GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	M1	M1	M2	M3	TC2	WORK INSTRUCTION	SAFETY ?
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 Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	2018/05/18
			CHECKER	Nosizo Pindela	2018/05/18
			REVISED BY	Ramokone Motama	2018/05/18
2	2018/06/18	MODIFICATION CONTENT	APPROVER	Itumeleng Modiba	2018/06/18
			CHECKER	Nosizo Pindela	2018/06/18
			REVISED BY	Ramokone Motama	2018/06/18
3	2018/12/12	Additional checkpoints	APPROVER	Itumeleng Modiba	2018/12/12
			CHECKER	Nosizo Pindela	2018/12/12
			REVISED BY	Ramokone Motama	2018/12/12
5	22/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	22/01/2019
			CHECKER	Nosizo Pindela	22/01/2019
			REVISED BY	Vanessa Ntuli	22/01/2019
6	2019/11/03	Record D1 and D2 on Self - Inspection	APPROVER	Itumeleng Modiba	2019/11/03
			CHECKER	Nosizo Pindela	2019/11/03
			REVISED BY	Nosizo Pindela	2019/11/03
10	21/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	21/08/2019
			CHECKER	Nosizo Pindela	21/08/2019
			REVISED BY	Nosizo Pindela	21/08/2019
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
20	19/04/2020	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi Collins	17/08/2021
			CHECKER	Mpho Mulaudzi	
			REVISED BY	Mpho Mulaudzi	
25	21/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombhi Collins	21/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlampe Amogelang	
			REVISED BY	Mohlampe Amogelang	
27	27/07/2023	Added verification of loaded parts	APPROVER	Ngobeni Tyson	27/07/2023
			CHECKER	Mathapo Kelebone	
			REVISED BY	Mohlampe Amogelang	
28	07/11/2023	Addition of welding traceability	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Andani Muthelo	
			REVISED BY	Ntokozo Zwane	

TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
230	TC1	SEAN 410022	24/05/24	SI.CB2210.322.V28	16

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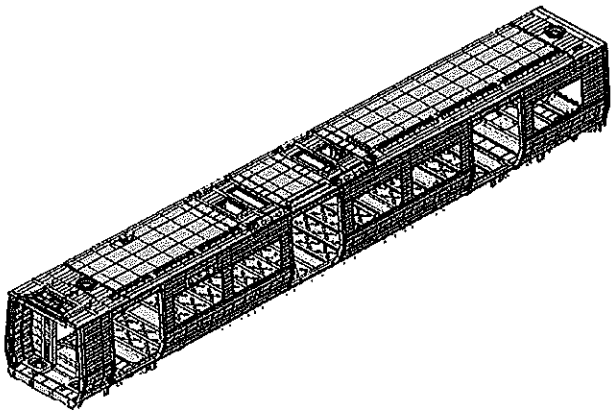
Car: TC1 & TC2	NCR:	Work station: CB2210

Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car TC1	MC1	MC2	MC3	MC4	TC2	Revision	Observation	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30223319/3	X								✓	N/A	24/5/24	24/05/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
3m TAPE	TIB TP 9284	14/03/2024	✓		24/5/24	
LASER TAPE	125425924	8/01/2024	✓		24/5/24	
TUBULAR	32823-3	15/03/2024	✓		24/5/24	24/05/24

1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
308 LSI	373779	MIG WELDING	✓		24/5/24	
309 LSI	273471	MIG WELDING	✓		24/5/24	24/05/24

GIBELA	DTR302233319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
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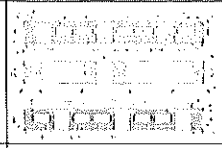
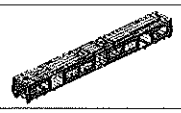
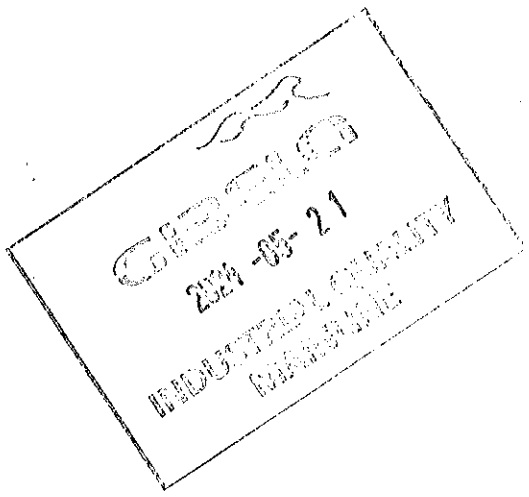
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Verification of correct parts loaded (Sidewalls,Endframes,Roof and Underframe)	DT00000284980	√			24/5/24	24/05/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	√			24/5/24	24/05/24
03		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	√			24/5/24	24/05/24
04	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	IND-SAL-WMS-016 e DTD0000210675	√			24/4/24	24/05/24
05	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	√			24/4/24	24/05/24
06		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	√			24/4/24	24/05/24
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	√			24/4/24	24/05/24



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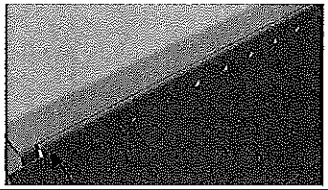
Welder traceability

Roof ring welds



Boiler maker (Name & Sign): LHS Pontso Hlapa Welder (Name & Sign): Keitu K.Mach

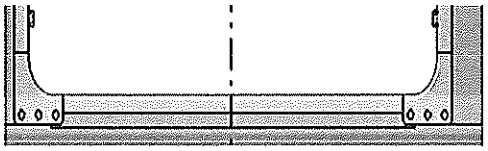
END 1

Boiler maker (Name & Sign): RHS Pontso Hlapa Welder (Name & Sign): Keitu K.Mach

Boiler maker (Name & Sign): LHS Pontso Hlapa Welder (Name & Sign): Keitu K.Mach

END 2

Boiler maker (Name & Sign): RHS Pontso Hlapa Welder (Name & Sign): Keitu K.Mach



LHS

Boiler maker (Name & Sign): Sean B.

Welder (Name & Sign):

RHS

Boiler maker (Name & Sign): Innocent

Welder (Name & Sign):

2024 -05- 21

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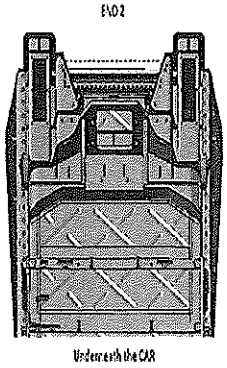
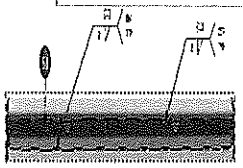
EUF Reinforcement Plates





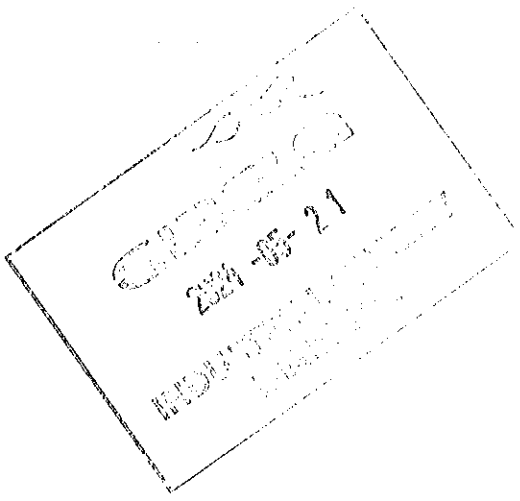
END 2

Boiler maker (Name & Sign): JUSTICE

Welder (Name & Sign):

FEDOLI

Operator: LAWRENCE



GIBELA	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
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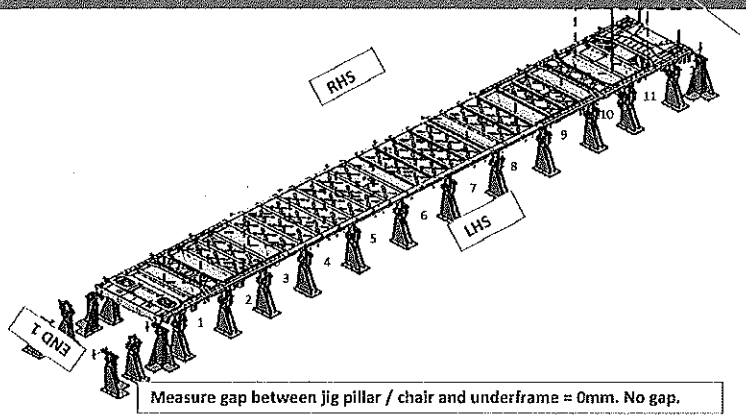
Specifications of Details for CBS measurement



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

Fill in the gap foundon each 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					N/A							
Right Hand Side												

Signature Operations: Date: 24/05/2024

After Welding.

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

Signature Industrial Quality: Date: 24/05/24

GIBELA
2024 -05- 21
INDUSTRIAL QUALITY
MARIANNE

GIBELA	DTR30223319/3 Carshell Assembly TC	Rev. V28	Project: PRASA
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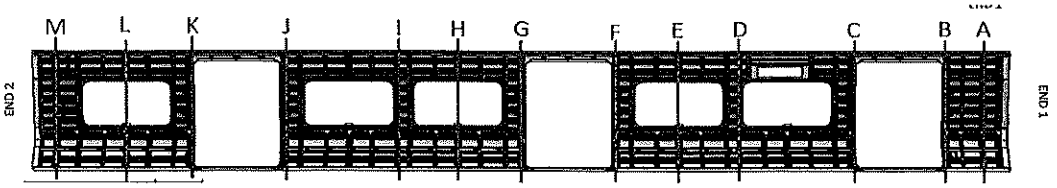
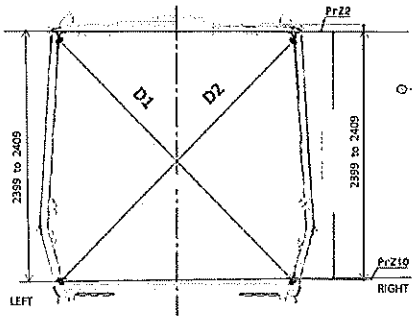
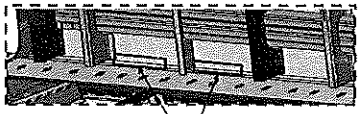
Specifications of Details for CBS measurement

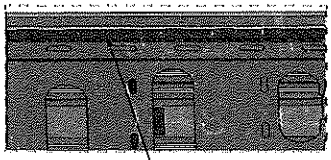




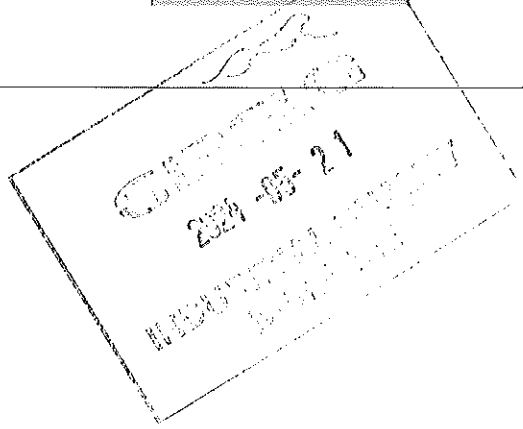
Measurement positions on roof rail and sidewall omega corner



Measurement positions on sidewall and side sill corner.



Reinforcement area measurement positions on roof reinforcement area.



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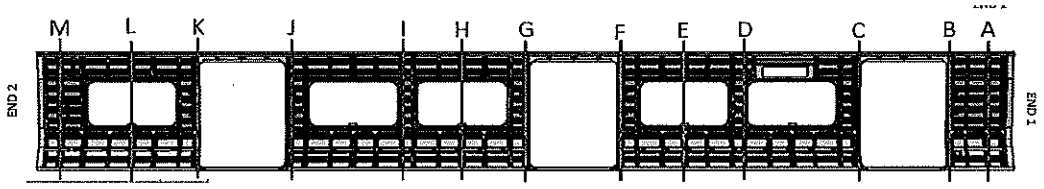
Specifications of Details for CBS measurement

BEFORE WELDING



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

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3266	3265	1	2405	2405	0
B	3263	3264	1	2406	2406	0
C	3264	3264	0	2406	2405	1
D	3265	3266	1	2406	2407	1
E	3264	3264	0	2406	2406	0
F	3265	3264	1	2405	2406	1
G	3264	3264	0	2406	2406	0
H	3265	3266	1	2406	2405	1
I	3266	3266	0	2407	2406	1
J	3265	3264	1	2406	2406	0
K	3265	3265	0	2406	2406	0
L	3266	3266	0	2407	2407	0
M	3266	3265	1	2407	2406	1

24/05/2024

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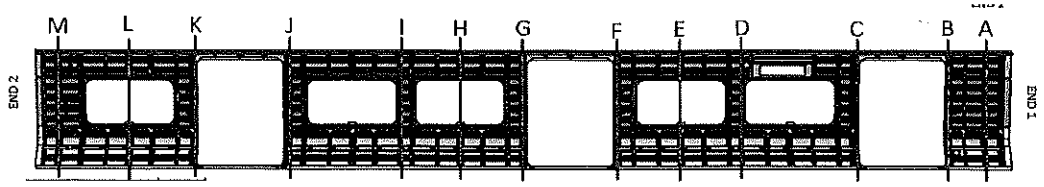
Specifications of Details for CBS measurement

AFTER WELDING



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

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3266	3267	1	2405	2405	0
B	3295	3294	1	2406	2406	0
C	3294	3293	1	2405	2406	1
D	3266	3265	1	2406	2407	1
E	3295	3264	1	2406	2405	1
F	3294	3295	1	2406	2406	0
G	3295	3294	1	2406	2406	0
H	3266	3264	2	2406	2405	1
I	3264	3265	1	2407	2406	1
J	3295	3295	0	2406	2405	1
K	3294	3294	0	2406	2406	0
L	3264	3266	2	2407	2407	0
M	3296	3295	1	2407	2406	1

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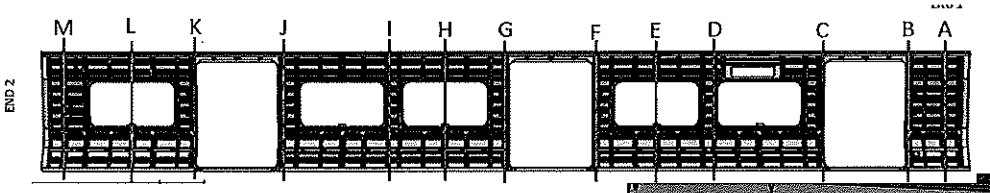
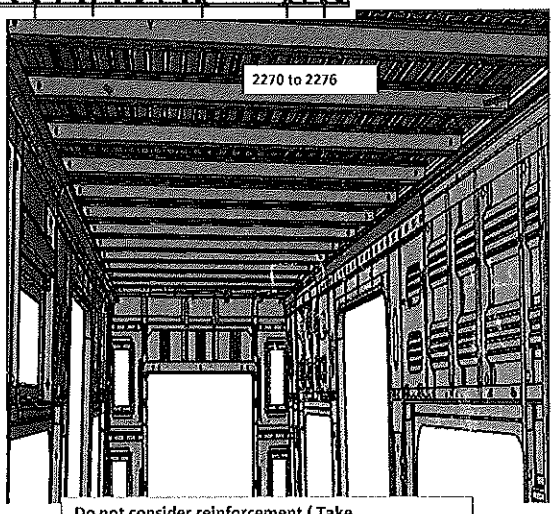
CBS measurement

BEFORE WELDING



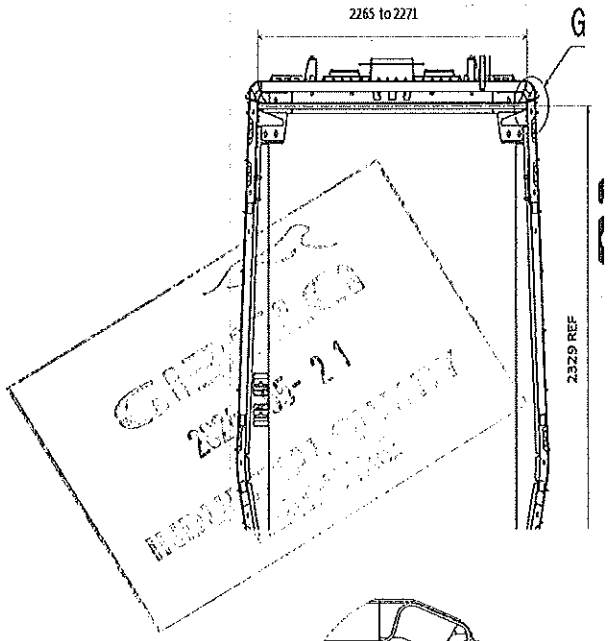


Do not consider reinforcement (Take measurements top area of zee profile

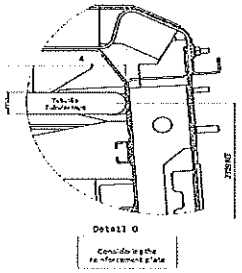
2270 to 2276

2268 a 2274

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



2265 to 2271



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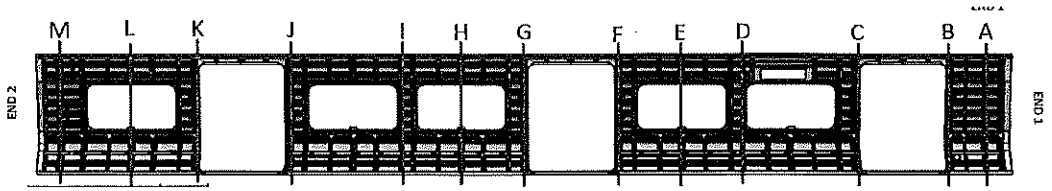
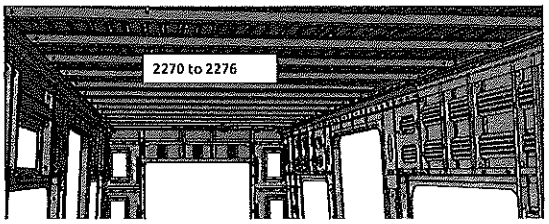
Specifications of Details for CBS measurement

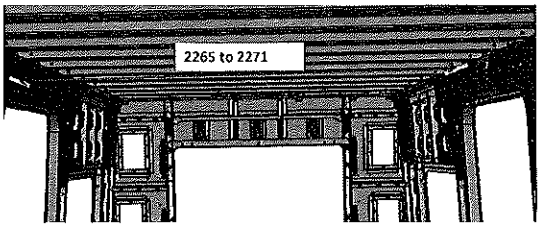
AFTER WELDING



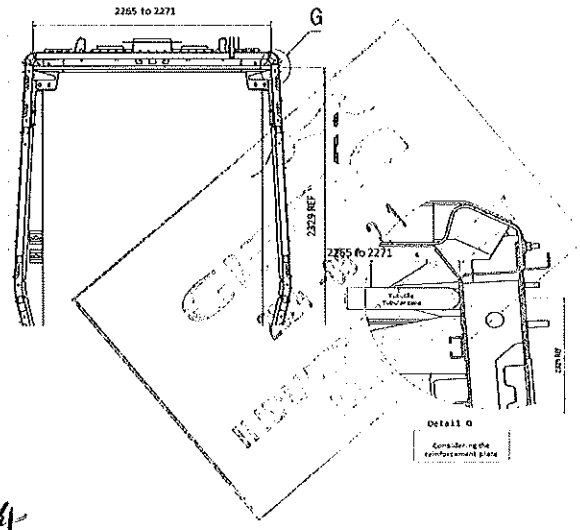
	2265 to 2271	2270 to 2276
A		2273
B	2265	
C	2265	
D		2274
E		2273
F	2265	
G	2266	
H		2274
I		2274
J	2267	
K	2267	
L		2275
M	2268	



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



Take measurement close to radius (considering reinforcement)



24/05/2024

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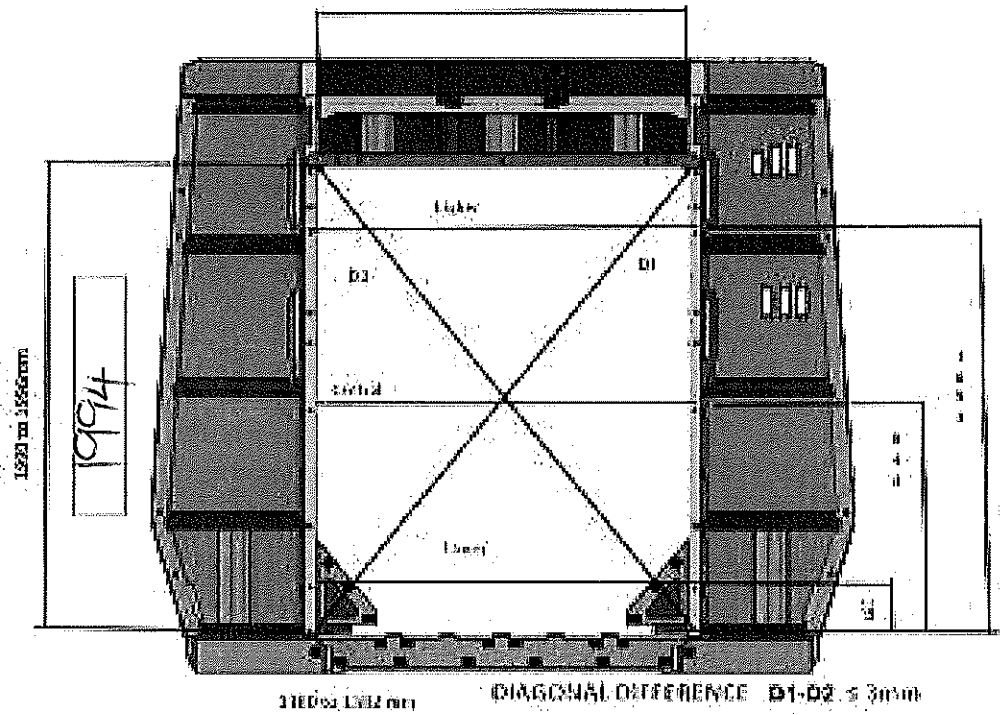
Specifications of Details for CBS measurement

Endframe 2



DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Upper Diameter	1382	D1	2415
Central Diameter	1381	D2	2414
Lower Diameter	1380	D1-D2	1

24/05/2024

GIBELA
2024 -05- 21
RECEIVED QUALITY
DEPARTMENT

GIBELA	DTR30223319/3 Carsheli Assembly TC	Rev. V28	Project: PRASA
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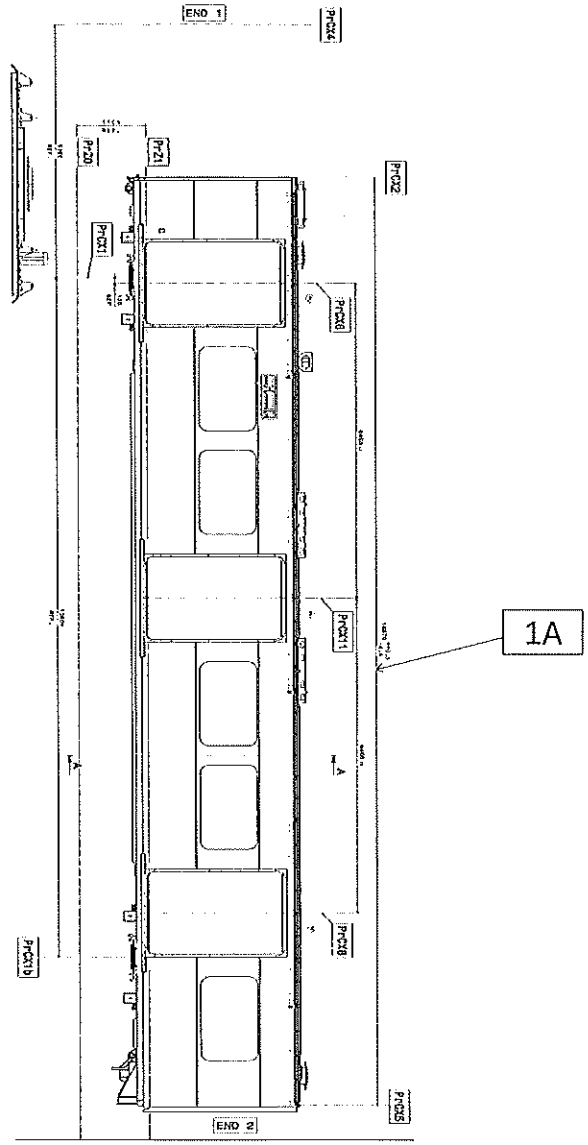
Specifications of Details for CBS measurement



	LEFT SIDE	
	SPECIFICATION SIZE	ACTUAL SIZE
1A	18870 +10.5 -4.5	18873

	RIGHT SIDE	
	SPECIFICATION SIZE	ACTUAL SIZE
1A	18870 +10.5 -4.5	18872

GIBELA 22-05-21

Dye penetrant test

Dye-penetration test to be performed by quality personnel

24/05/2024

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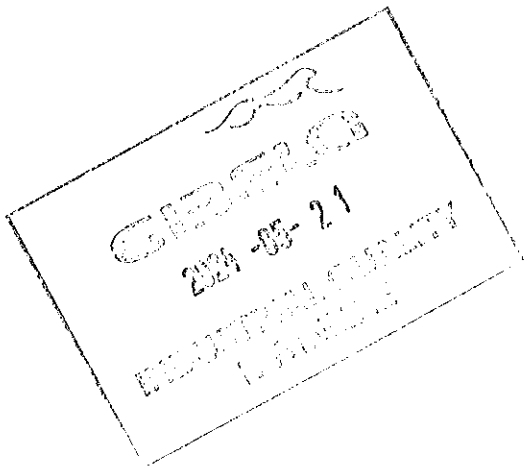
Item	Description of the Issue	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)

II.2 - Check List REX

Check List Items

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



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		Date- 07/11/2023	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 completa, the missing activities must not impact the next stage!	24/05/24	SEAN Operations	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	24/05/24	Richmond 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)		Quality	

In case of "NO GO", describe blocking problems

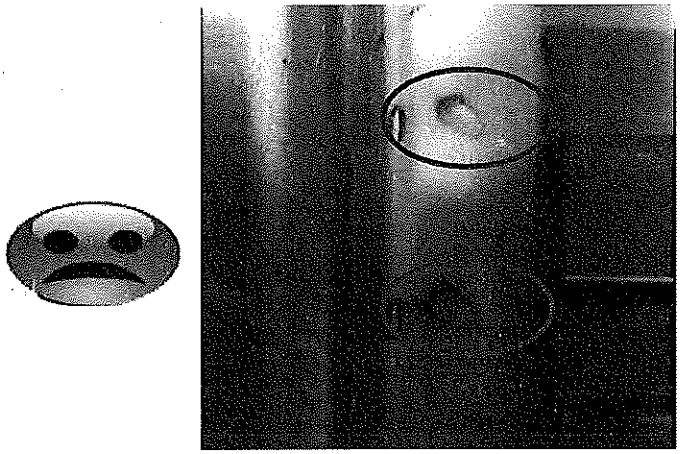
In case of "NO GO", the operations manager must define below action plan to ensure "GO":

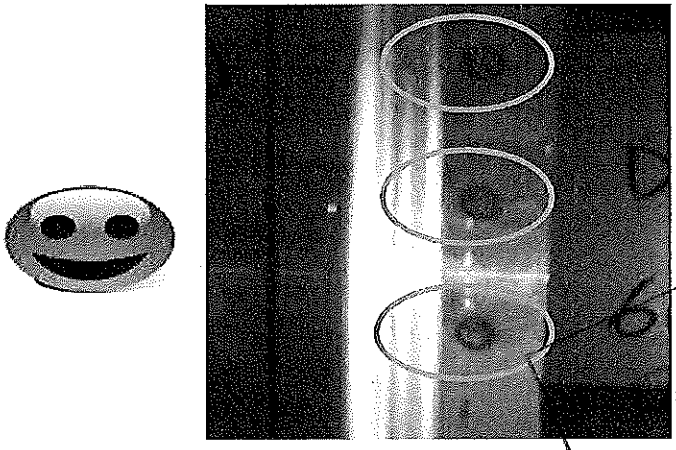
Item	Description	Action	Responsible	Due date	Status

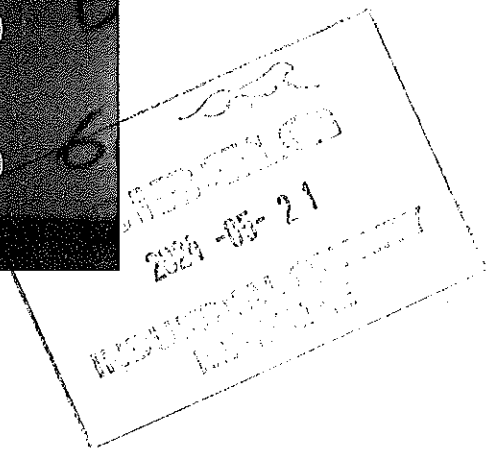
Operations

Quality

ANNEXURE A: Spot Welding Quality Acceptance Standard







GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	MC1	M1	M2	MC2	TC2	WORK INSTRUCTION	SAFETY
DTR3022.3319/2	AAD0001241033	Cardhall Assembly TC	CB1230	X					X	PRA.CB1220 DTR3022 3319/2.V20	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	23/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	23/05/2018
			CHECKER	Nosizo Pindela	23/05/2018
			REVISED BY	Ramokone Motama	23/05/2018
2	05/07/2018	Certain dimensional checks added and others moved to CB1210 and CB1230	APPROVER	Itumeleng Modiba	05/07/2018
			CHECKER	Nosizo Pindela	05/07/2018
			COMPILER	Ramokone Motama	05/07/2018
3	2018/06/12	Certain dimensional checks added and others moved to CB1210 and CB1230	APPROVER	Itumeleng Modiba	2018/06/12
			CHECKER	Nosizo Pindela	2018/06/12
			COMPILER	Ramokone Motama	2018/06/12
5	24/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	24/01/2019
			CHECKER	Nosizo Pindela	24/01/2019
			COMPILER	Vanessa Ntuli	24/01/2019
6	13/03/2019	Added D1 and D2 on Self - Inspection Remove length measurements	APPROVER	Itumeleng Modiba	13/03/2019
			CHECKER	Nosizo Pindela	13/03/2019
			COMPILER	Nosizo Pindela	13/03/2019
7	20/05/2019	Removed roof width	APPROVER	Itumeleng Modiba	20/05/2019
			CHECKER	Nosizo Pindela	20/05/2019
			REVISED BY	Nosizo Pindela	20/05/2019
10	22/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	22/08/2019
			CHECKER	Nosizo Pindela	22/08/2019
			REVISED BY	Nosizo Pindela	22/08/2019
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
20	19/04/2021	New Baseline 10.2.6	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi Collins	17/08/2021
			CHECKER	Mulaudzi Mpho	
			REVISED BY	Mulaudzi Mpho	
25	20/02/2022	New Baseline 10.2.6	APPROVER	Mbhombhi Collins	20/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/06/2022	Update minimum temperature requirement for sealant application	APPROVER	Mbhombhi Collins	14/06/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
27	17/10/2022	Addition of traceability for sealant application and welding.	APPROVER	Mbhombhi Collins	17/10/2022
			CHECKER	Ntokozo Zwane	
			REVISED BY	Amogelang Mohlampe	
28	14/04/2023	Added sealant batch number & welding consumables traceability	APPROVER	Vanessa Ntuli	14/04/2023
			CHECKER	Ntokozo Zwane	
			REVISED BY	Amogelang Mohlampe	
29	26/10/2023	Addition of bracket quantity	APPROVER	Ngobeni Tyson	26/10/2023
			CHECKER	Mathapo Kelebone	
			REVISED BY	Amogelang Mohlampe	

TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
250	TC1	Tetelo 471781	25/06/24	SI.CB1220.323.V29	17

GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
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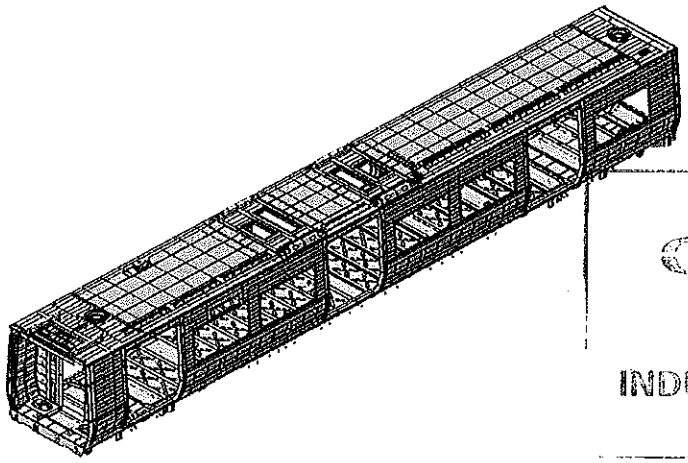
Carro Car: TC1, TC2	NCR:	Work station: CB1220

Safety Related



GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MARILINE

I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car: TC1	M1	M2	M3	M4	TC2	Revision	Observation	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30223319/2	✓						29	25/05/24	✓	N/A	25/05/24	25/05/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
Turbular Measuring Tape	32825-2 GIBTA0396	15/05/25 12/04/25	✓ ✓		25/05/24	25/05/24

1.3 Consumables

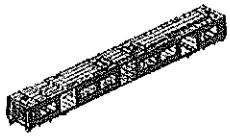
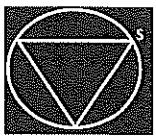
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
Welding Wire	EZ3106T	MIG Welding	✓		28/05/24	25/05/24

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

II - Control Activities of Prodution

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	N.A.	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	DTR30223319/2	✓			25/05/24	25/05/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓			25/05/24	25/05/24
03	REFER TO ANNEXURE A	Spot Welding inspected and approved according procedure	**IND-SAL-WMS-016 e DTD0000210675**	✓			25/05/24	25/05/24
04	REFER TO ANNEXURE B	Arc Welding inspected and approved according procedure.	**IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000**	✓			25/05/24	25/05/24
05		Cleaning of all Stainless Steel Surface	**According TO GIB-WEL - PROC-0002**	✓			25/05/24	25/05/24
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.	✓			25/05/24	25/05/24
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	✓			25/05/24	25/05/24
08	N/A	Before appplication of sealant record the expiry date and make sure that the room temperature and humidity are withion 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% - 60%	Sealant Batch No: B8477 Exp Date: 09/06/24 Actuals Temparature: 23 Humidity: 37	✓			25/05/24	25/05/24

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09	NA	Verification of sealant application in certain regions in the drawing.	AAD0001241033	✓			25/05/24	25/05/24
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**	✓			25/05/24	25/05/24

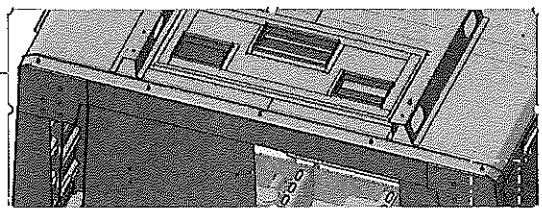
GIBELA
2024 -05- 23
INDUSTRIAL
MAINLI

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

END 1
SEALANT

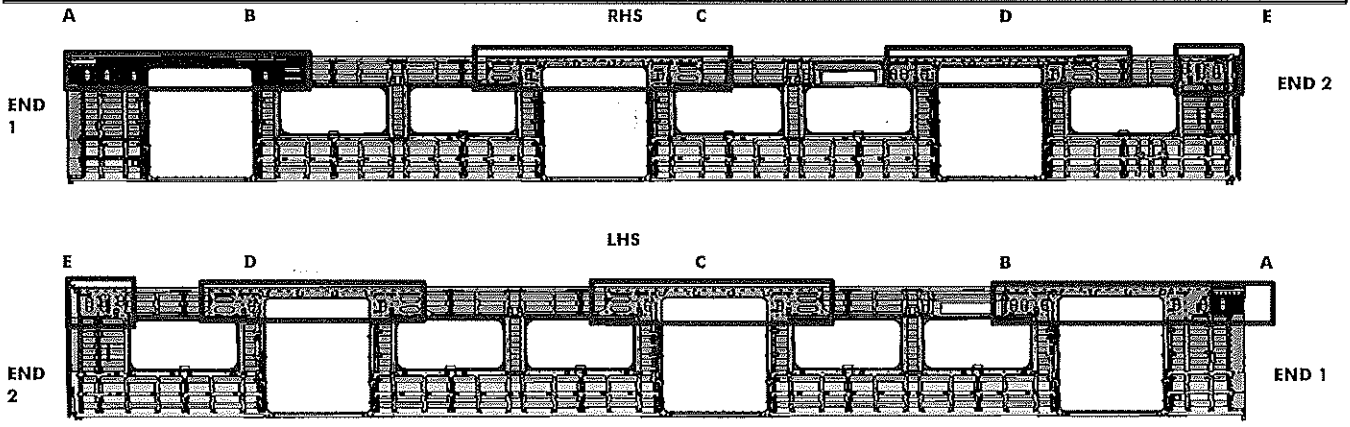
OPERATOR (Name & sign): Mthokozisi

OPERATOR (Name & sign): Mthokozisi



GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MARIBURG

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

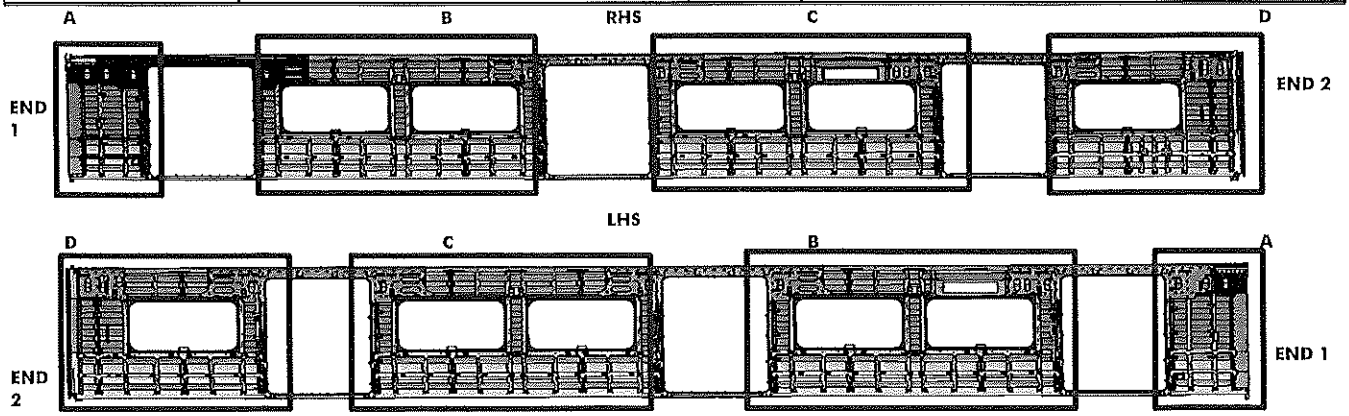


REINFORCEMENT WELDING

AREA		LHS	RHS
A	Operator (Name&sign):	LINDO	LINDO
B	Operator (Name&sign):	LINDO	LINDO
C	Operator (Name&sign):	[illegible]	[illegible]
D	Operator (Name&sign):	MKHIZE	THULANI
E	Operator (Name&sign):	[illegible]	[illegible]

GIBELA
2024 -05- 23
QUALITY
MAINLINE

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



BRACKETING

		INSTALLATION
C-RAILS:	Operator:	Leni
	Operator:	
DOOR MECHANISMS:	Operator:	Mthokozo
	Operator:	
TAPPING PADS	Operator:	Nkhize
	Operator:	
		INSTALLATION & VERIFICATION
SEAT & LUGGAGE BRACKETS:	Operator:	Tebelo
	Operator:	Leni
SEAT BRACKETS VERIFICATION:	Operator:	Tebelo
	Operator:	

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY ENGINEERING

WELDING

AREA END1

		LHS	RHS
A	(Seat brackets) : Operator (Name&sign):	LINDO	LINDO
	(C-rails, Luggage and earth bushes) : Operator (Name&sign):	LINDO	LINDO
B	(Seat brackets) : Operator (Name&sign):	[illegible]	LINDO
	(C-rails, Luggage and earth bushes) : Operator (Name&sign):	[illegible]	[illegible]
C	(Seat brackets) : Operator (Name&sign):	Mmasuuo Maa	Mmasuuo Maa
	(C-rails, Luggage and earth bushes) : Operator (Name&sign):	[illegible]	[illegible]
D	(Seat brackets) Operator (Name&sign):	[illegible]	[illegible]
	(C-rails, Luggage and earth bushes) : Operator (Name&sign):	[illegible]	Mmasuuo Maa

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

ENDS

END 1 TAPPING PADS WELDING: Operator (Name&sign): N/A

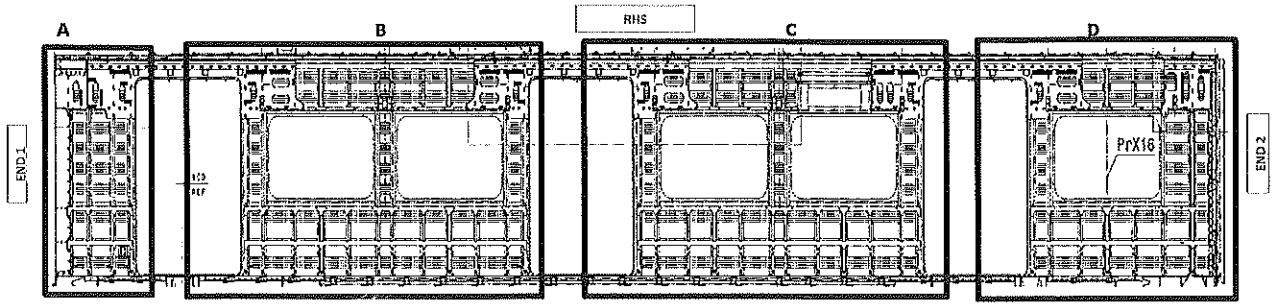
END 2 TAPPING PADS WELDING: Operator (Name&sign): [signature]

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

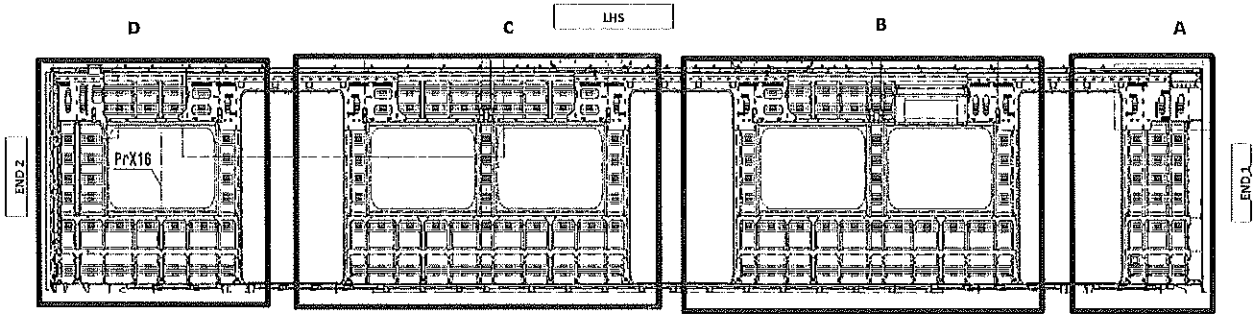
GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date- 28/10/2023	SI.CB1220.323.V29

TC BRACKET INSTALLATION

RHS



LHS



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: Tetelo

LHS

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

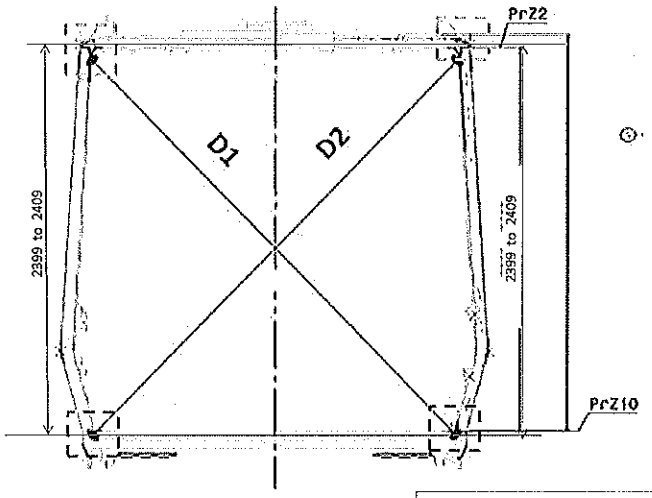
2024-05-23

ROOF ENDS:

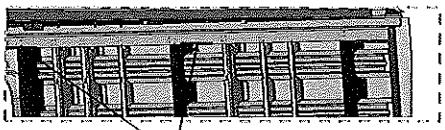
CRAILS 2 OFF END 2
EARTH BUSH 4 OFF END 2

VERIFICATION BY: Tetelo

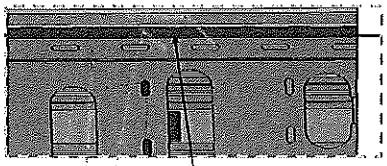
GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date- 28/10/2023	SI.CB1220.323.V29



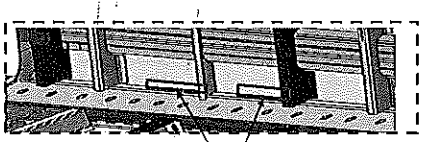
Take measurement close to radius



Measurement positions on roof rail and sidewall omega corner.

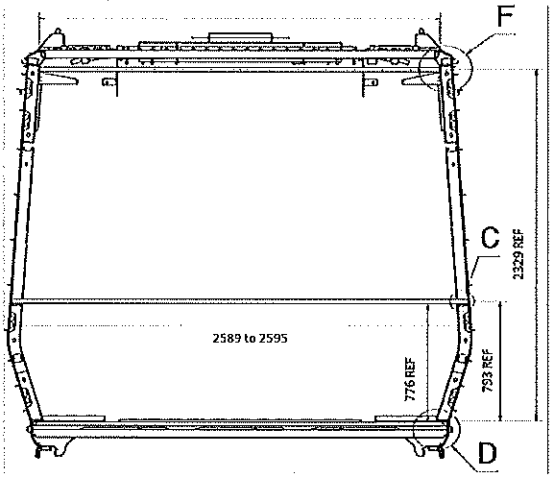


Reinforcement area measurement positions on roof reinforcement area.



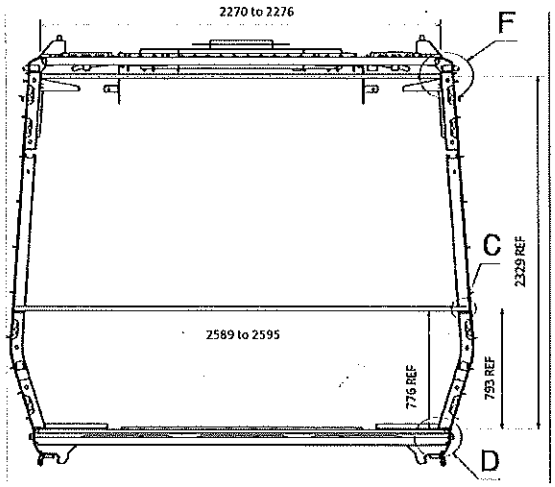
Measurement positions on sidewall and side sill corner.

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

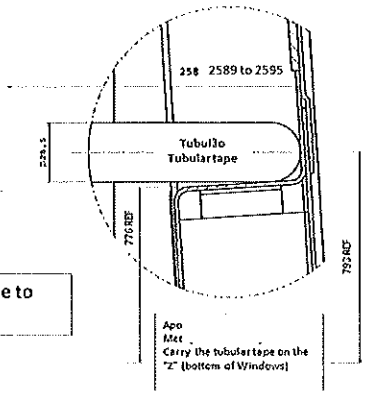


Take measurement close to radius

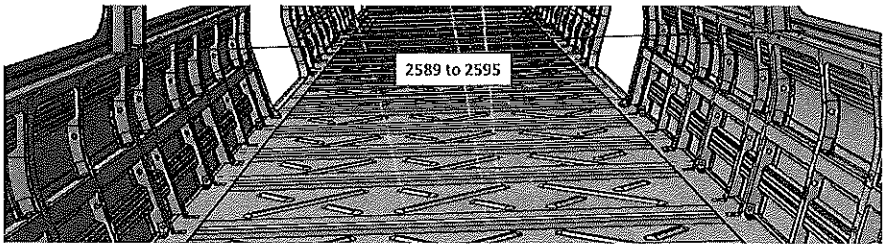
GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date- 28/10/2023	SI.CB1220.323.V29

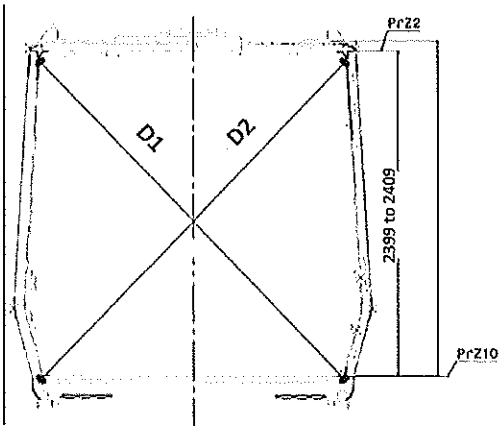


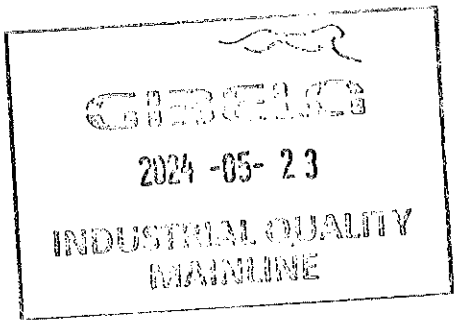
Take measurement close to radius

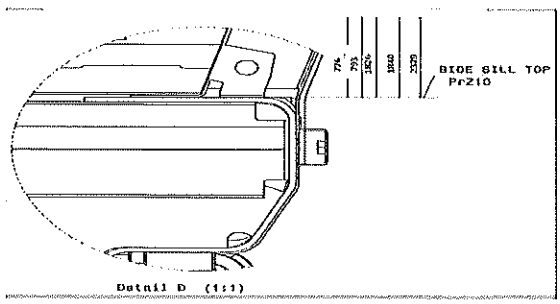


Detail C

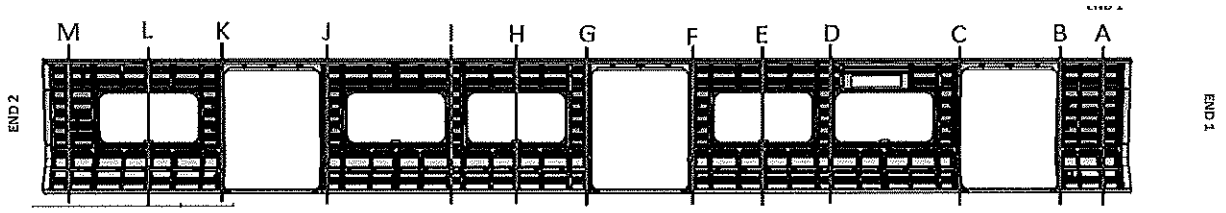








GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
		Date- 28/10/2023	SI.CB1220.323.V29



BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3268	3265	3	
B	3286	3299	3	
C	3295	3297	2	
D	3267	3265	2	
E	3265	3265	0	
F	3299	3300	1	
G	3300	3300	0	
H	3269	3267	2	
I	3267	3265	2	
J	3297	3295	2	
K	3295	3296	1	
L	3265	3267	2	
M	3299	3297	2	

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

GIBELA	DTR30223319/2 Carshell Assembly TC	Rev. 29	Project: PRASA
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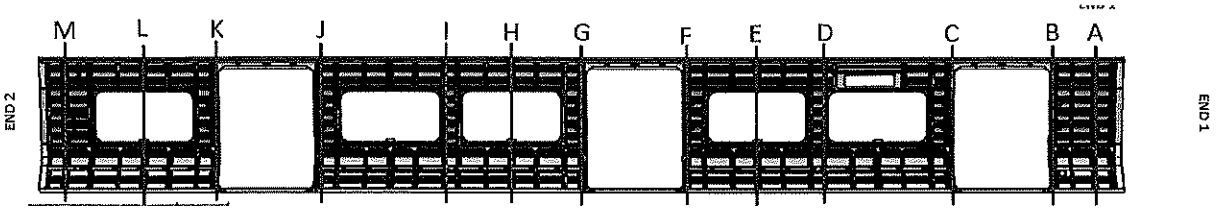


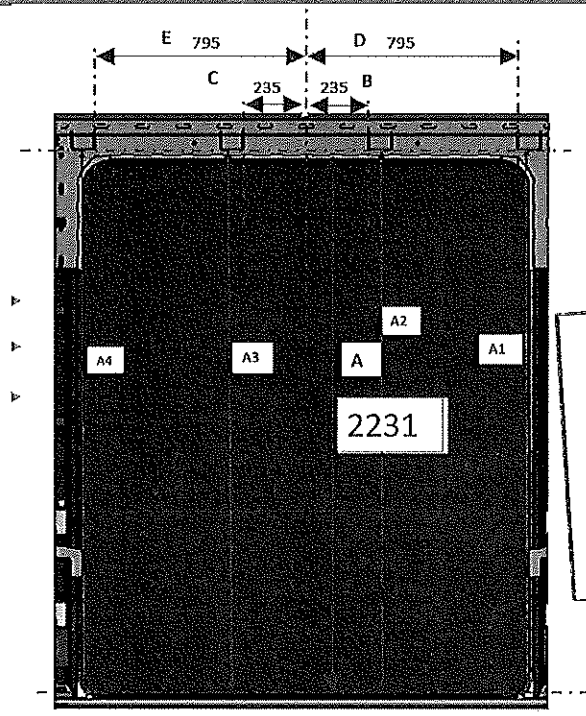
AFTER WELDING

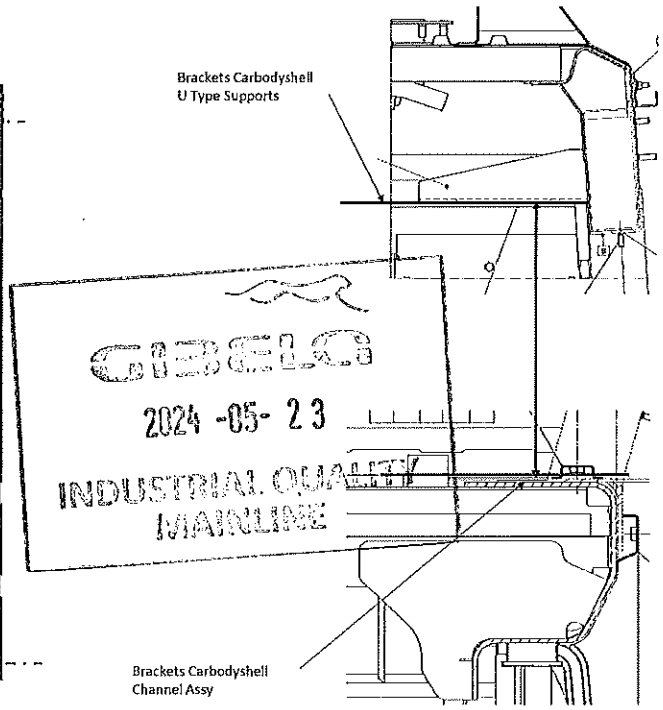
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3267	3266	1	2589
B	3295	3297	2	2590
C	3297	3296	1	2590
D	3266	3267	1	2591
E	3268	3266	2	2590
F	3298	3297	1	2591
G	3297	3298	1	2590
H	3266	3268	2	2591
I	3266	3267	1	2590
J	3299	3300	1	2591
K	3300	3298	2	2591
L	3265	3266	1	2591
M	3300	3300	0	2590

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

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

Specifications of Details for CBS measurement





DOOR 1 - LHS

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

DOOR 2 - LHS

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

DOOR 3 - LHS

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

DOOR 1 - RHS

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

DOOR 2 - RHS

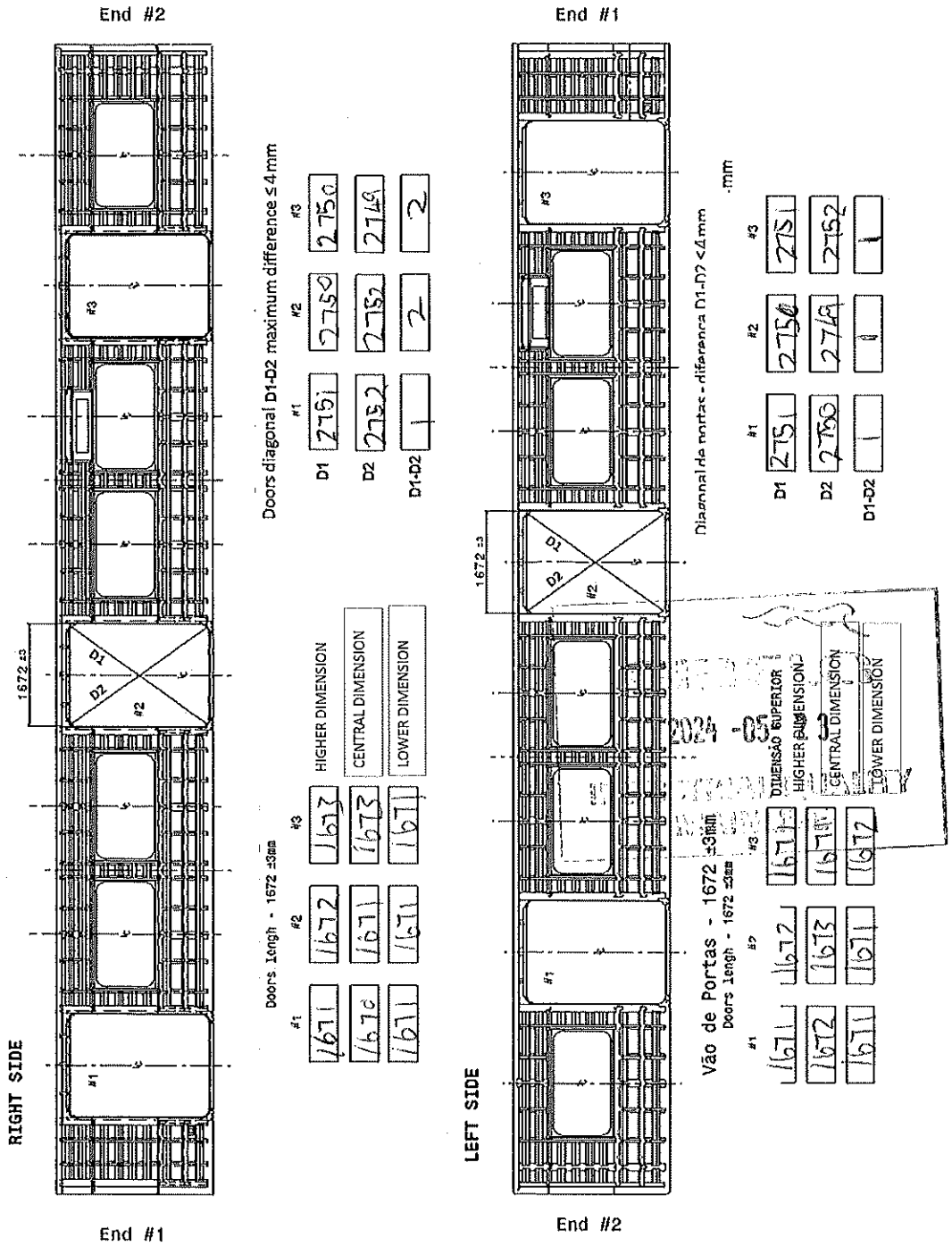
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2231
A3	2230 to 2232	2230
A4	2230 to 2232	2230
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

DOOR 3 - RHS

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

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

Specifications of Details for CBS measurement



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

Specifications of Details for CBS measurement

Dye penetrant test

Dye-penetration test to be performed by quality personnel

GIBELA
2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

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

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

Self Inspection - Final Result

Is 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!	25/05/24	Tebelo Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	25/05/24	Amo 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

2024 -05- 23
INDUSTRIAL QUALITY
MAINLINE

Operations

Quality

GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	M1	M2	M3	M4	TC2	WORK INSTRUCTION	SAFETY ?
DTR3000152695	AAD0001236963	DT0000023319 Carshell Assembly TC	CB1230	X					X	PRA.CB1230.DT0000012 23319.V20	YES

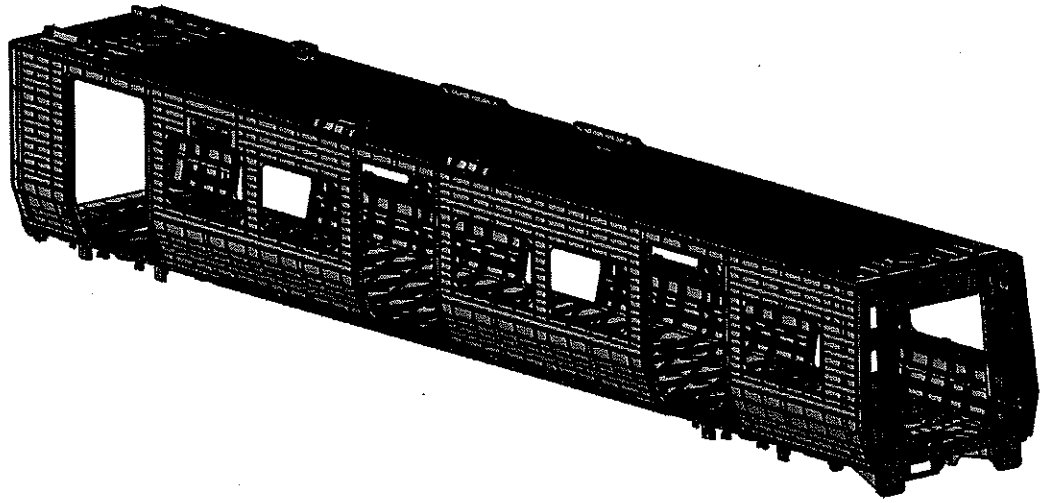
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	06/04/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	09/04/2018
			CHECKER	Nosizo Pindela	09/04/2018
			COMPILER	Thanyani Mathegu	06/04/2018
1	30/5/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	30/5/2018
			CHECKER	Nosizo Pindela	30/5/2018
			REVISED BY	Nosizo Pindela	30/5/2018
2	05/07/2018	Certain dimensional checks moved to CB1220	APPROVER	Itumeleng Modiba	05/07/2018
			CHECKER	Nosizo Pindela	05/07/2018
			COMPILER	Ramokone Motarna	05/07/2018
5	24/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	24/01/2019
			CHECKER	Nosizo Pindela	24/01/2019
			REVISED BY	Vanessa Ntuli	24/01/2019
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements	APPROVER	Itumeleng Modiba	13/03/2019
			CHECKER	Nosizo Pindela	13/03/2019
			COMPILER	Nosizo Pindela	13/03/2019
7	17/09/2019	Added Cab Fire Barrier Flatness Measurements	APPROVER	Itumeleng Modiba	17/09/2019
			CHECKER	Nosizo Pindela	17/09/2019
			COMPILER	Nosizo Pindela	17/09/2019
10	20/09/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	20/09/2019
			CHECKER	Nosizo Pindela	20/09/2019
			COMPILER	Nosizo Pindela	20/09/2019
15	28/01/2021	New Baseline 10.2.6	APPROVER	Timothy Maimela	28/01/2021
			CHECKER	Bongane Masina	28/01/2021
			COMPILER	Bongane Masina	28/01/2021
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	19/04/2021
			COMPILER	Bongane Masina	19/04/2021
25	20/04/2022	New Baseline change 10.3.1	APPROVER	Collins Mbhombhi	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 Mbhombhi	14/06/2022
			CHECKER	Andani Muthelo	
			COMPILER	Andani Muthelo	
27	26/07/2022	Threashold measurements addition	APPROVER	Collins Mbhombhi	26/07/2022
			CHECKER	Andani Muthelo	
			COMPILER	Andani Muthelo	
28	17/10/2022	Addition of traceability for sealant application	APPROVER	Collins Mbhombhi	17/10/2022
			CHECKER	Ntokozo Zwane	
			COMPILER	Amogelang Mohlampe	
29	14/04/2023	Added sealant batch number & welding consumables traceability	APPROVER	Vanessa Ntuli	14/04/2023
			CHECKER	Ntokozo Zwane	
			COMPILER	Amogelang Mohlampe	
30	06/11/2023	Added traceability for thresholds for boiler makers and welders	APPROVER	Tyson Ngobeni	06/11/2023
			CHECKER	Andani Muthelo	
			COMPILER	Ntokozo Zwane	

TRAINSET	CAR	OPERATOR NAME & ALPS NUMBER	DATE	SELF INSPECTION NUMBER	PAGES
230	TC1	K Motsu 426952	29/05/24	SI.CB1230.324.V28	14

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

Carro / Car:	NCR:	Work station:	CB1230

Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

Document	Type of car TC1	M1	M2	M3	M4	TC2	Revision	Observation	OK			Signature/Date (Operations)	Signature/Date (Quality)
DT00000223319	X						29		V		N/A	(LM) .. 27/05/24	27/05/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Validation	Calibration or Verification Validation Date	OK		Signature/Date (Operations)	Signature/Date (Quality)
TUBULAR	3263-2	15/03/2025	V		(LM) .. 27/05/24	
Combination Square	GIBSPC0%	27/07/2024	V		(LM) .. 27/05/24	27-1-24
Measuring tape	GIBTA0401	2025/04/22	V		(LM) .. 27/05/24	

1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 LSi (LM) ..	373779	MIG Welding	V		27/05/24 (LM) ..	
ER 308 LSi		TIG Welding	V		27/05/24 (LM) ..	27/05/24

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

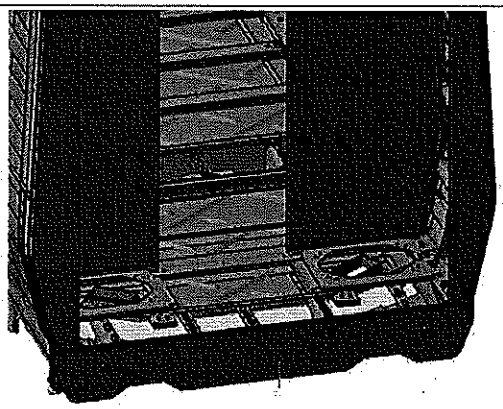
II - Control Activities of Prodution

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK			Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering nº DT00000223319	DT00000223319	✓			27/05/24	27/05/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality.	DTD0000210675	✓			27/05/24	27/05/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 DTD0000210675	✓			27/05/24	27/05/24
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.	✓			27/05/24	27/05/24
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	✓			27/05/24	27/05/24
06	N/A	Before appplication of sealant record the expiry date and make sure that the room temperature and humidity are withion 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%	LOT FA Sealant Batch No: 233 23469 Exp Date: ___/09/06/24 Actuals Temparature: 18°C Humidity: 60 %	✓			27/05/24	27/05/24
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	✓			27/05/24	27/05/24

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

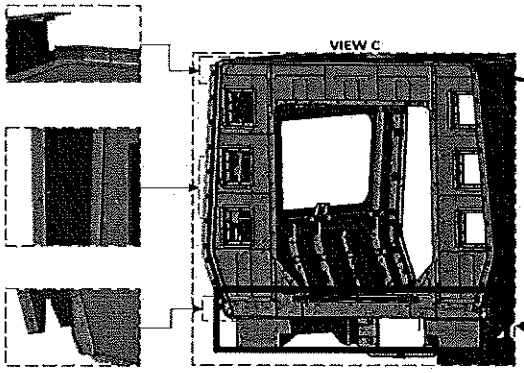
VIEW A



END 1
SEALANT

OPERATOR (Name & sign): Bunle Ayola

OPERATOR (Name & sign):

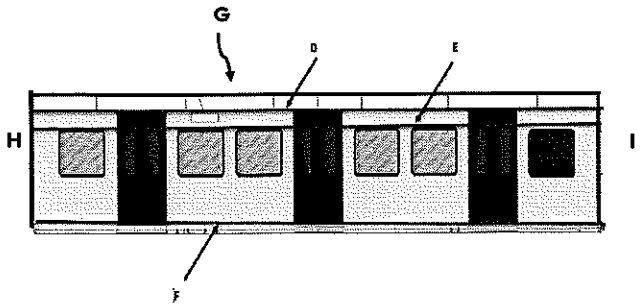


OPERATOR (Name&sign): Levey

OPERATOR (Name&sign): Levey

OPERATOR (Name&sign): Levey

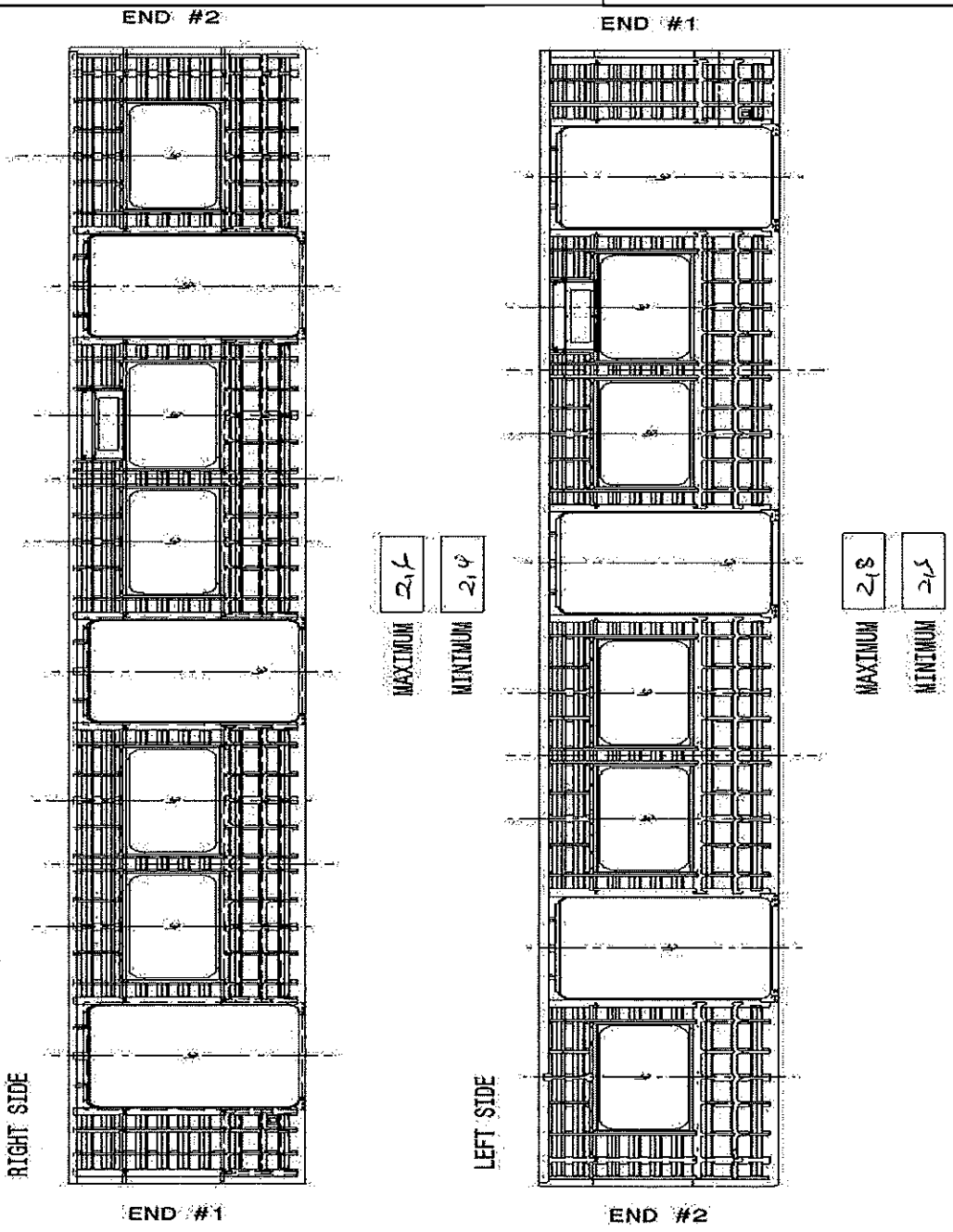
GIBELA	DT00000223319 Carshell Assembly TC	Rev. 30	Project: PRASA
		Date- 06/11/2023	SI.CB1230.324.V29



Area D,E,F,G,H,I	LHS	RHS
Operator (Name & sign) :	F, I (BOTTOM)	D, E, F, G, H, I
Operator (Name & sign) :		
Operator (Name & sign) :		
Operator (Name & sign) :	D, E, G, I (TOP)	
Operator (Name & sign) :	LEKATO	
Operator (Name & sign) :	BONTY	
	BUNLE	

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

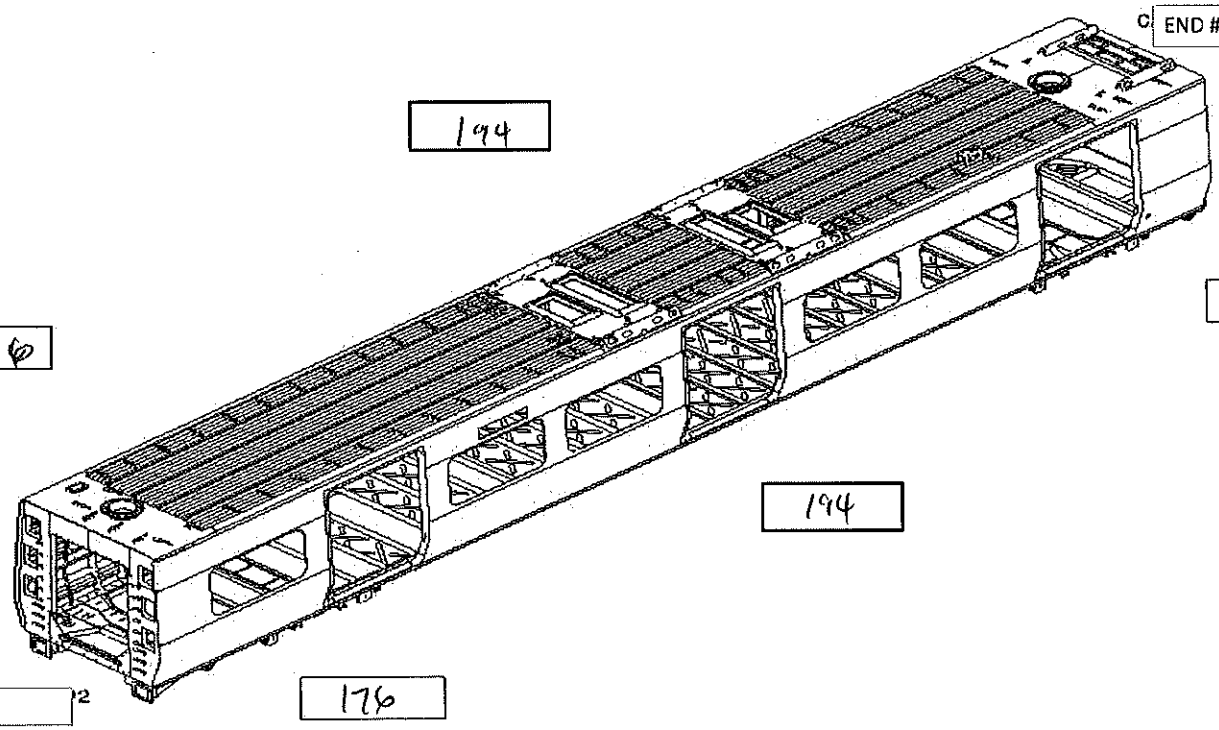
Flatness side left and right maximum of 2mm in the valley to peak measured in 900mm. Recod the maximum and minimum value foundand indicate the corresponding region.



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

Specifications of Details for CBS measurement CB1230

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

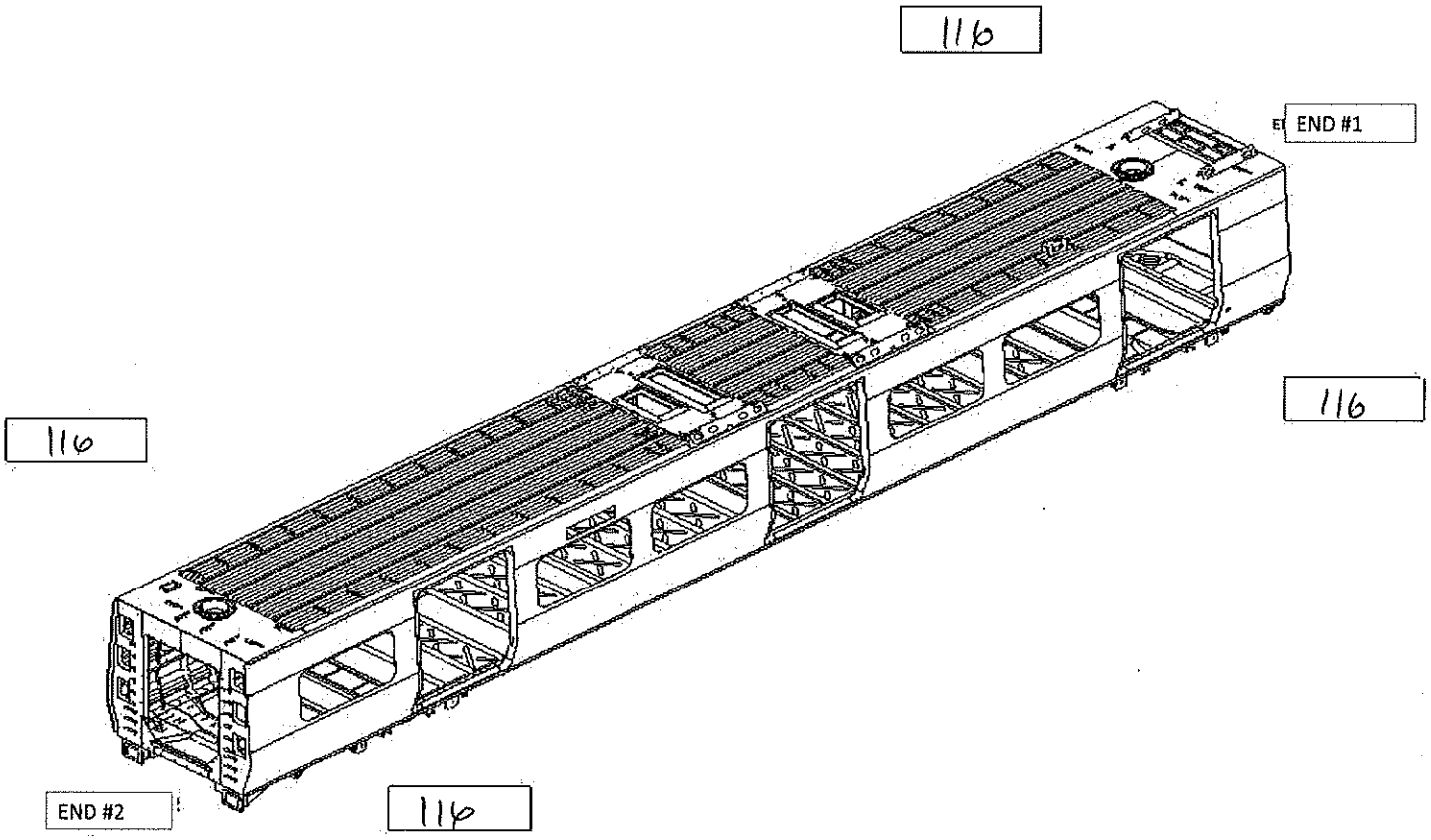


MEASURED CAMBER VALUES	
RIGHT	18
LEFT	18

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

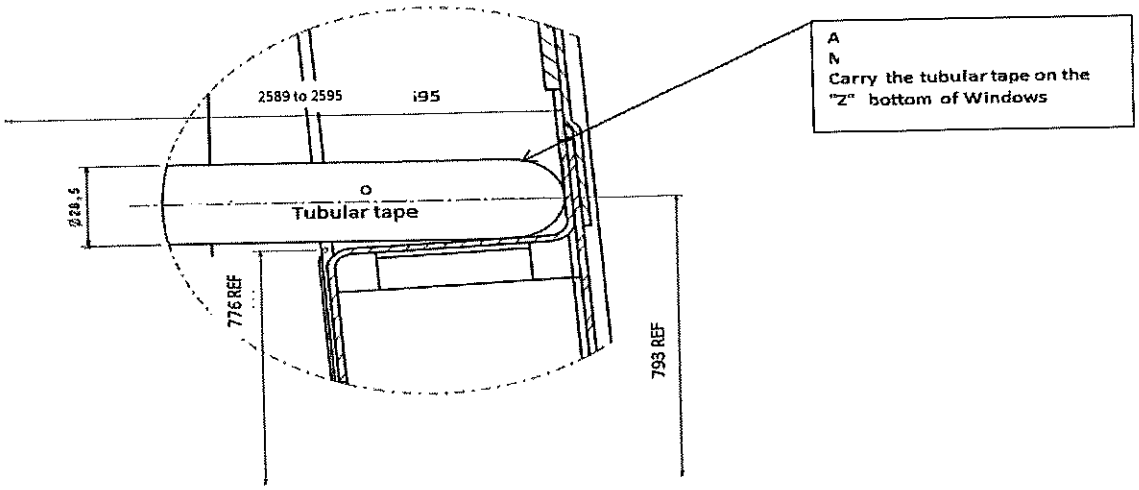
Specifications of Details for CBS measurement CB1230

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

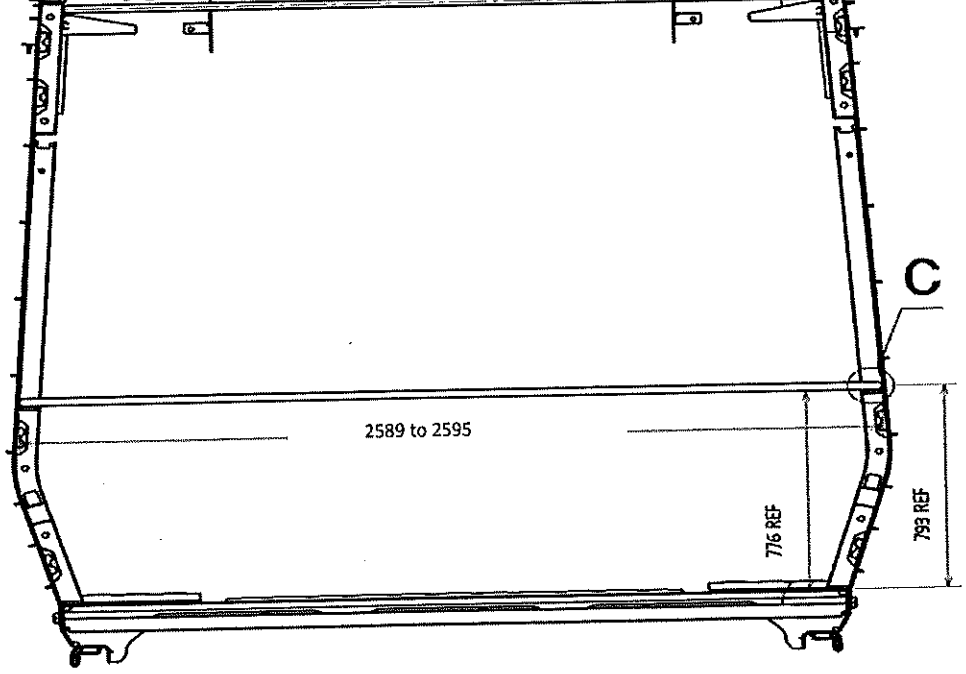


MEASURED TWIST VALUES END 1		MEASURED TWIST VALUES END 2	
LATERAL	0	LATERAL	0
LONGITUDINAL	0	LONGITUDINAL	0

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

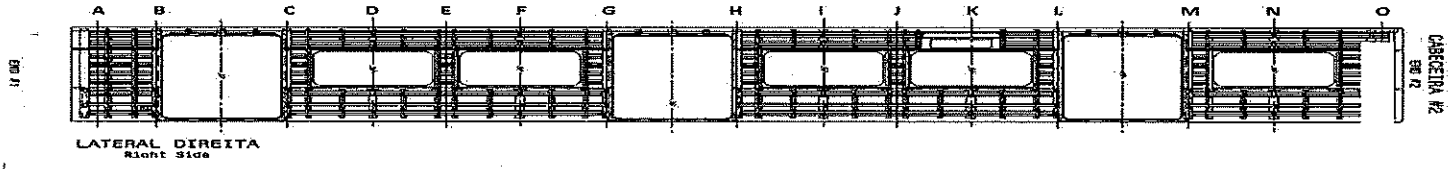


Detail C



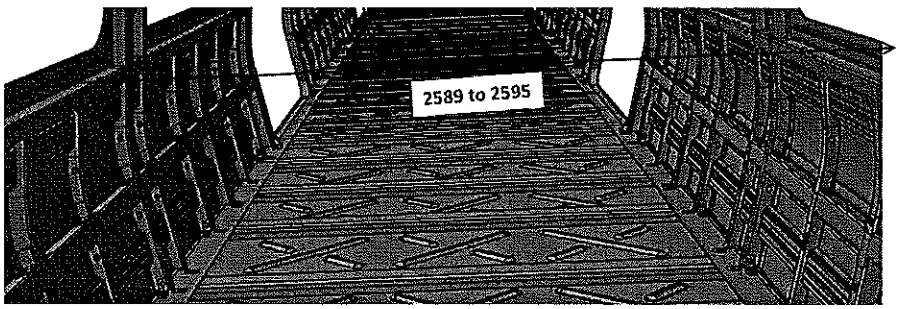
GIBELO	DT00000223319 Carshell Assembly TC	Rev. 30	Project: PRASA
		Date- 06/11/2023	SI.CB1230.324.V29

Specifications of Details for CBS measurement



2589 to 2595mm

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



Threashold verification

Nominal value :38

Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	38	38	37	37	39

Door 4		Door 5		Door 6	
L	R	L	R	L	R
38	39	39	38	38	38

BOILER MAKER: ?

WELDER: MTHOKOZISI

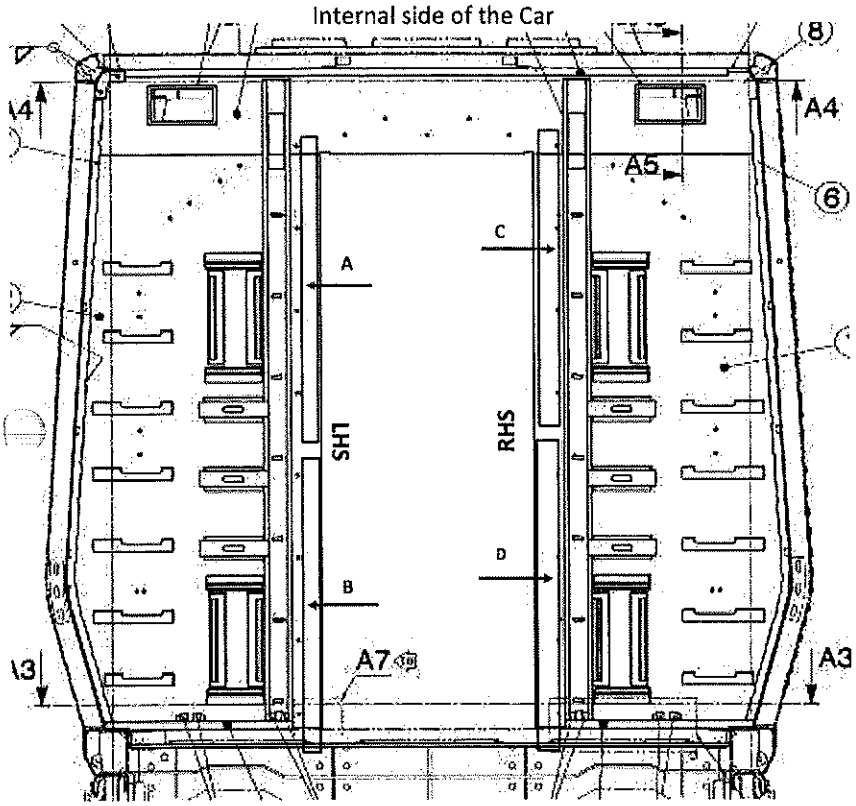
GIBELA	DT00000223319 Carshell Assembly TC	Rev. 30	Project: PRASA
		Date- 06/11/2023	SI.CB1230.324.V29

Specifications of Details for CBS measurement

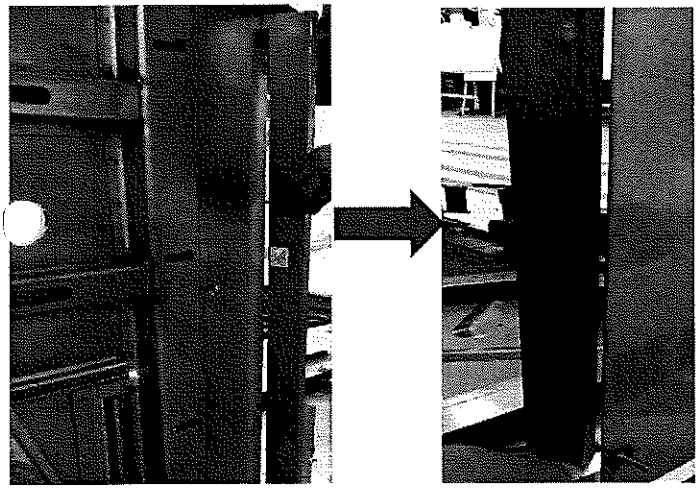
Measure the flatness on the Cab Fire Barrier after installation and welding. Measure positions A, B,C and D using 1000mm flatness ruler and taper gauge.

Specified Maximum Flatness deviation on Cab Fire Barrier = 2mm

Internal side of the Car



	Measured Values		
	Minimum	Maximum	Deviation
A	10	12	2
B	12	13	1
C	8.5	10	1.5
D	09	11	2



Dye penetrant test

Dye-penetration test to be performed by quality personnel

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

II.2 - Check List REX

Check List Items

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

GIBELO	DT00000223319 Carshell Assembly TC	Rev. 30	Project: PRASA
		Date- 06/11/2023	SI.CB1230.324.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!	27/05/24	LERATO Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	28/05/24	Richmond Industrial Quality	
			There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

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

Item	Description	Action	Responsible	Due date	Status

Operations

Quality

ANNEXURE A: Arc Welding Quality Acceptance Standard