

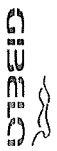
APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

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

APPLICATION REFERENCE										
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE					WORK INSTRUCTION	SAFETY ?
				TC1	M4	M1	M2	M3		
<input type="checkbox"/>	DTB31374497/3	CARBODYSHELL M2 ASSEMBLY	CB1230				<input checked="" type="checkbox"/>		PR4.CB1210.DTB313744 97/3.V25	YES
<input type="checkbox"/>										
REV	DATE	MODIFICATION CONTENT		RESPONSIBLE	NAME	DATE				
0	10/01/2018	GIBELA NEW CREATION		APPROVER	Iturneleng Modiba	10/01/2018				
				CHECKER	Nosizo Pindela	10/01/2018				
				COMPLER	Thanyani Mathagu	10/01/2018				
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager		APPROVER	Iturneleng Modiba	2018/05/18				
				CHECKER	Nosizo Pindela	2018/05/18				
				REVISED BY	Ramokone Motama	2018/05/18				
2	2018/07/04	Certain dimensional checks moved to CB1220 and CB1230		APPROVER	Iturneleng Modiba	2018/07/04				
				CHECKER	Nosizo Pindela	2018/07/04				
				REVISED BY	Ramokone Motama	2018/07/04				
3	2018/12/12	Added dimensional check points to CB1210		APPROVER	Iturneleng Modiba	12/12/2018				
				CHECKER	Nosizo Pindela	12/12/2018				
				REVISED BY	Ramokone Motama	12/12/2018				
5	22/01/2019	As per Baseline 10.2		APPROVER	Iturneleng Modiba	22/01/2019				
				CHECKER	Nosizo Pindela	22/01/2019				
				REVISED BY	Vanessa Ntuli	22/01/2019				
				APPROVER	Iturneleng Modiba	13/03/2019				
6	13/03/2019	Added D1 and D2 on Self - Inspection		CHECKER	Nosizo Pindela	13/03/2019				
				REVISED BY	Nosizo Pindela	13/03/2019				
10	21/08/2019	New Baseline 10.2.5		APPROVER	Iturneleng Modiba	21/08/2019				
				CHECKER	Nosizo Pindela	21/08/2019				
				REVISED BY	Nosizo Pindela	21/08/2019				
15	06/08/2020	New Baseline 10.2.6		APPROVER	Timothy Maimela	06/08/2020				
				CHECKER	Bongane Masina	06/08/2020				
				REVISED BY	Bongane Masina	06/08/2020				
				APPROVER	Timothy Maimela	06/08/2020				
20	19/04/2021	New Baseline change 10.3		CHECKER	Bongane Masina	19/04/2021				
				REVISED BY	Bongane Masina	19/04/2021				
				APPROVER	Timothy Maimela	19/04/2021				
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING		CHECKER	Mpho Mulaudzi	17/08/2021				
				REVISED BY	Mpho Mulaudzi	17/08/2021				
				APPROVER	Mpho Mulaudzi	17/08/2021				
25	21/02/2022	New Baseline change 10.3.1		CHECKER	Mpho Mulaudzi	21/02/2022				
				REVISED BY	Mpho Mulaudzi	21/02/2022				
				APPROVER	Mpho Mulaudzi	21/02/2022				
26	14/04/2023	Addition of welding consumable traceability		CHECKER	Ntuli Vanessa	14/04/2023				
				REVISED BY	Mohlampe Amogelang	14/04/2023				
				APPROVER	Mohlampe Amogelang	14/04/2023				
27	27/07/2023	Added verification of loaded parts		CHECKER	Ngobeni Tyson	27/07/2023				
				REVISED BY	Zwane Ntokoza	27/07/2023				
				APPROVER	Zwane Ntokoza	27/07/2023				
28	07/11/2023	Addition of welder traceability		CHECKER	Ngobeni Tyson	07/11/2023				
				REVISED BY	Andani Muthelo	07/11/2023				
				APPROVER	Andani Muthelo	07/11/2023				
TRAINSET	CAR	OPERATOR NAME& ALPS NO		DATE	SELF INSPECTION NUMBER		PAGES			
15300	MA	PANTSO		25/05/24	51.CB1210.247.V28		17			

PRASA PROJECT
QUALITY
MANAGEMENT
2024-03-17



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

Rev. 28
Date 07/11/2023
Project: PRASA
SI.CB1210.247.V28

Car: M2

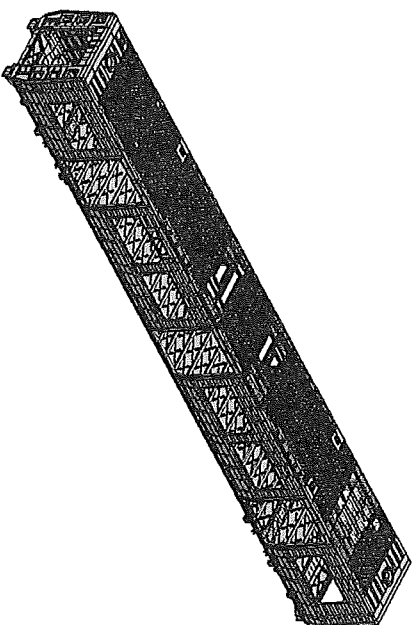
NCR:

Work station:

CB1210



Safety Related

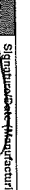



I - Documentation and Instruments Control

I.1 - Documentation Control

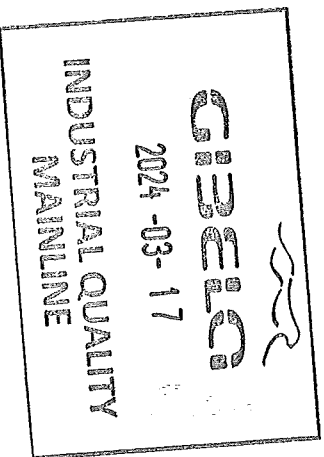
Document	Type of car				Revision	Observation	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4	TC2				
DTR31374497/3			X			V28	X			
25/03/24										

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process						
Instruments	Serial number	Calibration or Verification Validation Date	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
WEIGUE CASEL 1016 30m 10PC	30823-2 125425984 6167P0102	15/03/25 08/01/25 18/01/24	✓ ✓ ✓		 25/03/24	 25/03/24









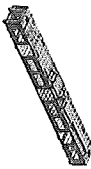


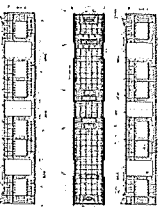




1.3 - Consumables

Welding Consumable Control - Used for Special Process						
Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 LS1 ER 308 L	314018-2457 299657-2032	MIG TIG	X			
25/03/24						



	CARBODYSHELL M2 ASSEMBLY DTR313744973		Rev. 28	Project: PRASA
			Date 07/11/2023	SI.CB1210.247.V28

II - Self Inspection - Items to Check

II.1 - Items to check							
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Signature/Date (Disseminating)	Signature/Date (Quality)
01	N/A	Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe)	AA00001375051	✓		 23/03/24	 23/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓		 23/03/24	 23/03/24
03	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	✓		 23/03/24	 23/03/24
04	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		 23/03/24	 23/03/24
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		 23/03/24	 23/03/24
06		Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	✓		 23/03/24	 23/03/24
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. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	✓		 23/03/24	 23/03/24

	CARBODYSHELL M2 ASSEMBLY DTR31374497/3		Rev. 28 Date 07/11/2023 Project: PRASA SI.CB1210.247.V28	
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Welder traceability

Roof ring welds



LHS

Boiler maker (Name & Sign): Lebogang Maseko

RHS

Boiler maker (Name & Sign): Siphokazi

Welder (Name & Sign): Thabani

END 1

LHS

Boiler maker (Name & Sign): Lebogang Maseko

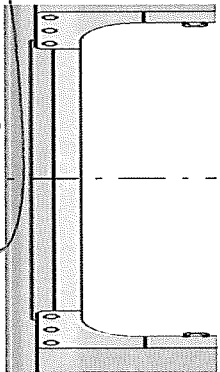
RHS

Boiler maker (Name & Sign): Siphokazi

Welder (Name & Sign): Thabani

END 2

Door ring welds



LHS

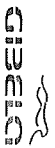
Boiler maker (Name & Sign): Lebogang Maseko

Welder (Name & Sign): Thabani

RHS

Boiler maker (Name & Sign): Lebogang Maseko

Welder (Name & Sign): Thabani



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

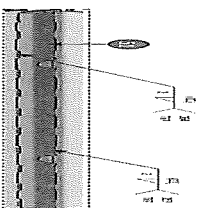
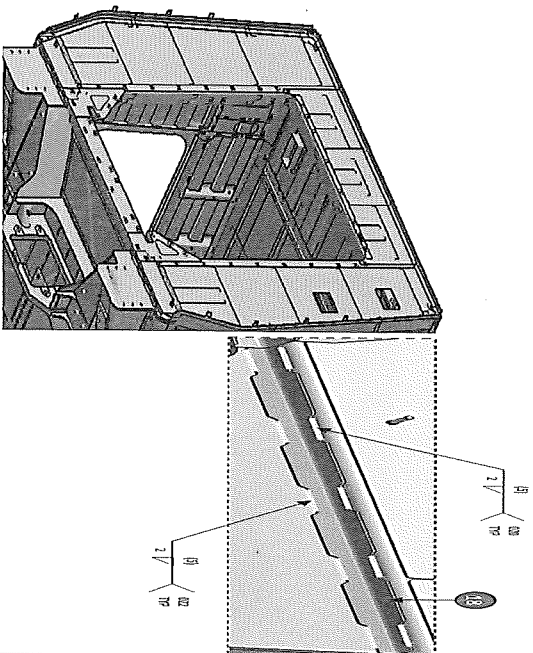
Rev. Project: PRASA

28 SI.CB1210.247.V28

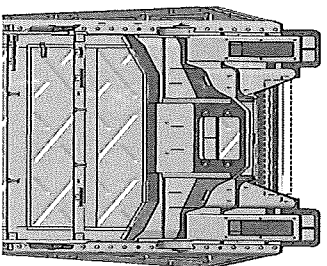
Date

07/11/2023

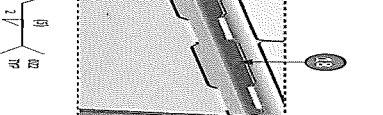
EUF Reinforcement Plates



END 2



Underneath the CAR



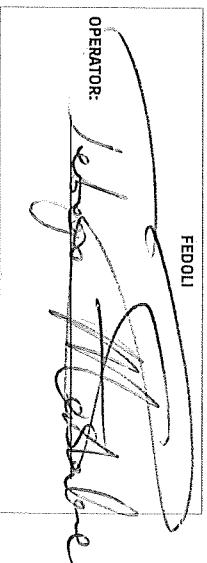
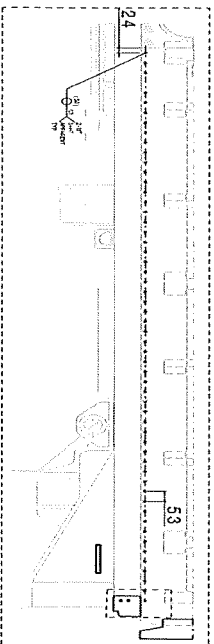
END 1

Boiler maker (Name & Sign): Leboya Maseko

Weider (Name & Sign): SIPHOA ZI

Boiler maker (Name & Sign): Pontso Maseko

Weider (Name & Sign): Thabani Maseko



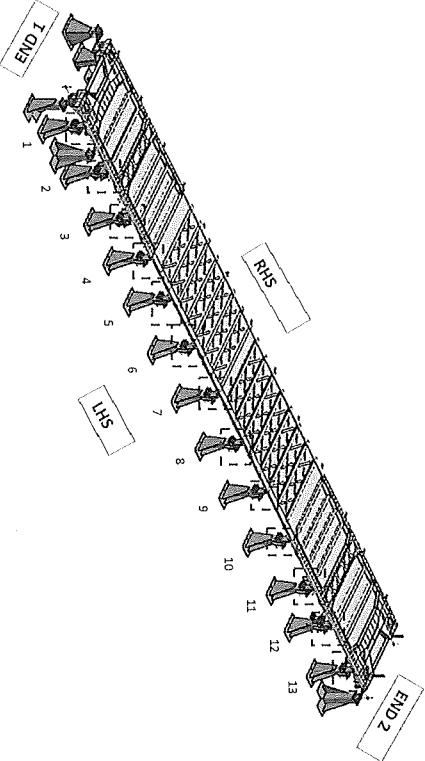
OPERATOR:



2024-03-17

INDUSTRIAL QUALITY
MAINLINE

Specifications of Details for CBS measurement

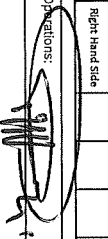


Measure gap between jig pillar / chair and underframe = 0mm. No

After loading and clamping

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

	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side					NA								
Right Hand Side													

Signature Operations:  Date: 25/03/24

After Welding.

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

	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side						NA							
Right Hand Side													

Signature Industrial Quality:  Date: 25/03/24

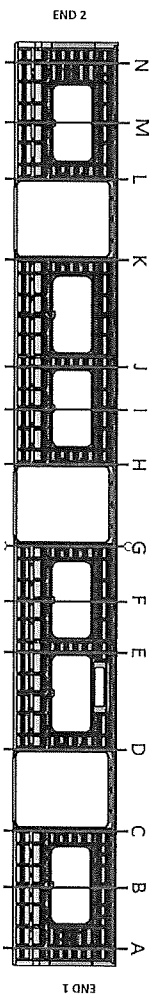


CARBODYSHELL M2 ASSEMBLY DTR31374497/3

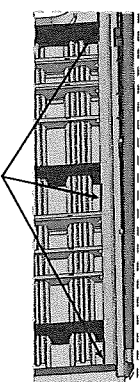
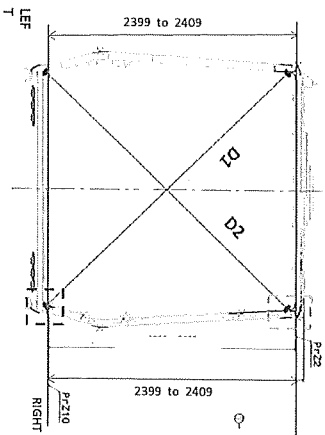
Rev. 28
Date 07/11/2023

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SI.CB1210.247.V28

Specifications of Details for CBS measurement



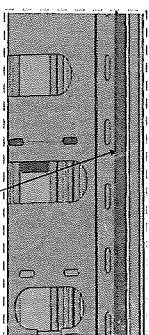
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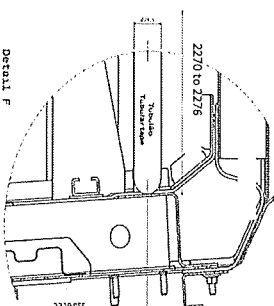
Measurement positions on roof rail and sidewall omega corner.



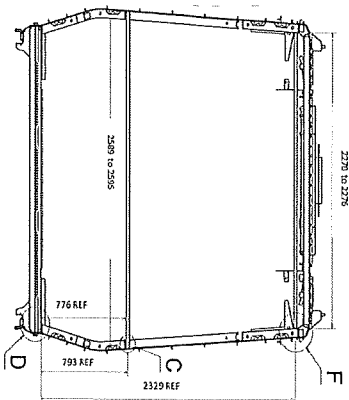
Measurement positions on sidewall and side sill corner.




Reinforcement area measurement positions on roof reinforcement area.



Don't considering the reinforcement

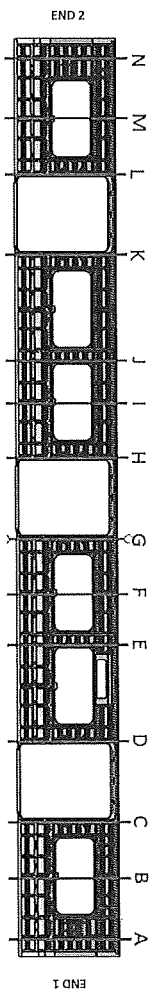




GIBBELCO
2024-03-17
INDUSTRIAL QUALITY
MAINLINE

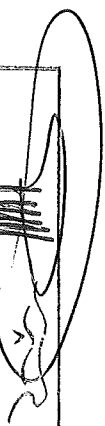

Specifications of Details for GBS measurement

BEFORE WELDING



Note: 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 (LHS)	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3269	1	2404	2404	0
B	3271	1	2406	2405	1
C	3269	0	2404	2405	1
D	3266	2	2404	2404	2
E	3268	1	2404	2403	1
F	3268	0	2406	2404	2
G	3270	1	2405	2404	1
H	3271	1	2403	2405	2
I	3271	0	2404	2404	0
J	3269	2	2406	2404	2
K	3267	1	2408	2403	2
L	3268	0	2406	2405	1
M	3268	2	2405	2406	1
N	3266	0	2404	2403	1



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 INDUSTRIAL QUALITY
 MAINLINE



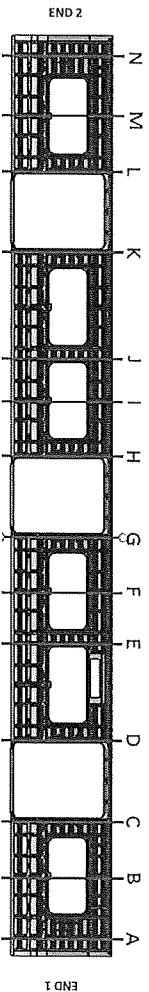
CARBODYSHELL M2 ASSEMBLY DTR31374497/3

Rev.
28
Date
07/11/2023

Project: PRASA
SI.CB1210.2.47.V28

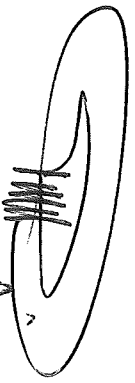
Specifications of Details for GBS measurement

AFTER WELDING




Note: 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 (LHS)		2399 to 2409 (RHS)		LHS-RHS ≤ 2	
A	3396	3398	2	2404	2404	0		2404	2404	0	
B	3389	3370	1	2406	2425	1		2425	2425	1	
C	3396	3396	0	2404	2426	2		2426	2425	1	
D	3398	3399	1	2401	2425	2		2425	2424	1	
E	3369	3369	0	2426	2424	2		2424	2424	0	
F	3370	3371	1	2423	2424	1		2424	2424	0	
G	3398	3399	1	2404	2405	1		2404	2404	0	
H	3376	3376	0	2405	2404	1		2404	2405	1	
I	3369	3370	1	2426	2405	1		2405	2403	1	
J	3368	3369	1	2424	2403	0		2403	2404	0	
K	3396	3398	2	2404	2425	0		2425	2405	0	
L	3399	3377	2	2406	2404	2		2404	2404	0	
M	3390	3370	0	2406	2404	2		2404	2404	0	
N	3366	3366	0	2403	2404	1		2404	2404	0	



2399 to 2409
2399 to 2409
2399 to 2409

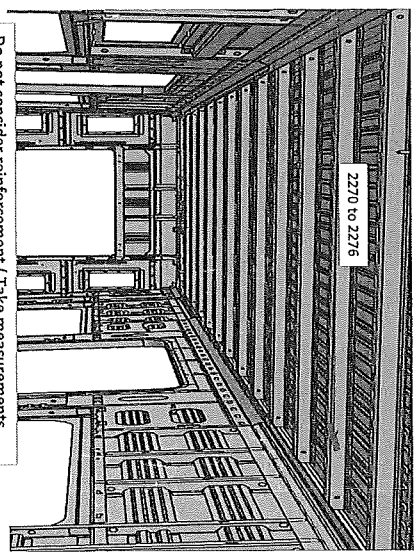
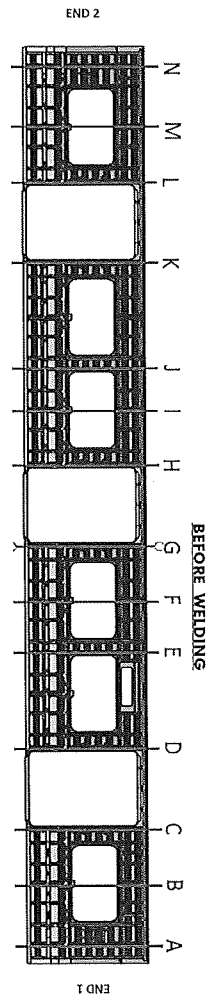


2024-03-17

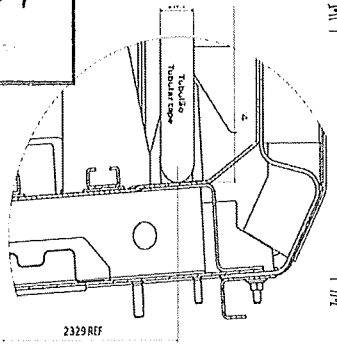
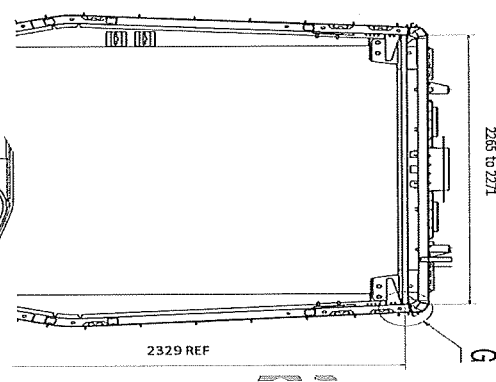
INDUSTRIAL QUALITY
MAINLINE

GIBB&G	CARBODYSHELL M2 ASSEMBLY DTR31374497/3	Rev. 28 Date 07/11/2023	Project: PRASA SI.CB1210.247.V28

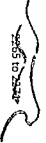
CBS measurement



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



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



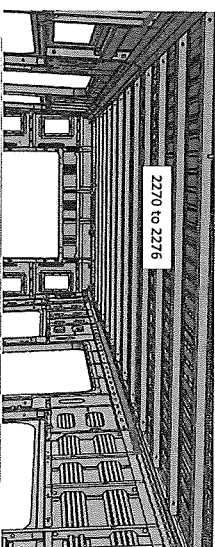
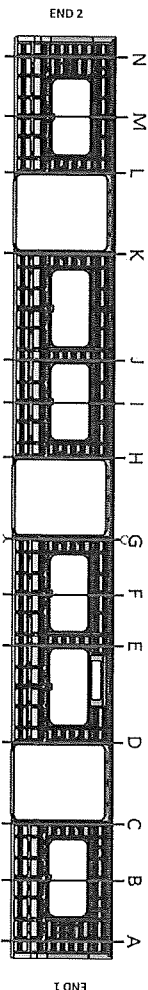
2024-03-17

PROPOSED QUALITY
MAINLINE
as per b4

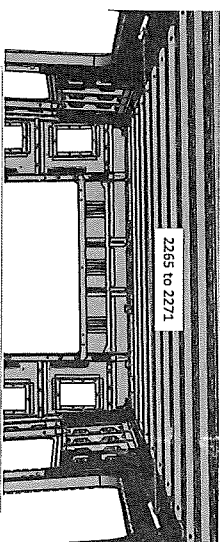
Detail G
Considering the
reinforcement plate

GBS measurement

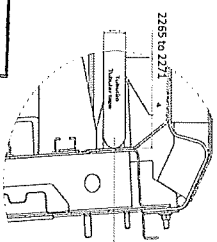
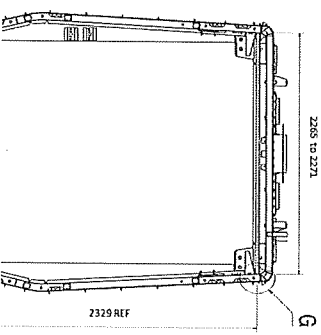
AFTER WELDING



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

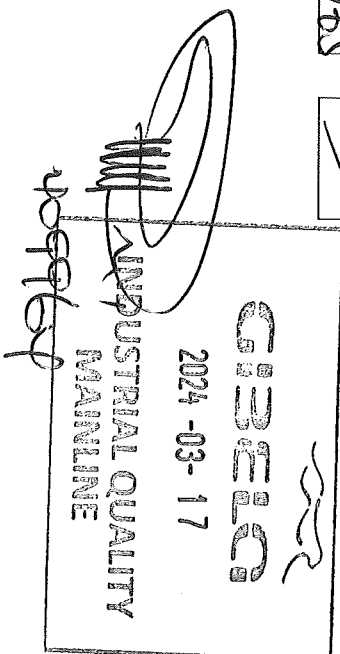


Take measurement close to radius (considering reinforcement)



DETAIL G
Considering the reinforcement radius

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





CARBODYSHELL M2 ASSEMBLY DTR3137497/3

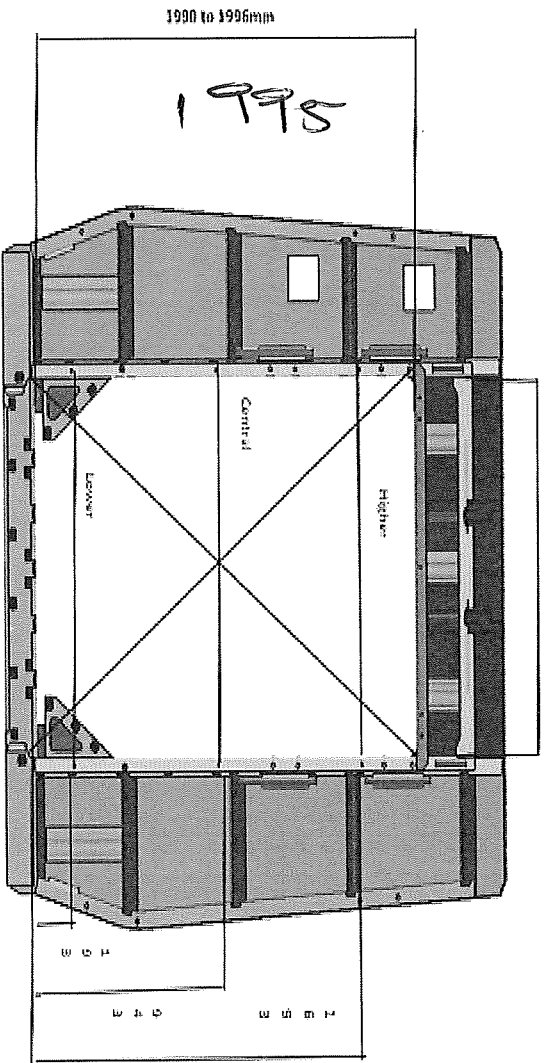
Rev.
28
Date
07/11/2023

Project: PRASA
SI.CB1210.247.V28

CB5 measurement

End frame 1

1380 to 1382 mm



1380 to 1382 mm

DIAGONAL DIFFERENCE D1-D2 $\leq 3mm$

D1 1381

D1 2416

D2 1380

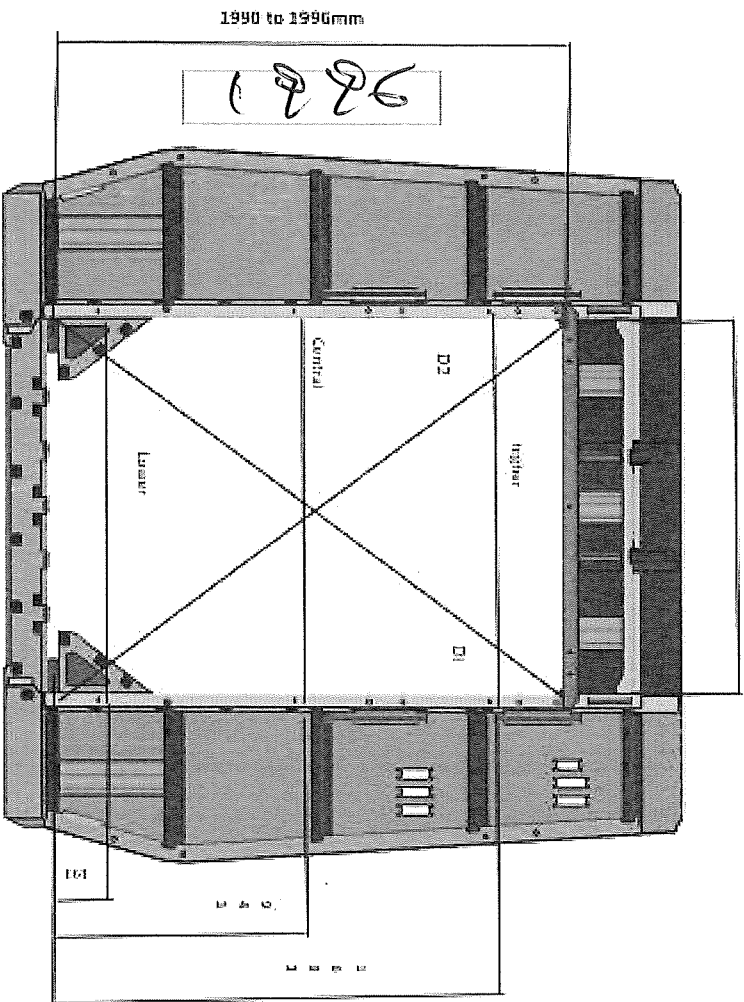
D2 2415

D1-D2 1

D1-D2 0

GIBELCO
INDUSTRIAL QUALITY
DESIGN
2024-03-17
2024-03-17

End frame 2



1380 to 1381 mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Upper Dimension

1380

D1

2416

Central Dimension

1381

D2

2416

Lower Dimension

1382

D1-D2

0

CIBELC
INDUSTRIAL QUALITY
MANUFACTURING



CARBOYSHELL M2 ASSEMBLY DTR31374497/3

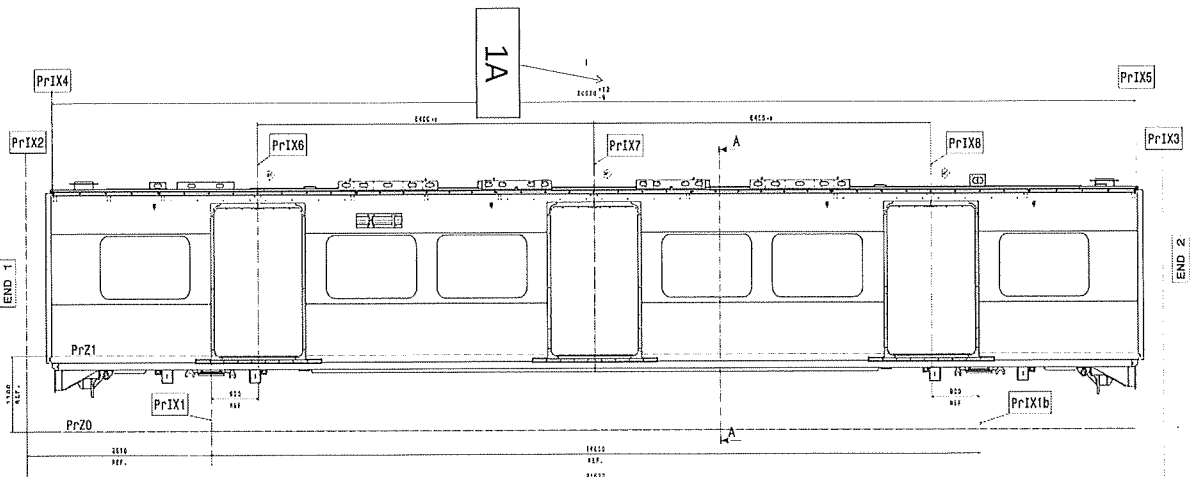
Rev.
28
Date
07/11/2023

Project: PRASA
SI.CB1210.247.V28

Specifications of Details for GBS measurement

LEFT SIDE	
SPECIFICATION SIZE	ACTUAL SIZE
1A 20632 - 20614	20615

RIGHT SIDE	
SPECIFICATION SIZE	ACTUAL SIZE
1A 20632 - 20614	20615



Handwritten signature and date: 2024-03-17

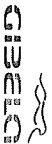
Dye penetrant test

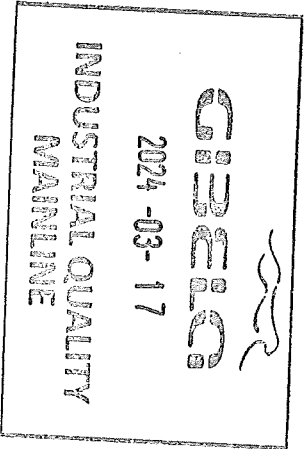
Dye-penetration test to be performed by quality personnel



GIBEL
2024-03-17
INDUSTRIAL QUALITY
MAINLINE

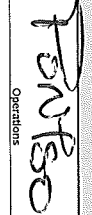
GIBEL
2024-03-17
INDUSTRIAL QUALITY
MAINLINE

		CARBODYSHELL M2 ASSEMBLY DTR31374497/3		Rev. 28 Date 07/11/2023		Project: PRSA SI,CB1210.247.V28		
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	NOX	Trace	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	To comply REX	Refer to REX. New defects must be added on the REX					



 CIBEL	CARBODYSHELL M2 ASSEMBLY DTR31374497/3	Rev. 28	Project: PRASA
		Date 07/11/2023	SI.CB1210.247.V28

Self Inspection - Final Result

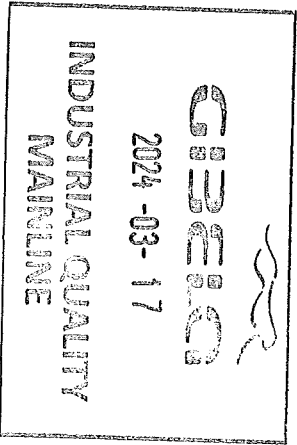
Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)		DATE	NAME	SIGNATURE
HOLD POINT	GO	25/03/24	Richmond	
	NO GO			

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	Responsible	Due date

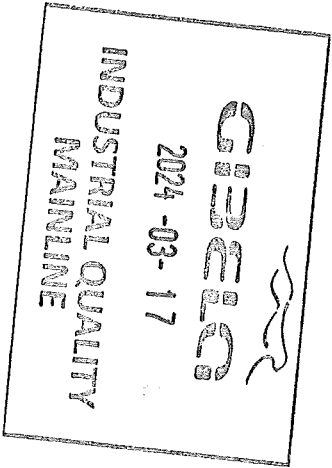
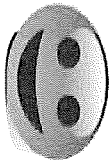
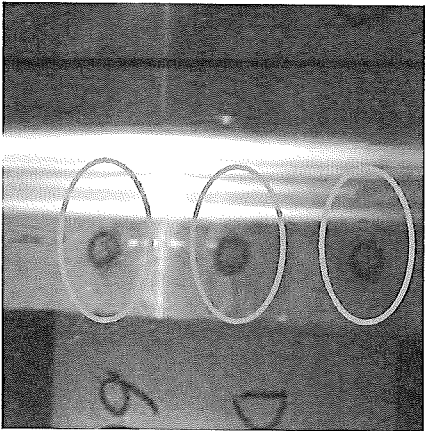
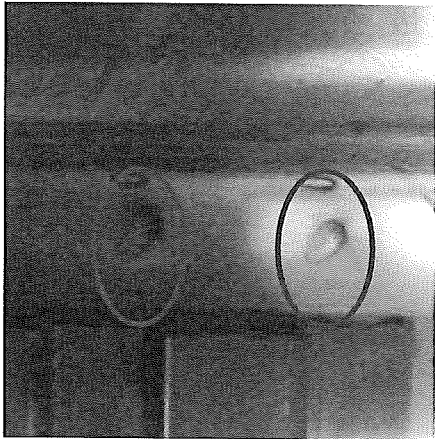
Operations


Quality



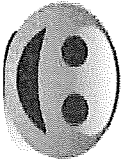
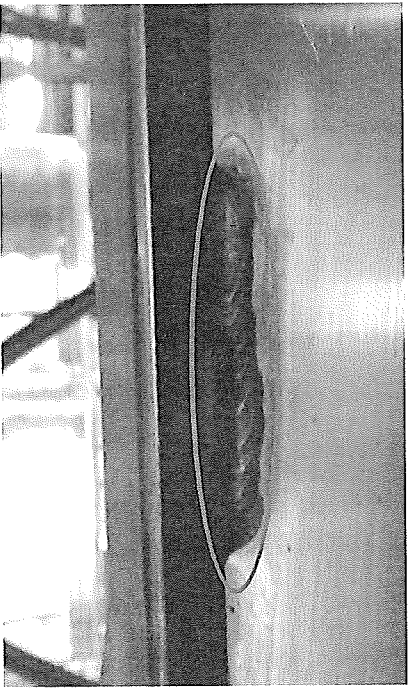
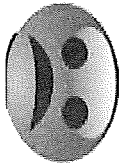
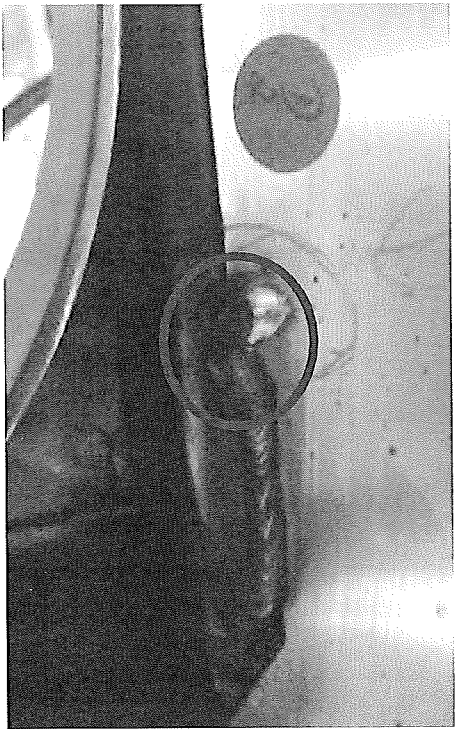
		CARBODYSHELL M2 ASSEMBLY DTR313744973		Rev. 28	Project: PRASA
				Date 07/11/2023	SI.CB1210.247.V28

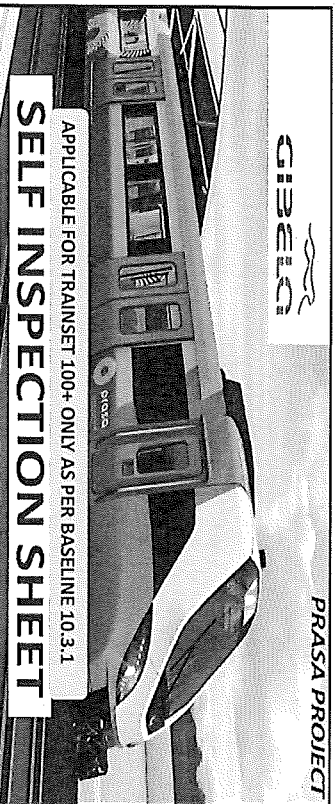
ANNEXURE A: Spot Welding Quality Acceptance Standard



	CARBODYSHELL M2 ASSEMBLY DTR31374497/3		Rev. 28 Date 07/11/2023	Project: PRASA SI.CB1210.247.V28
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ANNEXURE B: Arc Welding Quality Acceptance Standard

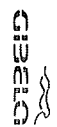




APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1
SELF INSPECTION SHEET

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

APPLICATION REFERENCE											
MOUNTING	DRAWING	DESCRIPTION	STATION	CART TYPE					WORK INSTRUCTION	SHEET 7	
				TC1	MA	ME	M3	TC2			
<input type="checkbox"/>	OTB231149712	A4000014329	CARBODYSHELL NO ASSEMBLY	CR1210		3			PRA.CB1220.DTR13174497 /2.V21	YES	
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
<input type="checkbox"/>											
REV	DATE	MODIFICATION CONTENT							RESPONSIBLE	NAME	DATE
0	01/02/2018	GIBELA NEW CREATION							APPROVER	Iumeleng Modiba	01/02/2018
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager							CHECKER	Nosozo Pindela	01/02/2018
2	2019/07/05	Certain dimensional checks added and others moved to CB1210							REVISOR	Ramokone Mogana	2019/07/05
3	2018/06/12	Width tolerance as per DT0000336600							APPROVER	Iumeleng Modiba	18/05/2018
5	24/01/2019	As per Baseline 10.2							CHECKER	Nosozo Pindela	18/05/2018
6	13/03/2019	Added D1 and D2 on Self-Inspection length measurements							REVISOR	Nosozo Pindela	2019/07/05
7	27/05/2019	Removed measurement positions on the display windows							APPROVER	Iumeleng Modiba	2019/06/12
10	22/08/2019	New Baseline 10.2.5							CHECKER	Nosozo Pindela	2019/06/12
15	06/08/2020	New Baseline 10.2.6							APPROVER	Iumeleng Modiba	2019/06/12
20	19/04/2021	New Baseline change 10.3							CHECKER	Nosozo Pindela	2019/06/12
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING							REVISOR	Nosozo Pindela	2019/06/12
25	20/02/2022	New Baseline change 10.3.1							APPROVER	Iumeleng Modiba	2019/06/12
26	14/06/2022	Update Minimum temperature requirement for sealant application							CHECKER	Nosozo Pindela	2019/06/12
27	19/10/2022	Addition of traceability for sealant application and welding							APPROVER	Iumeleng Modiba	2019/06/12
28	14/04/2023	Added sealant batch number & welding consumables traceability							CHECKER	Nosozo Pindela	2019/06/12
29	28/10/2023	Addition of bracket quantity							APPROVER	Iumeleng Modiba	2019/06/12
TRAINSET	CAR	OPERATOR NAME, ALPS NO		DATE		SELF INSPECTION NUMBER		PAGES			
230	MC2	Moshwani 410041		26/03/2024		SI.CB1220.276.V29		15			



CARBODYSHELL M2 ASSEMBLY DTR31374497/2

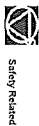
Rev. 29
Date 29/10/2023
Project: PRUSA
SI.CB1220.276.V29

Chf. M2

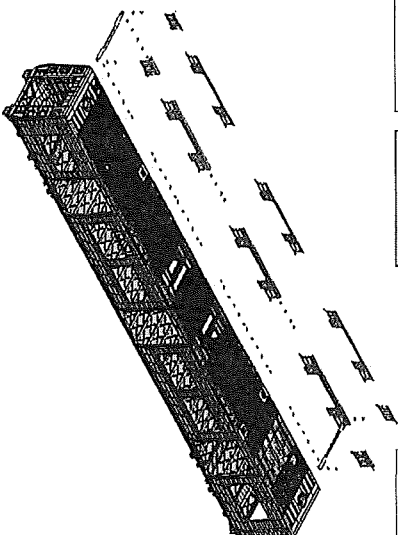
NCB:

Work station:

CB1220



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

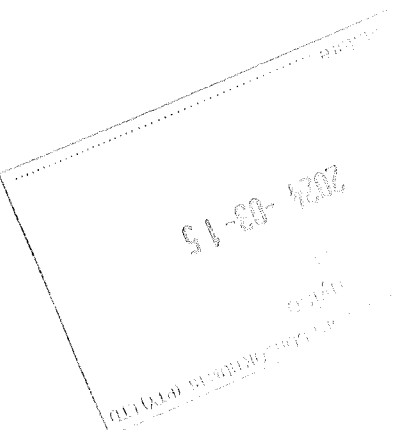
Document	Type of car					Revision	Observation	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4	TC2					
DTR31374497/2			✓					✓		N/A	Moda 29/10/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process							
Instruments	Serial number	Calibration or Verification		OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
		Validation Date					
Tubular	39828-3	15/03/2025		✓		Moda	29/10/24
Measuring tape	6487A0351	05/04/2024		✓		Moda	29/10/24

1.3 Consumables

Welding Consumable Control - Used for Special Process							
Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)	
308 1.0mm	891056	MIG	✓		Moda	29/10/24	





CARBODYSHELL M2 ASSEMBLY DTR313744972

Rev.
29
Date
28/10/2023
Project: PRASA
SI.CB1220.276.V29

II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Not OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220. DTR313744972 Verification of fitment for all reinforcement brackets.	PRA.CB1220. DTR313744972	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
02	N/A	Carbide free of significant flaws which compromise the appearance or functionality	DT00000210675	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
03	REFER TO ANNEXURE A	Arg Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TTPDEP - ADEC - 0000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
05		Functional dimension approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on page below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
06		Perform visual inspection of welds in 100% of the project. Run by percent testing in electric arc welding (weld ring) as IND-SAL-WMS-016. Run by percent testing welds (weld ring) and filled sampling as described in DT00000210668.	As the welding procedure IND-SAL-WMS-016 and DT00000210668.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified value as per Work Instructions Shop floor Temperature Min - Max T1 - Max-Max Relative Humidity Min - Max-Max Max T1 Max-Max 20% 50%	Sealant Batch No. 147-60 Exp Date: 1/03/21 Actuals Temperature: 26 Humidity: 55	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24
08	NA	Verification of sealant application in certain regions in the drawing	AAD000413329	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mascher 26/03/24	26/03/24

Signature: _____
2024-03-03 15:15
SI.CB1220.276.V29

 GIBCO	CARBODYSHELL M2 ASSEMBLY DTR313744972		Rev.	Project: PRASA
			29	
			Date	
			28/10/2023	
		SI.CB1 220.276.V29		

SEALANT APPLICATION

AREA 1 & 2 END 1

Operator (Name & sign):

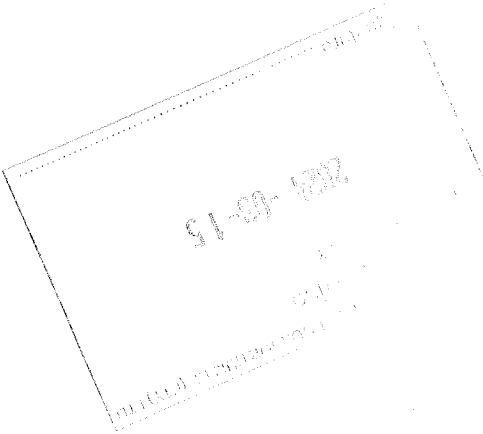
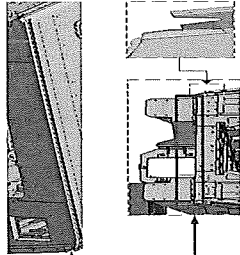
Mthokozisi

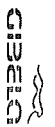
[Signature]

Operator (Name & sign):

Mthokozisi

[Signature]



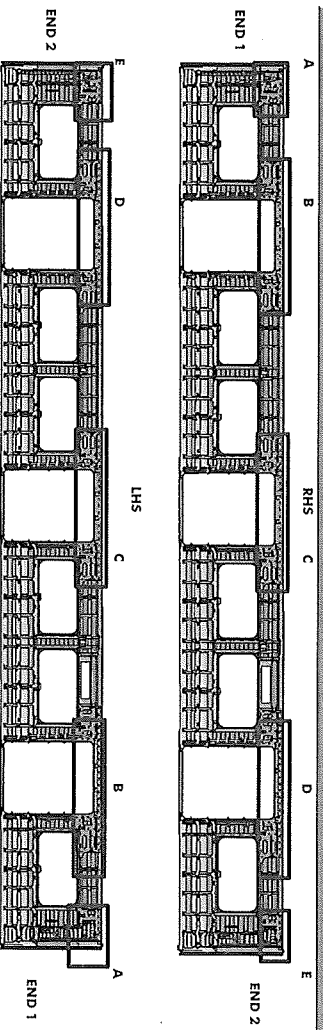


CARBOYSHELL M2 ASSEMBLY DTR31374497/2

Rev. 29
Project: PRSA

Date 29/10/2023
SI.CB1220.276.V29

II - Self Inspection - Items to Check

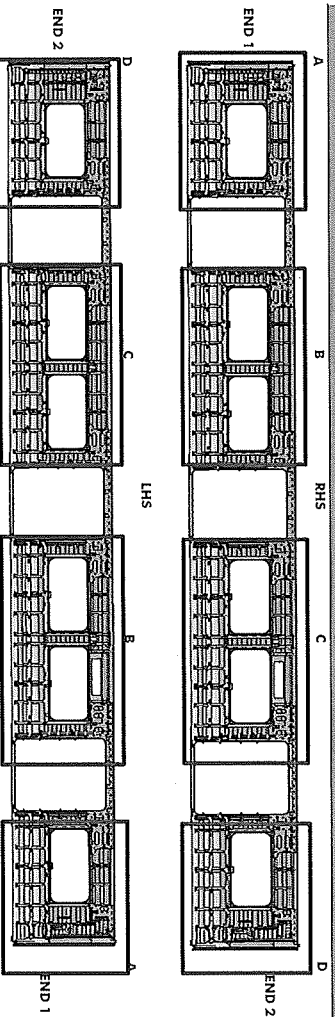


REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>0.5</u>	<u>0.5</u>
B	Operator (Name&sign): <u>0.5</u>	<u>0.5</u>
C	Operator (Name&sign): <u>0.5</u>	<u>0.5</u>
D	Operator (Name&sign): <u>0.5</u>	<u>0.5</u>
E	Operator (Name&sign): <u>0.5</u>	<u>0.5</u>

Signature
2024-10-29
SI.CB1220.276.V29

II - Self Inspection - Items to Check



BRACKETING

C-RAILS:

Operator:

Installation
Piscilla

Operator:

Pontes

Operator:

Pontes

TAPPING PADS

Operator:

Lindo

Operator:

Lindo

INSTALLATION & VERIFICATION

SEAT & LUGGAGE BRACKETS:

Operator:

Almeida

Operator:

Almeida

SEAT BRACKETS VERIFICATION:

Operator:

Almeida

Operator:

Almeida

WELDING

AREA

LHS

A (Seat brackets)

Operator (Name&sign):

Lindo

(C-rails, Luggage and earth bushes) : Operator (Name&sign):

Almeida

B (Seat brackets)

Operator (Name&sign):

Lindo

(C-rails, Luggage and earth bushes) : Operator (Name&sign):

Almeida

C (Seat brackets)

Operator (Name&sign):

Almeida

(C-rails, Luggage and earth bushes) : Operator (Name&sign):

Almeida

D (Seat brackets)

Operator (Name&sign):

Almeida

(C-rails, Luggage and earth bushes) : Operator (Name&sign):

Almeida

RHS

Lindo

Almeida

Almeida

Almeida

Almeida

Almeida

Almeida

Almeida

ENDS

END 1 TAPPING PADS WELDING:

Operator (Name&sign):

Lindo

END 1 TAPPING PADS WELDING:

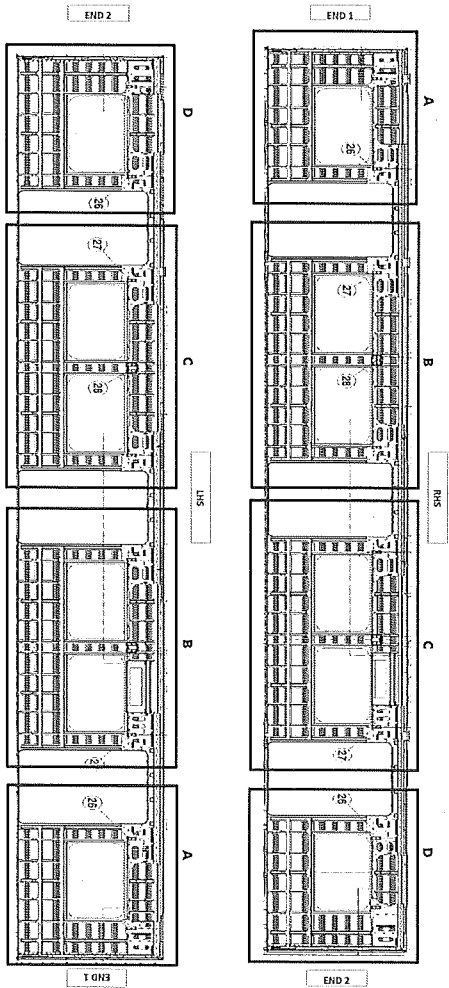
Operator (Name&sign):

Lindo

Signature

28/10/2023 15:15

M2 BRACKET INSTALLATION



QUANTITIES (M2)

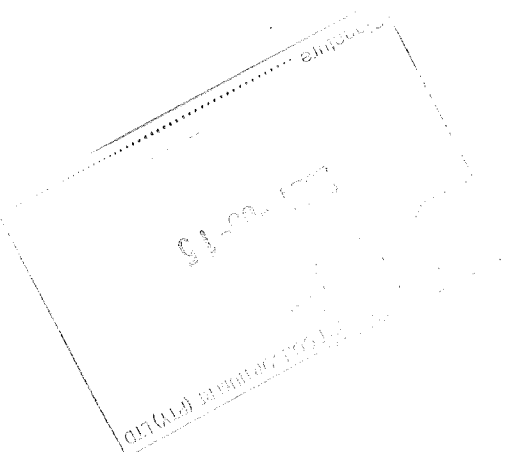
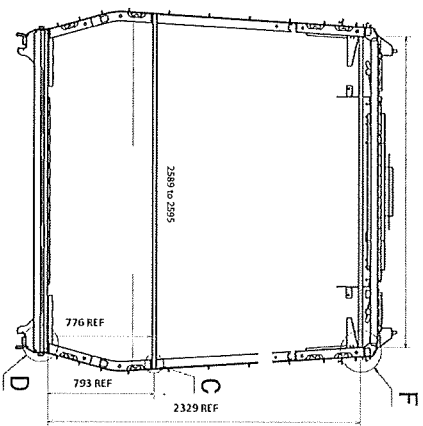
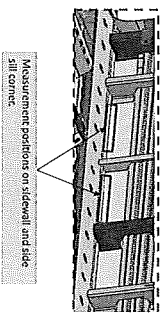
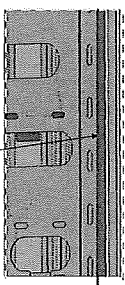
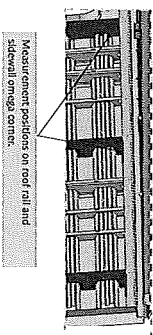
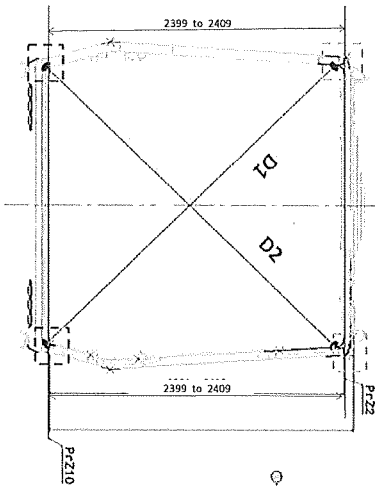
	RHS			
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	8	✓	
	B	8	✓	
	C	8	✓	
SEAT BRACKETS	A	13	✓	
	B	21	✓	
	C	21	✓	
EARTH BUSH	A	2	✓	
	B	4	✓	
	C	4	✓	

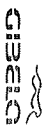
ROOF ENDS:
GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY: Moghu

	LHS			
	SECTION	QUANTITY	OK	NOK
C-RAILS	B	11	✓	
	C	11	✓	
	D	12	✓	
SEAT BRACKETS	A	21	✓	
	B	21	✓	
	C	9	✓	
EARTH BUSH	A	7	✓	
	B	8	✓	
	C	2	✓	

ROOF ENDS:
GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY: Moghu

Signature _____
SI-CB1-220-276-V29
28/10/2023



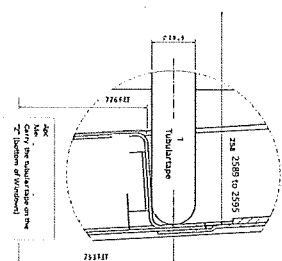
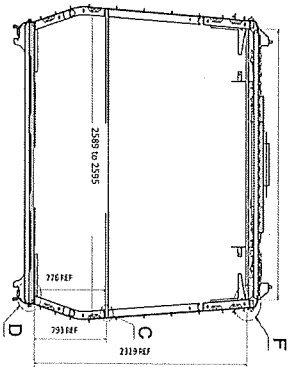


CARBODYSHELL M2 ASSEMBLY DTR313744972

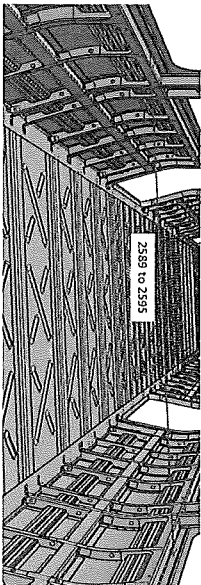
Rev.
29
Date
28/10/2023

Project: PRASA

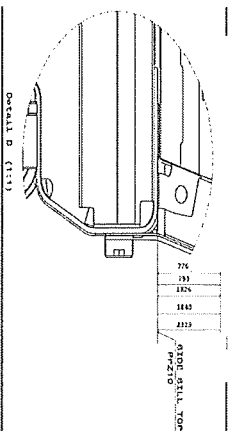
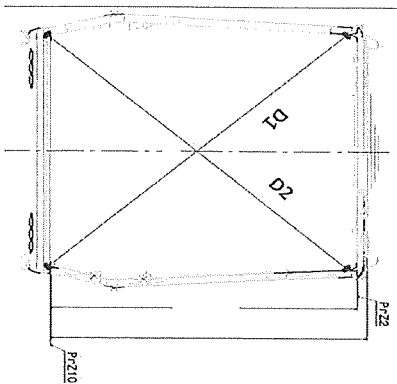
SI.CB1220.276.V29



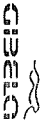
Detail C



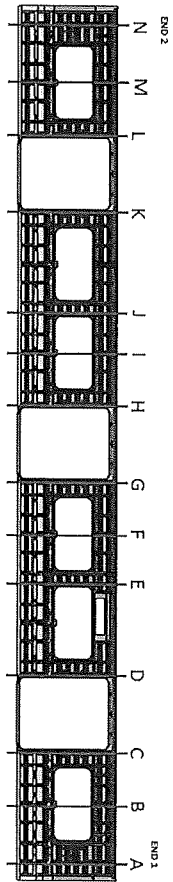
Take measurement close to radius



SI-00-1202

	CARBODYSHELL M2 ASSEMBLY DTR313744972		Rev.	Project: PRASA
			29	
			Date	SI.CB1220.276.V29
		28/10/2023		

CBS measurement

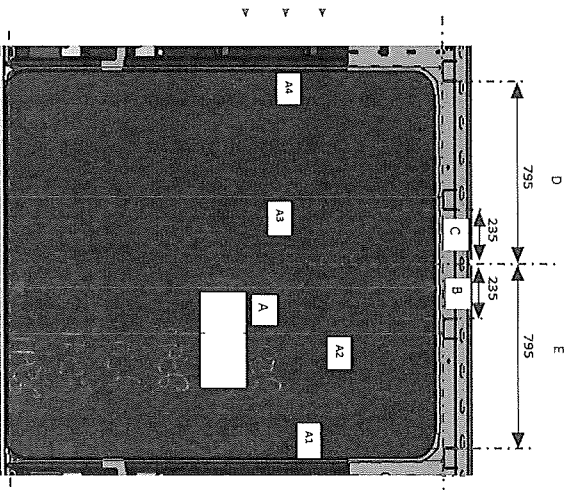
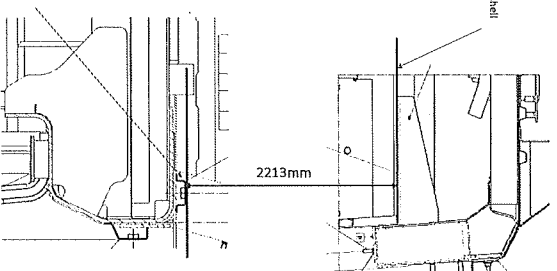


AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3299	3297	2	2591
B	3265	3262	3	2592
C	3295	3293	2	2590
D	3295	3298	3	2592
E	3263	3261	2	2591
F	3265	3262	3	2591
G	3293	3296	3	2594
H	3296	3295	1	2593
I	3263	3263	0	2591
J	3265	3265	0	2592
K	3298	3294	2	2593
L	3295	3296	1	2592
M	3265	3269	4	2591
N	3298	3294	4	2595

eimtuubis
 2024-08-15
 FITTING QUALITY
 INSPECTION
 COMPANY

Specifications of Details for CBS measurement GB1220

Brackets Carbodyshell
U Type SupportsBrackets Carbodyshell
Crane Assy

DOOR 1 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2253
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2235
B 234 to 236	235
C 234 to 236	234
D 794 to 796	796
E 794 to 796	795

DOOR 2 - LHS

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

DOOR 3 - LHS

VALUE	ACTUAL
A1 2230 to 2232	2283
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2233
B 234 to 236	236
C 234 to 236	235
D 794 to 796	796
E 794 to 796	795

DOOR 1 - RHS

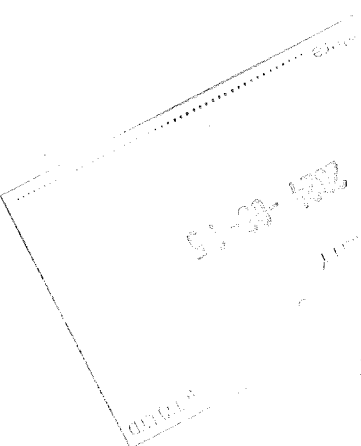
VALUE	ACTUAL
A1 2230 to 2232	2231
A2 2230 to 2232	2232
A3 2230 to 2232	2231
A4 2230 to 2232	2231
B 234 to 236	235
C 234 to 236	235
D 794 to 796	796
E 794 to 796	795

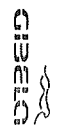
DOOR 2 - RHS

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

DOOR 3 - RHS

VALUE	ACTUAL
A1 2230 to 2232	2253
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2233
B 234 to 236	235
C 234 to 236	234
D 794 to 796	795
E 794 to 796	796



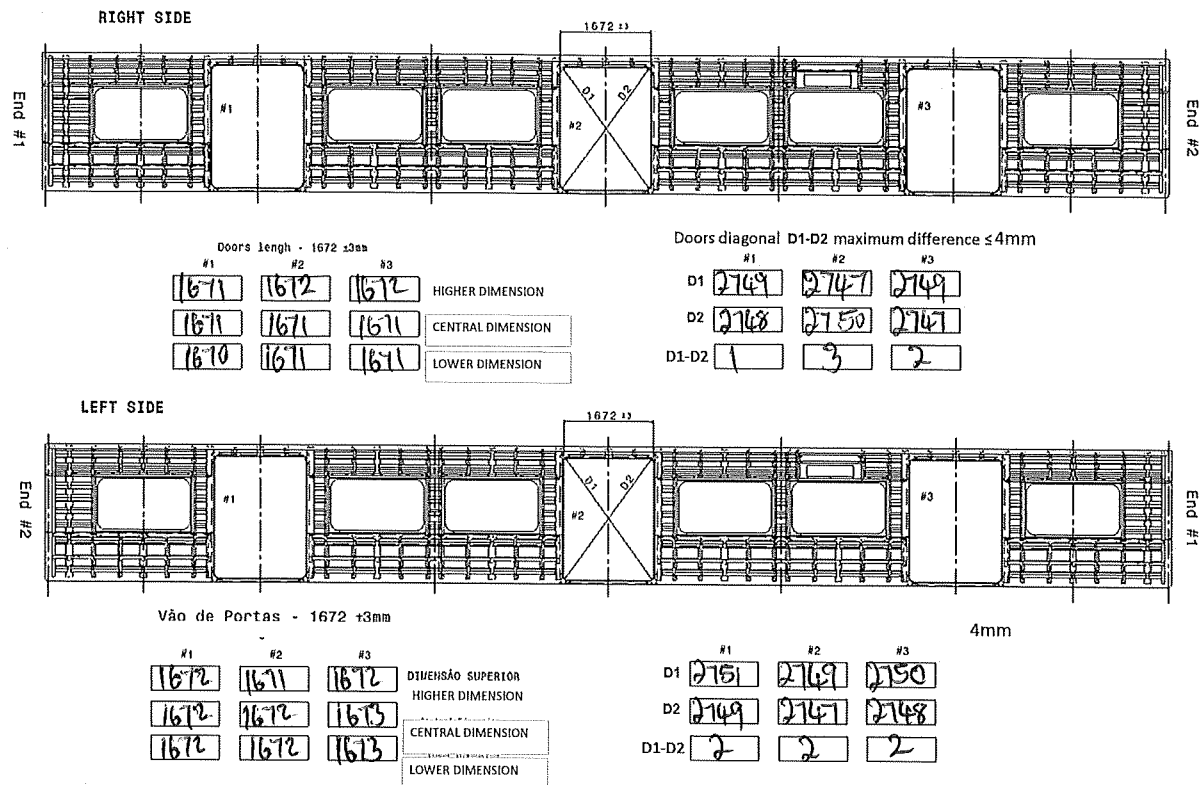


CARBODYSHELL M2 ASSEMBLY DTR313744972

Rev.	
Z9	
Date	28/10/2023

Project: PRASA
SI.CB1220.276.V29

Specifications of Details for CBS measurement CB1220





CARBODYSHELL M2 ASSEMBLY DTR3137/4487/2

Rev. 29
Date 28/10/2023
Project: PRASA

SI.CB1220.276.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	26/03/24	Moshudh Operations	Moshudh
	NO GO	26/3/24	Prodeni Industrial Quality	
			Operations	
			Industrial Quality	

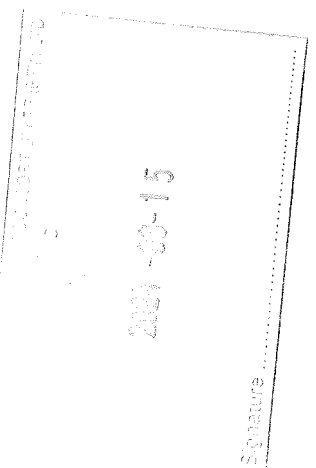
In case of "NO GO", describe blocking problems

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

Item	Description	Responsible	Due date	Status

Operations

Quality






APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

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

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE					WORK INSTRUCTION	SAFETY ? 		
				TC1	M4	M1	M2	M3			TC2	
<input type="checkbox"/>	A400001374497	A400001413329	CARBON/SHELL M2 ASSEMBLY	CB1230					X		POL CB1230.A4000013 74497.V20	YES
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
NO.	DATE	MODIFICATION CONTENT					RESPONSIBLE	NAME	DATE			
0	2018/08/02	GIBELA NEW CREATION					APPROVER	Philippe Marques	2018/08/02			
							CHECKER	Nosizo Pindela	2018/08/02			
							COMPLIER	Nosizo Pindela	2018/08/02			
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	2018/05/07	Certain dimensional checks moved to CB1220					APPROVER	Itumeleng Modiba	2018/05/07			
							CHECKER	Nosizo Pindela	2018/05/07			
							REVISED BY	Ramokone Mofama	2018/05/07			
							APPROVER	Itumeleng Modiba	24/03/2019			
							CHECKER	Nosizo Pindela	24/03/2019			
5	24/01/2019	As per Baseline 10.2					REVISED BY	Vanessa Ntuli	24/01/2019			
							APPROVER	Itumeleng Modiba	13/03/2019			
							CHECKER	Nosizo Pindela	13/03/2019			
							REVISED BY	Vanessa Ntuli	13/03/2019			
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements					APPROVER	Itumeleng Modiba	23/08/2019			
							CHECKER	Nosizo Pindela	23/08/2019			
							REVISED BY	Nosizo Pindela	23/08/2019			
10	23/03/2019	New Baseline 10.2.5					APPROVER	Timothy Maimela	06/08/2020			
							CHECKER	Bongane Masina				
							REVISED BY	Bongane Masina				
							APPROVER	Timothy Maimela				
20	19/04/2021	New Baseline change 10.3					CHECKER	Bongane Masina	19/04/2021			
							REVISED BY	Bongane Masina				
							APPROVER	Collins Mkhombhi				
25	20/02/2022	New Baseline change 10.3.1					CHECKER	Andani Muthelo	20/02/2022			
							REVISED BY	Andani Muthelo				
							APPROVER	Collins Mkhombhi				
26	14/06/2022	Update minimum temperature requirement for sealant application					CHECKER	Andani Muthelo	14/06/2022			
							REVISED BY	Andani Muthelo				
							APPROVER	Collins Mkhombhi				
27	26/07/2022	Threshold mesurement addition					CHECKER	Andani Muthelo	27/07/2022			
							REVISED BY	Andani Muthelo				
							APPROVER	Collins Mkhombhi				
28	17/10/2022	Addition of traceability for sealant application					CHECKER	Ntsoko Zwane	17/10/2022			
							REVISED BY	Amogelang Mofhlame				
29	14/04/2023	Added sealant batch number & welding consumables traceability					APPROVER	Vanessa Ntuli	14/04/2023			
							CHECKER	Ntsoko Zwane				
							REVISED BY	Amogelang Mofhlame				
30	06/11/2023	Added traceability on thresholds for boiler makers and welders					APPROVER	Amogelang Mofhlame	06/11/2023			
							CHECKER	Andani Muthelo				
							REVISED BY	Ntsoko Zwane				
TRAINSET	CAR	OPERATOR NAME& ALIAS NO		DATE	SELF INSPECTION NUMBER		PAGES					
220	M2	Zanele 4877426103/24		SI.CB1230.277.V29	11							

2024-02-26

INDUSTRIAL QUALITY MAINLINE



CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.
30
Date
06/11/2023

Project: PRASA
SI.CB1230.277.V29

Car:

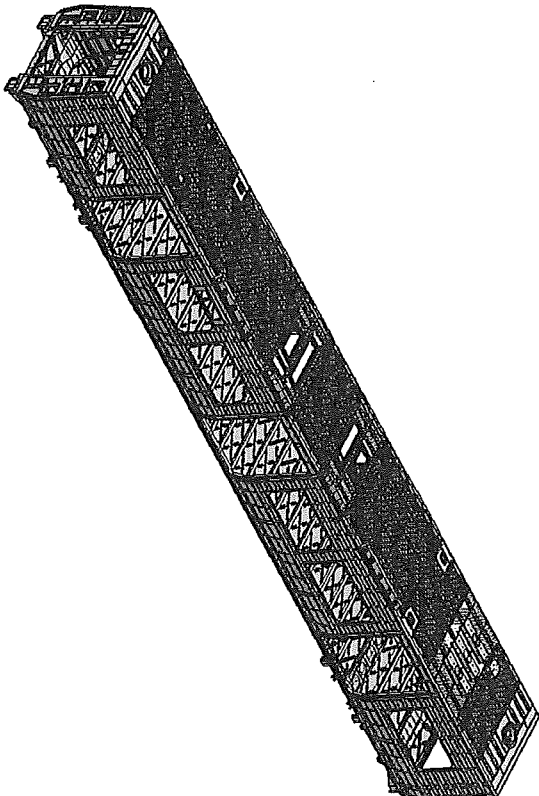
NCR:

Work station:

CB1230



Safety Related



1 - Documentation and Instruments Control

1.1 - Documentation Control

Document	Type of car						Revision	Observation	OK	NOK	Remark	Signature/Date (Operations)	Signature/Date (Quality)
	C1	M1	M2	M3	M4	TC2							
PRASA CB1230.AA00001374497			X				30		X		N/A	26/03/24	26/13/24

1.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Validation Date	OK	NOK	Signature/Date (Operations)	Signature/Date (Quality)
Tubular	22615	2024/04/07	X		26/03/24	26/13/24
Tape Measurement	9187A 0314	2024/04/05	X		26/03/24	26/13/24
Combination squares	91850131	2024/10/11	X		26/03/24	26/13/24

1.3 Consumables


Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
308 CSI	0231087	Mig	X		26/03/24	26/13/24

CIBELCO

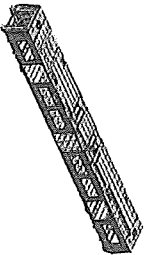
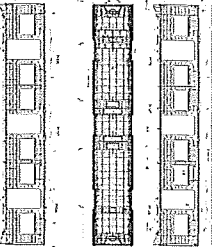
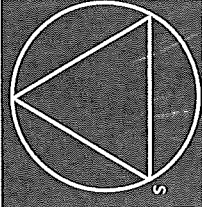

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INDUSTRIAL QUALITY
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	CARBODYSHELL M2 ASSEMBLY AA00001374497		Rev. 30	Project: PRASA SI.CB1230.277.V29
			Date 06/11/2023	

II - Self Inspection - Items to check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering nº PRA.CB1230.AA00001374497 Verification of fitment for all brackets.	PRA.CB1230.AA00001374497	X			26/03/24	26/03/2024
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	X			26/03/24	26/03/2024
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	X			26/03/24	26/03/2024
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	X			26/03/24	26/03/2024
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	X			26/03/24	26/03/2024
06		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 filler sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	X			26/03/24	26/03/2024
07		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: 20046359 Exp Date: 1/05/24 Actuals Temperature: 19°C Humidity: 31%	X			26/03/24	26/03/2024
08	INDUSTRIAL QUALITY MAINLINE	Verification of sealant application in regions of roof and sideframe.	Sealant applied in regions of roof and sideframe.	X			26/03/24	26/03/2024



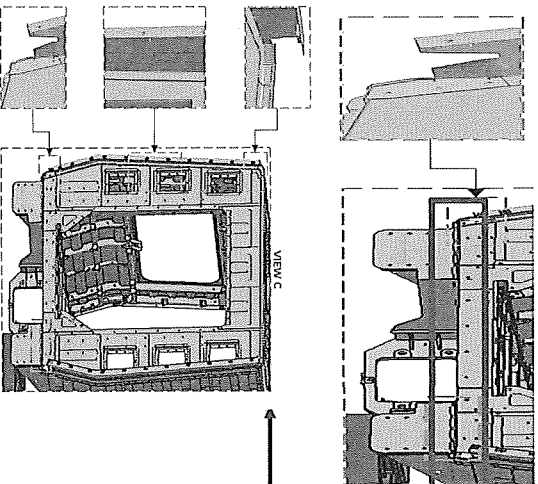
CARBODYSHELL M2 ASSEMBLY AA00001374497

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Project: PRASA

SI.CB1230.277.V29

AREA 1



END 2 SEALANT

OPERATOR
(Name & sign):

Levery *[Signature]*

OPERATOR
(Name & sign):

Levery *[Signature]*

OPERATOR
(Name & sign):

Levery *[Signature]*

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

Operator (Name & sign):

LHS
D,E,F,G,H,I

RHS
D,E,F,G,H,I

Operator (Name & sign):

Sime

Sime

Operator (Name & sign):

[Signature]

[Signature]

Operator (Name & sign):

Ishenodlo

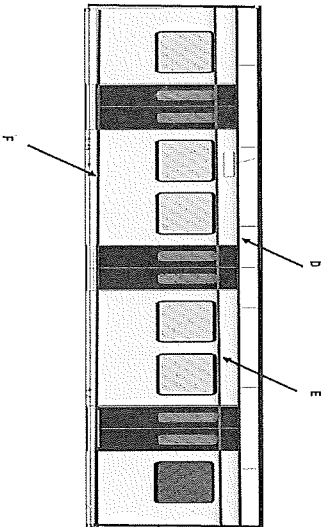
Ishenodlo

Operator (Name & sign):

[Signature]

[Signature]

Operator (Name & sign):

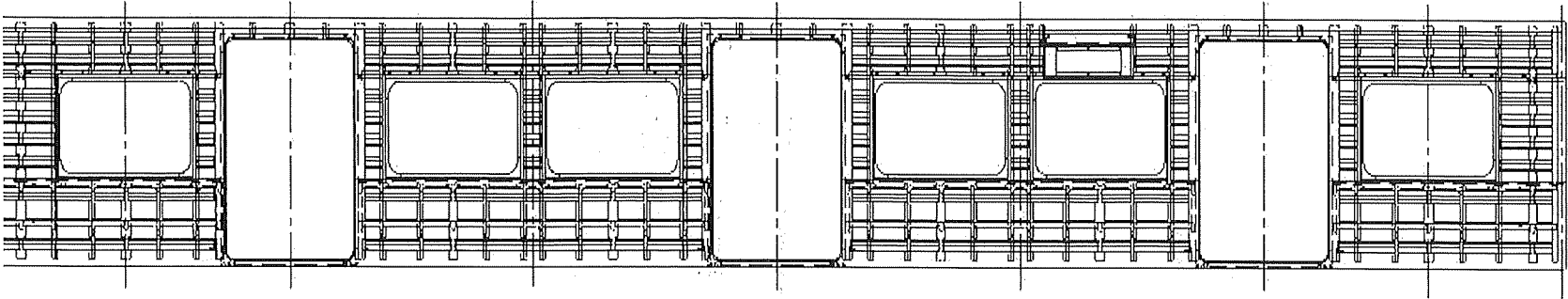


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latness side left and right maximum of 2mm the valley to peak measured in 90° m. Recod the maximum and minimum value foundand indicate the corresponding region.

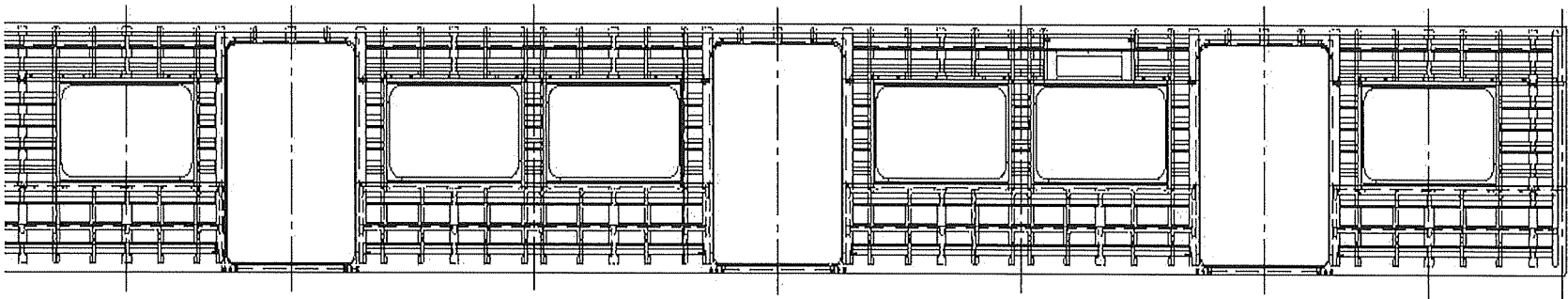
RIGHT SIDE



END #2

MAXIMUM 1.5
MINIMUM 1.0

LEFT SIDE



END #1

MAXIMUM 1.5
MINIMUM 0.5



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CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.	30
Date	06/11/2023

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SI.CB1230.277.V29

Specifications of Details for GBS measurement CB1230



CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.
30

Project: PRASA

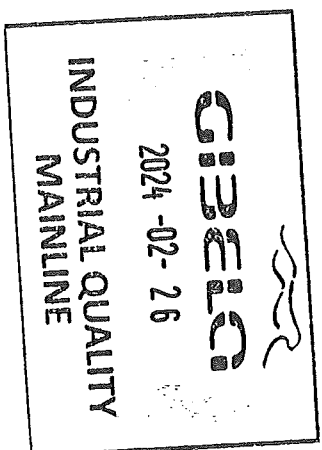
Date


06/11/2023

SI.CB1230.277.V29

END #1

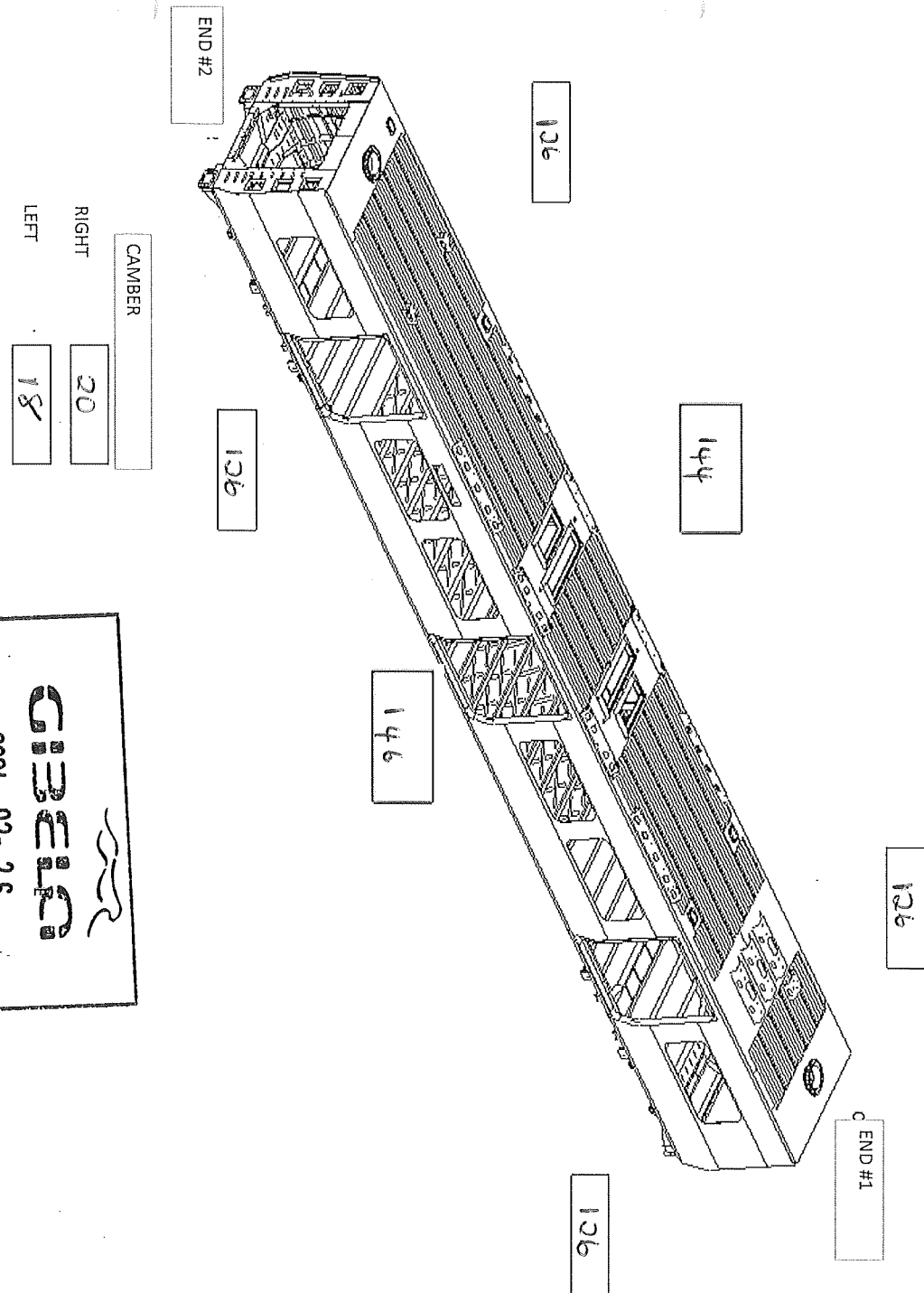
END #2




	CARBODYSHELL M2 ASSEMBLY AA00001374497		
	<div>Rev. 30</div>		Project: PRASA
	<div>Date</div>		
	06/11/2023		SI.CB1230.277.V29

Specifications of Details for GBS measurement GB1230

Specified Camber for car out of jig is 18mm(-0mm + 2mm)





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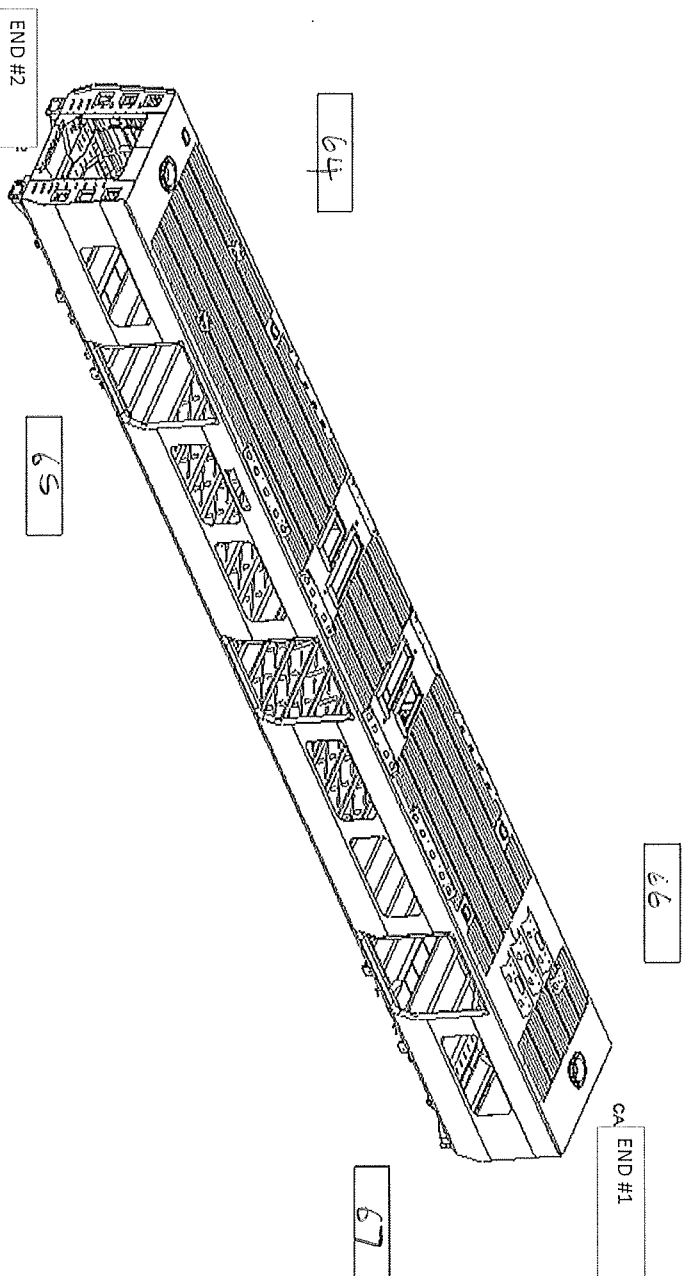
CARBODYSHELL M2 ASSEMBLY AA00001374497

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30
Date
06/11/2023

Project: **PRASA**
SI.CB1230.277.V29

Specifications of Details for GBS measurement CB1230

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



TWIST FOUND ON END 1

TRANVERSE

1

LONGITUDINAL

2

TWIST FOUND ON END 2

TRANVERSE

1

LONGITUDINAL

2

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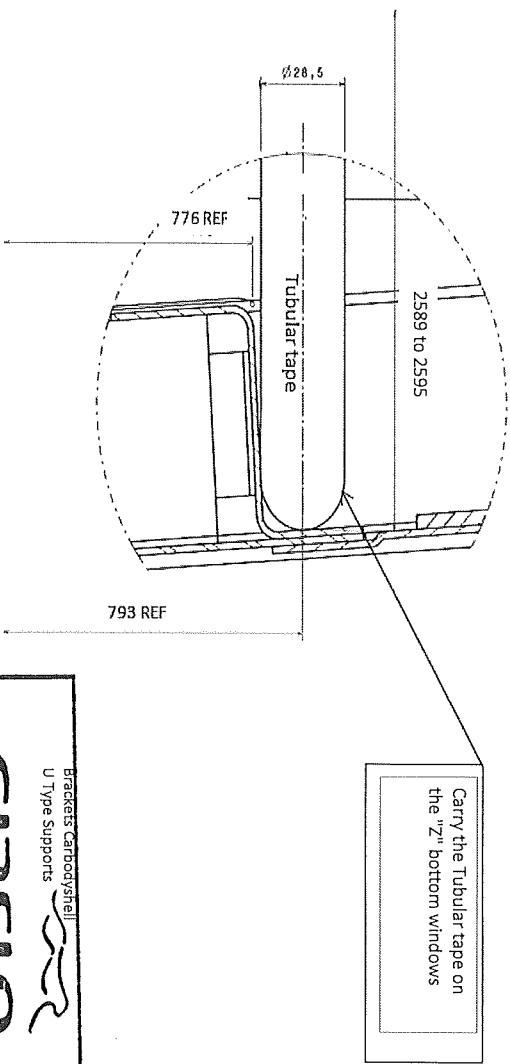
CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.	Date
30	06/11/2023

Project: PRASA

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Specifications of Details for GBS measurement GB1230

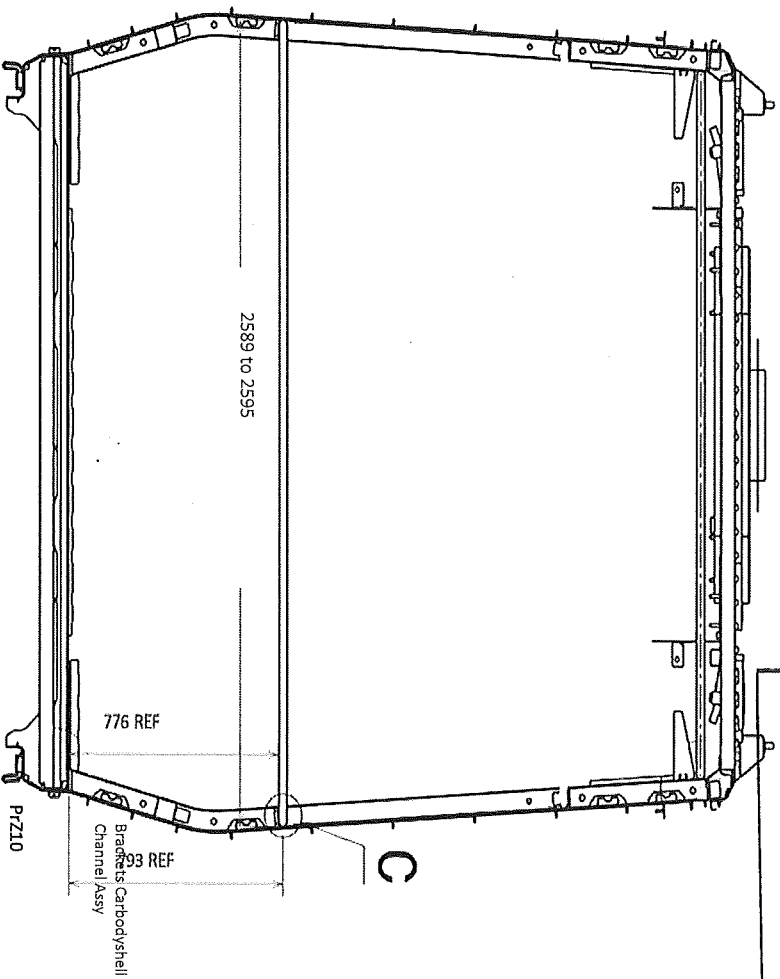


Detail C

Brackets Carbodyshell
U Type Supports

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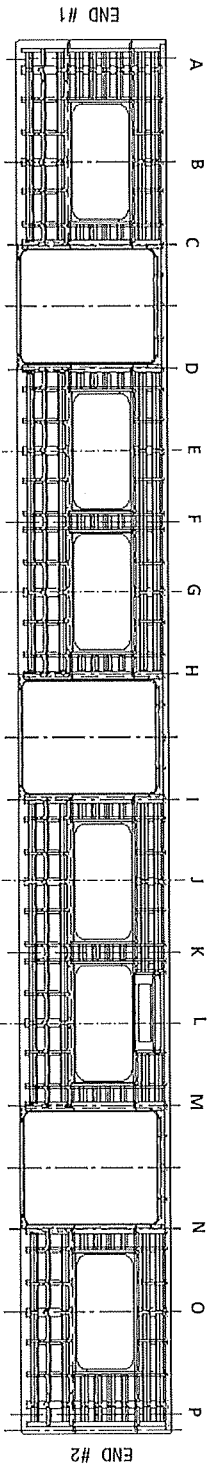


CARBODYSHELL M2 ASSEMBLY AA00001374497

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Date 06/11/2023	

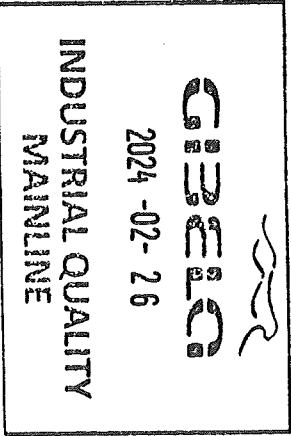
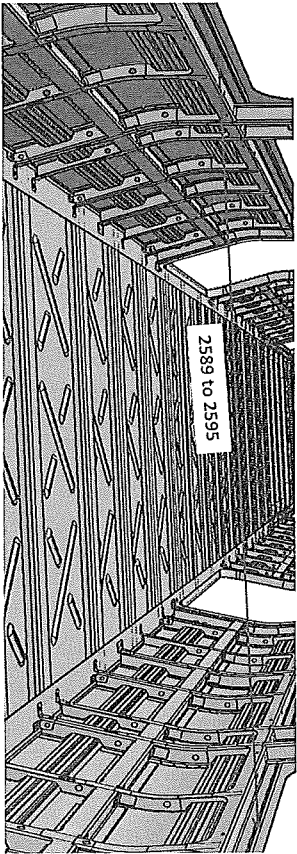
SI.CB1230.277.V29

Specifications of Details for GBS measurement CB1230



2589 to 2595mm


A	2596
B	2592
C	2594
D	2592
E	2595
F	2593
G	2592
H	2594
I	2595
J	2595
K	2593
L	2593
M	2595
N	2593
O	2592
P	2593

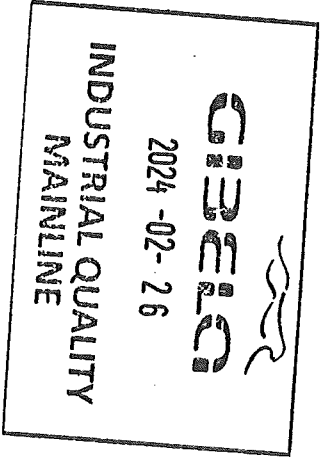



Threshold verification				Nominal value :38	
Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	39	38	39	38	39
Door 4		Door 5		Door 6	
L	R	L	R	L	R
38	39	38	39	39	38

BOILER MAKER: Leni Bang

WELDER: Thulani Lengisi

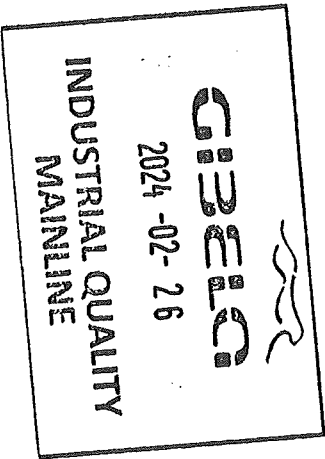
	CARBODYSHELL M2 ASSEMBLY AA00001374497		Rev.	Project: PRASA
			30	
			Date	SI.CB1230.277.V29
			06/11/2023	




	CARBODYSHELL M2 ASSEMBLY AA00001374497			Project: PRASA	
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				SI.CB1230.277.V29	



Dye penetrant test

Dye-penetration test to be performed by quality personnel



	CARBODYSHELL M2 ASSEMBLY AA00001374497	Rev.	Project: PRASA	
		30		
		Date	SI.CB1230.277.V29	
		06/11/2023		

Self Inspection - Final Result

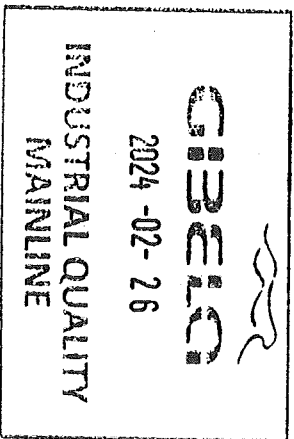
Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)		DATE	NAME	SIGNATURE
HOLD POINT	GO	26/03/24	Zone 16 Operations	
		26/03/2024	Amogobay Industrial Quality	
	NO GO		Operations Industrial Quality	


In case of "NO GO", describe blocking problems

In case of "NO GO", the operations manager must define below action plan to ensure "GO":				
Item	Description	Responsible	Due date	Status

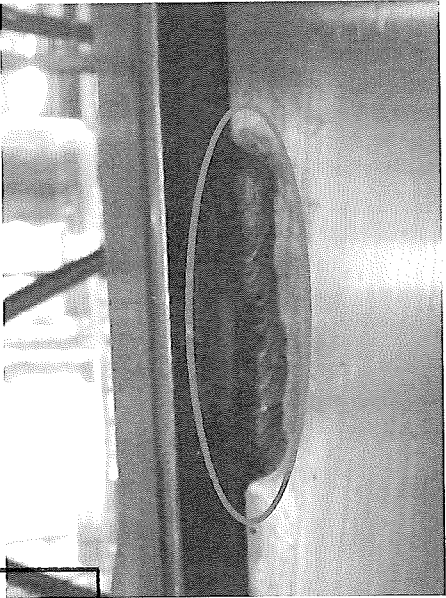
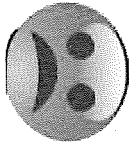
Operations


Quality



	CARBODYSHELL M2 ASSEMBLY AA0000137/4497		Rev. 30	Project: PRASA
			Date 06/11/2023	SI.CB1230.277.V29

ANNEXURE A: Arc Welding Quality Acceptance Standard





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