

GIBELA

PRASA PROJECT


APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

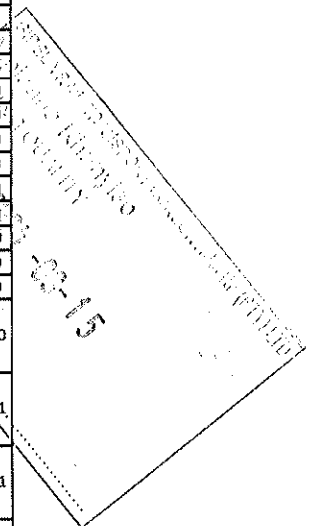
CONFIDENTIAL INFORMATION

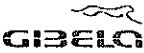
This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE							WORK INSTRUCTION	SAFETY ? 
				TC1	M4	M1	M2	M3	TC2			
DTR30223319/3	AAD0001241033	Carshell Assembly TC	CB2210	X						X	PRA.CB2210.DTR3022331 9/3.V25	YES

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	Ntokozi Zwane	07/11/2023
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
216	7C2	WNGA 471497	05/03/24	SI.CB2210.322.V28	16

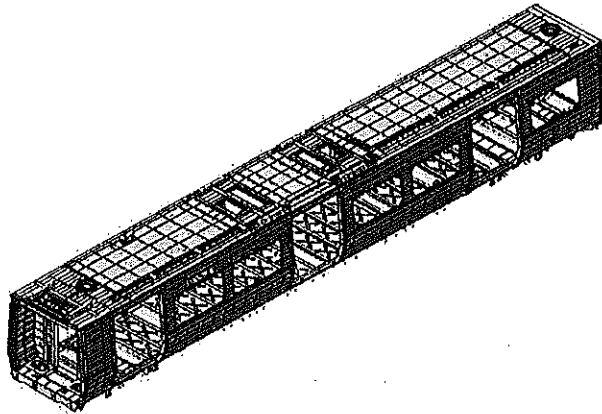


	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB2210.322.V28
		Date: 07/11/2023	

Cart: TC1 & TC2	HCR:	Work station: CB2210
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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)
	P	E	S	S	E	P						
DTR30223319/3						X	157		✓		N/A	10/10/24

I.2 - Instruments Control

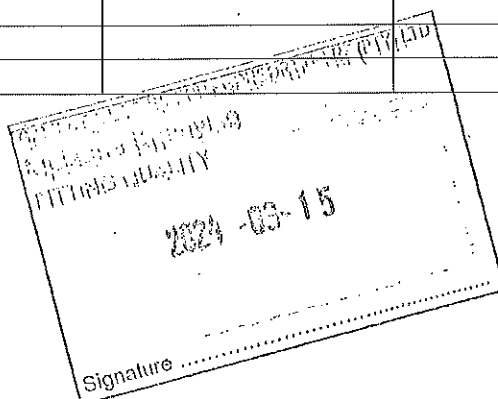
Monitoring and Measuring Instrument Control - Used for Special Process



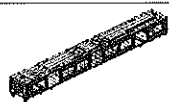
Instruments	Validation	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
TUBULAR	22713	04/10/23	✓		10/10/24 05/03/24	10/10/24
30 M TAPE	6187P0084	23/03/31	✓		10/10/24 05/03/24	10/10/24
LASER TAPE	128425024	08/01/24	✓		10/10/24 05/03/24	10/10/24

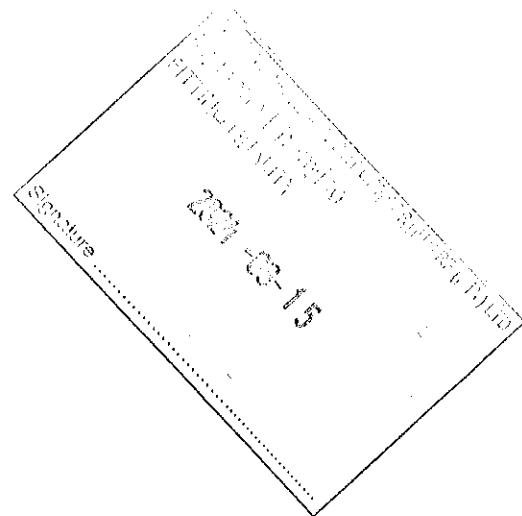
I.3 Consumables


Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
AUT ROD 308 LSI	5221880	MIG	✓		10/10/24 05/03/24	10/10/24
ER 309 LSI	318394	MIG	✓		10/10/24 05/03/24	10/10/24



			DTR30223319/3 Carshell Assembly TC		Rev. V28		Project: PRASA	
					Date- 07/11/2023		SI.CB2210.322.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	✓			10/10 05/03/24	05/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓			10/10 05/03/24	05/03/24
03		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓			10/10 05/03/24	05/03/24
04	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓			10/10 05/03/24	05/03/24
05	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓			10/10 05/03/24	05/03/24
06		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓			10/10 05/03/24	05/03/24
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	✓			10/10 05/03/24	05/03/24



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Welder traceability

Roof ring welds

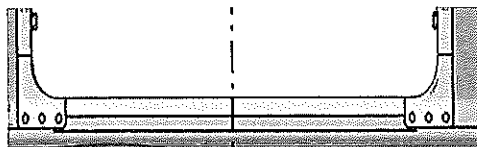


LHS	
Boiler maker (Name & Sign): <u>Tumelo [Signature]</u>	Welder (Name & Sign): <u>MTHO [Signature]</u>
RHS	
Boiler maker (Name & Sign): <u>Timothy [Signature]</u>	Welder (Name & Sign): <u>BOBBERT</u>

END 1

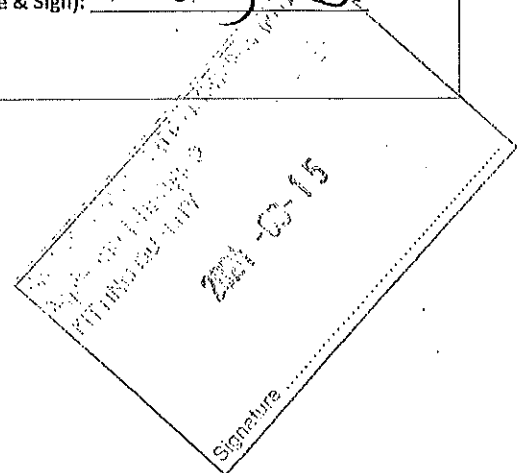
LHS	
Boiler maker (Name & Sign): <u>Tumelo [Signature]</u>	Welder (Name & Sign): <u>MTHO [Signature]</u>
RHS	
Boiler maker (Name & Sign): <u>Timothy [Signature]</u>	Welder (Name & Sign): <u>BOBBERT</u>


END 2



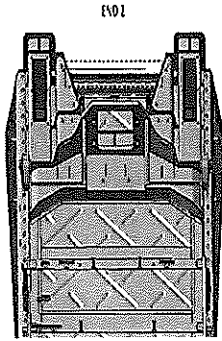
LHS	
Boiler maker (Name & Sign): <u>Thabang [Signature]</u>	
Welder (Name & Sign): <u>Thabang [Signature]</u>	

RHS	
Boiler maker (Name & Sign): <u>Thabang [Signature]</u>	
Welder (Name & Sign): <u>Thabang [Signature]</u>	

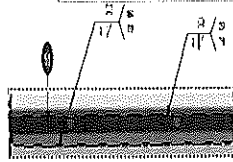


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EUF Reinforcement Plates

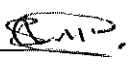


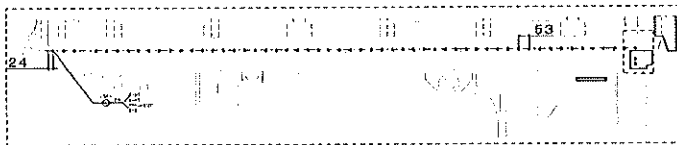
Underneath the CAR




END 2

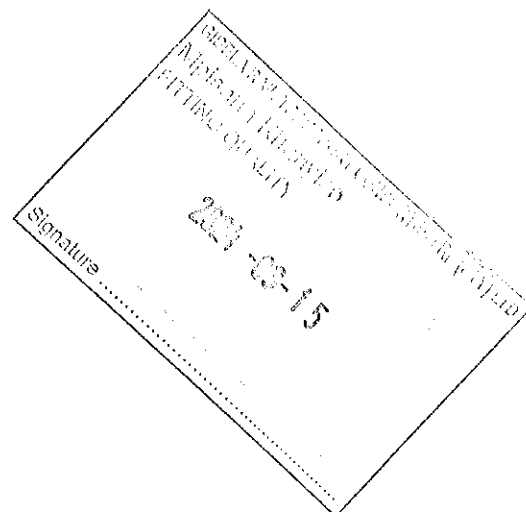
Boiler maker (Name & Sign) GERALD 


Welder (Name & Sign): SIPHOKAZI 

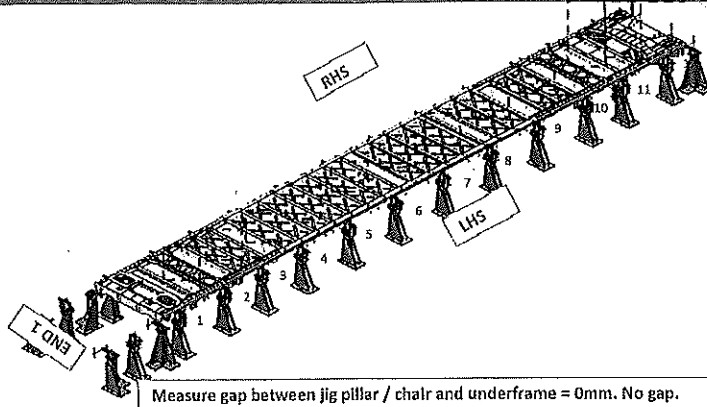


FEDOLI

Operator: LAWRENCE 



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Specifications of Details for CBS measurement			



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

Fill in the gap foundon each Jlg 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	3	4	0	0	0

Signature Operations:

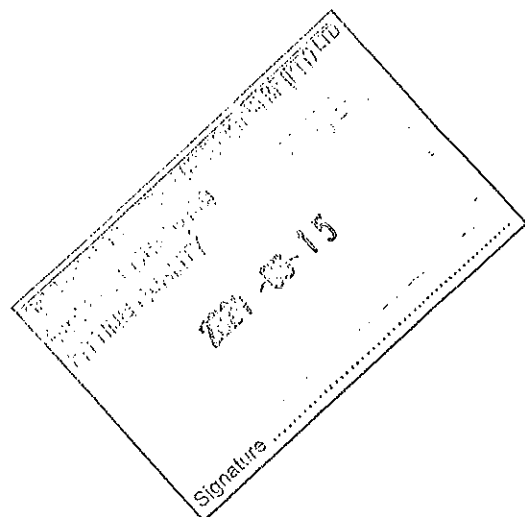
Date: 05/05/24

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	3	2	0	0	0

Signature Industrial Quality:

Date: 05/05/24





DTR30223319/3 Carshell Assembly TC

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V28

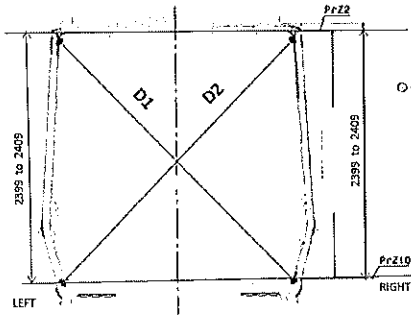
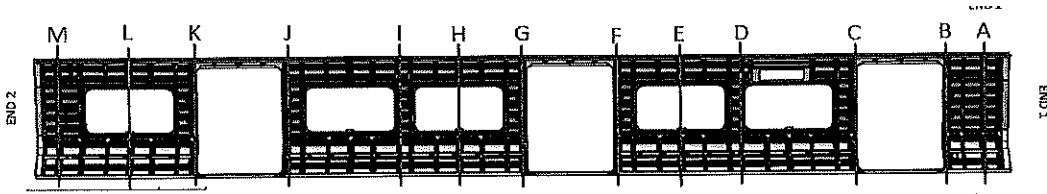
Date-

07/11/2023

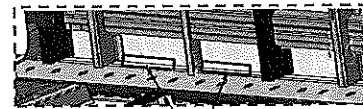
Project: PRASA

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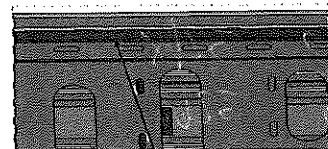
Specifications of Details for CBS measurement



Measurement positions on roof rail and sidewall omega corner.




Measurement positions on sidewall and side sill corner.

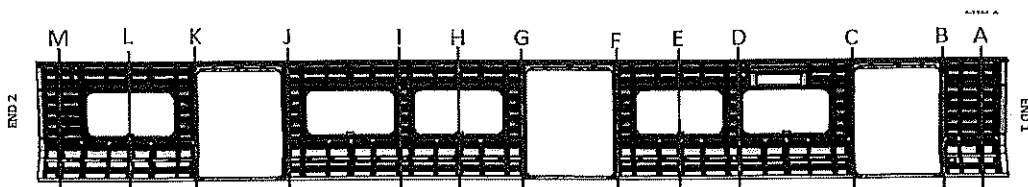


Reinforcement area measurement positions on roof reinforcement area.

APPROVED FOR CONSTRUCTION
APPROVED FOR CONSTRUCTION
2023-08-15
Signature

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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	3271	3270	1	2405	2404	1
B	3270	3270	0	2406	2406	0
C	3269	3271	2	2405	2404	1
D	3266	3266	0	2404	2406	2
E	3266	3265	1	2405	2406	1
F	3271	3270	1	2404	2404	0
G	3270	3268	2	2407	2405	2
H	3265	3266	1	2405	2406	1
I	3266	3266	0	2406	2407	1
J	3269	3269	0	2405	2405	0
K	3269	3268	1	2404	2406	2
L	3266	3270	4	2405	2405	0
M	3271	3268	3	2406	2408	2

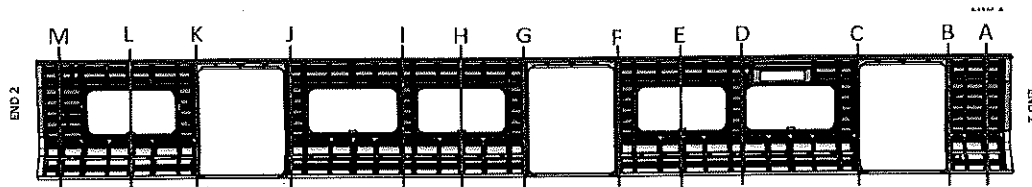
05/03/24

Signature

2024-03-15

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Specifications of Details for CBS measurement			

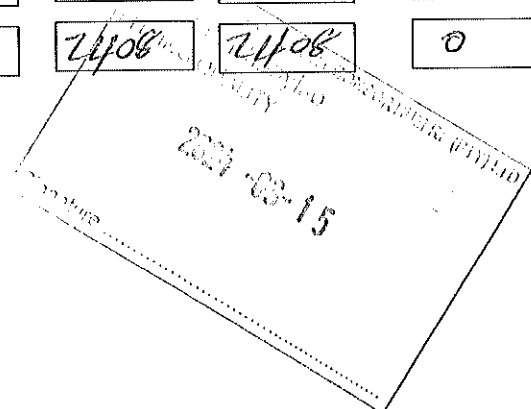
AFTER WELDING




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

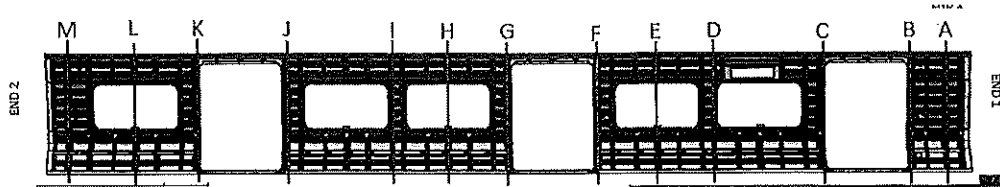
	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3268	3268	0	2404	2404	0
B	3295	3296	1	2405	2406	1
C	3296	3296	0	2404	2406	2
D	3266	3266	0	2405	2404	1
E	3266	3265	1	2405	2407	2
F	3294	3295	1	2406	2405	1
G	3295	3296	1	2408	2408	0
H	3264	3265	1	2406	2405	1
I	3266	3266	0	2404	2405	1
J	3294	3294	0	2406	2406	0
K	3295	3296	1	2405	2405	2
L	3266	3264	3	2406	2405	1
M	3294	3295	1	2408	2408	0

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	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB2210.322.V28
		Date- 07/11/2023	
CBS measurement			

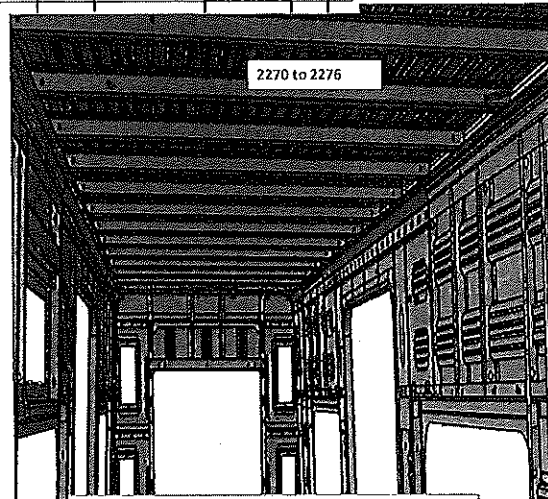
BEFORE WELDING



2270 to 2276

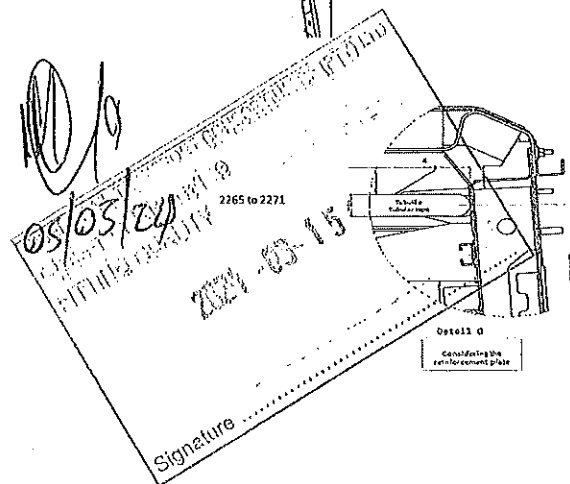
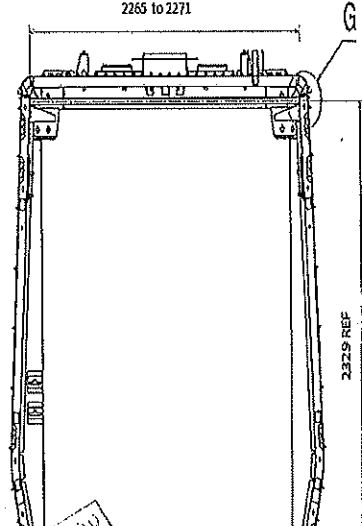
2268 & 2274


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



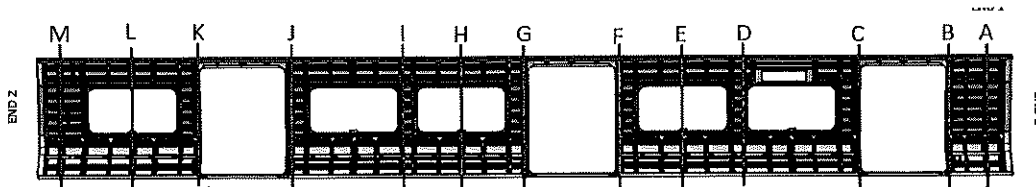
Do not consider reinforcement (Take measurements top area of zee profile

2265 to 2271

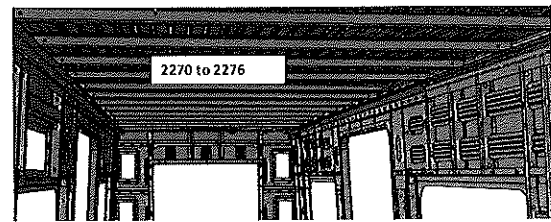


	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA SI.CB2210.322.V28
		Date: 07/11/2023	
Specifications of Details for CBS measurement			

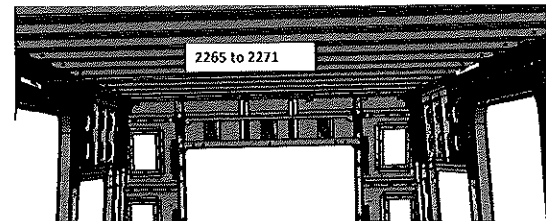
AFTER WELDING



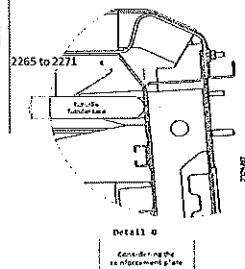
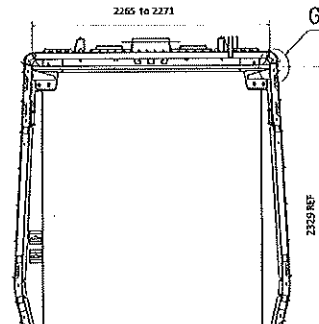
	2265 to 2271	2270 to 2276
A	N/A	2274
B	2268	N/A
C	2265	N/A
D	N/A	2276
E	N/A	2275
F	2266	N/A
G	2269	N/A
H	N/A	2276
I	N/A	2276
J	2266	N/A
K	2265	N/A
L	N/A	2273
M	2270	N/A




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



Take measurement close to radius (considering reinforcement)




05/03/24
Signature
2024-03-15
FITTING QUALITY



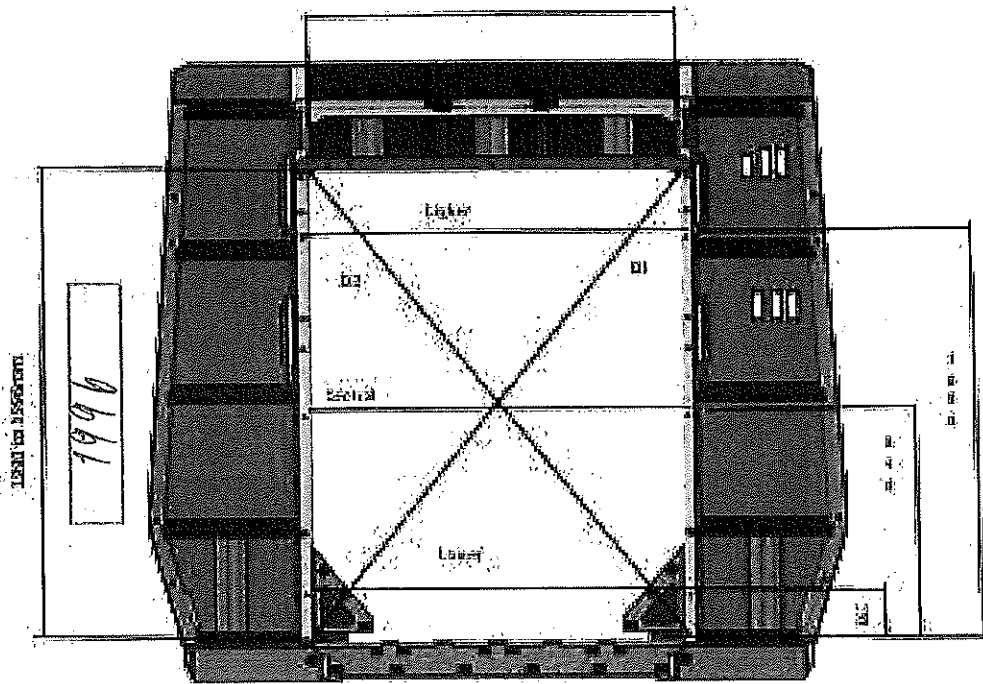
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Date:
07/11/2023

Project: PRASA
SI, CB2210.322.V28

Specifications of Details for CBS measurement

Endframe 2



1381 to 1387 mm

DIAGONAL DIFFERENCE D1-D2 = 3mm

Upper Diagonal

1382

D1

2414

Central Diagonal

1381

D2


2415

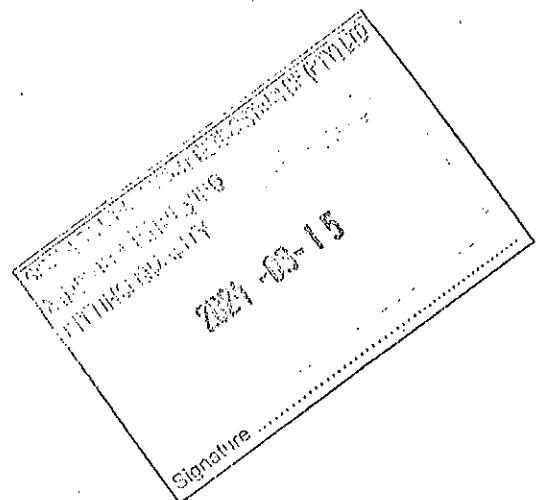
Lower Diagonal

1381

D1-D2

1


05/03/24





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Rev.

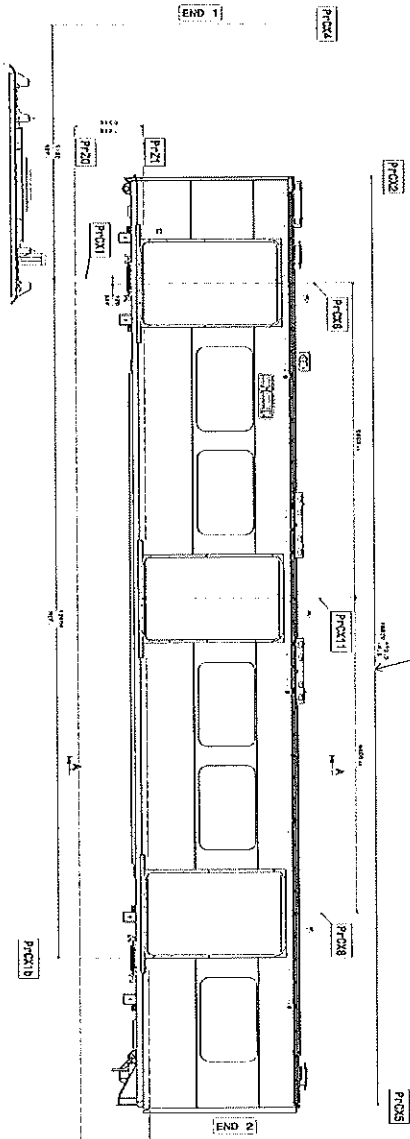
V28

Project: PRASA

Date-
07/11/2023

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Specifications of Details for CBS measurement

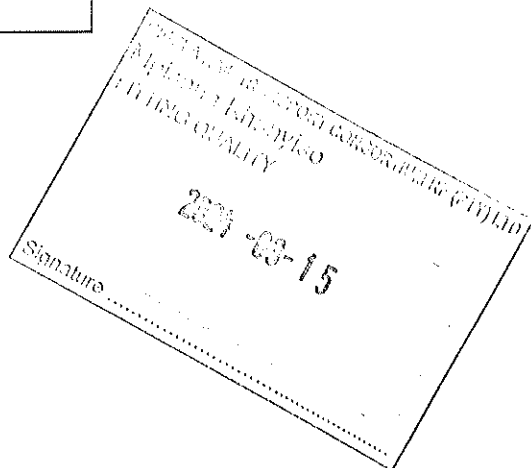





LEFT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	18870 $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$	18871

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

Dye penetrant test

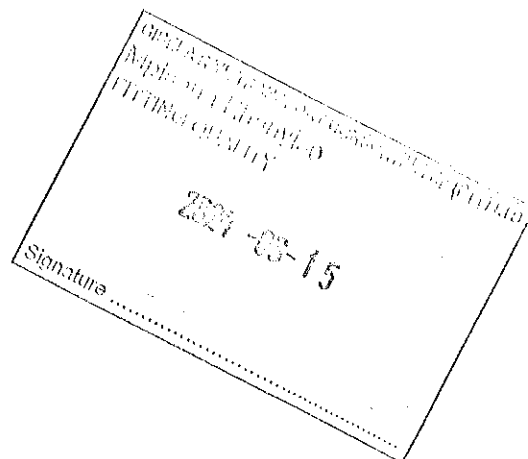
Dye-penetration test to be performed by quality personnel




		DTR30223319/3 Carshell Assembly TC		Rev. V28 Date- 07/11/2023	Project: PRASA SI.CB2210.322.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!	05/03/24	LWNGA Operations		
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.	05/03/24	Nkolaw Quality		
	NO GO	There are activities pending 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



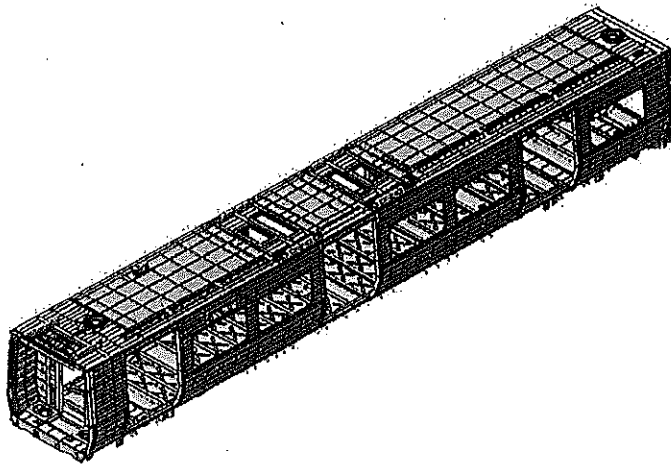
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGE
TS96	TC2	ASA-10A-409974	06-03-24	SI.CB2220.323 V28	17

	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)
	D	E	M	MA	TC						
DTR30223319/2						29	28-10-2023	X		N/A	

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process


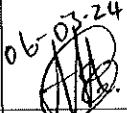

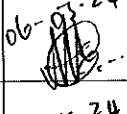
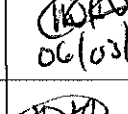
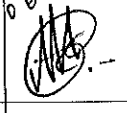
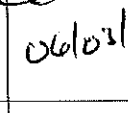
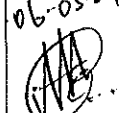
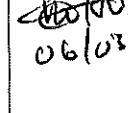
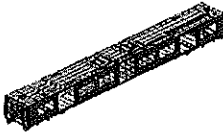
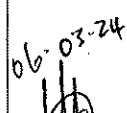
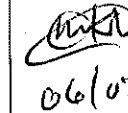
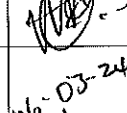
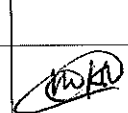

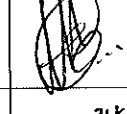
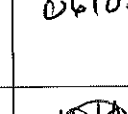
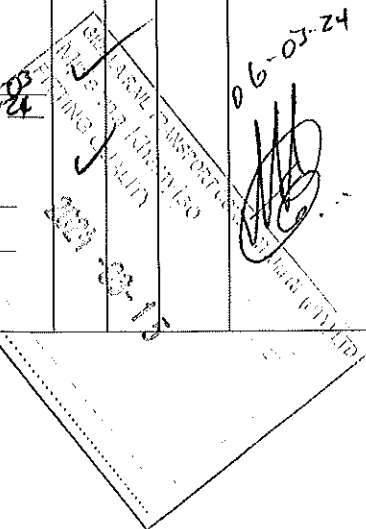
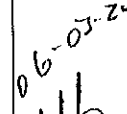
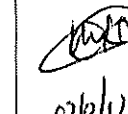
Instruments	Validation	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
Tubular	22173	19/02/2024	X		06-03-24	
measuring tape	GS07A0231	03/30/2024	X		06-03-24	






1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
308	2310157	MIG	X		06-03-24	

Signature

		DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29		
			Date- 28/10/2023			
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° PRA.CB2220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	DTR30223319/2	✓	06-03-24 	 06/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓	06-03-24 	 06/03/24
03	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	✓	06-03-24 	 06/03/24
04	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	06-03-24 	 06/03/24
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓	06-03-24 	 06/03/24
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.	✓	06-03-24 	 06/03/24
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	✓	06-03-24 	 06/03/24
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> <p>Temperature Min - Max (I) Min-Max 10°C - 35°C Relative humidity Min - Max (I) Min-Max 25% - 60%</p>	<p>Sealant Batch No: <u>477008</u> Exp Date: <u>06/24</u></p> <p>Actuals Temperature: <u>25</u> Humidity: <u>35</u></p>		06-03-24 	 06/03/24

		DTR30223319/2 Carshell Assembly TC		Rev. 29	Project: PRASA			
				Date-	SI.CB2220.323.V29			
				28/10/2023				
09	NA	Verification of sealant application in certain regions in the drawing.	AAD0001241033	✓			 06/03/24	 06/03/24
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	✓			 06/03/24	06/03/24 

PRASA EPC JV Consortium (Pty) Ltd
 Approved Quantity
 FITTING QUALITY
 2024-03-15
 Signature



DTR30223319/2 Carshell Assembly TC

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29


Project: PRA5A

Date-

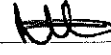
SI.CB2220.323.V29

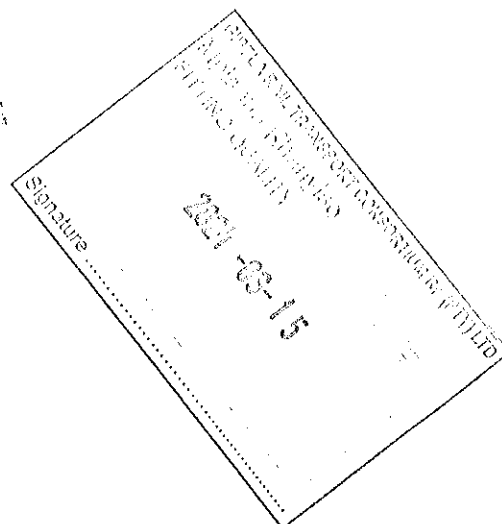
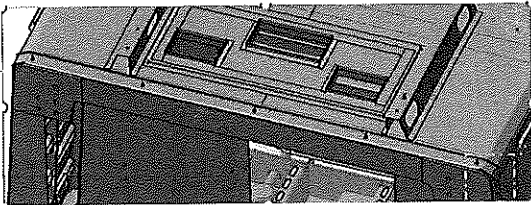
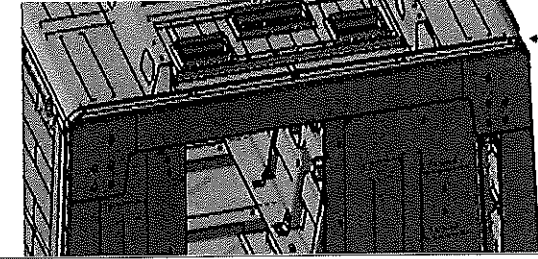
END 1
SEALANT


OPERATOR
(Name & sign):

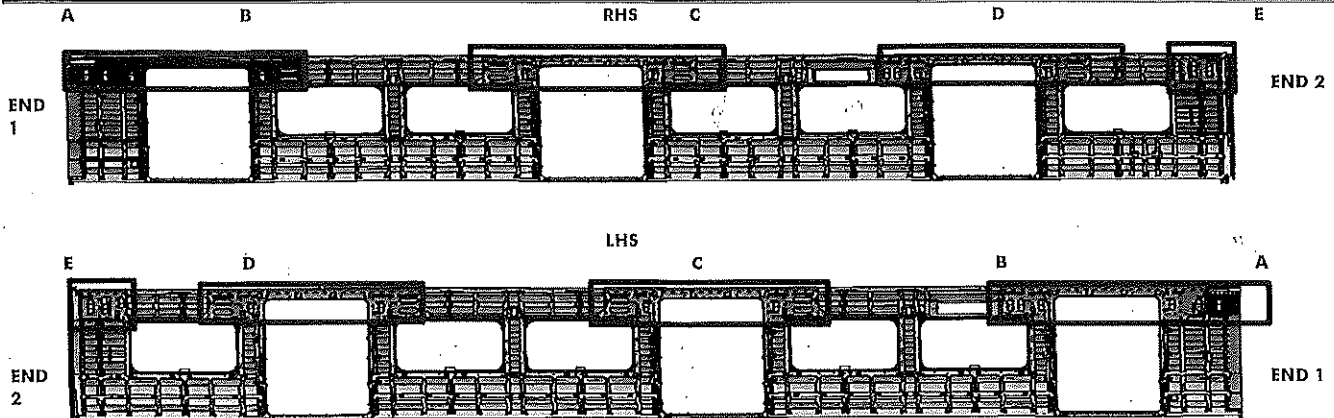
Mthokozisi: 

OPERATOR
(Name & sign):





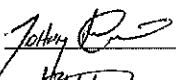
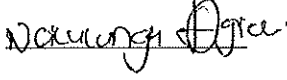
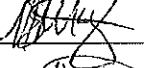
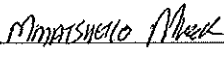
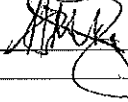
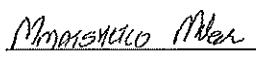
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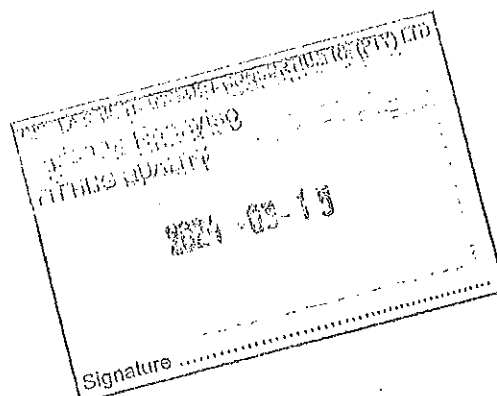



	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA SI.CB2220.323.V29
		Date-	
		28/10/2023	

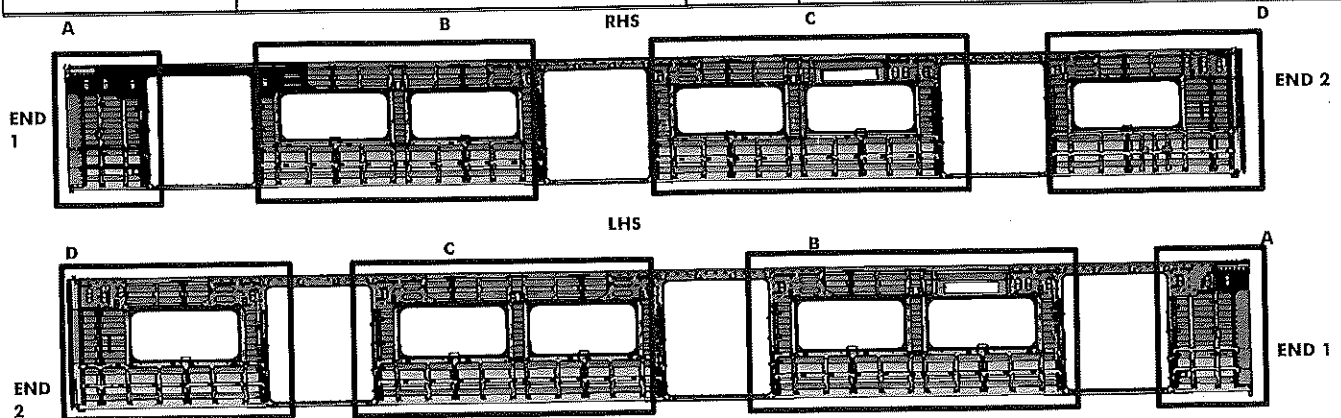


REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>LINDO</u> 	<u>LINDO</u> 
B	Operator (Name&sign): <u>LINDO</u> 	<u>LINDO</u> 
C	Operator (Name&sign): <u>Johny</u> 	<u>Nckulungu Diga</u> 
D	Operator (Name&sign): <u></u>	<u>Mmashele Mbe</u> 
E	Operator (Name&sign): <u></u>	<u>Mmashele Mbe</u> 



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



BRACKETING

C-RAILS:	Operator:	<u>INSTALLATION</u> <u>Phucilla</u>
	Operator:	
DOOR MECHANISMS:	Operator:	<u>Phucilla</u>
	Operator:	
TAPPING PADS	Operator:	<u>Phucilla</u>
	Operator:	
		INSTALLATION & VERIFICATION
SEAT & LUGGAGE BRACKETS:	Operator:	<u>Phucilla</u>
	Operator:	
SEAT BRACKETS VERIFICATION:	Operator:	<u>Phucilla</u>
	Operator:	


WELDING

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

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

Signature: _____

2023-10-15

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

ENDS

END 1 TAPPING PADS WELDING: Operator (Name&sign): MA

END 2 TAPPING PADS WELDING: Operator (Name&sign): Nokulunga Doran

GIBELA (PTY) LTD
 100% BLACK OWNED
 FITNESS QUALITY
 2024-03-15
 Signature



DTR30223319/2 Carshell Assembly TC

Rev.

29

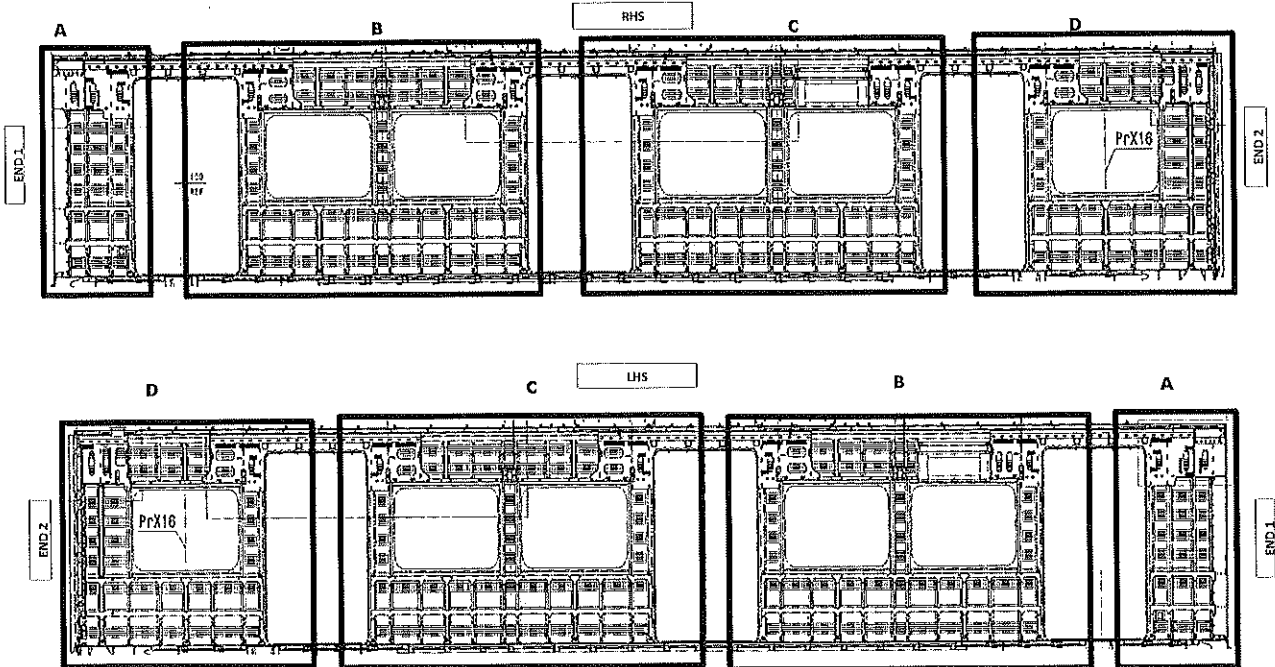
Project: PRASA

Date-

28/10/2023

SI.CB2220.323.V29

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	✓	

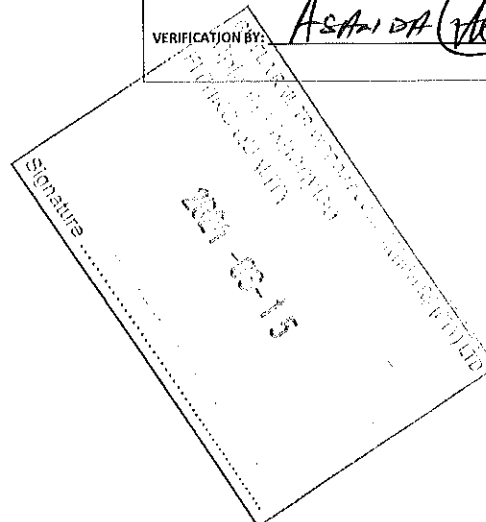
ROOF ENDS:
CRAILS 2 OFF END 2
EARTH BUSH 4 OFF END 2

VERIFICATION BY: *ASANI DA*

LHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	4	✓	
	B	8	✓	
	C	4	✓	
	D	6	✓	
SEAT BRACKETS	A	0	✓	
	B	21	✓	
	C	21	✓	
	D	13	✓	
EARTH BUSH	A	1	✓	
	B	4	✓	
	C	4	✓	
	D	2	✓	

ROOF ENDS:
CRAILS 2 OFF END 2
EARTH BUSH 4 OFF END 2

VERIFICATION BY: *ASANI DA*

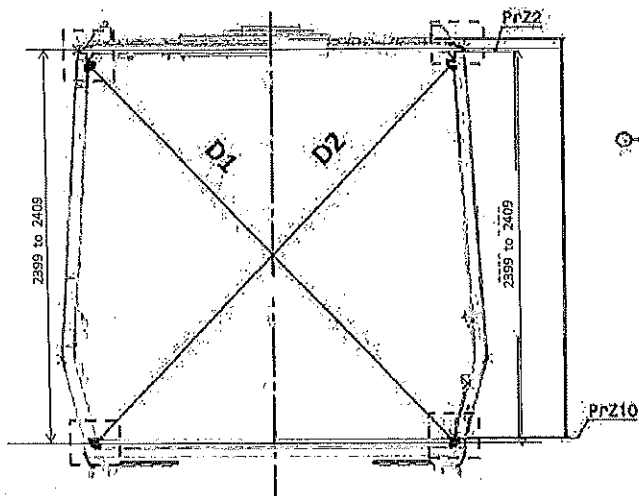




DTR30223319/2 Carshell Assembly TC

Rev.
29
Date-
28/10/2023

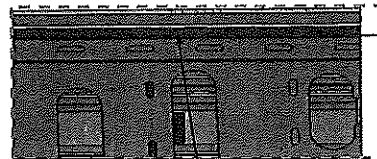
Project: PRASA
SI.CB2220.323.V29



Take measurement close to radius



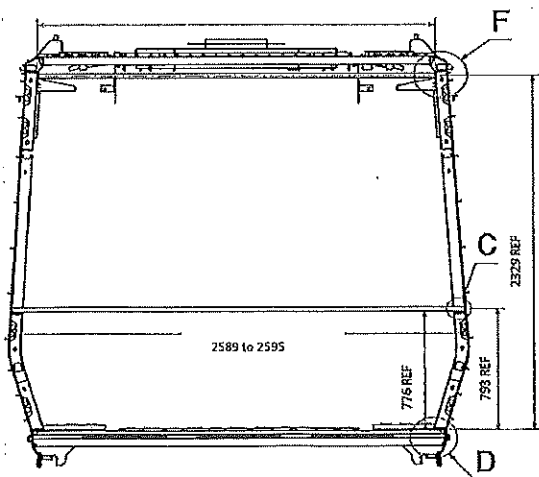
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



Take measurement close to radius

2024-03-15
Signature



DTR30223319/2 Carshell Assembly TC

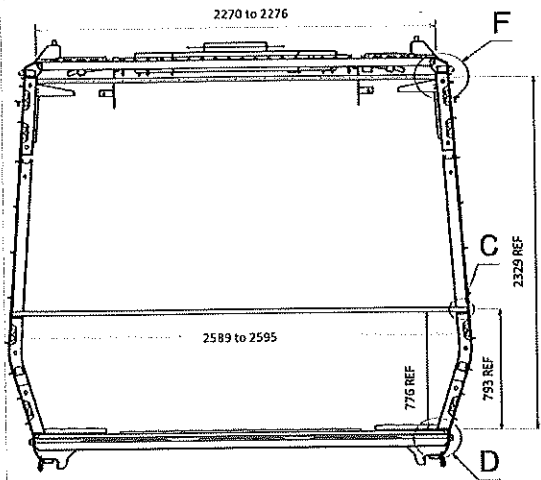
Rev.
29

Project: PRASA

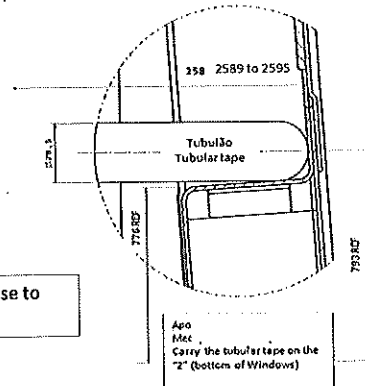
Date-

SI.CB2220.323.V29

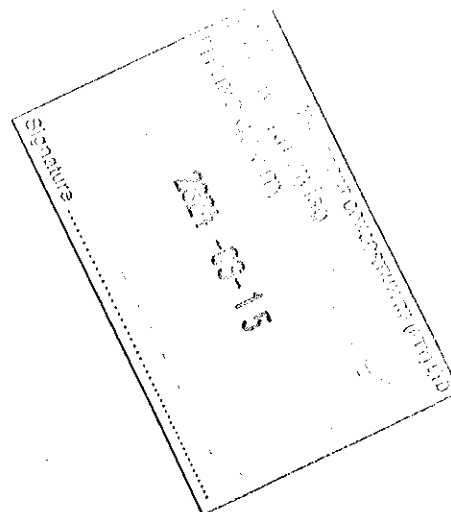
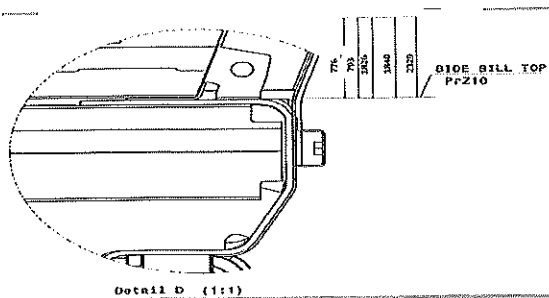
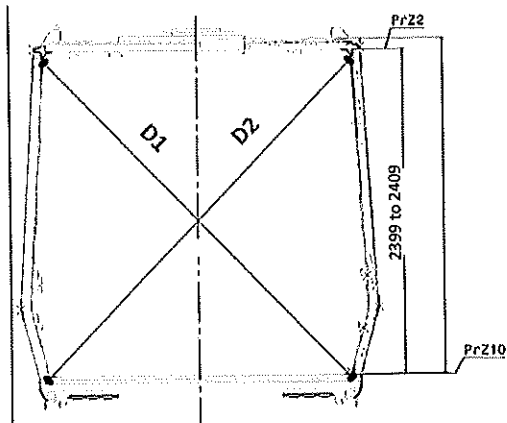
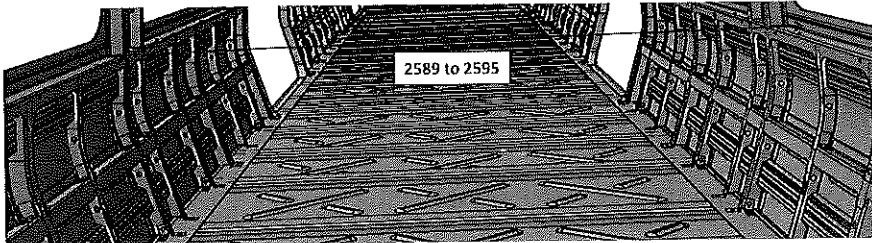
28/10/2023



Take measurement close to radius



Detail C





DTR30223319/2 Carshell Assembly TC

Rev.

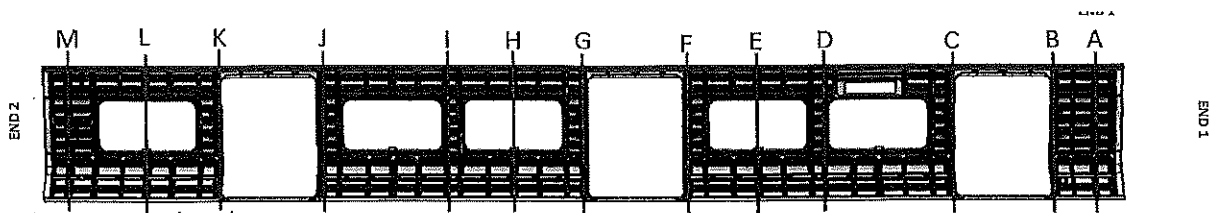
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Project: PRASA

Date-

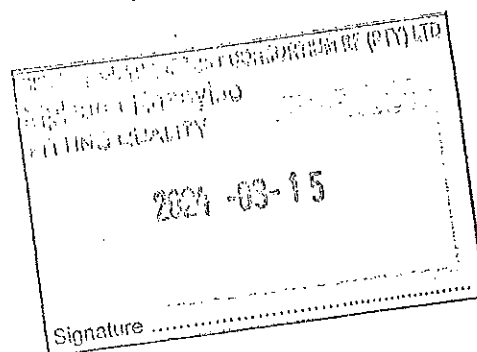
28/10/2023

SI.CB2220.323.V29

BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3268	3268	0	—
B	3292	3298	7	—
C	3299	3300	1	—
D	3265	3267	2	—
E	3265	3265	0	—
F	3296	3297	1	—
G	3295	3299	4	—
H	3268	3265	3	—
I	3267	3269	2	—
J	3296	3297	1	—
K	3297	3295	2	—
L	3265	3269	4	—
M	3299	3300	1	—

06-03-24





DTR30223319/2 Carshell Assembly TC

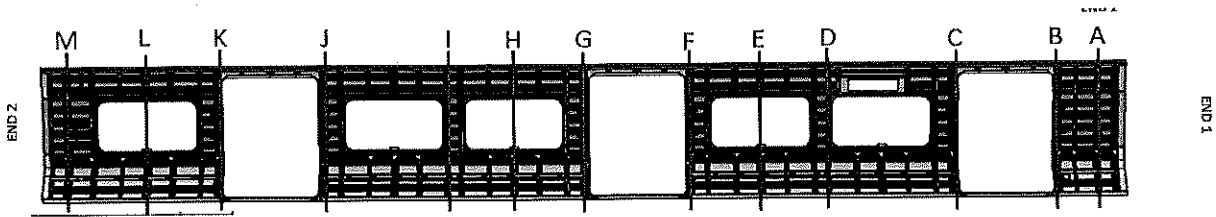
Rev.
29

Project: PRASA


Date-

SI.CB2220.323.V29

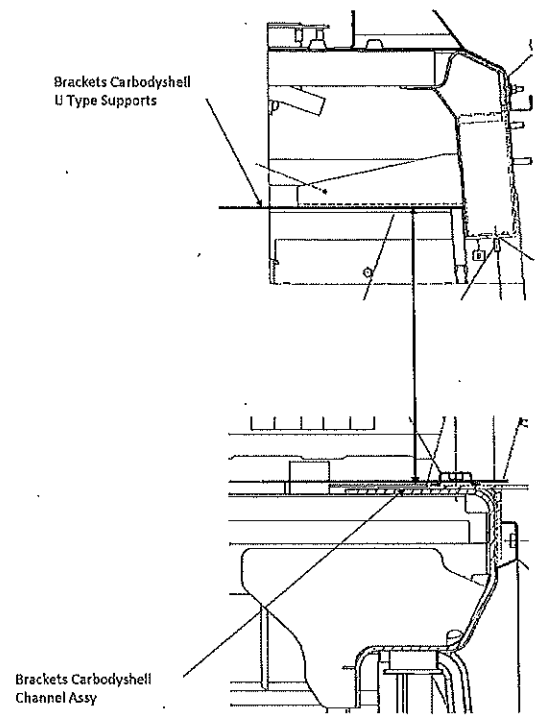
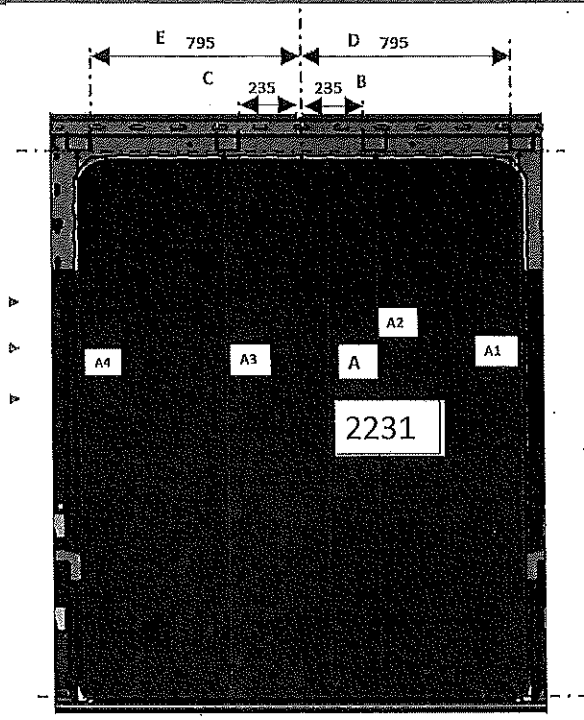
28/10/2023

AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3291	3297	6	2594
B	3290	2595	5	2585
C	3299	3300	1	2592
D	3269	3264	5	2589
E	3269	3260	9	2589
F	3293	3297	4	2590
G	3300	3291	2	2592
H	3270	3260	10	2590
I	3271	3262	9	2591
J	3302	3286	16	2592
K	3309	3290	19	2593
L	3273	3269	4	2589
M	3302	3297	5	2595


06-03-24

Signature
2023-03-15
PRASA



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

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

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

DOOR 2 - RHS		
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2231
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 3 - RHS		
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2232
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

06-03-24

2024-03-15
Signature



DTR30223319/2 Carshell Assembly TC

Rev.
29

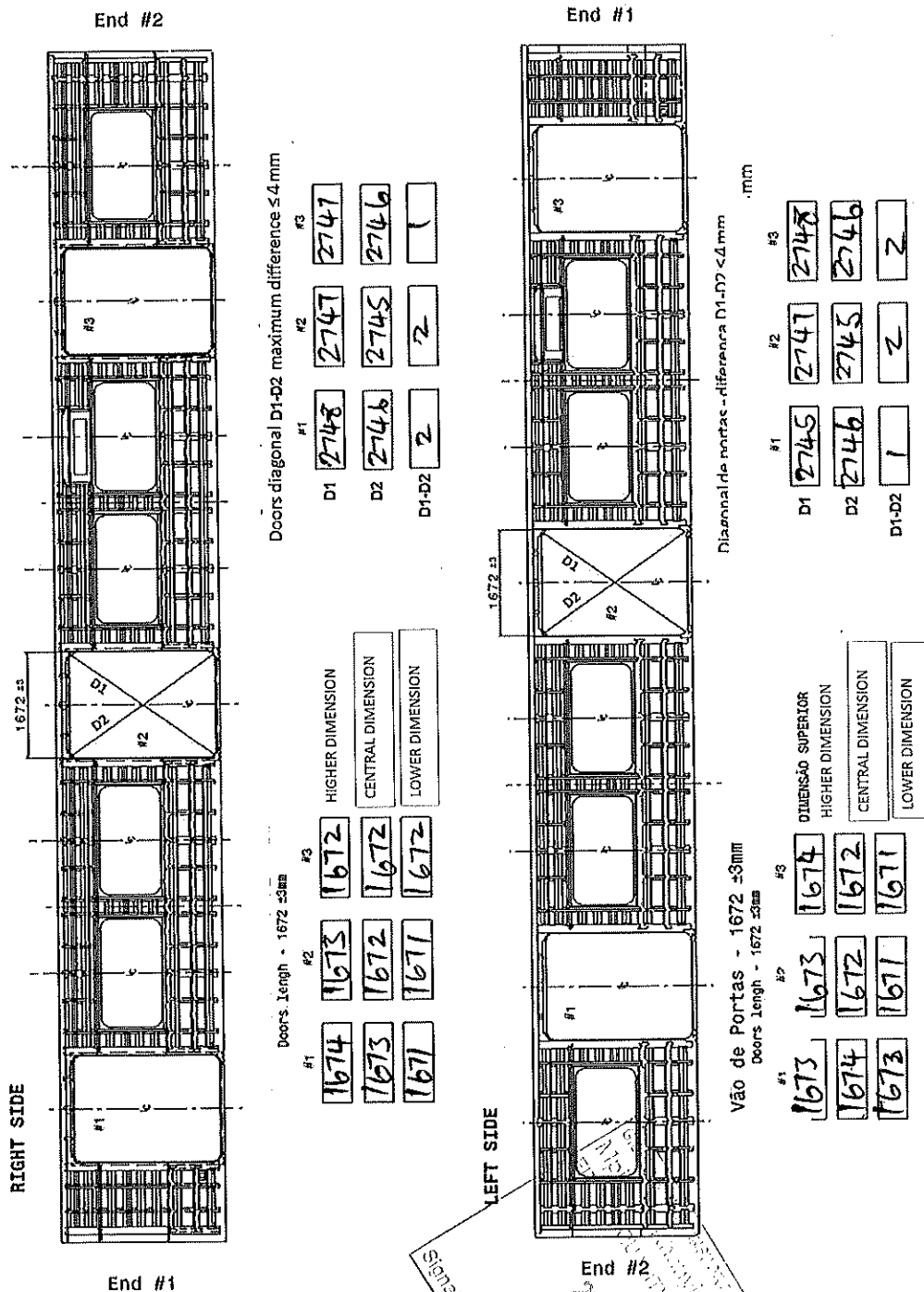
Project: PRASA

Date-

SI.CB2220.323.V29

28/10/2023

Specifications of Details for CBS measurement




Signature

End #2

2021-08-15


06-03-24

	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				



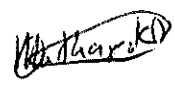
GIBELA

Mps. de Engenharia

FITTING QUALITY

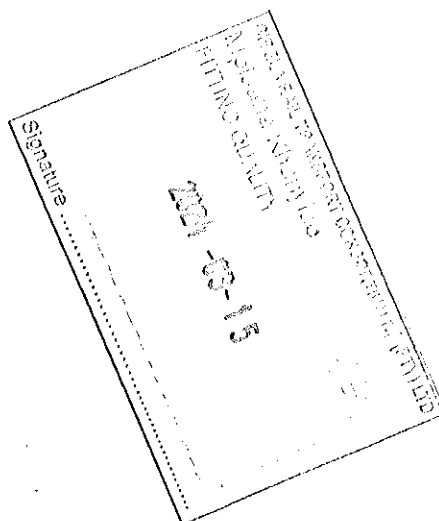
2024-03-15

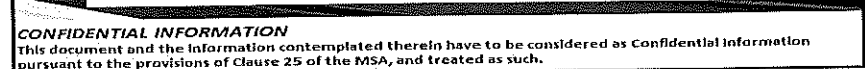
Signature

	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA			
		Date- 28/10/2023	SI.CB2220.323.V29			
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!	06-03-24	ASANDIA Operations		
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	06/03/24	Richmond 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





2021-03-15



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30

Date-

06/11/2023

Project: PRASA

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Carro
Car:

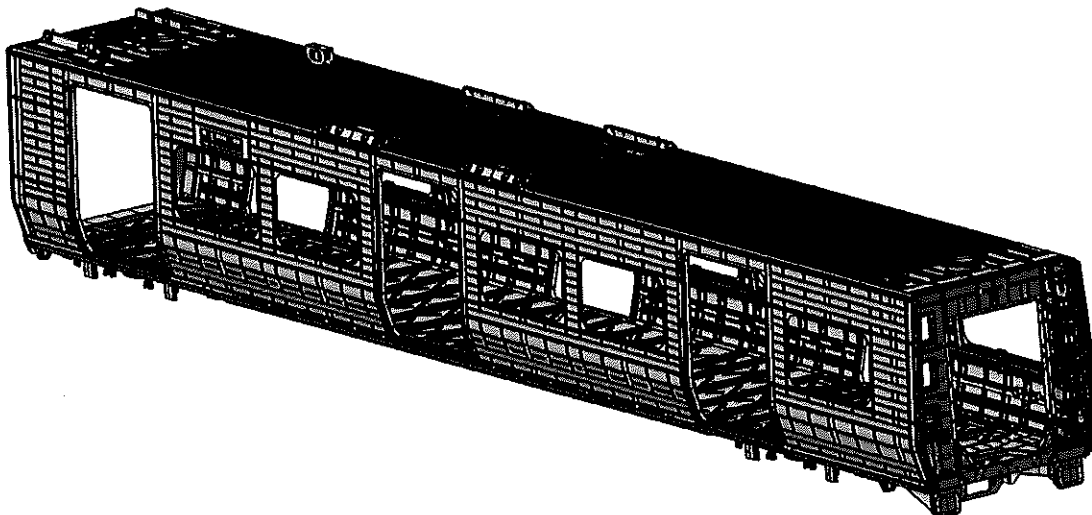
NCR:

Work station:

CB2230



Safety Related



I - Documentation and Instruments

1.1 - Documentation Control

Document	Type of car						Revision	Observation	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4	TC2							
DT00000223319						X	30	07/03/24	OK		N/A	07/03/24	07/03/24

1.2 - 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)
Tubular	02713-1	29/11/24	OK		07/03/24	07/03/24
Combination Square	GIBCS0137	2024/07/04	OK		07/03/24	07/03/24
Measuring tape	GIBTA0394	2024/04/05	OK		07/03/24	07/03/24

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		07/03/24	07/03/24
ER 308 LSI	299687	Tig welding	OK		07/03/24	07/03/24



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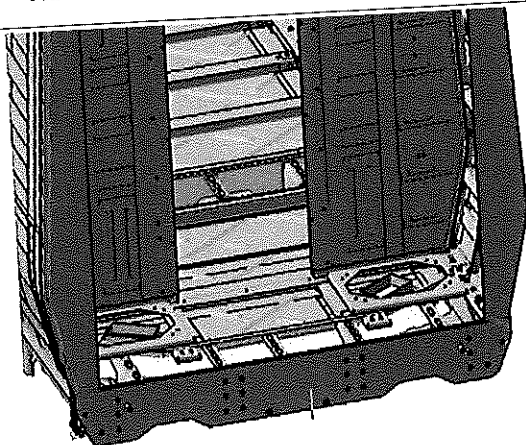
II - Control Activities of Production

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 nº DT00000223319	DT00000223319	OK			07/03/24	07/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	OK			07/03/24	07/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 DTD0000210675	OK			07/03/24	07/03/24
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			07/03/24	07/03/24
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			07/03/24	07/03/24
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: Temperature Min - Max (1) Min-Max 10°C - 35°C Relative humidity Min - Max (1) Min-Max 25% - 80%	Sealant Batch No: 136 70 03 Exp Date: 05 / 05 / 24 Actuals Temperature: 26°C Humidity: 54%	OK			07/03/24	07/03/24
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				07/03/24	07/03/24

Signature.....
2024-03-15

VIEW A



**END 1
SEALANT**

OPERATOR
(Name & sign):

Bortumelo Bloe

OPERATOR
(Name & sign):

Buhle Buhle

**END 2 SEALANT
(VIEW C)**

OPERATOR
(Name & sign):

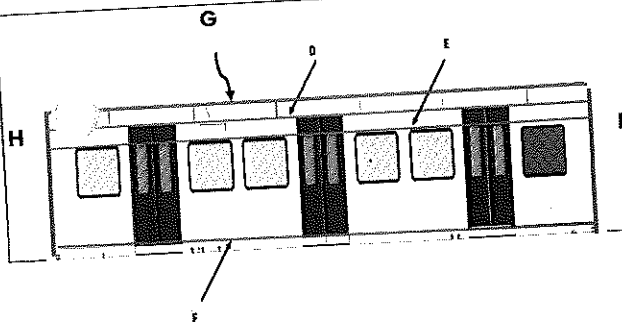
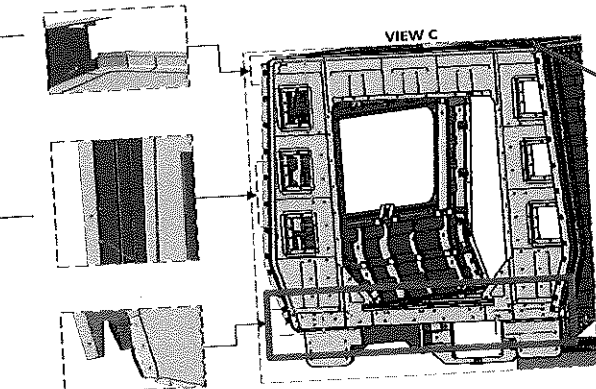
Zande Zande

OPERATOR
(Name & sign):

Zande Zande

OPERATOR
(Name & sign):

Nhlonhla Nhlonhla



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

Operator(Name & sign):

LHS
DEFGH,I

RHS
DEFGH,I

Operator (Name & sign):

Bortumelo Bloe

Bortumelo Bloe

Operator (Name & sign):

Buhle Buhle

Buhle Buhle

Operator (Name & sign):

Operator (Name & sign):

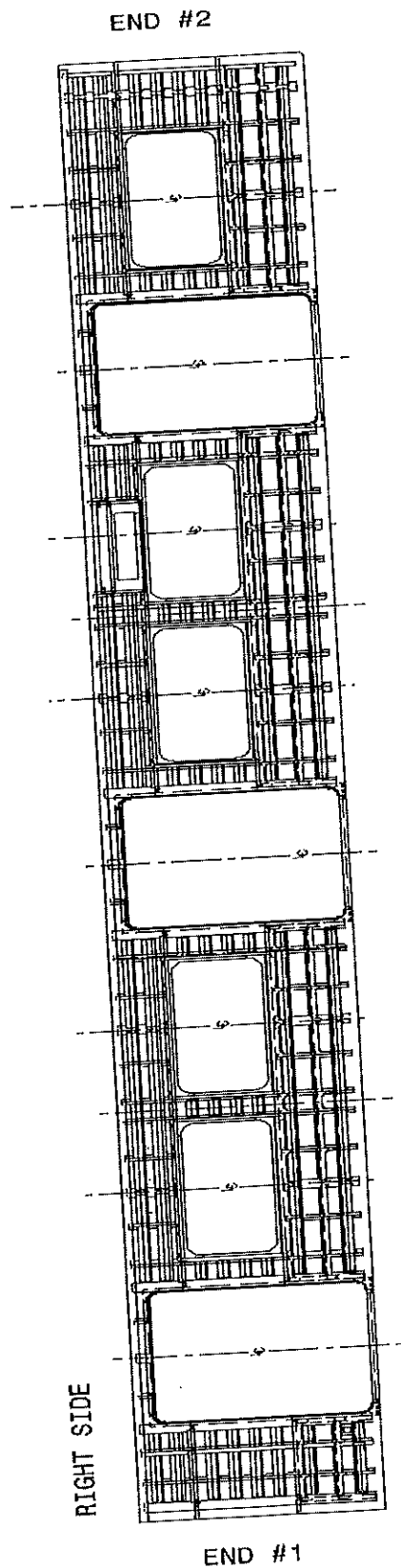
Operator (Name & sign):

Signature

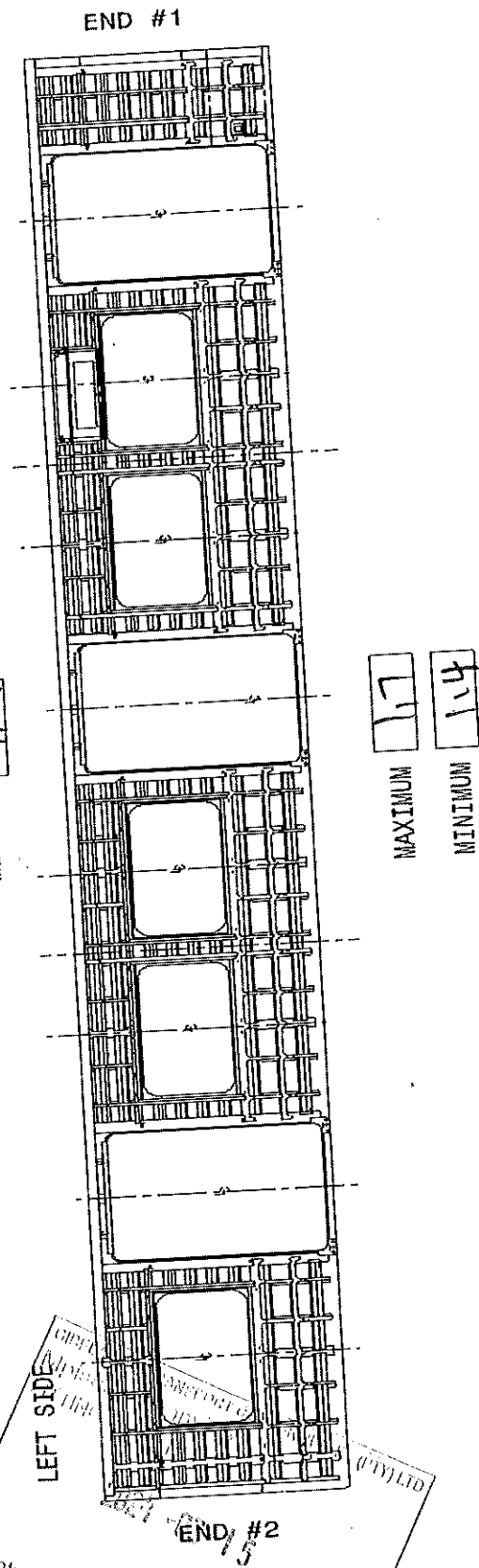
2023-05-15

Specifications of Details for CBS measurement CB2230

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.



MAXIMUM 1.8
MINIMUM 1.2



Signature



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Date-

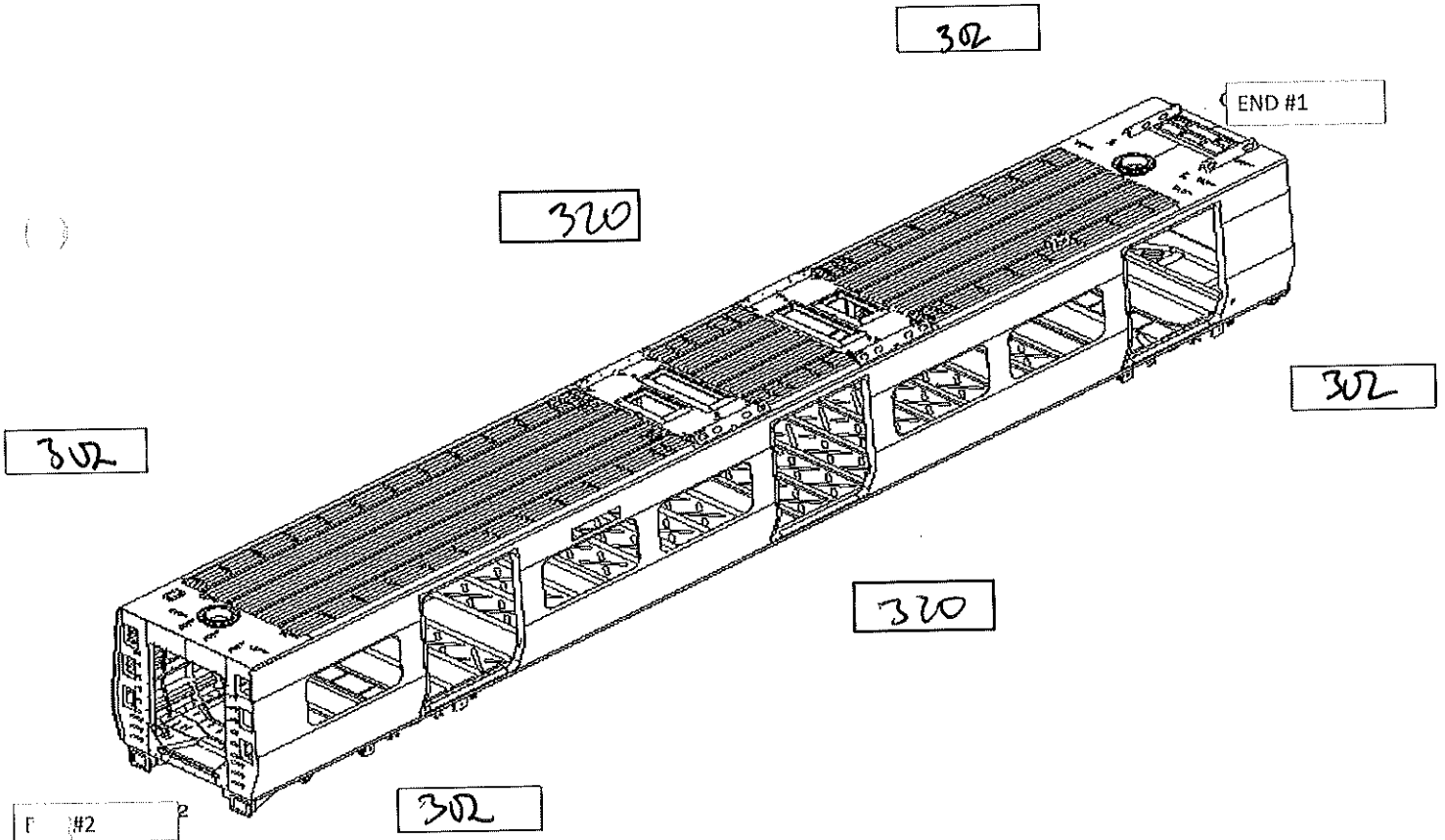
06/11/2023

Project: PRASA

SI.CB2230.324.V29

Specifications of Details for CBS measurement CB2230

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



MEASURED CAMBER VALUES

RIGHT

18

LEFT

18

PRASA RAILWAYS GROUP (PTY) LTD
2023-03-15
Signature



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Date-

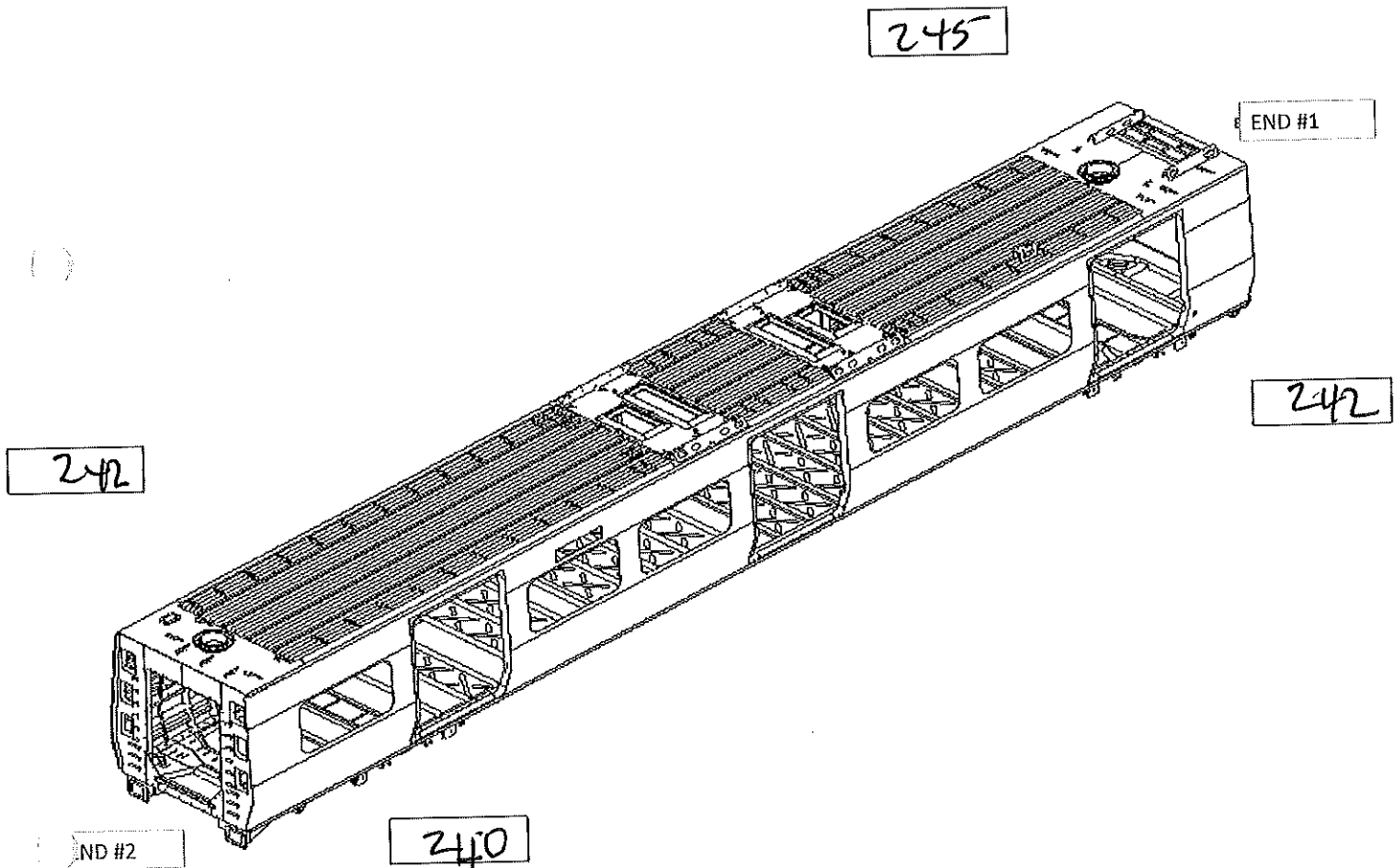
06/11/2023

Project: PRASA

SI.CB2230.324.V29

Specifications of Details for CBS measurement CB2230

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

2

LONGITUDINAL

3

MEASURED TWIST VALUES END 2

LATERAL

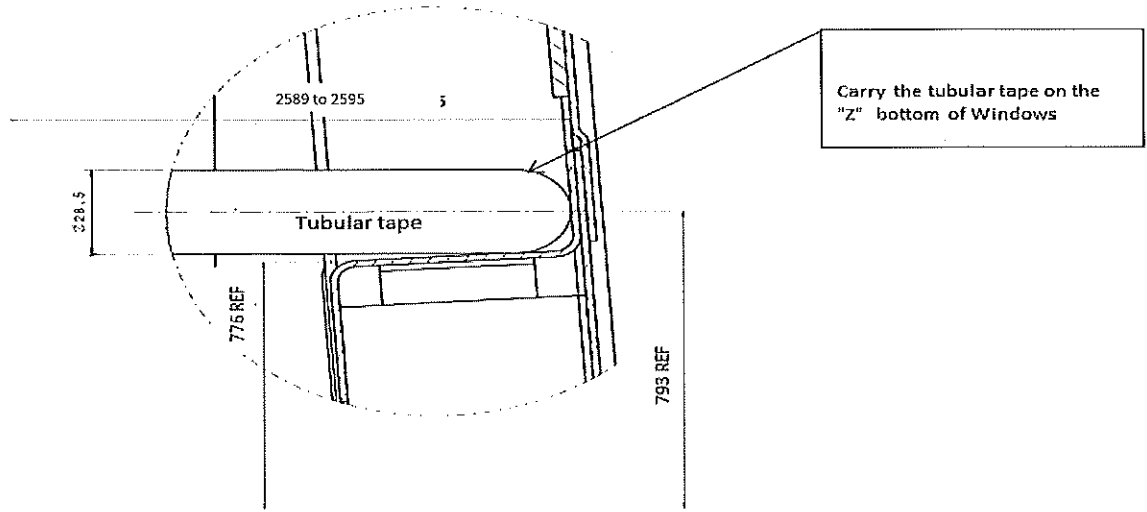
3

LONGITUDINAL

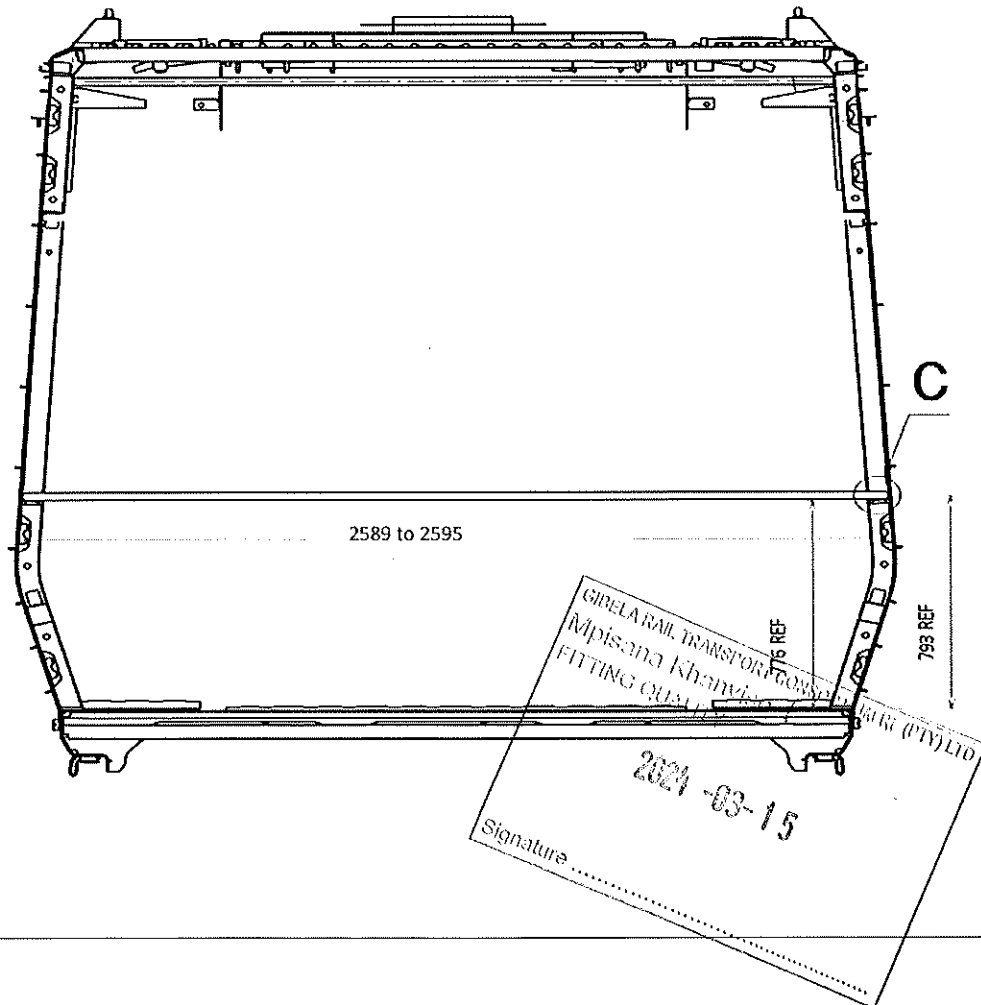
2

GHAT LARVAL TRANSPORT CORPORATION (PTY) LTD
Kopeteng Kh. 51450
PILING QUALITY
2021-03-15
Signature

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



Detail C





DT00000223319 Carshell Assembly TC

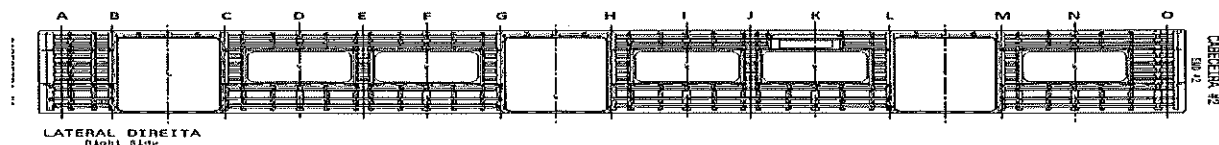
Rev.
30

Project: PRASA

Date-
06/11/2023

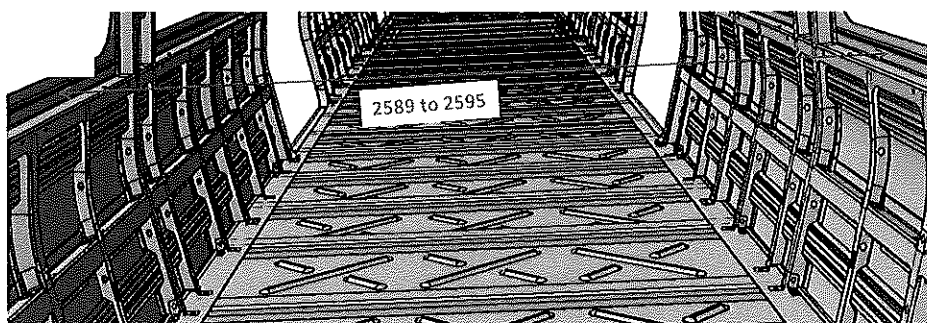
SI.CB2230.324.V29

Specifications of Details for CBS measurement



2589 to 2595mm

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



Threshold verification

Nominal value :38

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

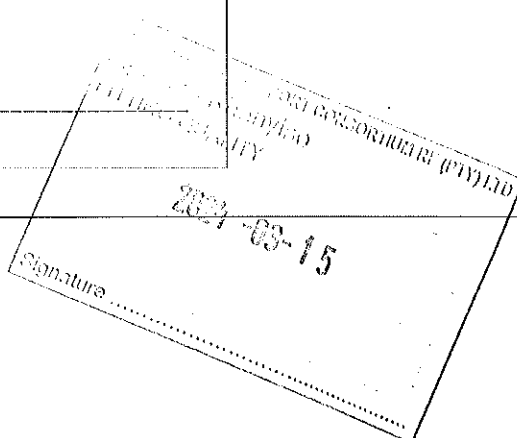
BOILER MAKER:

SINIE

WELDER:

MMATHAPETO

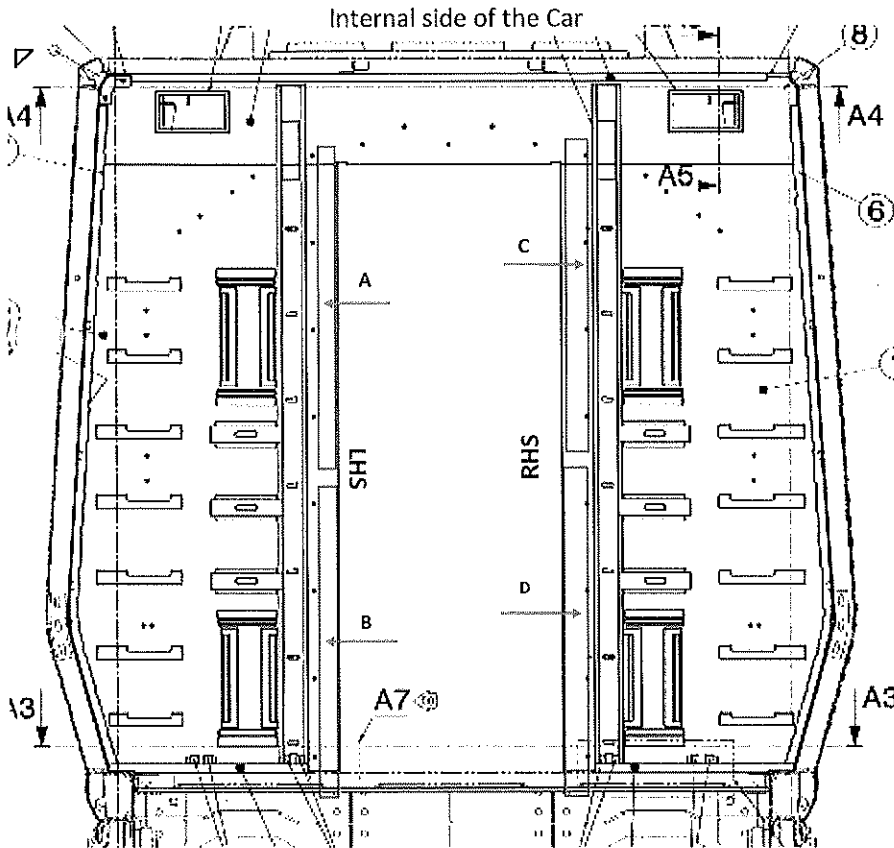
M. S. de



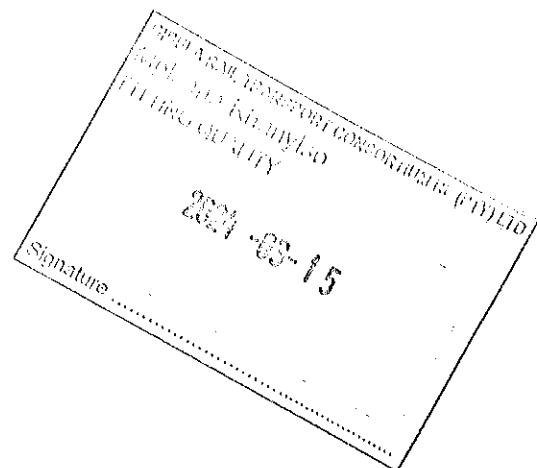
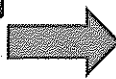
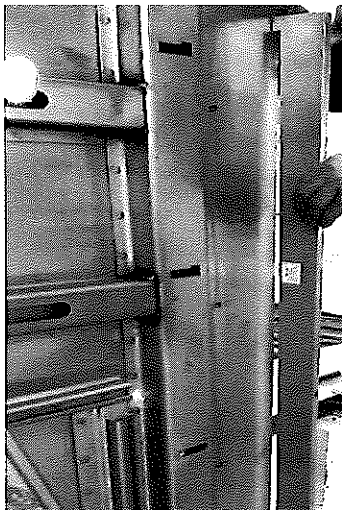
Specifications of Details for CBS measurement

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	9.9	11	1.1
B	10.7	12	1.3
C	11.3	12.3	1
D	11	12	1





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Project: PRASA

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Dye penetrant test

Dye-penetration test to be performed by quality personnel

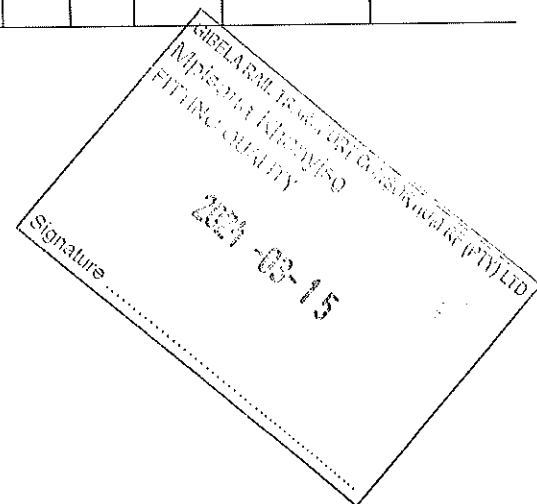


Item	Description of the issue	OK	Signature/Date (Operations)	Signature/Date (Quality)
1				

II.2 - Check List REX

Check List Items

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





DT00000223319 Carshell Assembly TC

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30

Date-

06/11/2023

Project: PRASA

SI.CB2230.324.V29

Self Inspection - Final Result

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

DATE

NAME

SIGNATURE

HOLD POINT

GO

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

07/03/24

Ginle

Operations

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

07/03/24

Nholucro

Industrial Quality

NO GO

There are activities pendings 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

