

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

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

APPLICATION REFERENCE										
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE				WORK INSTRUCTION	SAFETY ?	
				TCL	M1	M2	M3			
	DTR3022331/9/3	AAD000124-0039	Carbel Assembly TC	CB2210	<input checked="" type="checkbox"/>				PPA CB1210 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		
				COMPLIER		Thangeni Marhegu		06/04/2018		
				APPROVER		Itumeleng Modiba		2018/05/18		
1	2018/05/18	Team leader and Quality Technician to sign final signature from PME Manager to Quality manager		CHECKER		Nosizo Pindela		2018/05/18		
				APPROVER		Ramokone Motama		2018/06/18		
2	2018/06/18	MODIFICATION CONTENT		CHECKER		Nosizo Pindela		2018/06/18		
				REVISD BY		Ramokone Motama		2018/06/18		
				APPROVER		Itumeleng Modiba		2018/12/12		
				CHECKER		Nosizo Pindela		2018/12/12		
3	2018/12/12	Additional checkpoints		REVISD BY		Ramokone Motama		2018/12/12		
				APPROVER		Itumeleng Modiba		22/01/2019		
				CHECKER		Nosizo Pindela		22/01/2019		
5	22/01/2019	As per Baseline 10.2		REVISD BY		Vanessa Ntuli		22/01/2019		
				APPROVER		Itumeleng Modiba		2019/11/03		
				CHECKER		Nosizo Pindela		2019/11/03		
6	2019/11/03	Record D1 and D2 on Self - Inspection		REVISD BY		Nosizo Pindela		2019/11/03		
				APPROVER		Itumeleng Modiba		21/08/2019		
				CHECKER		Nosizo Pindela		21/08/2019		
10	21/08/2019	New Baseline 10.2.5		REVISD BY		Nosizo Pindela		21/08/2019		
				APPROVER		Timothy Maimela		06/08/2020		
15	06/08/2020	New Baseline 10.2.6		REVISD BY		Bongane Masina		06/08/2020		
				APPROVER		Timothy Maimela		19/04/2021		
20	19/04/2020	New Baseline change 10.3		REVISD BY		Bongane Masina		19/04/2021		
				APPROVER		Bongane Masina		2024-03-21		
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING		CHECKER		Mpho Mulaudi		17/08/2021		
				APPROVER		Mphomathi Collins				
25	21/02/2022	New Baseline change 10.3.1		REVISD BY		Andani Muthleho				
				APPROVER		Ntuli Vanessa		14/04/2023		
26	14/04/2023	Addition of welding consumable traceability		CHECKER		Mohlamepe Amogelang		14/04/2023		
				REVISD BY		Mohlamepe Amogelang				
27	27/07/2023	Added verification of loaded parts		APPROVER		Ngobeni Tyson		27/07/2023		
				CHECKER		Mathapo Kelebone				
28	07/11/2023	Addition of welding traceability		APPROVER		Ngobeni Tyson		07/11/2023		
				CHECKER		Andani Muthleho				
				REVISD BY		Nkoko Zwane				
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER		DATE		SELF INSPECTION NUMBER		PAGES		
13230	Te1	P00150 409964		21/03/24		SI.CB1210.322.V28		16		

INDUSTRIAL QUALITY
MAINTENANCE



DTR30223319/3 Carshell Assembly TC

Rev. Project: PRASA

V28

Date- 07/11/2023
SI.CB1210.322.V28

Car: TC1 & TC2

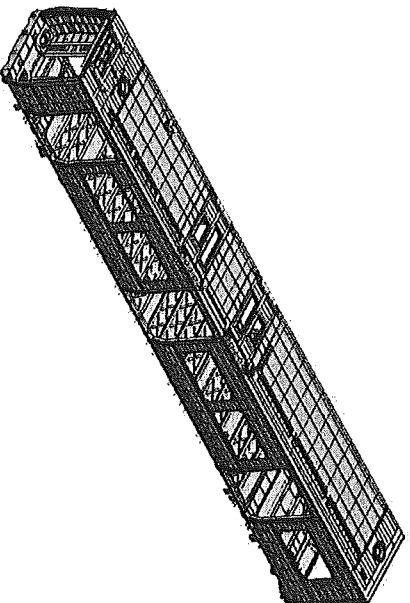
NCR

Work station:

CB1210



Safety Release



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	W	FW	FW	TC2					
DTR30223319/3	X					V28			N/A	21/05/24

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	30823-3	15/03/25	✓		
WATER WARE	125425924	08/01/25	✓		
32M - 14PE	6287D102	18/11/25	✓		

1.3 Consumables





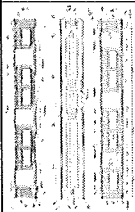







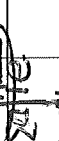


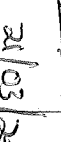
Welding Consumable Control - Used for Special Process

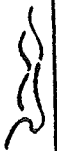
Flow/Passes	Heat Number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 LSI	314218-74027	MIG	✓		
EP 308 L	299687-70322	TIG	✓		

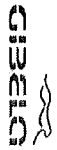


2024-03-21

INDUSTRIAL QUALITY
MAINLINE

GIBELCO		DTR302231913 Carshell Assembly TC		Rev. V28 Date- 07/11/2023		Project: PRASA SI.CB1210.322.V28	
Item	Picture/Drawing	Description	Acceptance criteria / Referent	OK	Signature/Date (Manufacturer)	Signature/Date (Quality)	
01	N/A	Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe)	DT00000028498u	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD00000210675	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
03		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
04	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD00000210675	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
05	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
06		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	
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 DTD00000210658	<input checked="" type="checkbox"/>	 21/03/24	 21/03/24	


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DTR302233193 Carshell Assembly TC

Rev.
V28

Project: PRASA





Date-
07/11/2023

SI.CB1210.322.V28


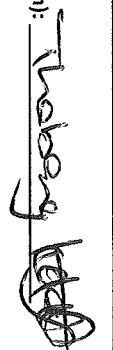
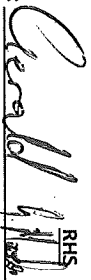

Welder traceability

Roof ring welds






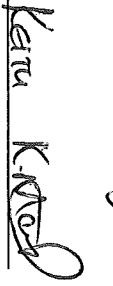
Boiler maker (Name & Sign):	<u>LHS</u> 	Welder (Name & Sign):	<u>RHS</u> 
Boiler maker (Name & Sign):	<u>RHS</u> 	Welder (Name & Sign):	<u>RHS</u> 

END 1

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

END 2



Boiler maker (Name & Sign):	<u>LHS</u> 	Boiler maker (Name & Sign):	<u>RHS</u> 
Welder (Name & Sign):	<u>Ketu Ketu</u> 	Welder (Name & Sign):	<u>Ketu Ketu</u> 

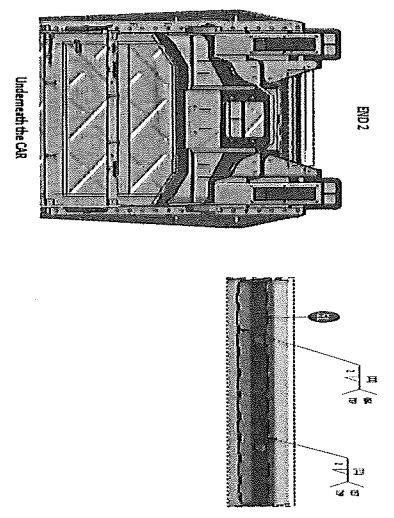
GIBELQ
2024-03-21
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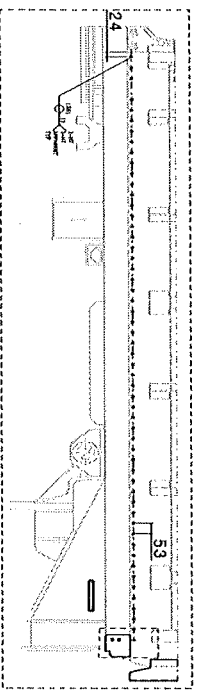
DTR30223319/3 Carshell Assembly TC

Rev.	Project: PRA5A
V28	
Date- 07/11/2023	SI.CB1210.322.V28

ELF Reinforcement Plates



END 2
Boiler maker (Name & Sign): [Signature]
Welder (Name & Sign): Mitokoris' [Signature]



FEDQU
Operator: [Signature]

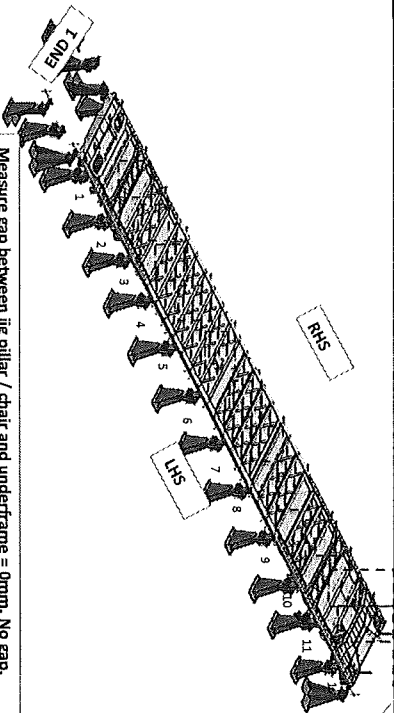
GIBELCO
2024 -03- 21
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DTR3022319/3 Carshell Assembly TC

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

Specifications of Details for CBS measurement



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

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

After Loading Underframe and Clamping.

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

Signature Operations:

Date:

21/03/24

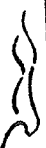
After Welding.

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

Signature Industrial Quality:

Date:

21/03/24



GIBECO

2024 -03- 21

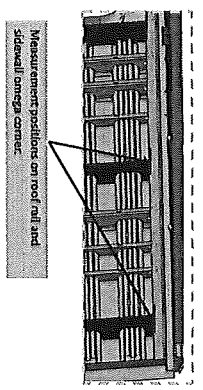
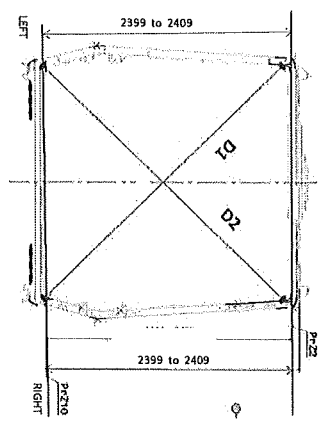
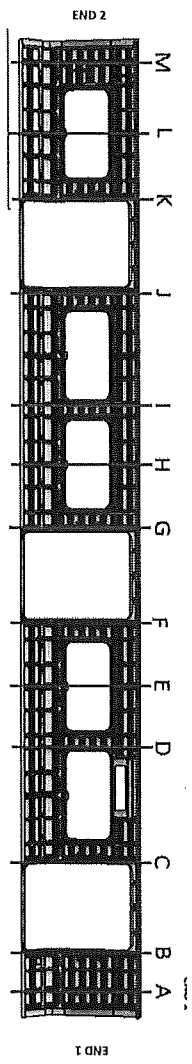
INDUSTRIAL QUALITY
MAINLINE



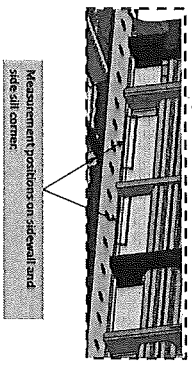
DTR3023319/3 Carshell Assembly TC

Rev.	Project: PRASA
V/28	
Date-	
07/11/2023	SI.CB1210.322.V28

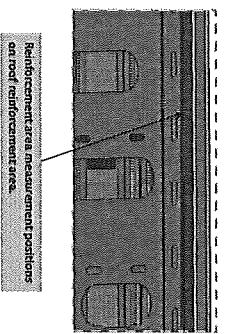
Specifications of Details for CBS measurement




Measurement positions on roof rail and sidewall omega corner



Measurement positions on sidewall and side sill corner

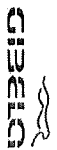


Reinforcement area measurement positions on roof reinforcement area



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AFTER



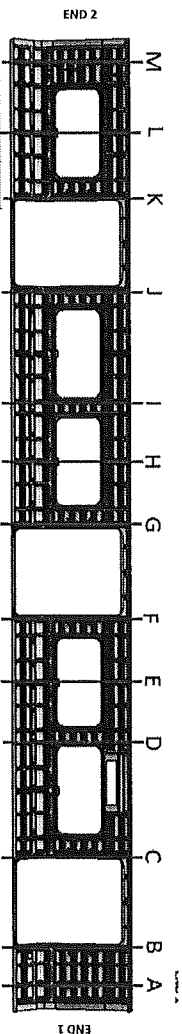
DTR30223319/3 Carshell Assembly TC

Rev. V28 Project: PRASA

Date- 07/11/2023 SI.CB1210.322.V28

Specifications of Details for CBS measurement

BEFORE WELDING

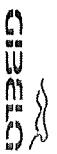


PME: The difference in Height values measured on the
LHS and RHS should be $\leq 2MM$ on each point.

	Record D1 values	Record D2 values	D1-D2 $\leq 5mm$		2399 to 2409		2399 to 2409 (RHS)		LHS-RHS ≤ 2
A	3269	3268	1		2404	2404	2404	2404	0
B	3292	3298	2		2406	2406	2405	2405	1
C	3297	3296	1		2405	2404	2404	2404	1
D	3268	3268	0		2405	2404	2404	2404	1
E	3269	3267	2		2404	2404	2405	2405	1
F	3296	3295	1		2406	2406	2405	2405	1
G	3298	3292	2		2404	2404	2404	2404	0
H	3268	3267	1		2406	2406	2405	2405	1
I	3269	3269	0		2404	2404	2403	2403	1
J	3295	3296	1		2406	2406	2404	2404	2
K	3297	3298	1		2404	2404	2404	2404	0
L	3268	3266	2		2405	2404	2404	2404	1
M	3296	3298	2		2406	2406	2404	2404	2

GIBSEA
2024-03-29
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Before



DTR30223319/3 Carshell Assembly TC

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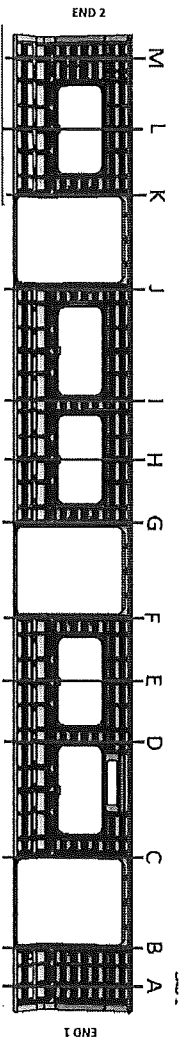
Project: PRASA

Date-
07/11/2023

SL CB1210.322.V28

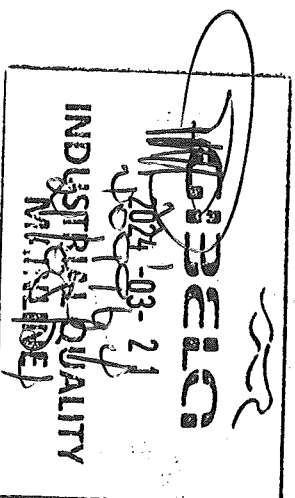
Specifications of Details for CB5 measurement

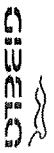
AFTER WELDING



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	3269	3268	1	2404	2404	0
B	2370	3271	1	2406	2404	2
C	3268	3268	0	2405	2404	1
D	3269	3271	2	2404	2405	0
E	3267	3266	1	2404	2405	1
F	3270	3271	1	2406	2404	2
G	3269	3268	1	2404	2404	0
H	3269	3269	0	2406	2405	1
I	3270	3269	1	2404	2405	1
J	3269	3268	1	2406	2404	2
K	3268	3268	0	2404	2404	0
L	3269	3268	1	2406	2404	2
M	3269	3269	0	2404	2404	0





DTR3022319/3 Carshell Assembly TC

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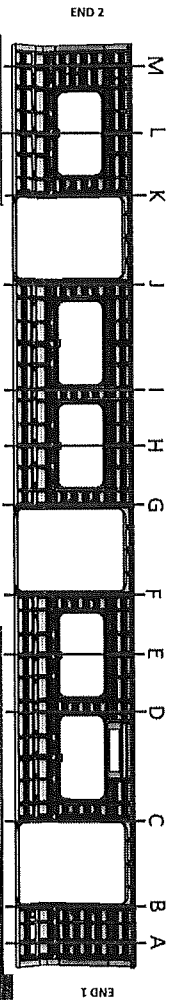
Project: PRASA

Date-
07/11/2023

SI.CB1210.322.V28

CBS measurement

BEFORE WELDING



2270 to 2276

2268 & 2274

A 2267

B 2274

C 2271

D 2276

E 2275

F 2278

G 2274

H 2274

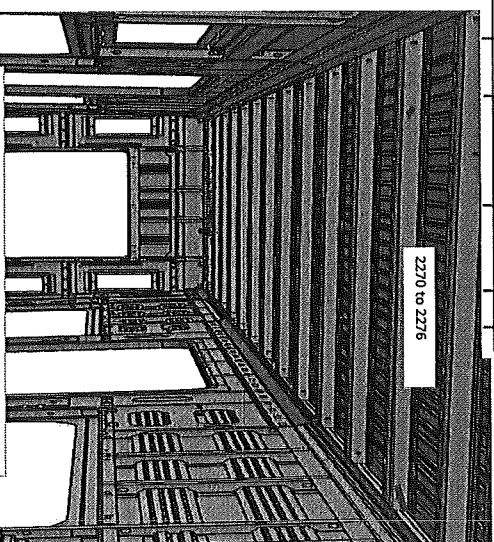
I 2274

J 2278

K 2278

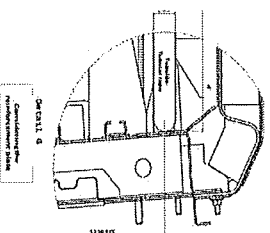
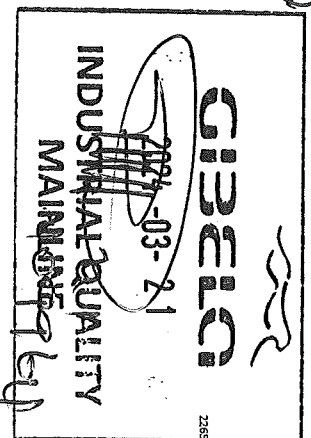
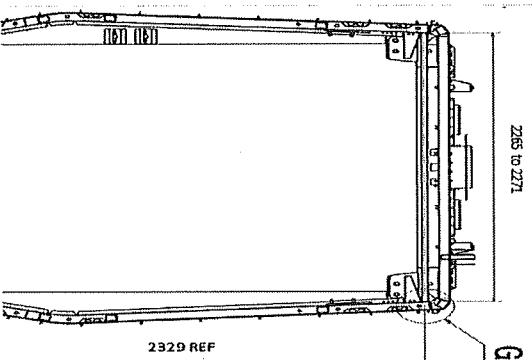
L 2274

M 2276



2270 to 2276

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



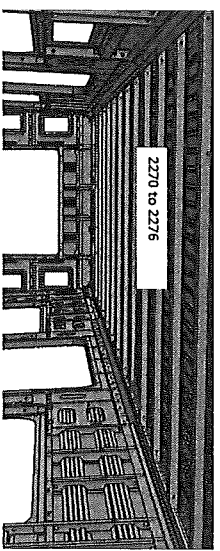
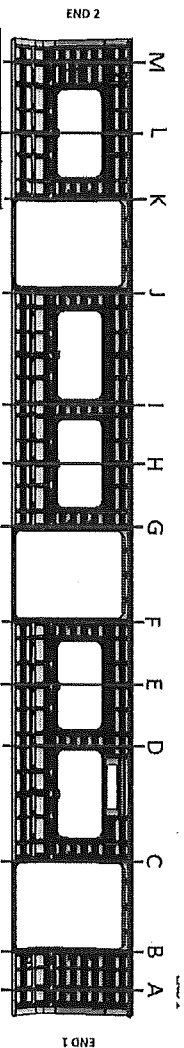


DTR3022319/3 Carshell Assembly TC

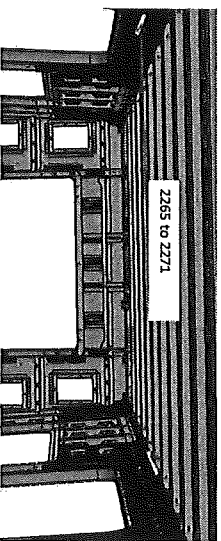
Rev.	Project: PRASA
V28	
Date-	SLCB1210.322.V28
07/11/2023	

Specifications of Details for CBS measurement

AEIER WELDING

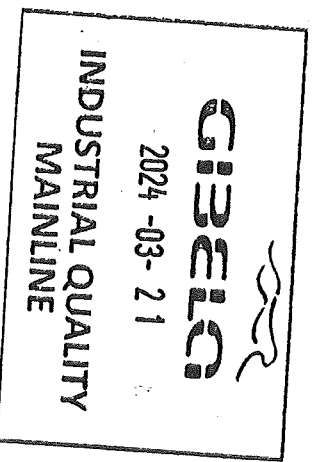
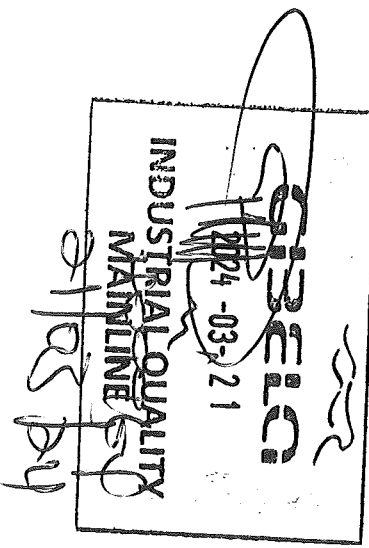
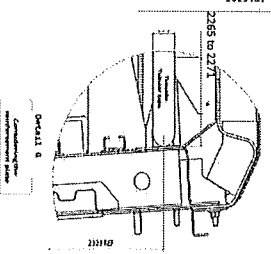
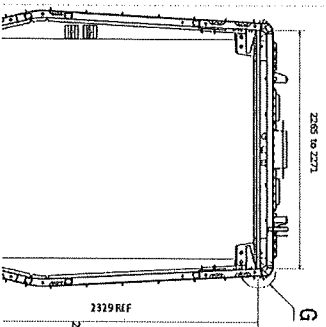


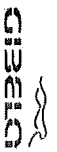
Do not consider reinforcement (Take measurements top area of tee profile)



Take measurement close to radius (considering reinforcement)

	2265 to 2271	2270 to 2276
A	<input checked="" type="checkbox"/>	2274
B	2269	<input checked="" type="checkbox"/>
C	2270	<input checked="" type="checkbox"/>
D	<input checked="" type="checkbox"/>	2276
E	<input checked="" type="checkbox"/>	2275
F	2265	<input checked="" type="checkbox"/>
G	2268	<input checked="" type="checkbox"/>
H	<input checked="" type="checkbox"/>	2276
I	<input checked="" type="checkbox"/>	2274
J	2269	<input checked="" type="checkbox"/>
K	2268	<input checked="" type="checkbox"/>
L	<input checked="" type="checkbox"/>	2274
M	2269	<input checked="" type="checkbox"/>





DTR3022319/3 Carshell Assembly TC

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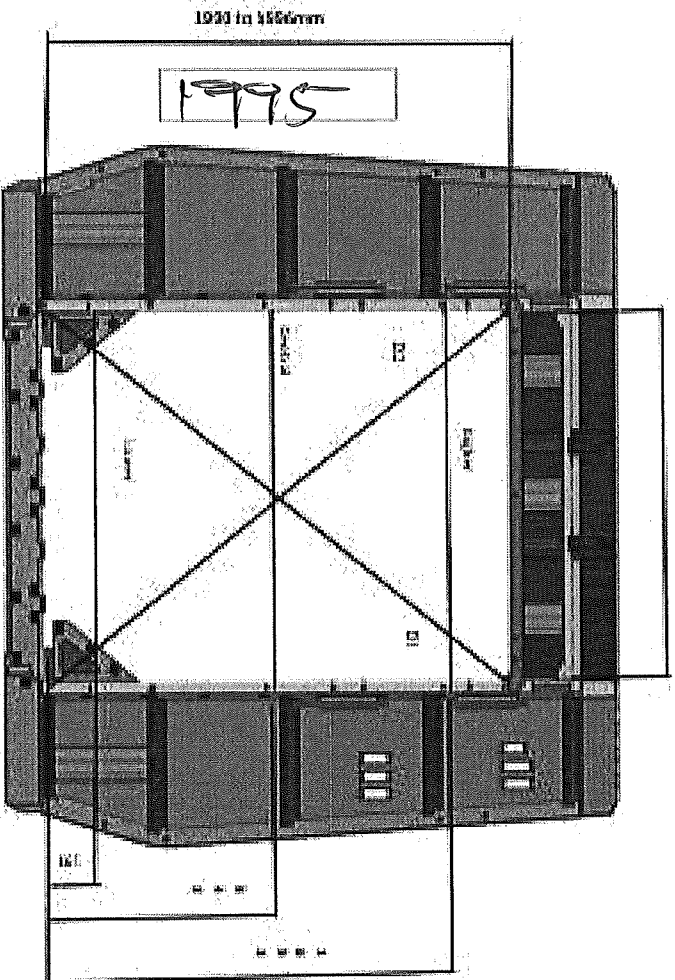
Project: PRASA

Date-
07/11/2023

SI.CB1210.322.V28

Specifications of Details for CBS measurement

Endframe 2



1150 to 1155 mm

DIAGONAL DIFFERENCE D1-D2 3mm

Height Dimension

1381

D1

2416

Central Dimension

1381

D2

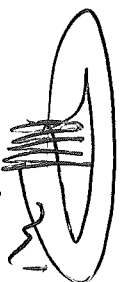
2415

Lower Dimension

1381

D1-D2

2



21/03/24



2024-03-21

INDUSTRIAL QUALITY
MAINLINE



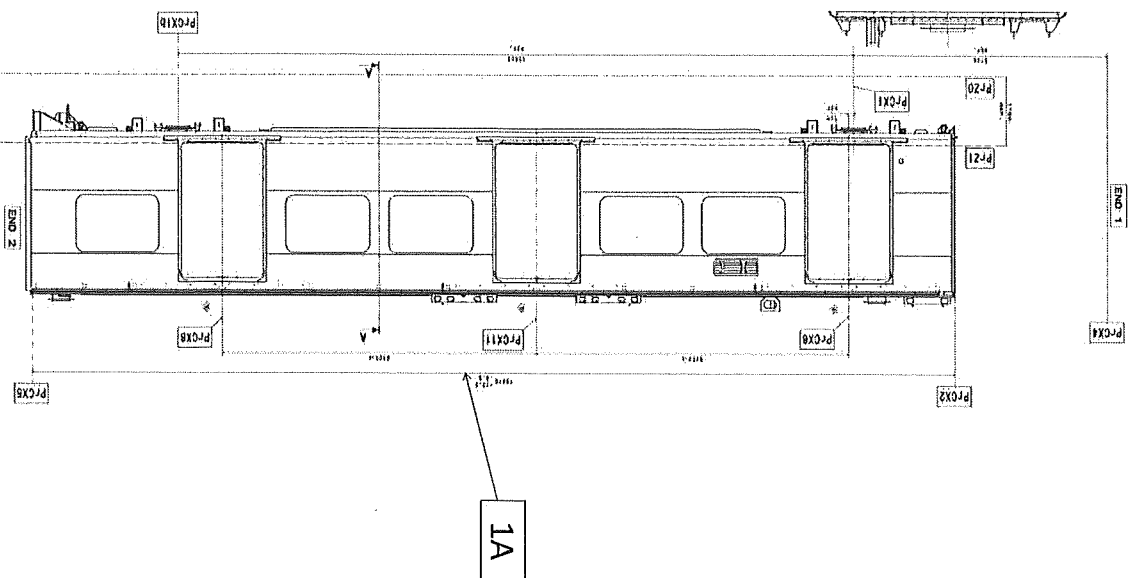
DTR302231913 Carshell Assembly TC

Rev.	Project: PRA5A
V28	
Date-	SI.CB1210.322.V28
07/11/2023	

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 $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$	18871



[Handwritten signature]

449964
0103134
2024




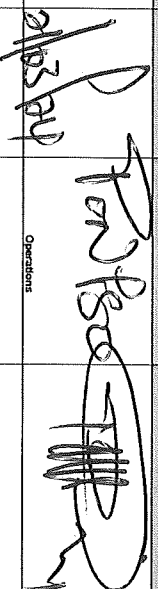


2024-03-21

INDUSTRIAL QUALITY
MAINLINE

Dye penetrant test

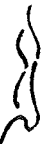
Dye-penetration test to be performed by quality personnel




		DTR3022319/3 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	Operations	
				NO GO	Operations	
				Quality	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

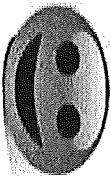
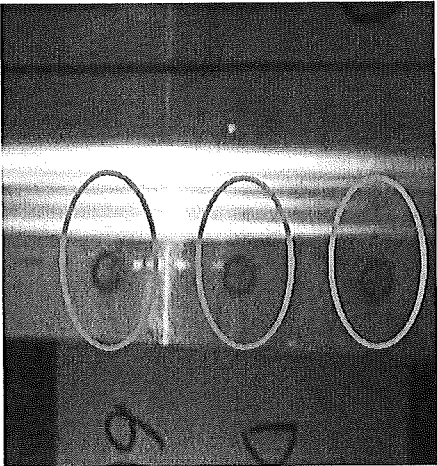
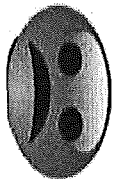
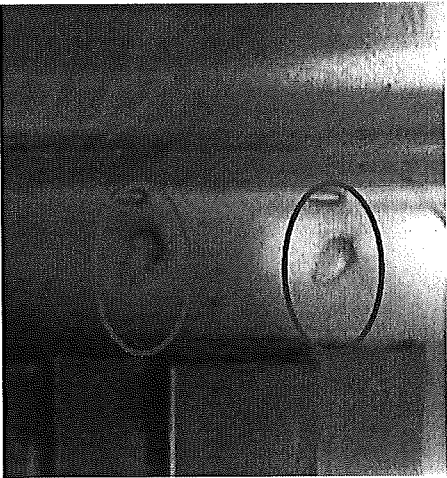
Quality



GIBELQ
 2024 -03- 21
 INDUSTRIAL QUALITY
 MAINLINE

 GIBELQ		DTR3022319/3 Carshell Assembly TC	
Rev	Project: PRASA	Date-	SI.CB1210.322.V28
V28		07/11/2023	

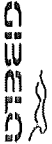
ANNEXURE A: Spot Welding Quality Acceptance Standard



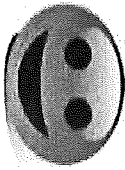
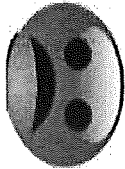
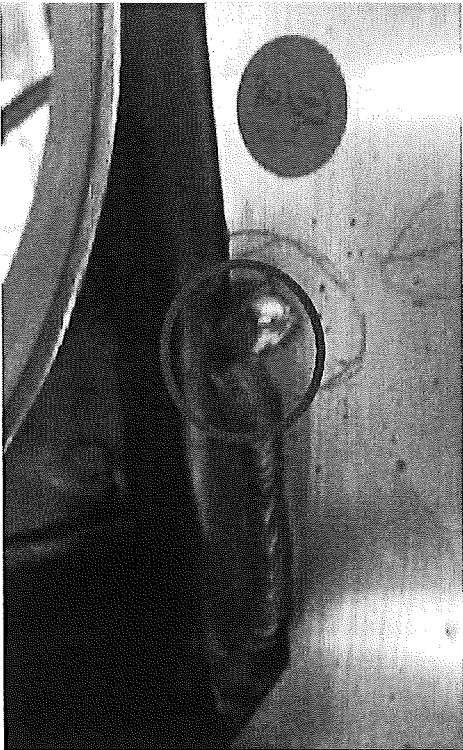

GIBELQ


2024 -03- 21

INDUSTRIAL QUALITY
MAINLINE

	DTR3022331913 Carshell Assembly TC		Rev.	Project: PRASA SI.CB1210.322.V28
			V28 Date- 07/11/2023	

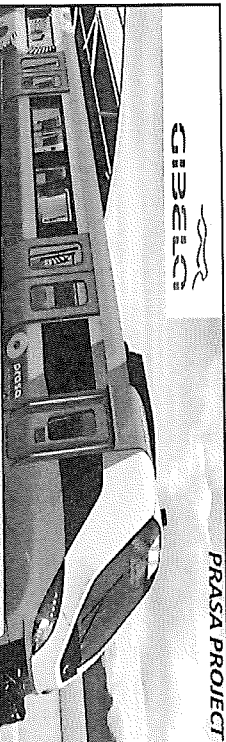
ANNEXURE B: Arc Welding Quality Acceptance Standard






CIBELQ
2024 -03- 21
INDUSTRIAL QUALITY
MAINLINE

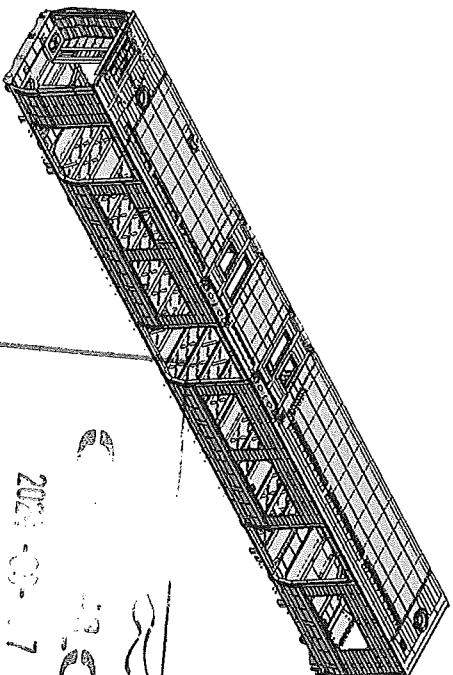


[illegible]

	DTR30233319/2 Carshell Assembly TC		Rev.	Project: PRASA SI.CB1220.323.V29	
			29		
			Date-		
28/10/2023					
Carro Car.	TC1, TC2	NCR:	Work station: CB1220		



I - Documentation and Instruments



1.1 - Documentation Control

Type of car														
Document	TC1	M1	M2	M3	M4	TC2	Revision	Observation	OK	N/A	Reviewed	Signature/Date (Manufacturing)	Signature/Date (Quality)	
DTR80223319Z							20	26-10-2023	X		N/A	OK	26/10/23	

1.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Processes

Instruments	Validation	Calibration or Verification Validation Date	OK	NOX	Signature/Date (Manufacturing)	Signature/Date (Quality)
Tube/ans	32323	15/03/2025	X		AB-22-03-24	PA
measuring tape	GIROK231	30/03/2024	X		AB-21-03-24	PA

1.3 Consumables

Welding Consumable Control - Used for Special Process

[illegible]



DTR30223319/2 Carshell Assembly TC

Rev.
29

Project: PRASA



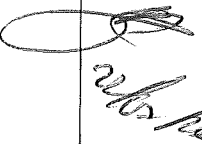
Date-
28/10/2023

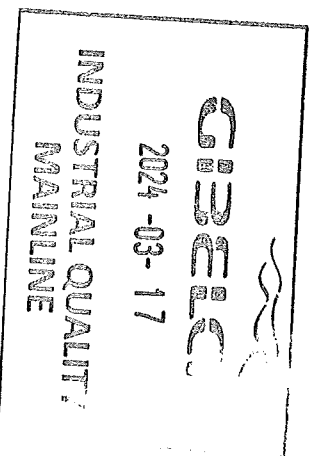
SI.CB1220.323.V29


II - Control Activities of Production

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Review	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220.DTR30223487/2 Verification of fitment for all reinforcement brackets.	DTR30223319/2	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
03	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
04	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TTPDEF - ARC - 0000	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC- GIBELCO 2024-03-17	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
06	N/A	Functional dimension according drawing of complementary document approved by Astom engineering and registered in this document.	INDUSTRIAL QUALITY Approved according to specification of Industrial Process 880w.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
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 DTD00000210658.	As the welding procedure IND-SAL-WMS-018 and DTD00000210658	<input checked="" type="checkbox"/>	<input type="checkbox"/>		22-03-24 [Signature]	22/03/24 [Signature]
08	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: 4170-03 Exp Date: 1/03/24 Actuals Temperature: 19 Humidity: 72	<input checked="" type="checkbox"/>	<input type="checkbox"/>		24/03/24 [Signature]	22/03/24 [Signature]

		DTR3022331912 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.	AAD0001 241 033	✓			22/05/24	
10	NA	Verification of sealant application on the roof and sidewall finishers	Sealant must be: -Applied straight and even (1.5mm) -Free of gaps, cracks, damage and debris (flashes, dirt, dust) Refer to Annexure B	✓			22/05/24	



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



END 1
SEALANT


OPERATOR
(Name & sign):

Mthlorosi


OPERATOR
(Name & sign):

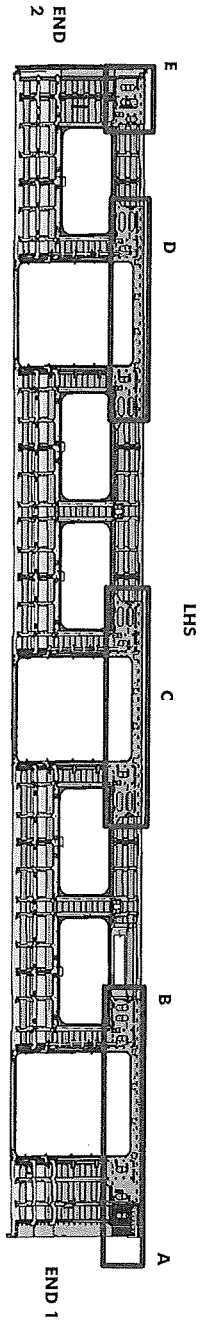
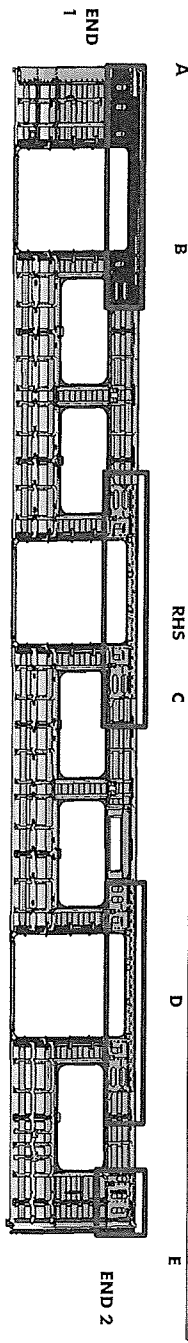
Mthlorosi






GIBBICO
 2024-03-17
 INDUSTRIAL QUALITY
 MAINLINE

		DTR3023319/2 Carshell Assembly TC		Rev. 29	Project: PRASA
				Date- 28/10/2023	SI.CB1220.323.V29




REINFORCEMENT WELDING

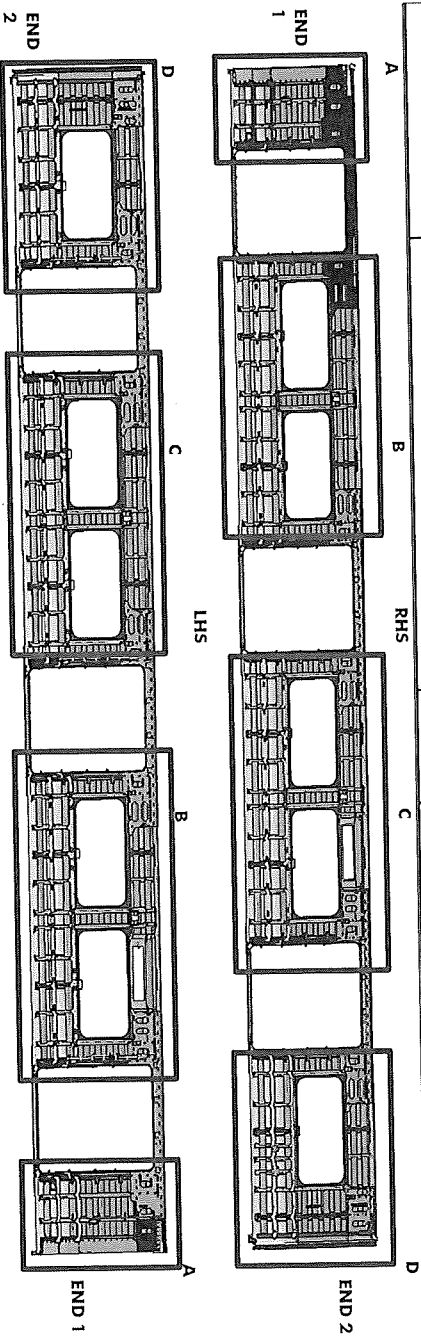
AREA	LHS	RHS
A	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
B	Operator (Name&sign): <u>LINDO [Signature]</u>	<u>LINDO [Signature]</u>
C	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
D	Operator (Name&sign): <u>[Signature]</u>	<u>Martine Mbe</u>
E	Operator (Name&sign): <u>[Signature]</u>	<u>Martine Mbe</u>



2024-03-17

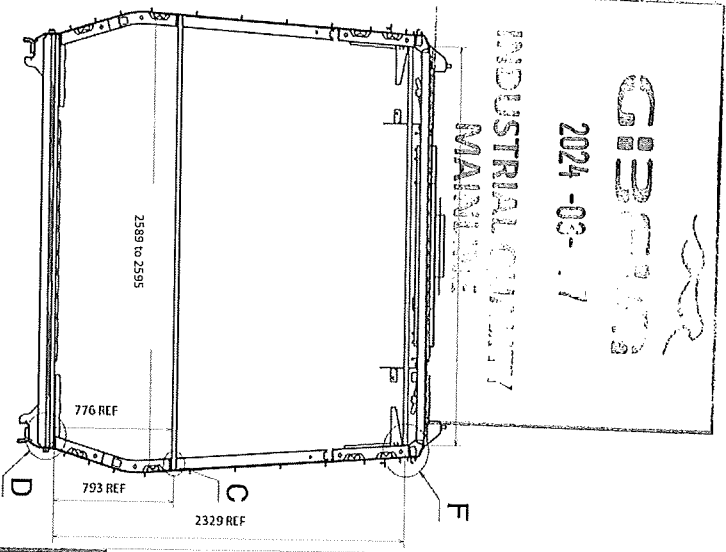
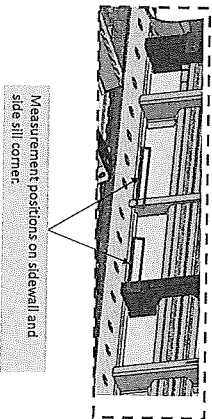
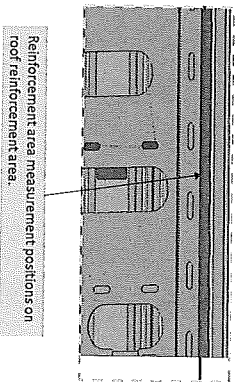
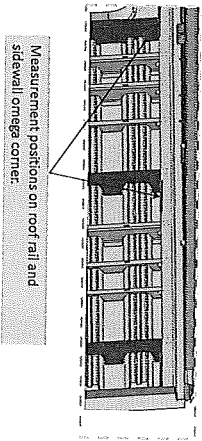
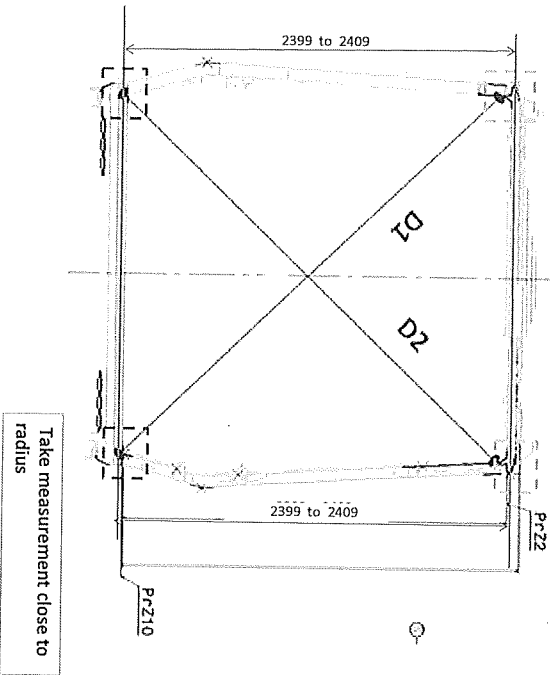
INDUSTRIAL QUALITY
MARINE

	DTR022331912 Carshell Assembly TC	
	Rev. 29	Project: PRASA
	Date- 28/10/2023	SI.CB1220.323.V29




INSTALLATION		WELDING	
C-RAILS:	Operator: <u>Michael</u>	LHS	RHS
	Operator: <u>Terle</u>		
DOOR MECHANISMS:	Operator: <u>Operator</u>		
	Operator: <u>Operator</u>		
TAPPING PADS	Operator: <u>Operator</u>		
	Operator: <u>Operator</u>		
SEAT & LUGGAGE BRACKETS:	Operator: <u>Operator</u>		
	Operator: <u>Operator</u>		
SEAT BRACKETS VERIFICATION:	Operator: <u>Operator</u>		
	Operator: <u>Operator</u>		
AREA			
A (Seat brackets)	: Operator (Name&sign): <u>Operator</u>		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>Operator</u>		
B (Seat brackets)	: Operator (Name&sign): <u>Operator</u>		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>Operator</u>		
C (Seat brackets)	: Operator (Name&sign): <u>Operator</u>		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>Operator</u>		
D (Seat brackets)	: Operator (Name&sign): <u>Operator</u>		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>Operator</u>		

CIBECIO	Rev. 29	Project: PRASA
DTR3022331912 Carshell Assembly TC	Date-	SI.CB1220.323.V29
	28/10/2023	

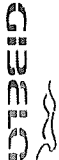


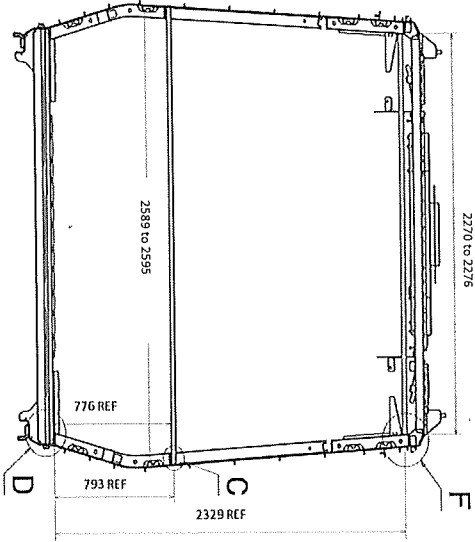
Take measurement close to radius



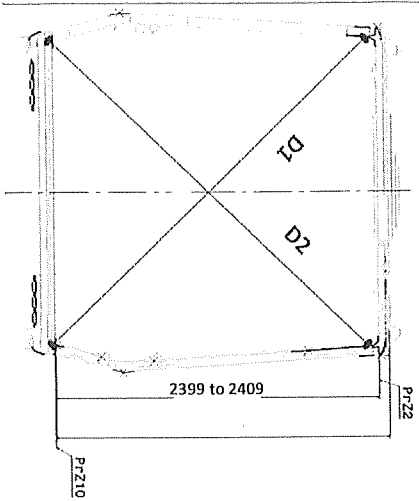
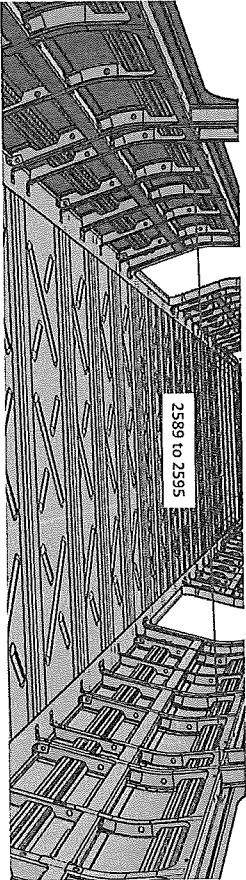
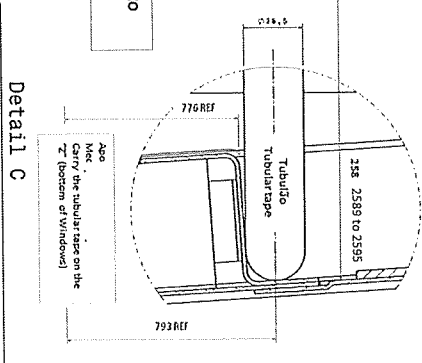
INDUSTRIAL QUALITY
MAINLINE


2024-03-17

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



Take measurement close to radius



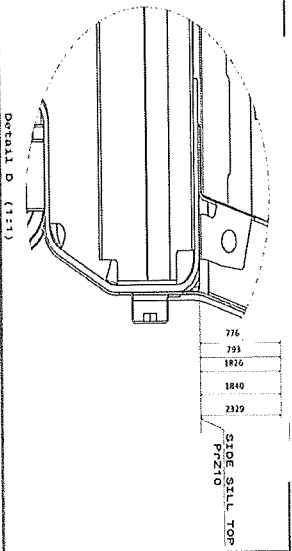


CIBELQ

2024-03-17

INDUSTRIAL QUALITY

MANUFACTURE

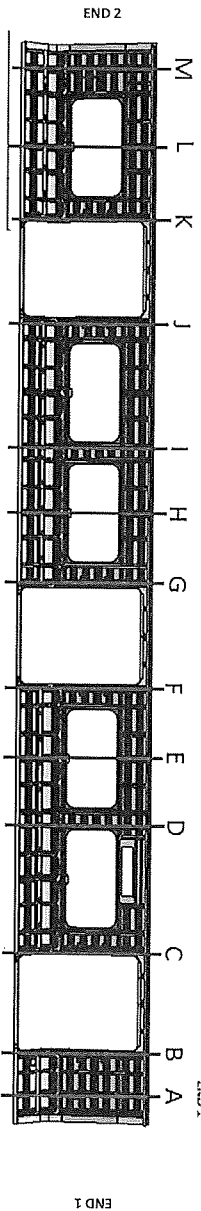




DTR3022319/2 Carshell Assembly TC

Rev.
29
Date-
28/10/2023

Project: PRASA
SI.CB1.220.323.V29



BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3216	3298	2	
B	3294	3294	0	
C	3299	3299	0	
D	3268	3267	1	
E	3268	3269	1	
F	3279	3279	0	
G	3299	3295	4	
H	3265	3268	5	
I	3268	3266	2	
J	3299	3298	1	
K	3296	3298	2	
L	3264	3264	3	
M	3294	3299	5	

22-03-24

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2024-03-17
INDUSTRIAL QUALITY
MAINLINE



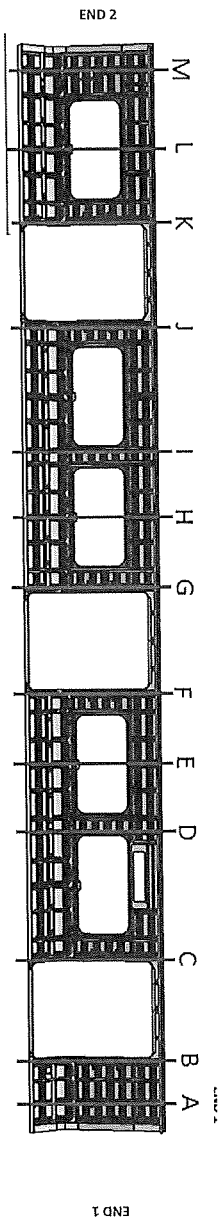
DTR3022331912 Carshell Assembly TC

Rev.
29

Project: PRASA

Date-
28/10/2023

SI.CB1220.323.V29



AFTER WELDING

Record D1 values		Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3298	3299	1	2596
B	3200	3300	0	2591
C	3300	3300	0	2592
D	3266	3266	0	2593
E	3262	3265	3	2591
F	3300	3296	4	2595
G	3300	3297	3	2595
H	3262	3262	0	2595
I	3264	3265	1	2594
J	3299	3298	1	2592
K	3299	3299	0	2594
L	3264	3266	2	2589
M	3297	3296	1	2591

Handwritten signature and date: 2024-03-17



2024-03-17

INDUSTRIAL QUALITY
MAINLINE

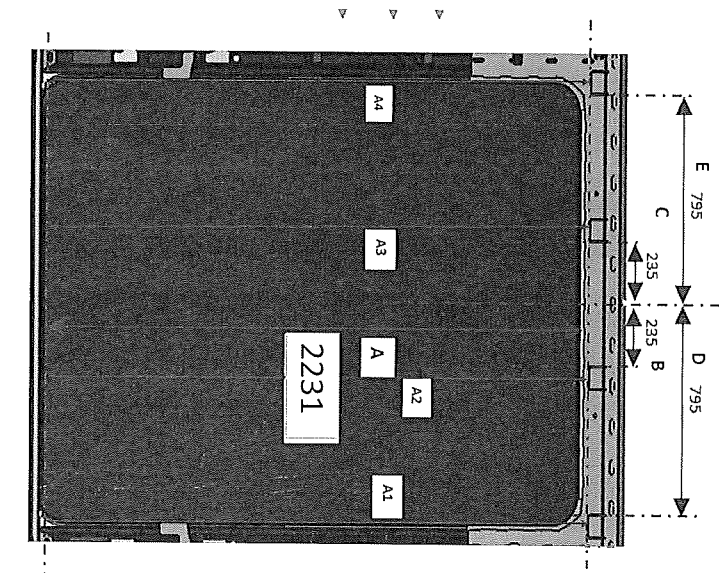


DTR30223319/2 Carshell Assembly TC

Rev.
29
Date-
28/10/2023

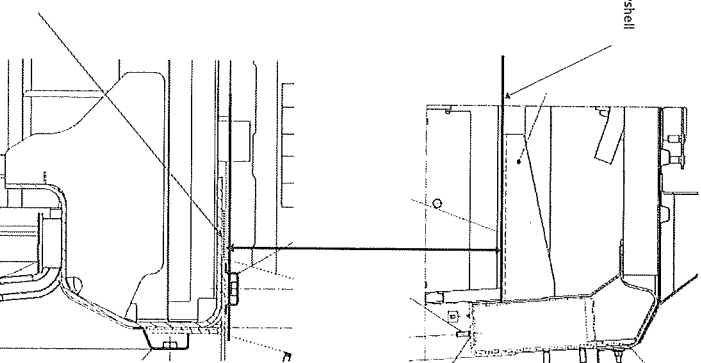
Project: PRASA
SI.CB1220.323.V29

Specifications of Details for GB5 measurement



Brackets Carbodyshell
U Type Supports

Brackets Carbodyshell
Channel Assy



DOOR 1 - 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	745
E 794 to 796	745

DOOR 2 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2231
A4 2230 to 2232	2231
B 234 to 236	236
C 234 to 236	235
D 794 to 796	746
E 794 to 796	745

DOOR 3 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2231
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	235
D 794 to 796	715
E 794 to 796	746

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	744
E 794 to 796	745

DOOR 2 - RHS

VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	234
D 794 to 796	745
E 794 to 796	745

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	745
E 794 to 796	745

INSTALLED
MAINTENANCE

22-03-22



DTR30223319/2 Carshell Assembly TC

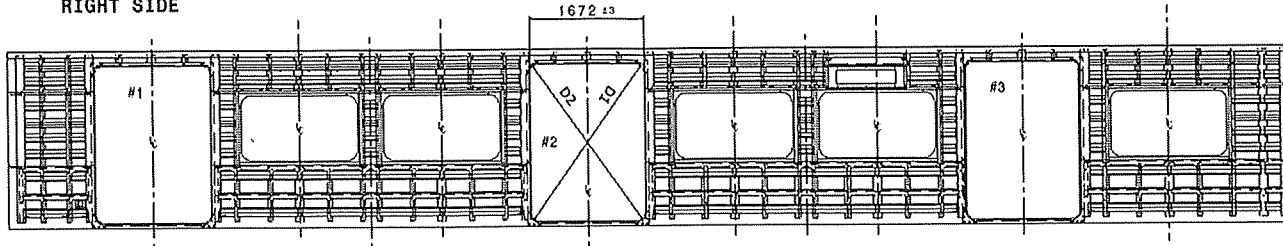
Rev.
29
Date-
28/10/2023

Project: PRASA
SI.CB1220.323.V29

Specifications of Details for CBS measurement

RIGHT SIDE

End #1



End #2

Doors length - 1672 ±3mm

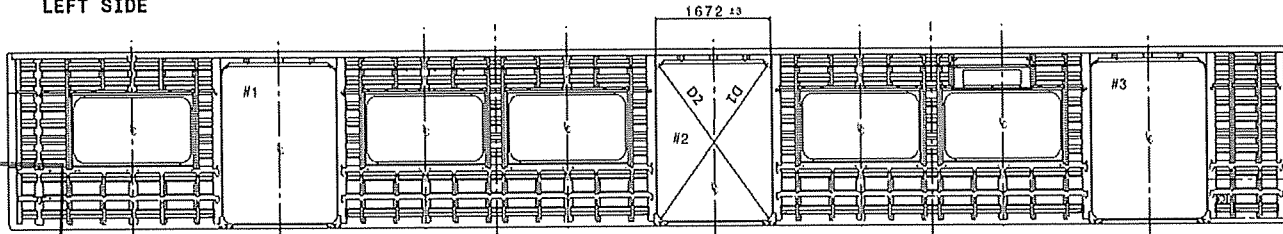
#1	#2	#3	
1674	1673	1674	HIGHER DIMENSION
1673	1672	1673	CENTRAL DIMENSION
1672	1671	1671	LOWER DIMENSION

Doors diagonal D1-D2 maximum difference ≤ 4 mm

	#1	#2	#3
D1	2748	2746	2744
D2	2746	2745	2747
D1-D2	2	1	3

LEFT SIDE

End #2



End #1

Vão de Portas - 1672 ±3mm
Doors length - 1672 ±3mm

#1	#2	#3	
1674	1673	1673	DIMENSÃO SUPERIOR HIGHER DIMENSION
1673	1673	1672	CENTRAL DIMENSION
1671	1671	1672	LOWER DIMENSION

Diagonal de portas - diferença D1-D2 < 4 mm


	#1	#2	#3
D1	2746	2748	2747
D2	2747	2745	2746
D1-D2	1	3	1

INDUSTRIAL QUALITY
MAINLINE


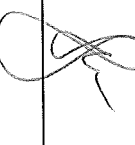
2024-03-17



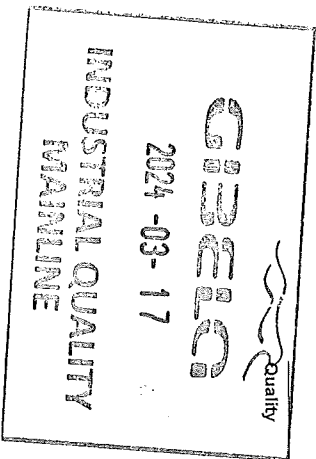
22-03-24


	DTR3022319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date- 28/10/2023	

Self Inspection - Final Result

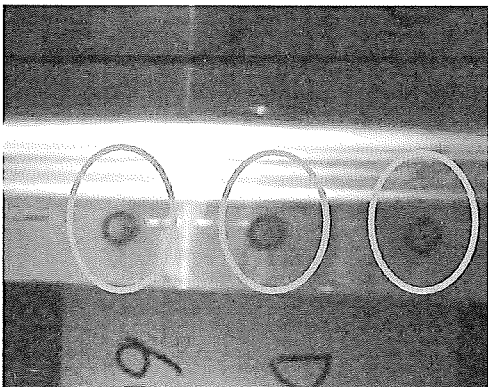
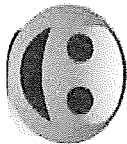
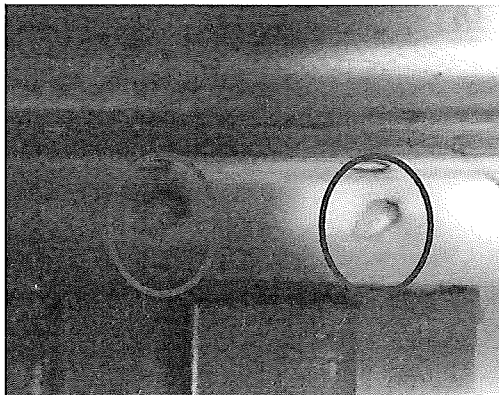
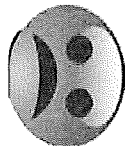
Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)		DATE	NAME	SIGNATURE	
HOLD POINT	GO	22-03-24	Asmaoui		
		29/03/24	Wakop		
	NO GO				
In case of "NO GO", describe blocking problems					
In case of "NO GO", the operations manager must define below action plan to ensure "GO":					
Item	Description	Action	Responsible	Due date	Status


Operations



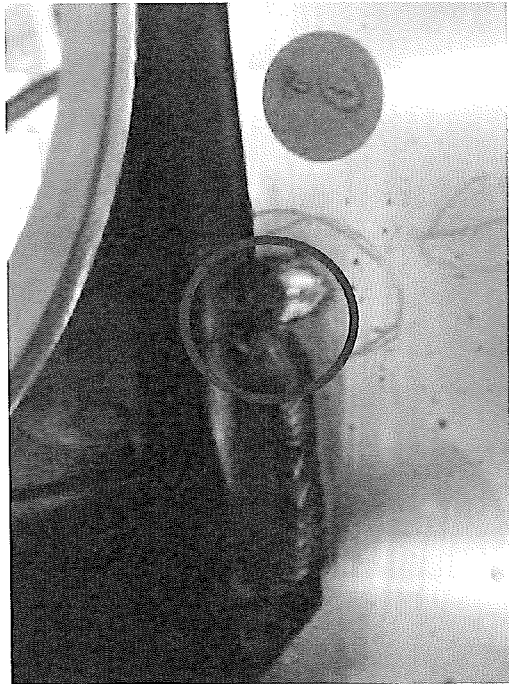
 GIBELQ	DTR30223319/2 Carshell Assembly TC		Rev. 29	Project: PRASA
			Date-	
			28/10/2023	
				SI.CB1220.323.V29


ANNEXURE A: Spot Welding Quality Acceptance Standard



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


ANNEXURE B: Arc Welding Quality Acceptance Standard



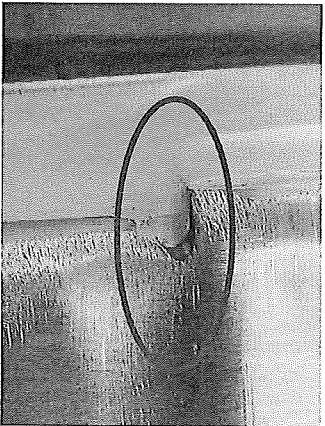
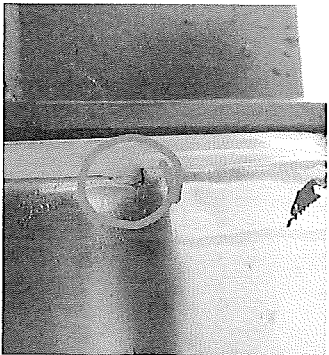


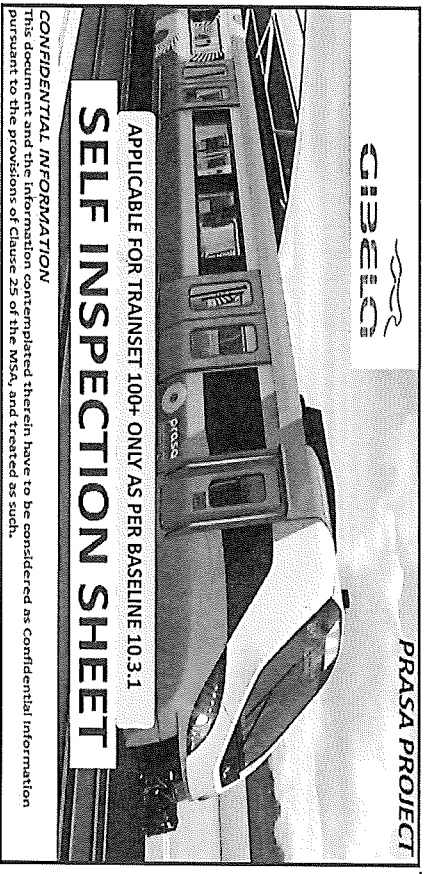
2024-03-17

INDUSTRIAL QUALITY
MAINLINE

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

ANNEXURE B: Sealant





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

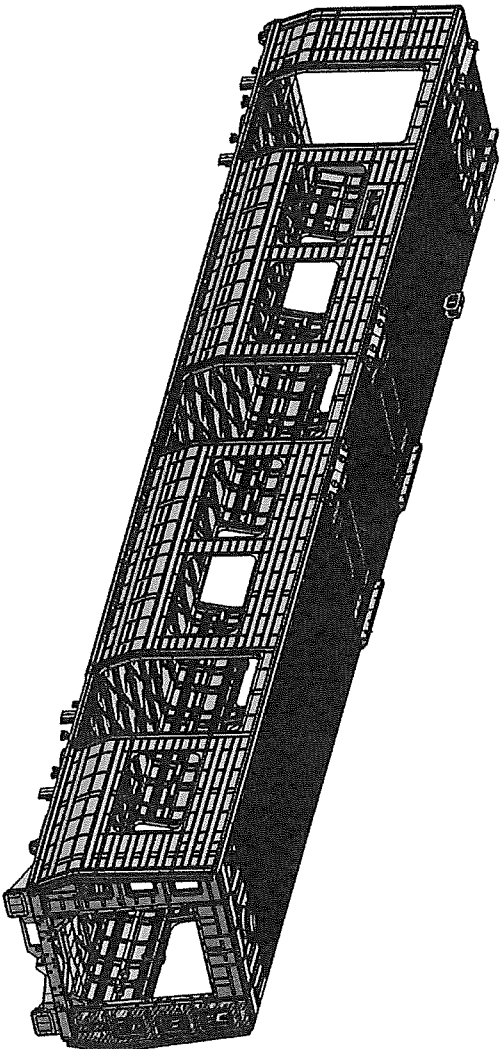
APPLICATION REFERENCE										
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE				WORK INSTRUCTION	SAFETY?	
				TCL	M4	M5	TCL			
<input type="checkbox"/>	07000023319	07000023319 Cabrol Assembly TC	GR230	X				X	PRA.CB1230.DT0000012 2319.V20	YES
REV	DATE	MODIFICATION CONTENT		RESPONSIBLE				NAME	DATE	
0	06/04/2018	GIBELA NEW CREATION		APPROVER				Itumeleng Modiba	06/04/2018	
				CHECKER				Nosizo Pindela	09/04/2018	
				COMPILER				Thanyani Mathregu	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				Ramogane 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	
				APPROVER				Timothy Maimela	19/04/2021	
20	19/04/2021	New Baseline change 10.3		CHECKER				Bongane Masina	19/04/2021	
				COMPILER				Collins Mkhombhi	19/04/2021	
25	20/04/2022	New Baseline change 10.3.1		APPROVER				Andani Muthelo	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 Mkhombhi	14/06/2022	
				CHECKER				Andani Muthelo		
				COMPILER				Andani Muthelo		
27	26/07/2022	Threshold measurements addition		APPROVER				Collins Mkhombhi	25/07/2022	
				CHECKER				Andani Muthelo		
				COMPILER				Andani Muthelo		
28	17/10/2022	Addition of traceability for sealant application		APPROVER				Collins Mkhombhi	17/10/2022	
				CHECKER				Nokozo Zwane		
				COMPILER				Amogelang Moshamphe		
29	14/04/2023	Added sealant batch number & welding consumables traceability		APPROVER				Vanessa Ntuli	14/04/2023	
				CHECKER				Nokozo Zwane		
				COMPILER				Amogelang Moshamphe		
30	06/11/2023	Added traceability for thresholds for boiler makers and welders		APPROVER				Tyson Ngobeni	06/11/2023	
				CHECKER				Andani Muthelo		
				COMPILER				Nokozo Zwane		
TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER		PAGES				
220	TC1	19050 421952	05/03/24	SI.CB1230.324.V28		14				

GIBELA AIRPORT CONSORTIUM RF (PTY) LTD
Mpisane Phanyiso
FITTING QUALITY
2024-02-15
Signature



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	SI.CB1230.324.V29

CB1230



1.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	NOK	Rework	Signature/Date (of technician)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4							
DT00000223319	✓							✓		N/A	Signature/Date (of technician)	Signature/Date (Quality)

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK	NOK	Signature (operator/s) (alt)	Date (alt)
Measuring Tape	41180399	25/04/24	X		[Signature]	25/04/24
Infusor	22113	26/06/24	X		[Signature]	26/06/24
Compressor Drive	41180032	27/07/24	X		[Signature]	27/07/24

Welding Consumable Control - Used for Special Process.

[illegible]


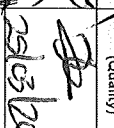







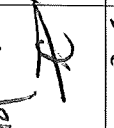
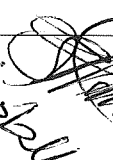





DT00000223319 Carshell Assembly TC

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II - Control Activities of Production

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria /Record	OK	NOX	Remark	Signature/Date (Inspection)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° DT00000223319	DT00000223319	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 DTD0000210675	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
04	N/A	Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
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	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
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>Temperature Min - Max (t) Min-Max 10°C - 35°C Relative humidity Min - Max (t) Min-Max 25% - 80%</div>	Sealant Batch No: Exp Date: <u>03 / 03 / 24</u> Actuals Temperature: <u>25°C</u> Humidity: <u>70 %</u>	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24
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	<input checked="" type="checkbox"/>			 23/03/24	 23/03/24

GIBELCO ENGINEERING CONSULTING LTD.
Mps and KPM/MSO
FITTING QUALITY
2024-02-15
Signature

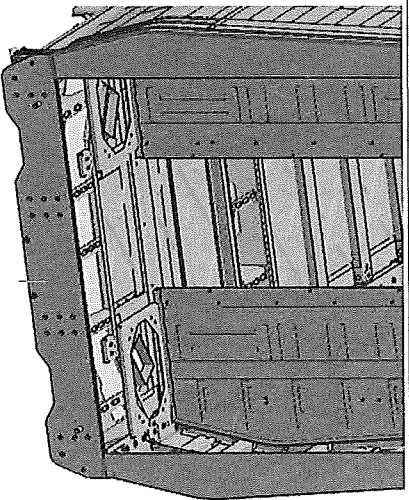


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VIEW A



**END 1
SEALANT**

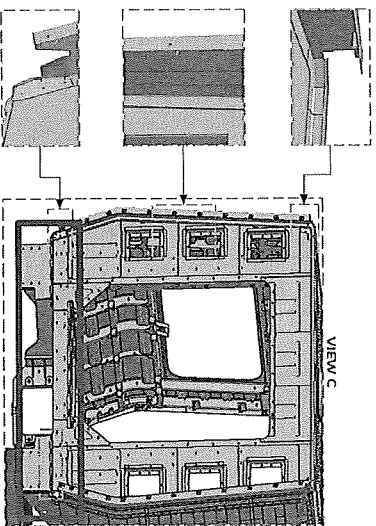
OPERATOR
(Name & sign):

Bunhe 18/09/19
Boticunelo 10/08

OPERATOR
(Name & sign):

Nonhlanhla 14

VIEW C



OPERATOR
(Name&sign):

LEEROY

OPERATOR
(Name&sign):

OPERATOR
(Name&sign):

LEEROY

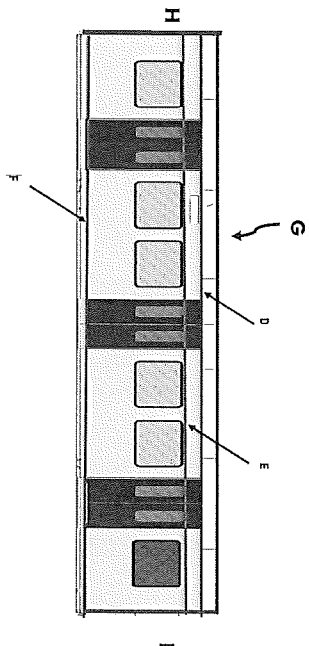
Signature: _____
Date: 2024-02-15
Printed Name: _____
Printed Title: _____
Printed Company: _____



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06/11/2023

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Area D,E,F,G,H,I	LHS	RHS
Operator (Name & sign) :	<u>D, E, F, G, H, I</u>	<u>D, E, F, G, H, I</u>
Operator (Name & sign) :	<u>Buhle Ngola</u>	<u>Buhle Ngola</u>
Operator (Name & sign) :	<u>Boikumele</u>	<u>Boikumele</u>
Operator (Name & sign) :	<u>Inani</u>	<u>Inani</u>
Operator (Name & sign) :	_____	_____
Operator (Name & sign) :	_____	_____

GIBELA Engineering & Design (Pty) Ltd
Mphahlele, 1550
FITTING QUALITY
2024-02-15
Signature _____

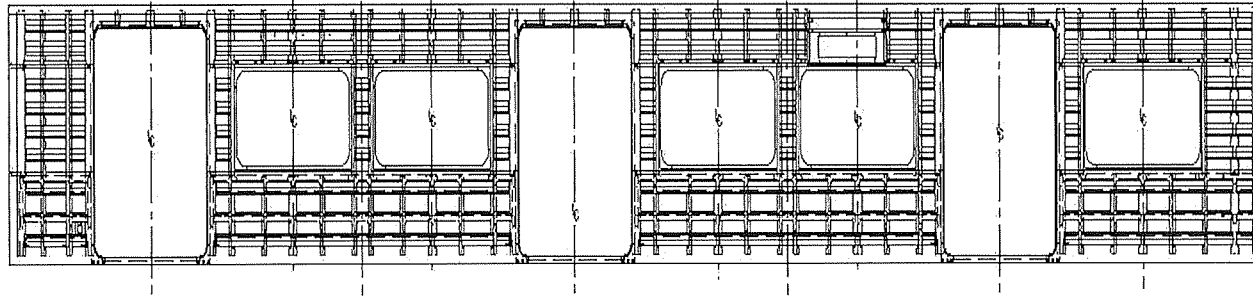
END #2

END #1

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

RIGHT SIDE

END #1

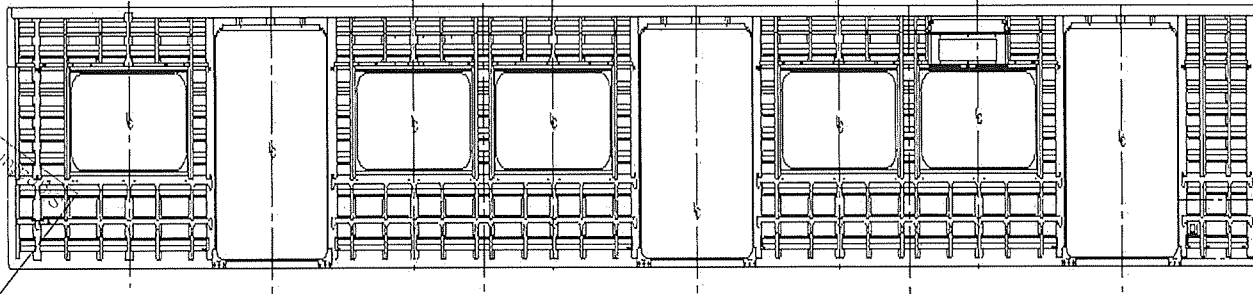


MAXIMUM 1

MINIMUM 0.5

LEFT SIDE

END #2



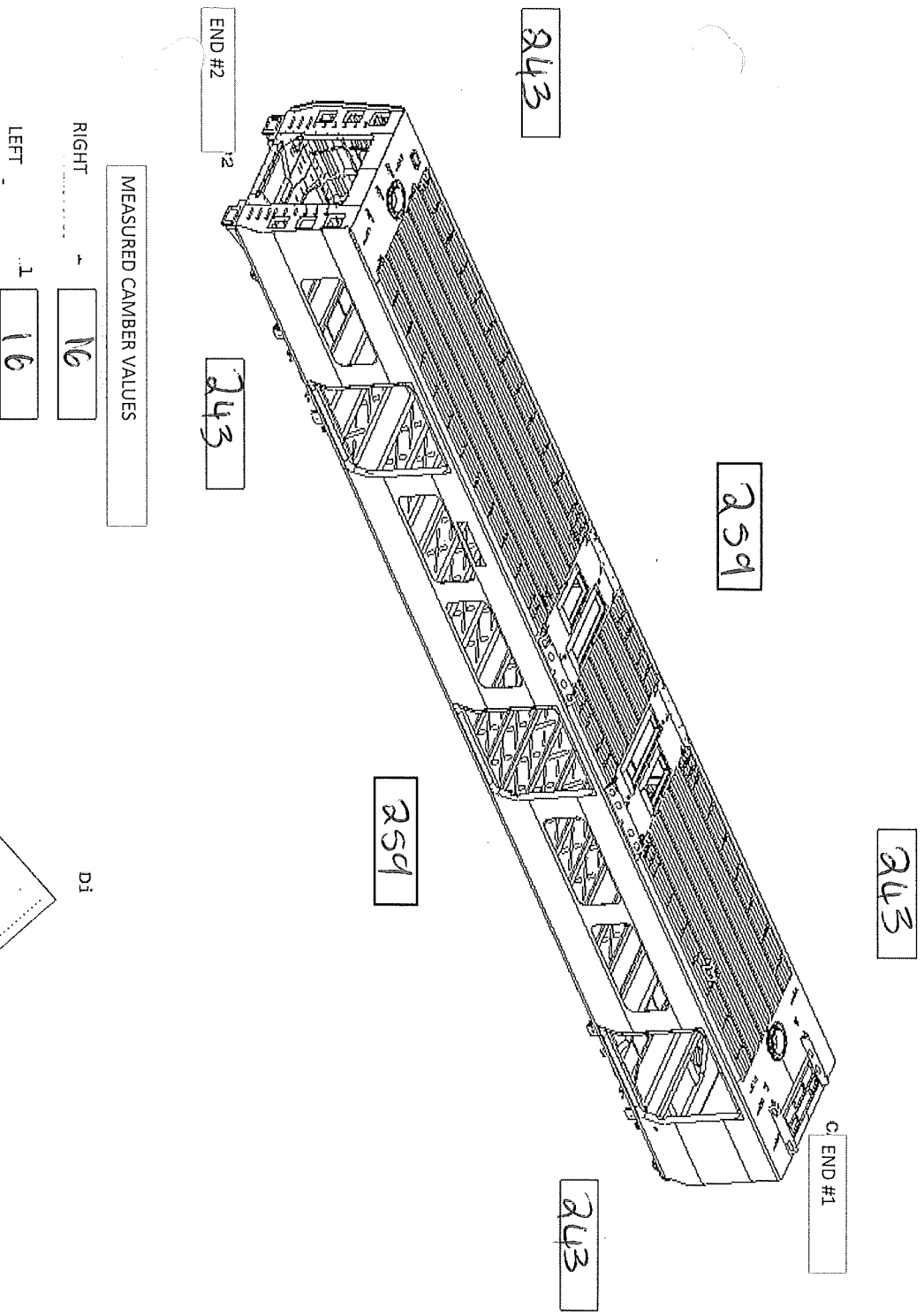
MAXIMUM 1

MINIMUM 0.2

2024-02-15
Fitting Quality
Mphahana Khanyiso
Mphahana Khanyiso
Mphahana Khanyiso

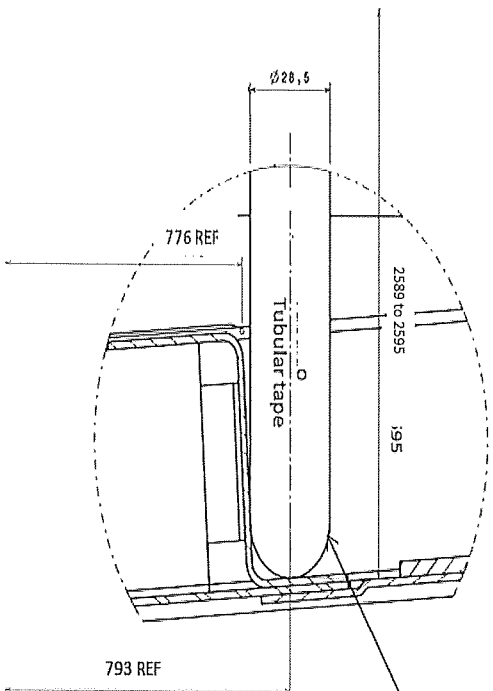
Specifications of Details for CBS measurement CB1230

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



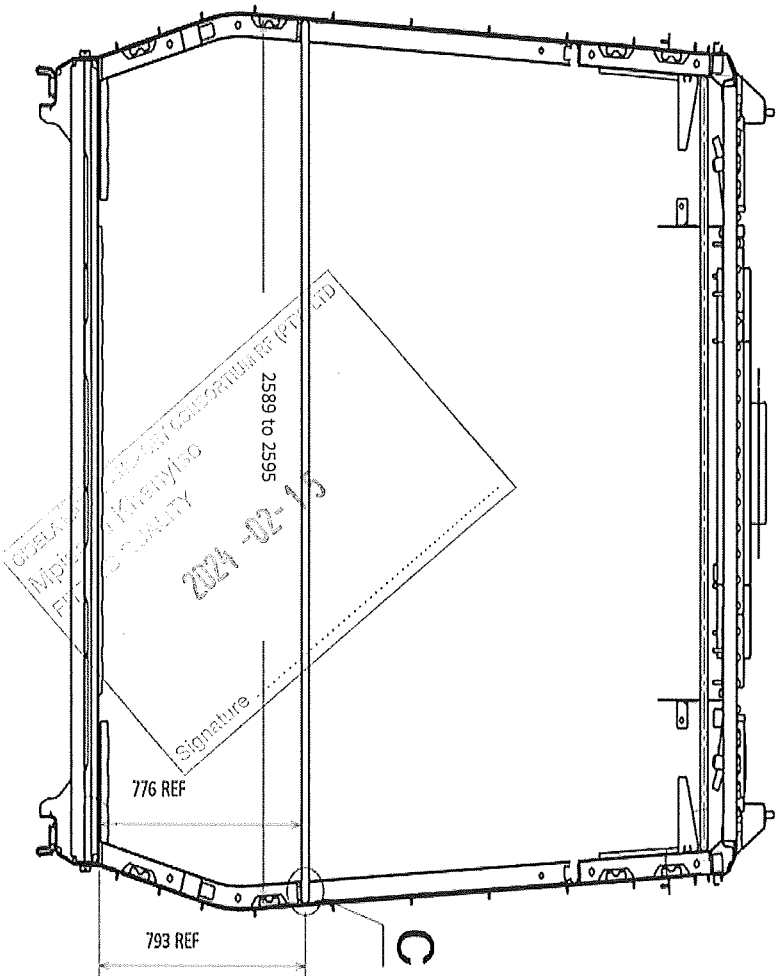
7

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

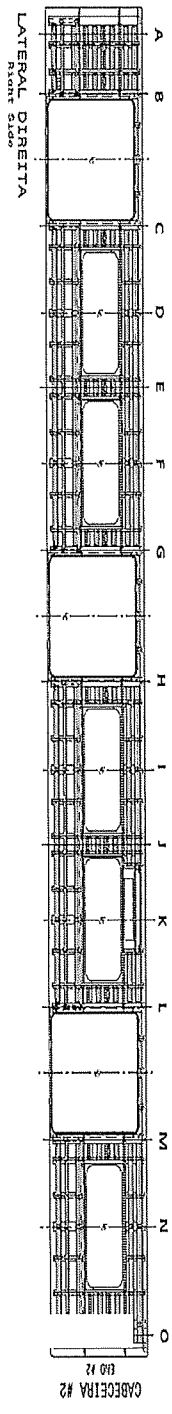


A
N
Carry the tubular tape on the
"Z" bottom of Windows

Detail C

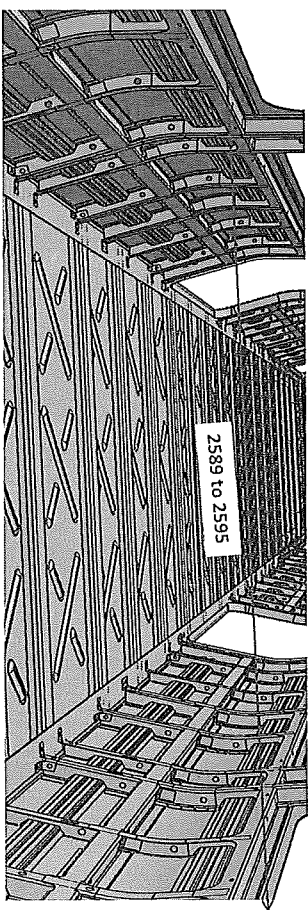


Specifications of Details for CBS measurement



2589 to 2595mm

A	2590
B	2591
C	2591
D	2595
E	2591
F	2589
G	2595
H	2593
I	2592
J	2593
K	2589
L	2592
M	2592
N	2591
O	2590



Threshold verification						Nominal value :38	
Door 1		Door 2		Door 3		Door 3	
L	R	L	R	L	R	L	R
38	38	37	37	38	37	37	37
Door 4		Door 5		Door 6			
L	R	L	R	L	R		
38	38	38	39	39		38	

BOILER MAKER: marcelo Silva

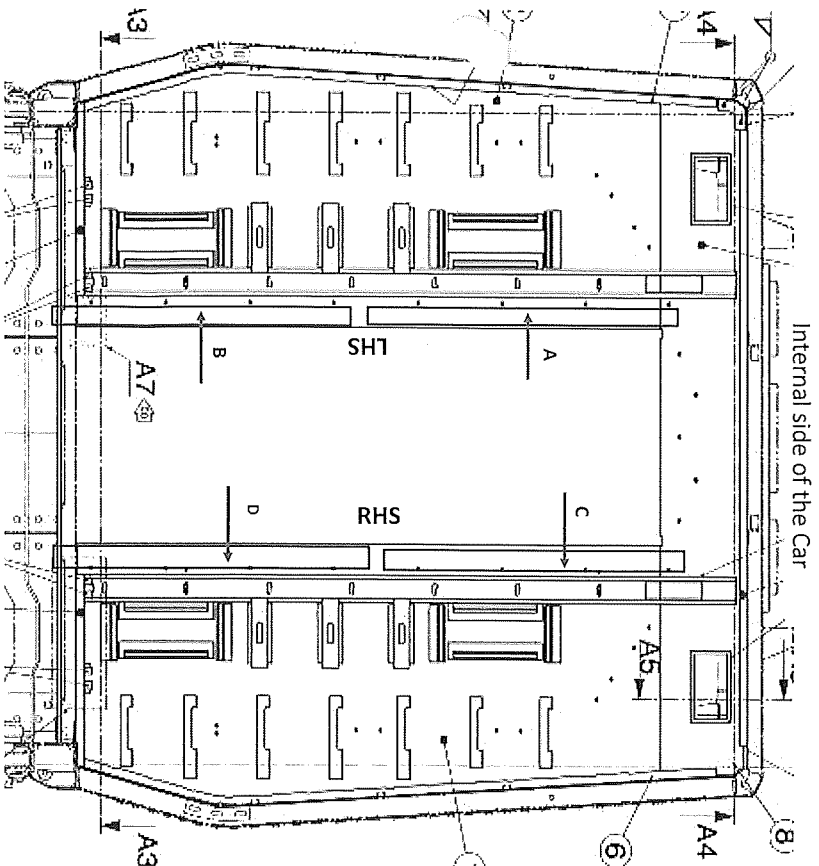
WELDER: Immanuel B. Pereira

Signature: _____
2024-02-15
FITTING QUALITY
Miguel Khenylo
del. - transcribed

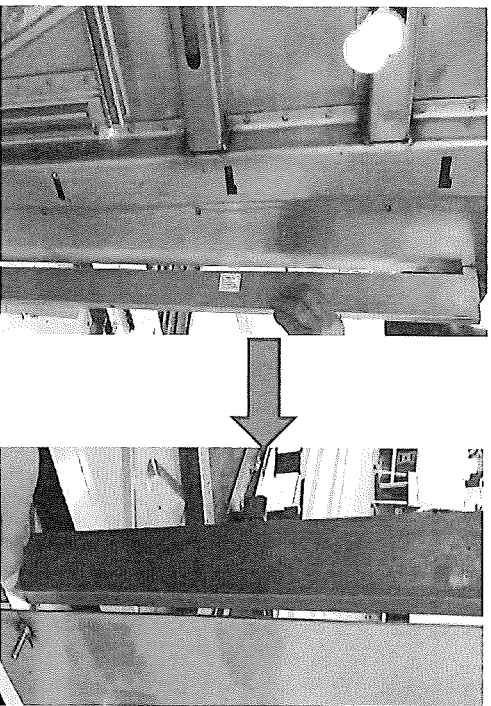
Specifications of Details for CBS measurement

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	9.1	9.2	0.1
B	10.1	10.2	0.1
C	11.0	11.2	0.2
D	12.0	12.1	0.1



CAPITAL ENGINEERING (PTY) LTD
 Mphahlele Khasanyiko
 FITTING QUALITY
 2024-02-15
 Signature





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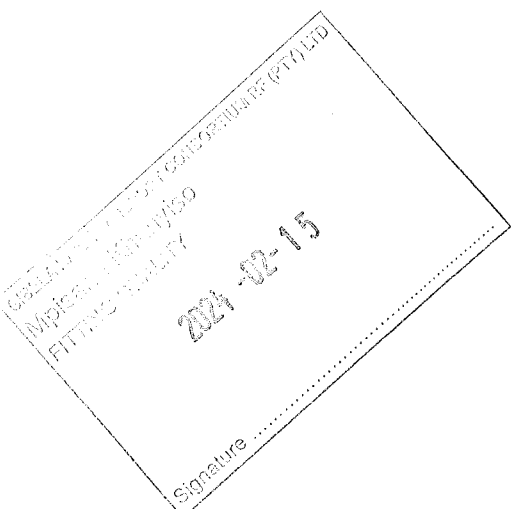
Self Inspection - Final Result


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

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!	25/03/24	K. GARCIA	
	Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	25/03/24	Andoni	
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)		Industrial Quality	

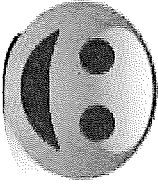
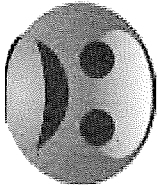
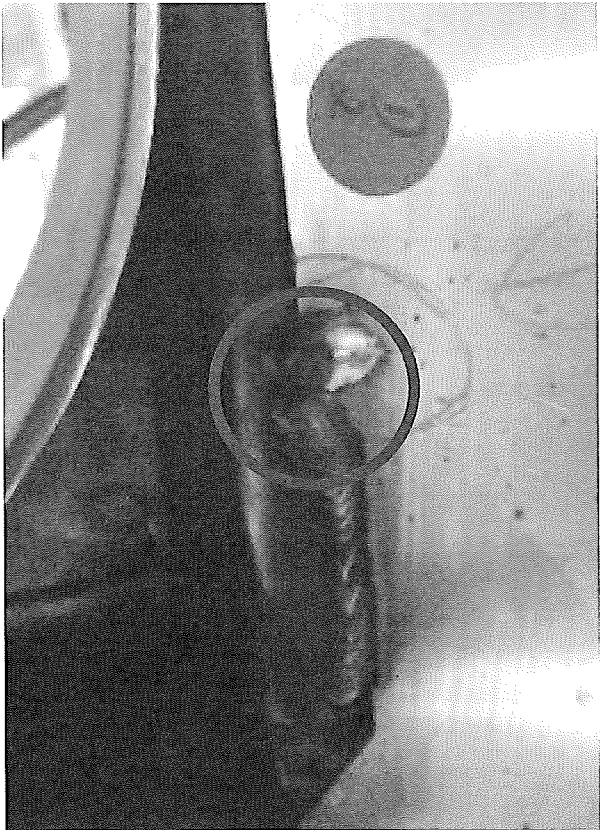
Operations


Quality



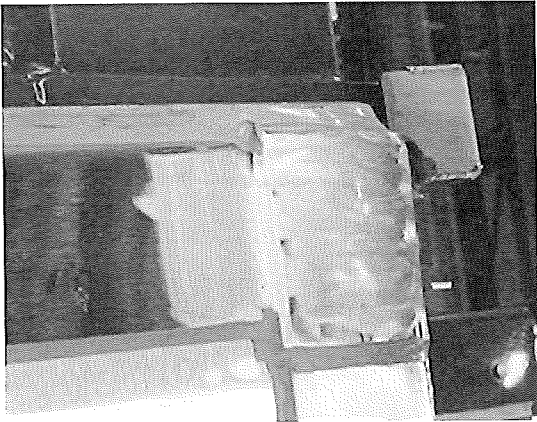
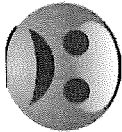
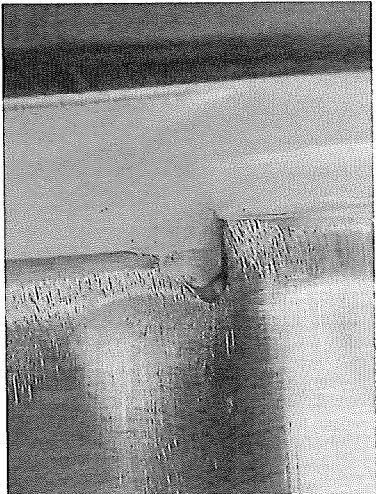
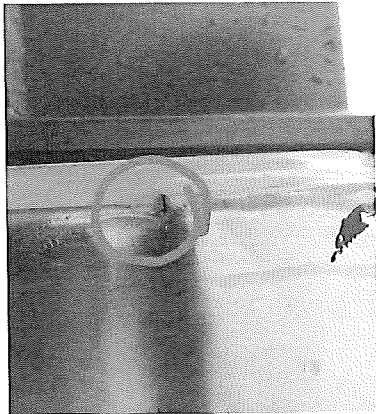
	DT00000223319 Carshell Assembly TC		Rev. 30	Project: PRASA SI.CB1230.324.V29
			Date- 06/11/2023	

ANNEXURE A: Arc Welding Quality Acceptance Standard



 GIBCO		DT00000223319 Carshell Assembly TC		Rev. 30	Project: PRASA
				Date- 06/11/2023	SI.CB1230.324.V29

ANNEXURE B: SEALANT



detaching sub