Boitumelo Blocc

OPERATOR
(Name & sign):

Buhle



OPERATOR
(Name&sign):

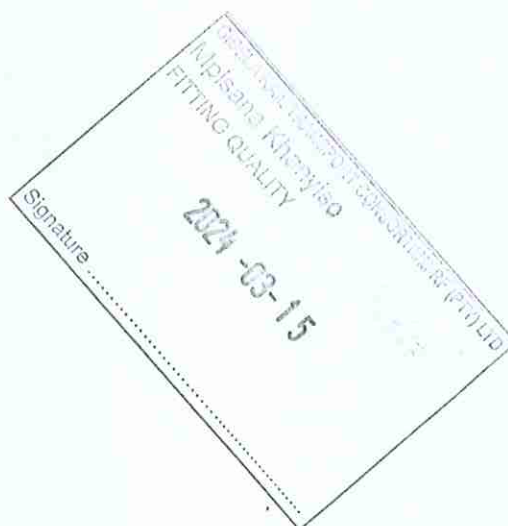
LERDY

OPERATOR
(Name&sign):

LERDY

OPERATOR
(Name&sign):

LERDY



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

Operator (Name & sign):

LHS
(F) Sinle

RHS
(F) Sinle

Operator (Name & sign):

(f) Tshendo

(f) Tshendo

Operator (Name & sign):

D,E,H,I,G Borty

D,E,H,I,G Borty

Operator (Name & sign):

Blore

Blore

Operator (Name & sign):

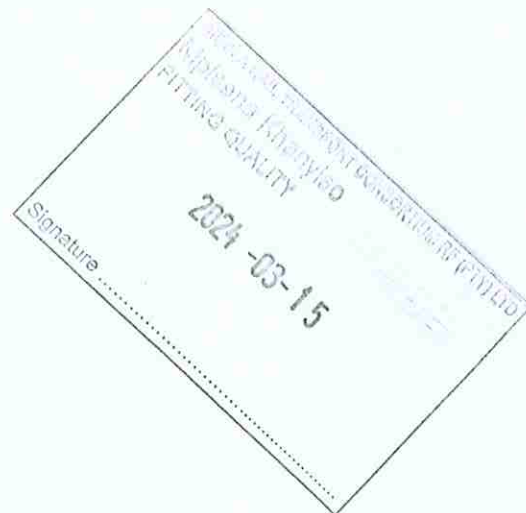
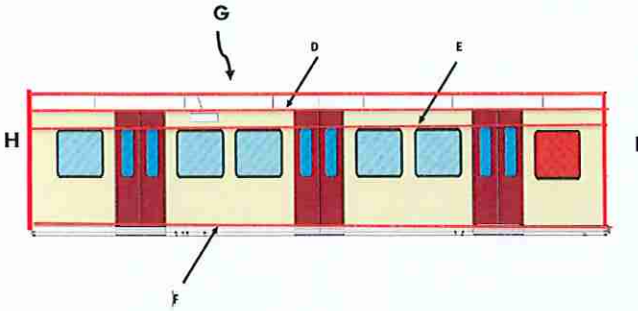
D,E,H,I,G Buhle

D,E,H,I,G Buhle

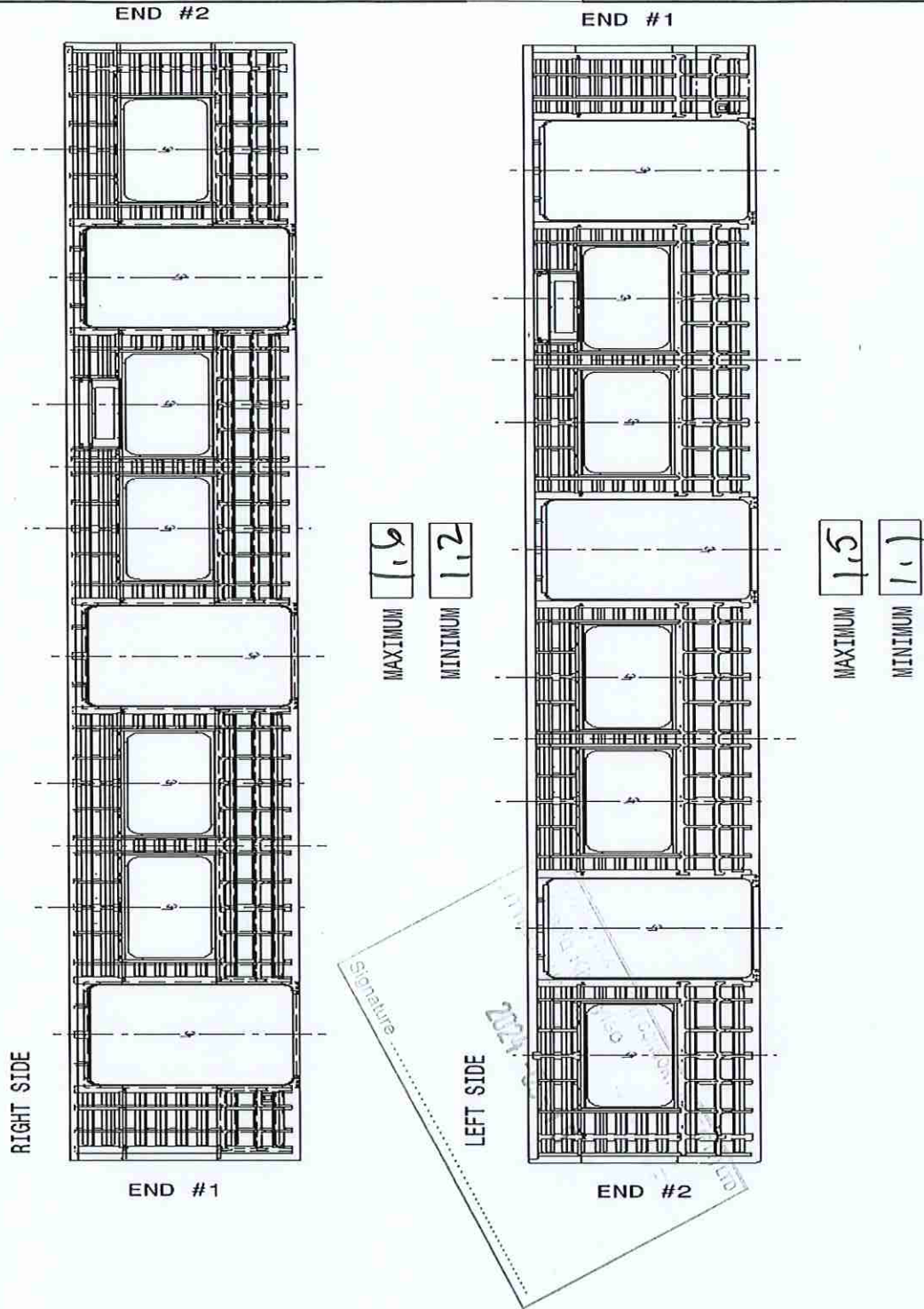
Operator (Name & sign):

Bhola

Bhola

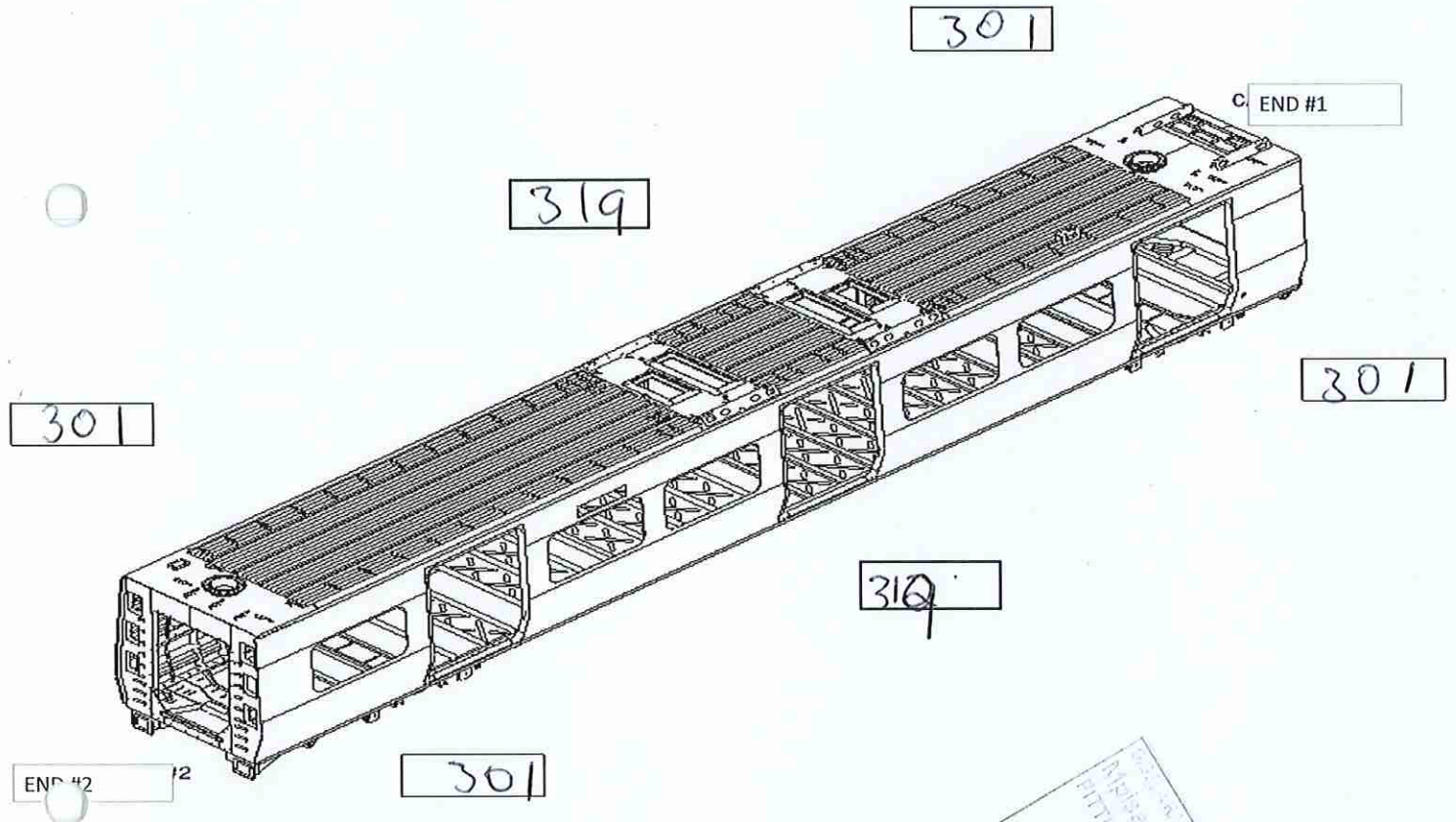


Flatness side left and right maximum of 2mm in the valley to peak measured in 900mm. Recod the maximum and minimum value found and indicate the corresponding region.



Specifications of Details for CBS measurement CB1230

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



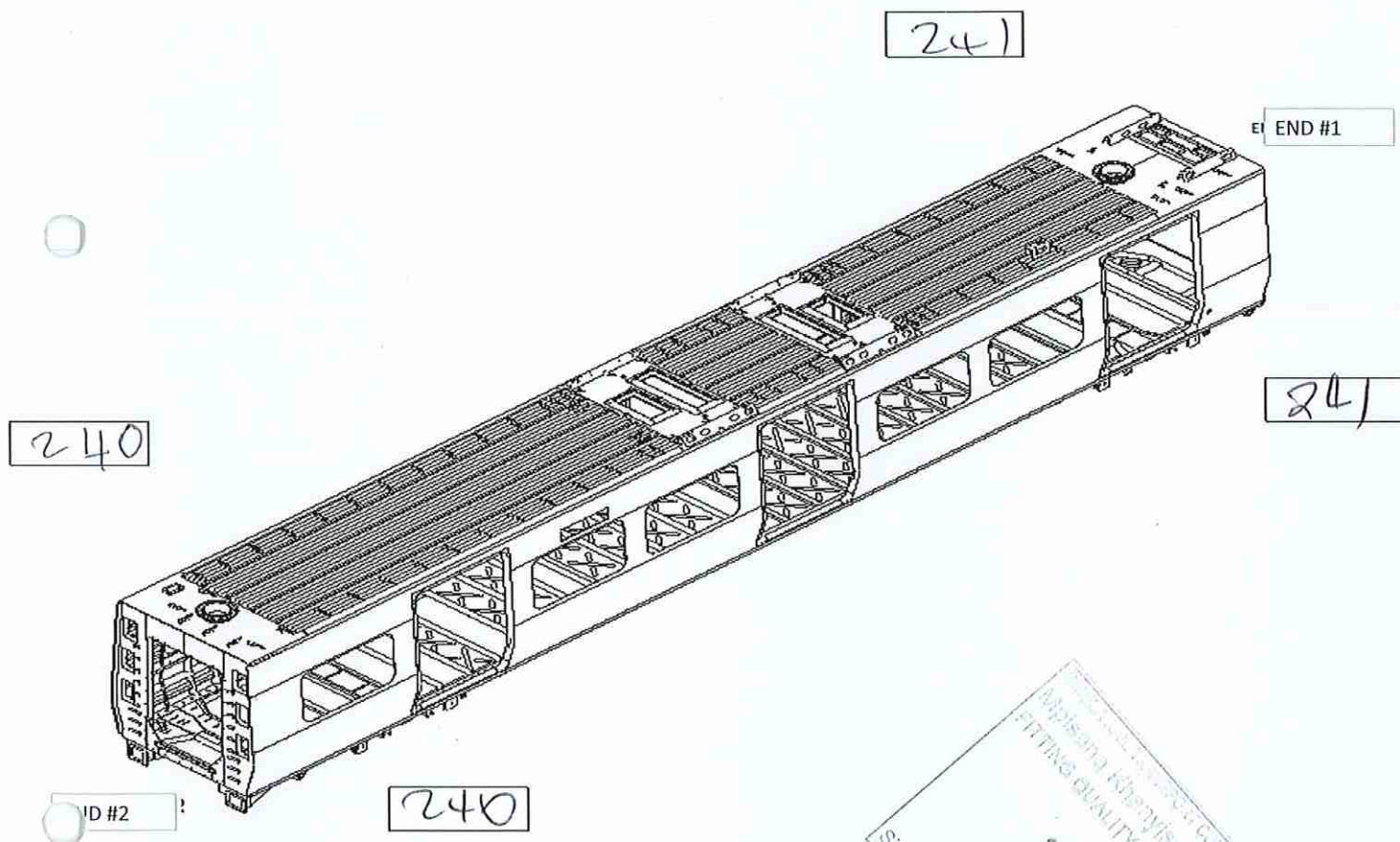
MEASURED CAMBER VALUES

RIGHT \rightarrow 18
LEFT \leftarrow 18

Signature
Dj
2024-03-15
Mileena Khanyisa
FITTING QUALITY
PRASA - RAILWAYS
PRASA - RAILWAYS (PTY) LTD

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

1

1

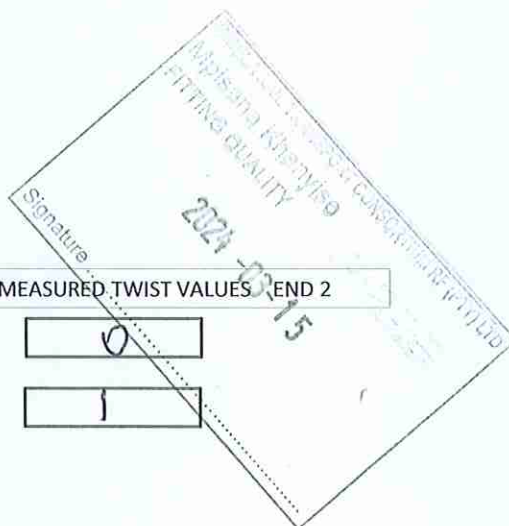
MEASURED TWIST VALUES END 2

LATERAL

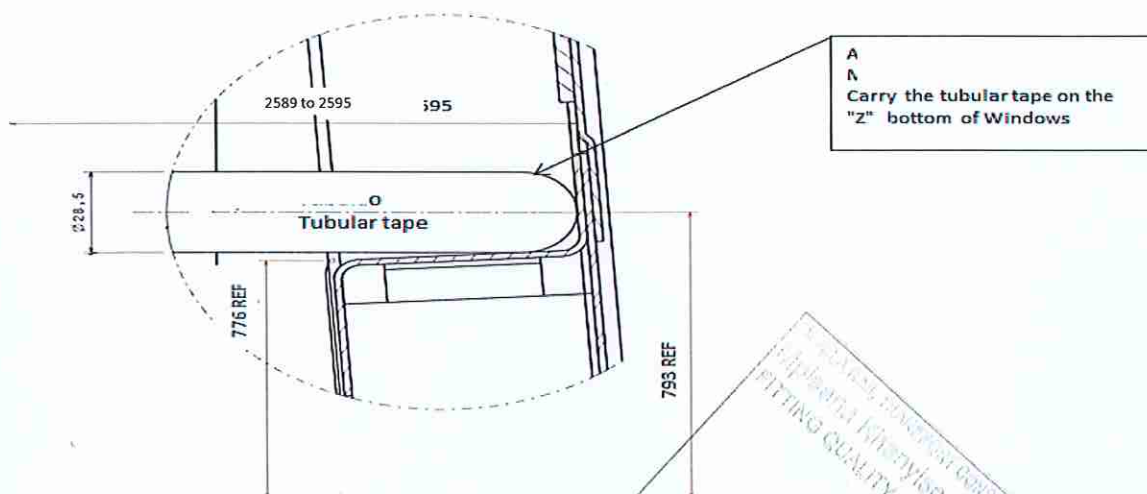
0

LONGITUDINAL

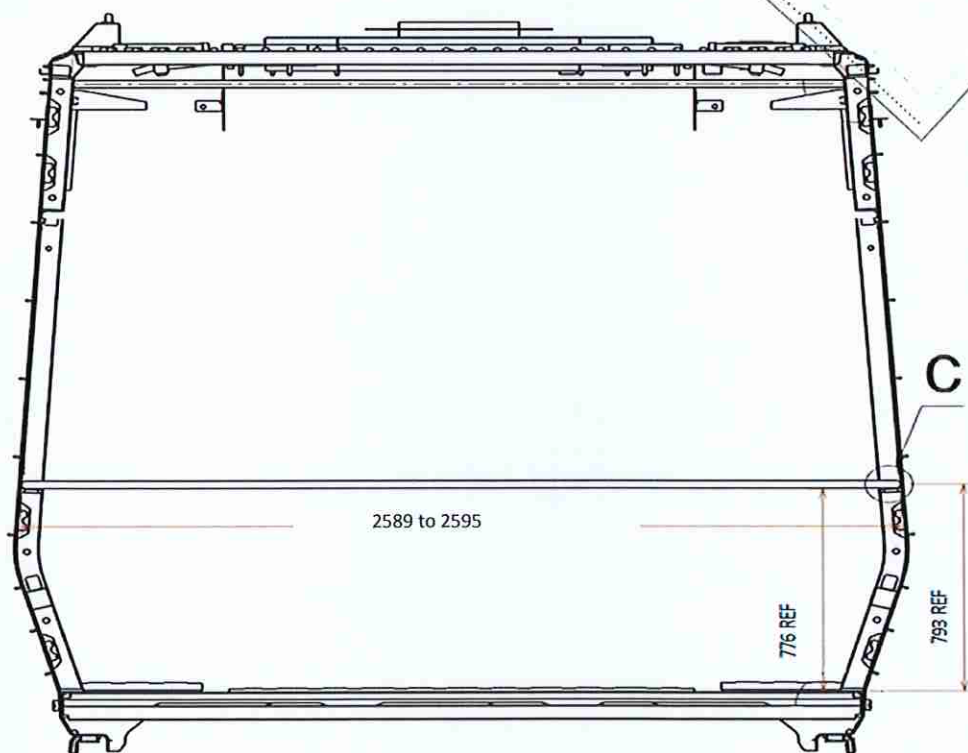
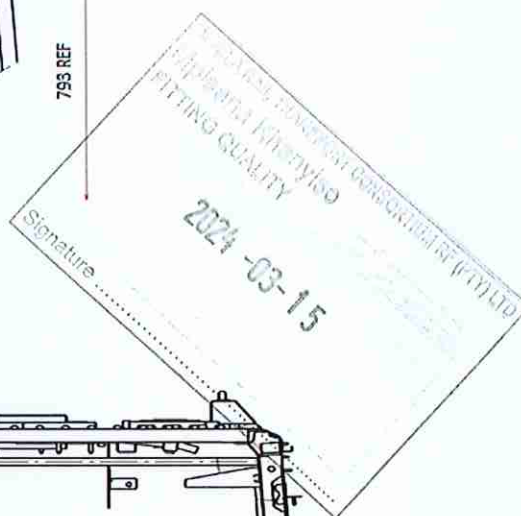
1



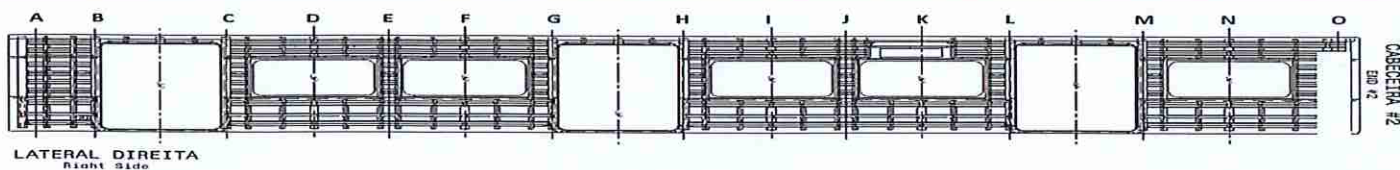
Details for measuring on the CB1230 stage, after completion of activities



Detail C

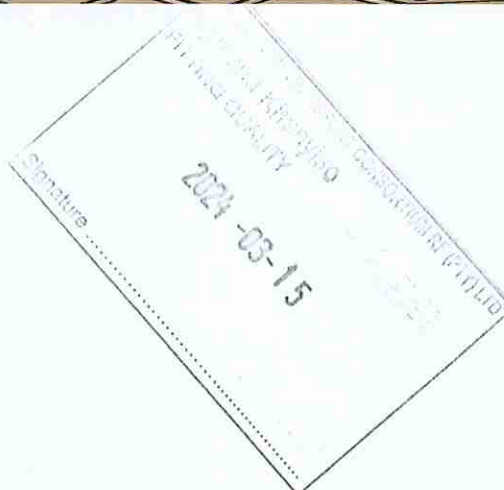


Specifications of Details for CBS measurement



2589 to 2595mm

A	2592
B	2593
C	2590
D	2592
E	2591
F	2590
G	2594
H	2593
I	2590
J	2591
K	2593
L	2592
M	2593
N	2590
O	2589



Threshold verification

Nominal value :38

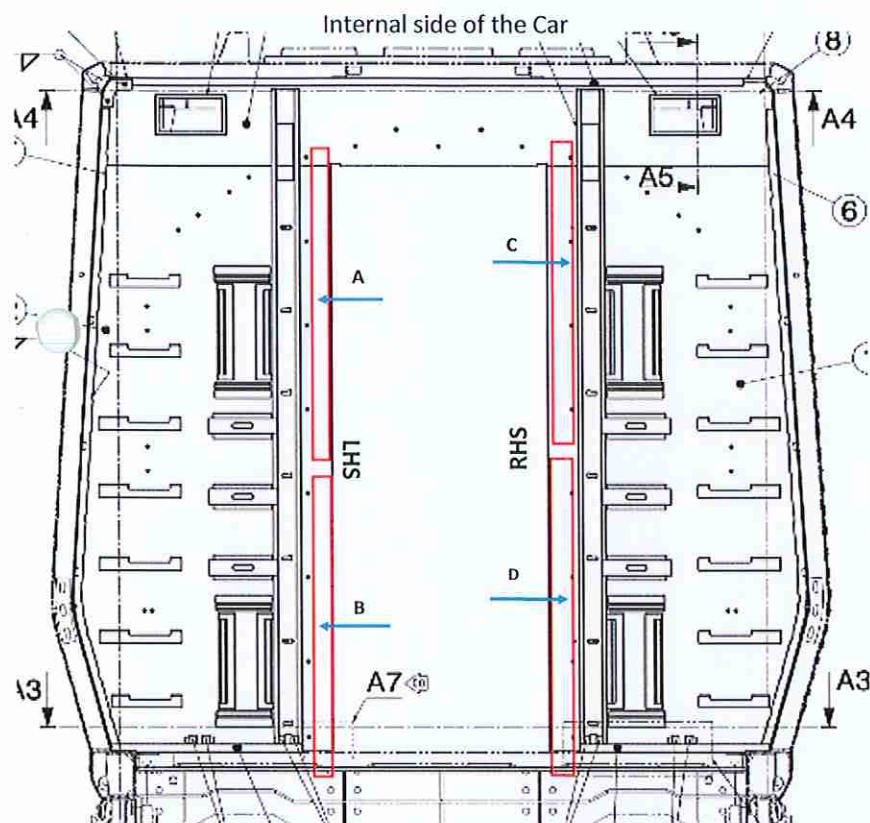
Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	39	38	39	38	38
Door 4		Door 5		Door 6	
L	R	L	R	L	R
39	38	39	39	38	37

BOILER MAKER: Mthokozisi [Signature]
WELDER: Mmathapelo [Signature] PP

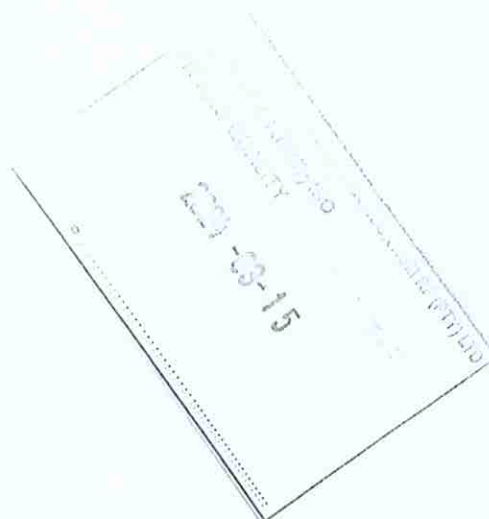
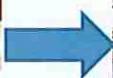
Specifications of Details for CBS measurement

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	9.8	10.8	1
B	11.2	12	0.8
C	11.3	12.1	0.8
D	10.8	11.3	0.5





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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	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX					



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Self Inspection - Final Result

Is the car good to advance to the next workstation/process?
(Approval of Operations and Industrial Quality)

DATE

NAME

SIGNATURE

GO

If activities are not complete, the missing activities must not impact the next stage!

05/03/24

Sme

Operations

Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)

05/03/24

Ntokozo

Industrial Quality

NO GO

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)

Operations

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

