

GIBELA

PRASA PROJECT


APPLICABLE FROM TRAINSET 190+ AS PER BASELINE 10.4

SELF INSPECTION SHEET


CONFIDENTIAL INFORMATION

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

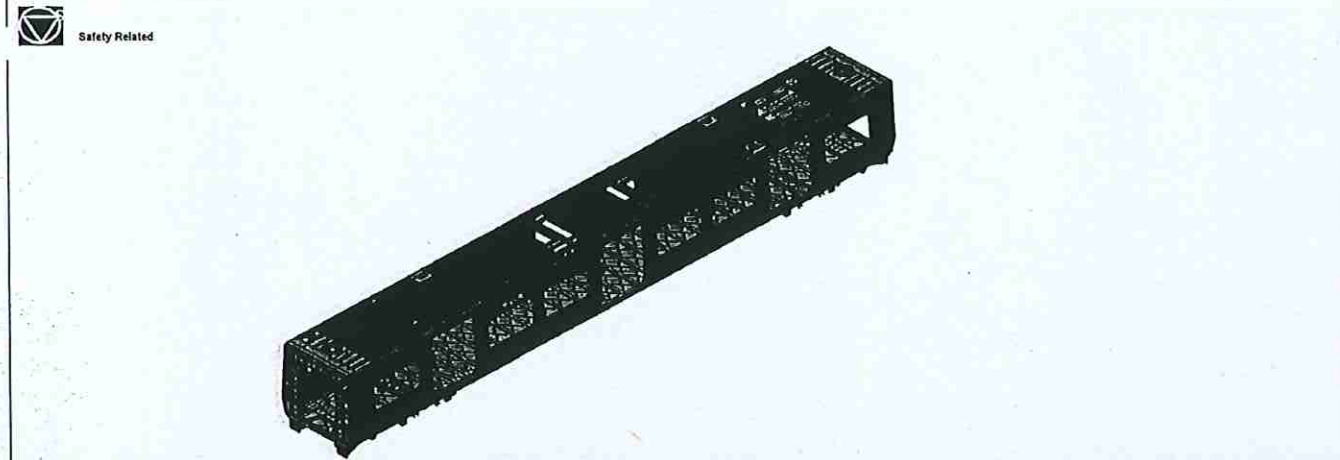
APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 	
				TC1	M4	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR30225487/3	AAD0001278566	CARBODYSHELL M3,M4 ASSEMBLY	CB2210		(X)			X		PRA.CB2210.DTR30225 487/3.V30	YES
<input type="checkbox"/>												
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE							
0	10/01/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	10/01/2018							
			CHECKER	Nosizo Pindela	10/01/2018							
			COMPILER	Thanyani Mathegu	10/01/2018							
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	2018/07/04	Certain dimensional checks moved to CB1220 and CB1230	APPROVER	Itumeleng 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 CB2210	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	13/03/2019	Added D1 and D2 on Self - Inspection	APPROVER	Itumeleng Modiba	13/03/2019							
			CHECKER	Nosizo Pindela	13/03/2019							
			REVISED BY	Nosizo Pindela	13/03/2019							
10	21/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	21/08/2019							
			CHECKER	Nosizo Pindela	21/08/2019							
			REVISED BY	Nosizo Pindela	21/08/2019							
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020							
			CHECKER	Bongane Masina	06/08/2020							
			REVISED BY	Bongane Masina	06/08/2020							
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021							
			CHECKER	Bongane Masina	19/04/2021							
			REVISED BY	Bongane Masina	19/04/2021							
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021							
			CHECKER	Mpho Mulaudzi	17/08/2021							
			REVISED BY	Mpho Mulaudzi	17/08/2021							
25	19/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi collins	19/02/2022							
			CHECKER	Andani Muthelo	19/02/2022							
			REVISED BY	Andani Muthelo	19/02/2022							
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023							
			CHECKER	Mohlampe Amogelang	14/04/2023							
			REVISED BY	Mohlampe Amogelang	14/04/2023							
30	20/07/2023	New Baseline change 10.4	APPROVER	Ngobeni Tyson	28/07/2023							
			CHECKER	Mohlampe Amogelang	28/07/2023							
			REVISED BY	Mohlampe Amogelang	28/07/2023							
31	07/11/2023	Added traceability for welding sections	APPROVER	Ngobeni Tyson	07/11/2023							
			CHECKER	Mohlampe Amogelang	07/11/2023							
			REVISED BY	Ntokozo Zwane	07/11/2023							
TRAINSET	CAR	OPERATOR NAME& ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES							
216	M4	LUNGA 471497	04/05/24	SI.CB2210.254.V30	17							

2024-03-15

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Car: M3 & M4	NCR:	Work station: CB2210
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I - Documentation and Instruments Control

I.1 - Documentation Control

Document	D	C	M	S	P	Revision	Observation	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30225487/3				X		31	✓	04/03/24	04/03/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process











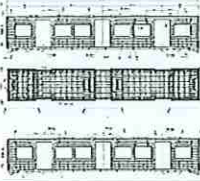




Instruments	Serial number	Calibration/Verification Validation Date	Signature/Date (Manufacturing)	Signature/Date (Quality)
TUBULAT	22713	04/10/23	04/03/24	04/03/24
30 M TAPE	GIBTP0084	23/03/31	04/03/24	04/03/24
CASER TAPE	125425924	08/01/24	04/03/24	04/03/24

1.3 Consumables


Welding Consumable Control - Used for Special Process

Fiber/Material	Heat Number	Welding Process	Signature/Date (Manufacturing)	Signature/Date (Quality)
AUTRAD 308 LSI	15221880	MIG	04/03/24	04/03/24
ETL 309 LSI	318394	MIG	04/03/24	04/03/24

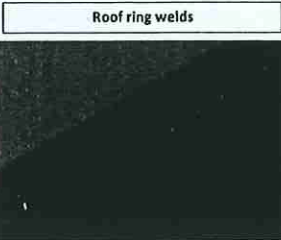
2021-03-15
 Signature

		CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		Rev. 31 Date 07/11/2023	Project: PRASA SI.CB2210.254.V30			
II - Self Inspection - Items to Check								
II.1 - Items to check								
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NO	Remarks	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	/			 04/03/24	 04/03/24
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	/			 04/03/24	 04/03/24
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	/			 04/03/24	 04/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	/			 04/03/24	 04/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	/			 04/03/24	 04/03/24
06	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.	/			 04/03/24	 04/03/24

GIBELQ LTD. ONTARIO, CANADA (PVT) LTD.
 Mpisana Khanyiso
 FITTING QUALITY
 2024-03-15
 Signature


	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Welding Traceability




LHS

Boiler maker (Name & Sign): LAWRENCE Jolya

Welder (Name & Sign): MTIKOZISI 

RHS


Boiler maker (Name & Sign): LAWRENCE Jolya

Welder (Name & Sign): MTIKOZISI 

END 1


LHS

Boiler maker (Name & Sign): LAWRENCE Jolya

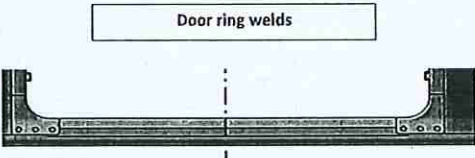
Welder (Name & Sign): MTIKOZISI 

RHS


Boiler maker (Name & Sign): LAWRENCE Jolya


Welder (Name & Sign): MTIKOZISI 

END 2





LHS

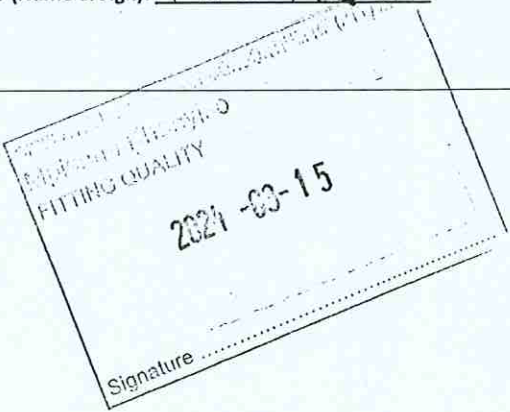
Boiler maker (Name & Sign): PONSO 


Welder (Name & Sign): THABANG 

RHS

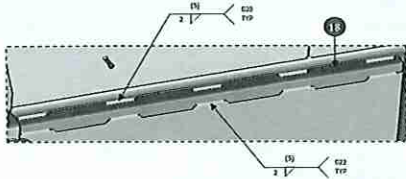
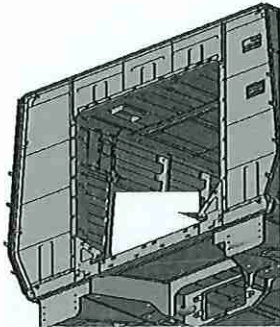
Boiler maker (Name & Sign): PONSO 

Welder (Name & Sign): THABANG 




	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

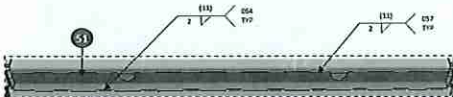
EUF Reinforcement Plates



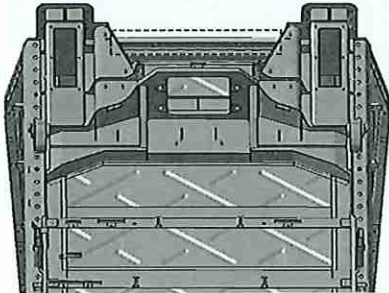
END 1

Boiler maker (Name & Sign): SEAN 

Welder (Name & Sign): SIPHOKAZI 

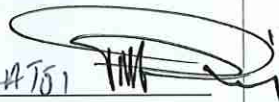


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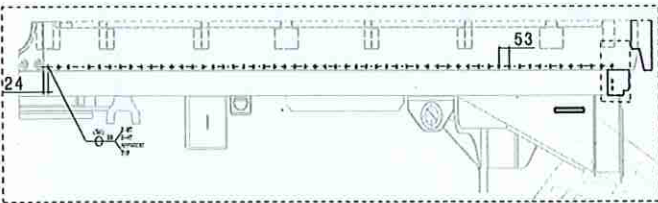


Underneath the CAR

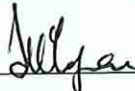
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Boiler maker (Name & Sign): MALATO 


Welder (Name & Sign): THABANG 



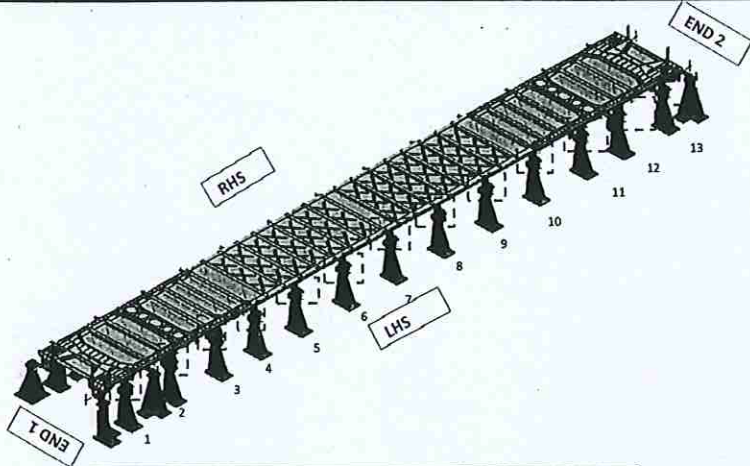
FEDOLI

Operator: LAWRENCE 



	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Specifications of Details for CBS measurement



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

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	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	0	0	0

Signature Operations:

Date: 04/03/20

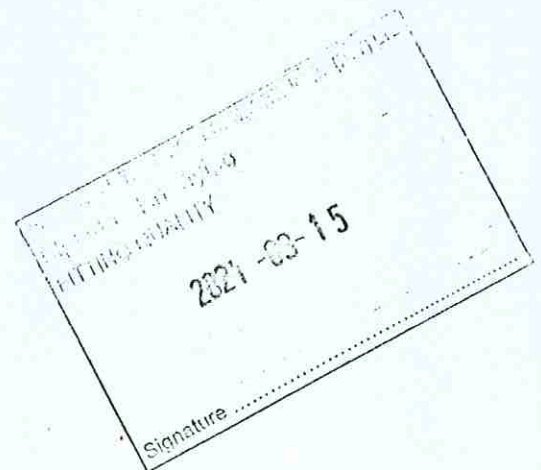
After Welding.

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	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	2	2	2	0	0	0

Signature Industrial Quality:

Date:





CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

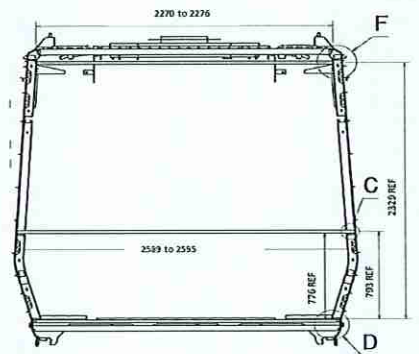
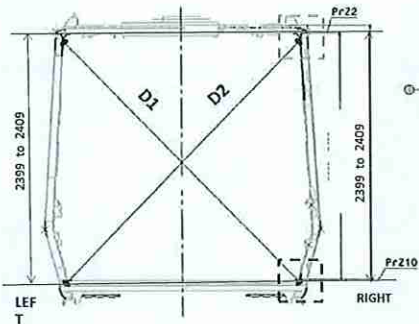
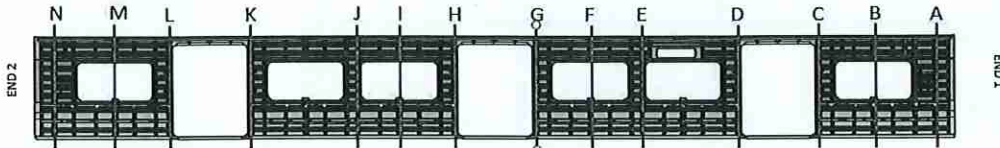
31

Project: PRASA
SI.CB2210.254.V30

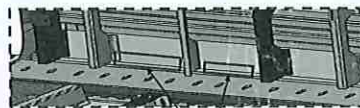
Date

07/11/2023

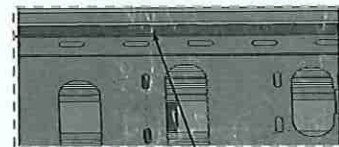
Specifications of Details for CBS measurement



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.



Detail F
Don't considering the reinforcement

GIBELA FM APPROVED FOR CONSTRUCTION
Mphahla Khanyiso
FITTING QUALITY
Signature 2024-03-15



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

31

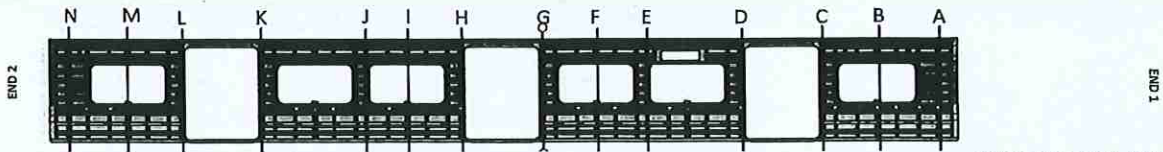
Project: PRASA

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Date

07/11/2023

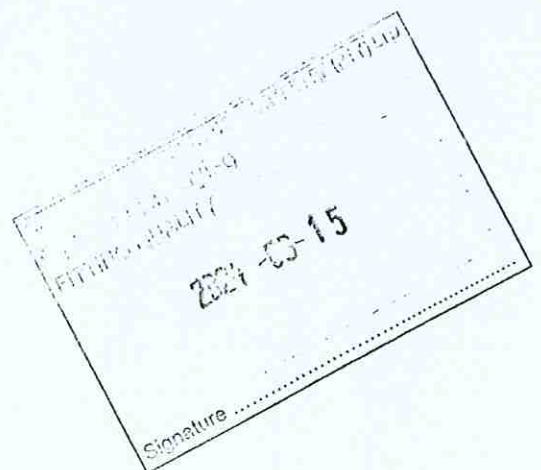
Specifications of Details for CBS measurement

PME Column LHS - RHS should be $\leq 2\text{MM}$ on each point.

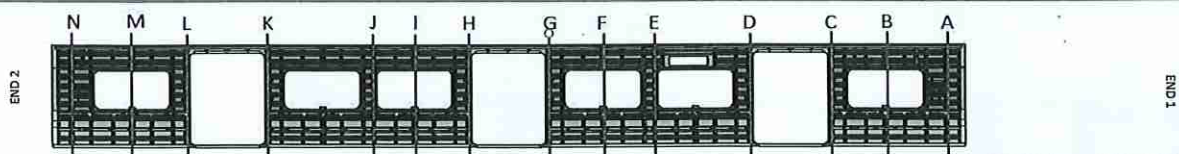
BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3269	3267	2	2408	2407	1
B	3266	3268	2	2406	2406	0
C	3269	3269	0	2405	2407	2
D	3268	3269	1	2406	2404	2
E	3263	3265	0	2405	2406	1
F	3264	3266	2	2406	2406	0
G	3269	3268	1	2405	2407	2
H	3270	3268	2	2405	2406	1
I	3265	3264	1	2404	2404	0
J	3266	3266	0	2405	2404	1
K	3268	3268	0	2407	2406	1
L	3269	3268	1	2405	2405	0
M	3268	3264	4	2406	2407	1
N	3266	3269	3	2407	2407	0

04/03/24



Specifications of Details for CBS measurement



PME Column LHS - RHS should be $\leq 2\text{MM}$ on each point.


AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3295	3296	1	2408	2408	0
B	3266	3268	2	2406	2407	1
C	3296	3295	1	2405	2406	1
D	3295	3297	2	2405	2405	0
E	3266	3266	0	2404	2406	2
F	3265	3265	0	2406	2405	1
G	3296	3294	2	2405	2405	0
H	3295	3295	0	2404	2404	0
I	3265	3264	1	2406	2405	1
J	3266	3266	0	2406	2407	1
K	3296	3295	1	2405	2405	2
L	3294	3294	0	2404	2405	1
M	3266	3269	3	2406	2406	0
N	3294	3295	1	2407	2408	1

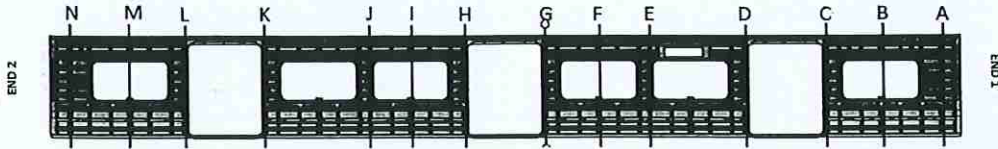
04/03/24

2024-03-15

Signature

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	
		CBS measurement	

BEFORE WELDING

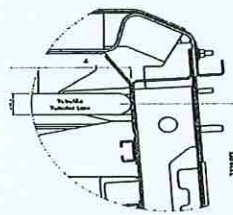
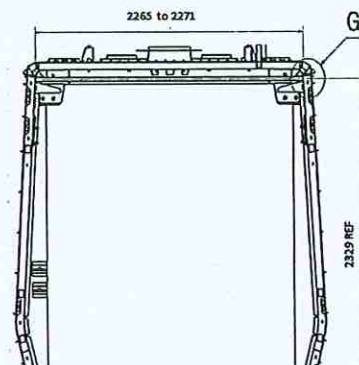


2270 to 2276

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



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



2265 to 2271

Detail 0
Consider ing the
ref all the points of the

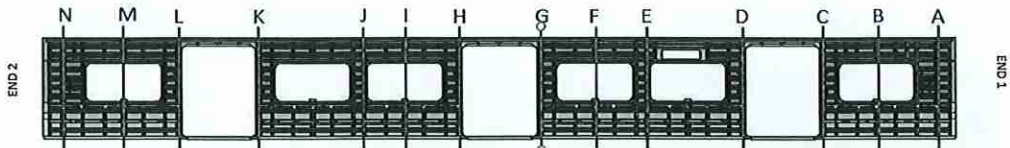
04/03/24

2024-03-15

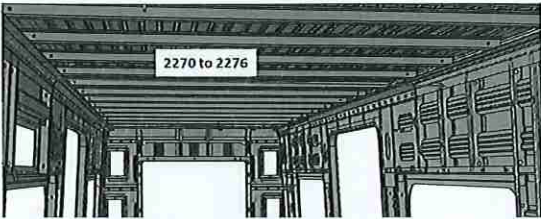
Signature

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	
CBS measurement			

AFTER WELDING



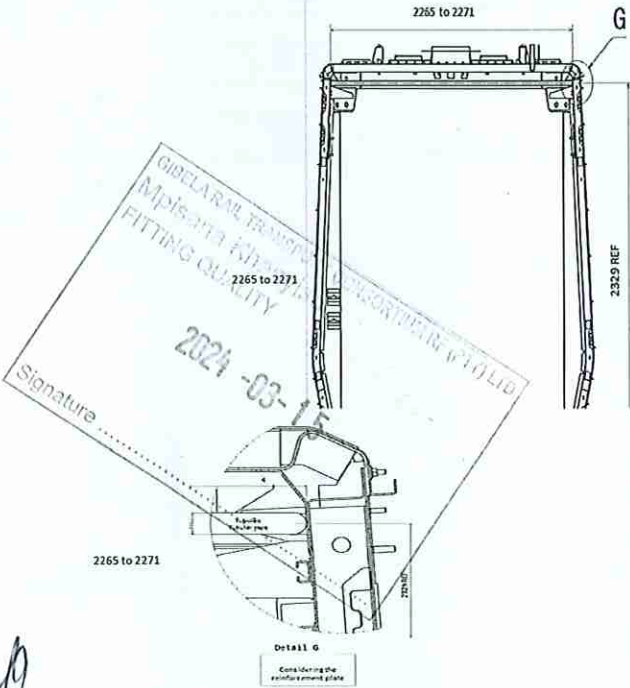
	2265 to 2271	2270 to 2276
A	2265	
B		2274
C	2269	
D	2268	
E		2276
F		2274
G	2268	
H	2268	
I		2275
J		2275
K	2268	
L	2271	
M		2275
N	2268	



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



Take measurement close to radius (considering reinforcement)



04/03/24



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

31

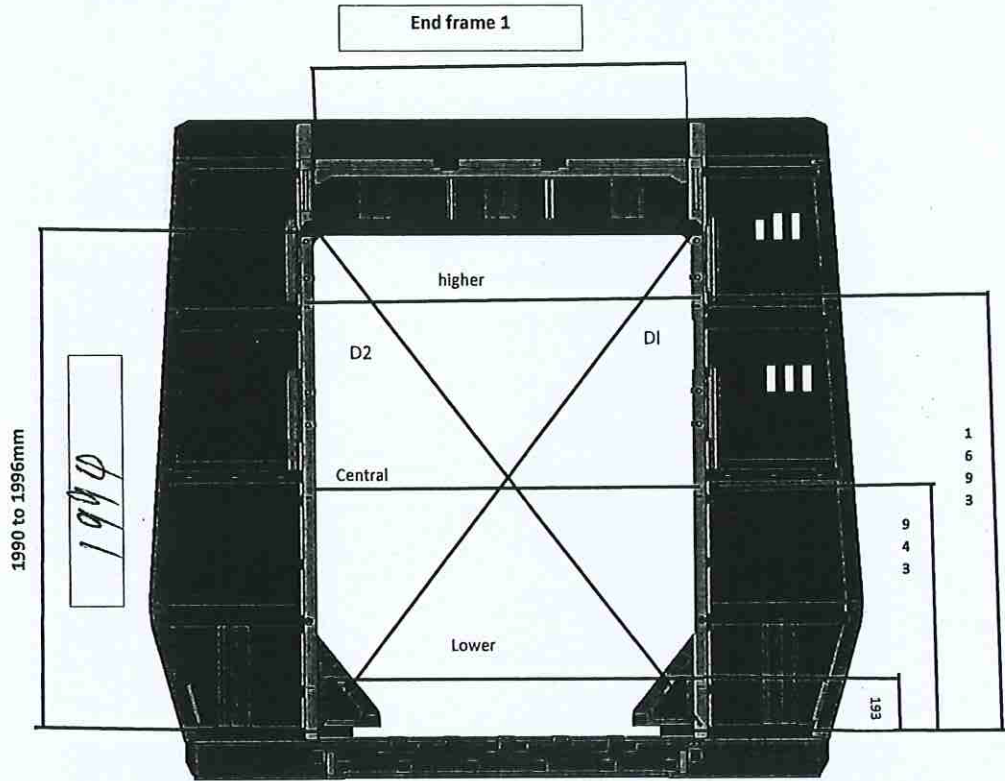
Project: PRASA

SI.CB2210.254.V30

Date

07/11/2023

Specifications of Details for CBS measurement



1380 to 1382 mm

DIAGONAL DIFFERENCE $D1-D2 \leq 3\text{mm}$

Higher Dimension

1387

D1

2413

Central Dimension

1387

D2

2414

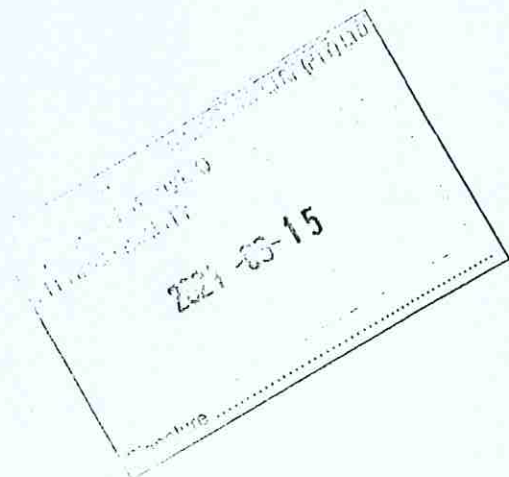
Lower Dimension

1387

D1-D2

1

04/03/24



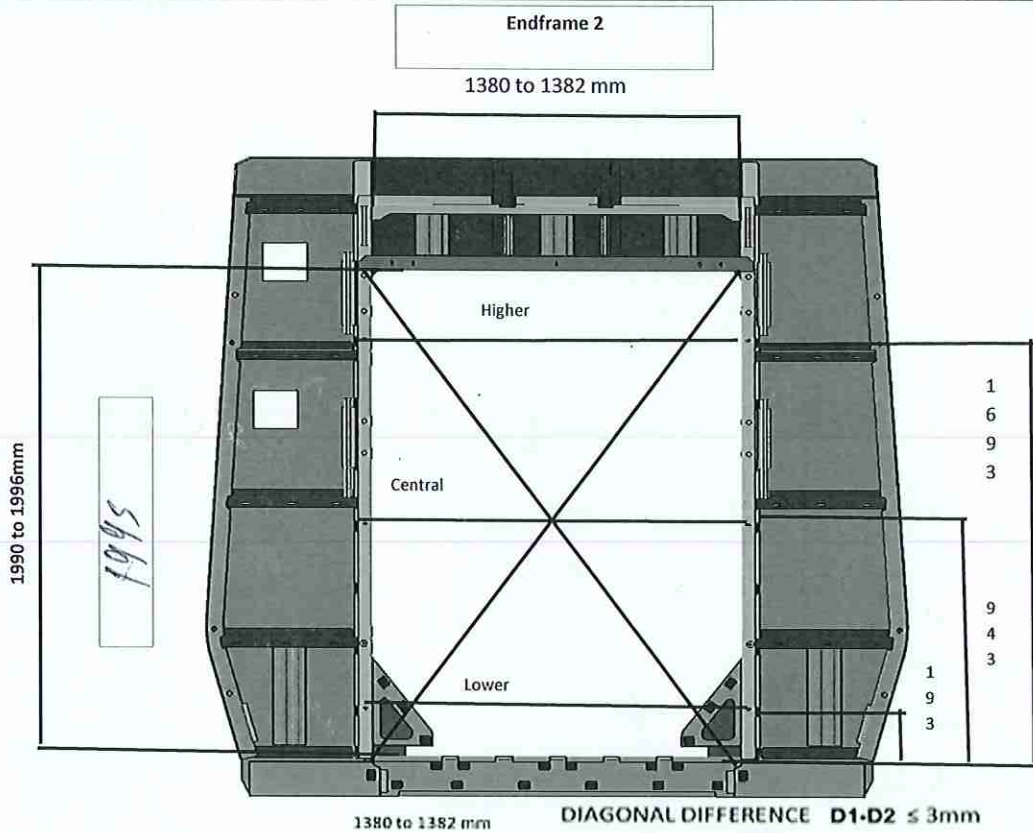


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.
31
Date
07/11/2023

Project: PRASA
SI.CB2210.254.V30

Specifications of Details for CBS measurement



Higher Dimension

1381

D1

24/13

Central Dimension

1381

D2

24/13

Lower Dimension


1380



D1-D2

0

2024-03-15

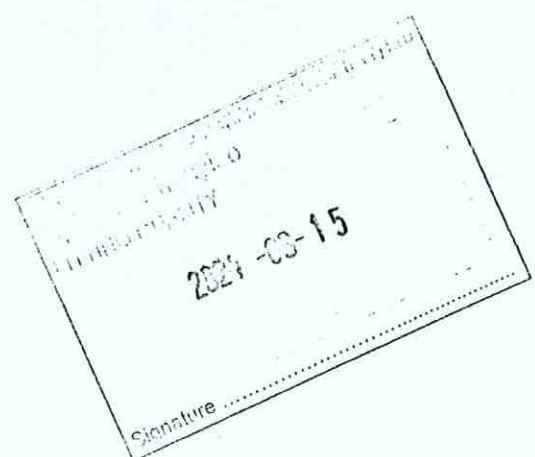
04/25/24

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Self Inspection - Final Result					
			DATE	NAME	SIGNATURE
HOLD POINT		(If activities are not complete, the missing activities must not impact the next stage)	04/03/24	LUNGA <small>Operations</small>	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	04/03/24	Ntoikoro <small>Industrial Quality</small>	
		There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)			
		There are non-conformities impact the quality of the product and there is no corrective action defined yet)			
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 M1,M3,M4 ASSEMBLY DTR30225487/2	Rev. 29	Project: PRASA SI.CB2220.250.V29	
		Date 28/10/2023		
Car: M1,M3&M4		NCR:		Work station: CB2220

Safety Related

I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car					Revision	Observation	TC	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	TC2					
DTR30225487/2				X		29	28-10-2023	X	N/A	 05-03-24

I.2 - Instruments Control


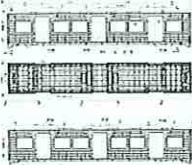


Monitoring and Measuring Instrument Control - Used for Special Process						
Instruments	Serial number	Calibration or Verification Validation Date	TC	Signature/Date (Manufacturing)	Signature/Date (Quality)	
Tubular,	22713	29/11/2024	X	05-03-24		
measuring tape	GIRTA029	30/03/2024	X	05-03-24		


1.3 Consumables

Welding Consumable Control - Used for Special Process					
Filler Material	Heat Number	Welding Process	TC	Signature/Date (Manufacturing)	Signature/Date (Quality)
308	231067	MIG	X	05-03-24	

2021-03-15

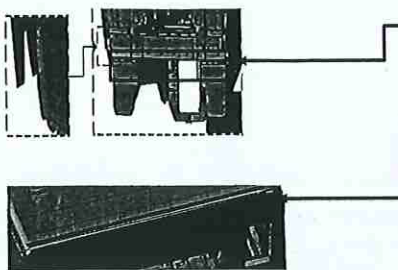
Signature

GIBELQ		CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2		Rev. 29 Date 28/10/2023	Project: PRASA SI.CB2220.250.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.CB2220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	PRA.CB2220.DTR30225487/2	✓		05-03-24 05/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓		05-03-24 05/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		03-03-24 03/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		05-03-24 03/03/24
05		Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓		05-03-24 05/03/24
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-016. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-016 and DTD0000210658.	✓		05-03-24 05/03/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max (t) Min-Max 10°C - 35°C Relative humidity Min - Max (t) 25% - 80%	Sealant Batch No: 1512 70-03 Exp Date: 10/03/24 Actuals Temperature: 21°C Humidity: 43%	✓		05-03-24 05/03/24
08	NA	Verification of sealant application in certain regions in the drawing.	AAD0001278566	✓		05-03-24 05/03/24
09		Verification of safety welds	Approved according to DTD000210658 reference and Self inspection	✓		05-03-24 05/03/24


	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
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		Date	
		28/10/2023	SI.CB2220.250.V29


II - Self Inspection - Items to Check

SEALANT APPLICATION




AREA 1 & 2 END 1

Operator (Name & sign): *Leroy* 

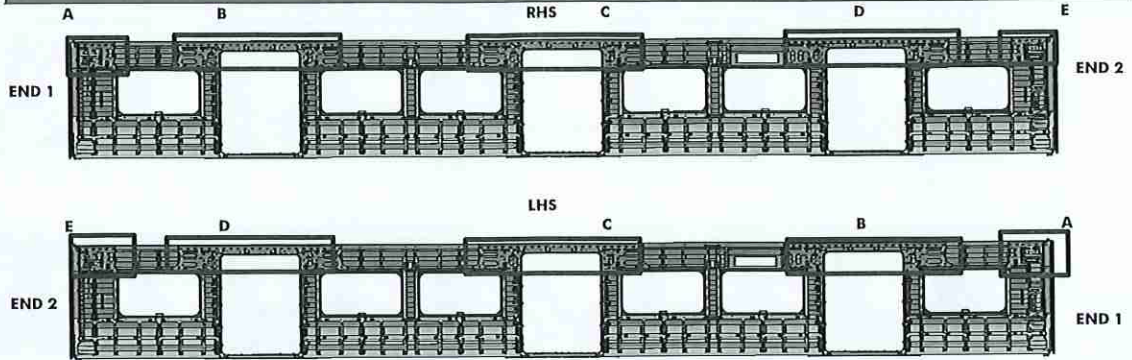
Operator (Name & sign): *Leroy* 

2021-03-15

Signature

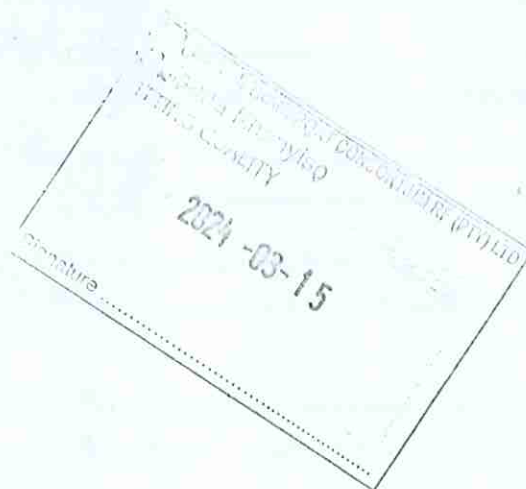
	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	


II - Self Inspection - Items to Check



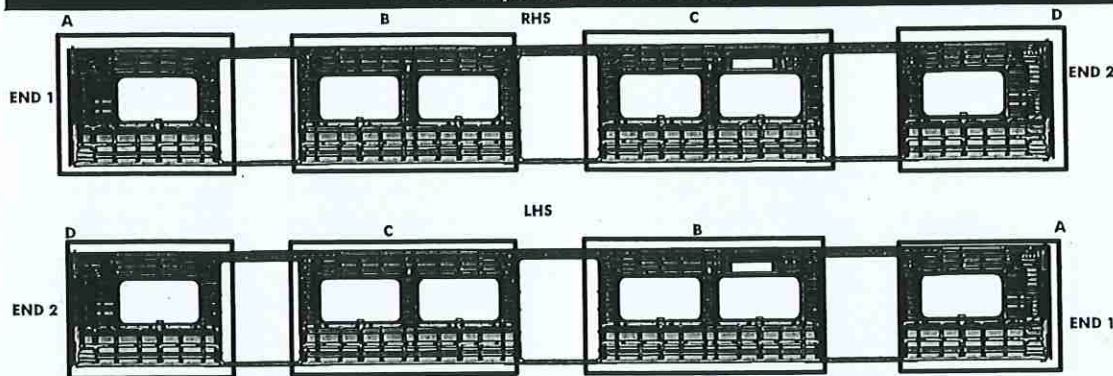
REINFORCEMENT WELDING

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



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
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		Date	SI.CB2220.250.V29
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II - Self Inspection - Items to Check



BRACKETING

INSTALLATION
C-RAILS: Operator: Priscilla Costa
Operator: _____
DOOR MECHANISMS: Operator: Tete
Operator: _____
TAPPING PADS Operator: Tete
Operator: _____


INSTALLATION & VERIFICATION
SEAT & LUGGAGE BRACKETS: Operator: ASADIA
Operator: Silvia
SEAT BRACKETS VERIFICATION: Operator: ASADIA
Operator: _____

WELDING

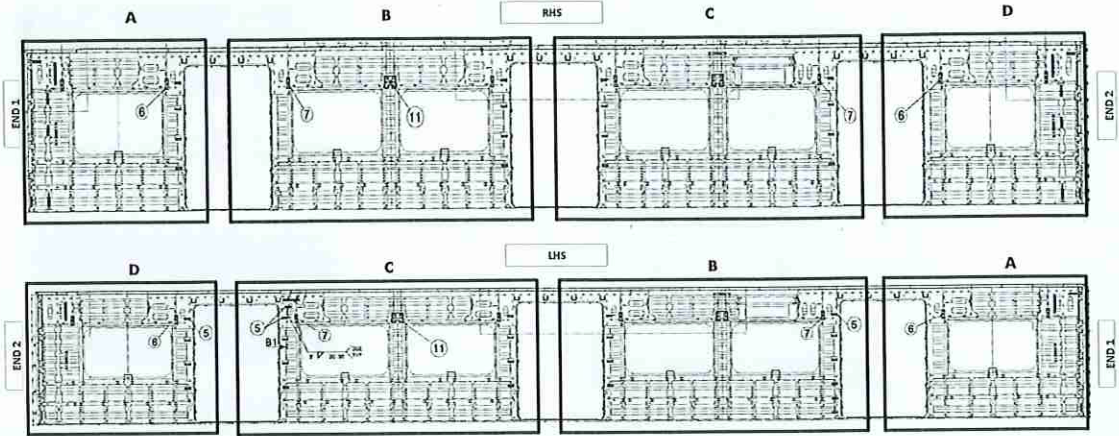
AREA	LHS	RHS
A (Seat brackets)	Operator (Name&sign): <u>Tete</u>	Operator (Name&sign): <u>Tete</u>
(C-rails, Luggage and earth bushes)	Operator (Name&sign): <u>Tete</u>	Operator (Name&sign): <u>Tete</u>
B (Seat brackets)	Operator (Name&sign): <u>Silvia</u>	Operator (Name&sign): <u>Silvia</u>
(C-rails, Luggage and earth bushes)	Operator (Name&sign): <u>Silvia</u>	Operator (Name&sign): <u>Silvia</u>
C (Seat brackets)	Operator (Name&sign): <u>Silvia</u>	Operator (Name&sign): <u>Silvia</u>
(C-rails, Luggage and earth bushes)	Operator (Name&sign): <u>Silvia</u>	Operator (Name&sign): <u>Silvia</u>
D (Seat brackets)	Operator (Name&sign): <u>Mmasueko Mah</u>	Operator (Name&sign): <u>Mmasueko Mah</u>
(C-rails, Luggage and earth bushes)	Operator (Name&sign): <u>Silvia</u>	Operator (Name&sign): <u>Mmasueko Mah</u>

ENDS

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

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			


M1/M3/M4 BRACKET INSTALLATION



QUANTITIES (M3/M4)


RHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	7		
	B	4		
	C	8		
	D	6		
SEAT BRACKETS	A	13		
	B	21		
	C	21		
	D	13		
EARTH BUSH	A	3		
	B	5		
	C	4		
	D	3		

ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: 

LHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	2		
	B	8		
	C	11		
	D	8		
SEAT BRACKETS	A	13		
	B	21		
	C	21		
	D	13		
EARTH BUSH	A	3		
	B	5		
	C	6		
	D	2		

ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: 

QUANTITIES (M1)

RHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	7		
	B	8		
	C	8		
	D	6		
SEAT BRACKETS	A	13		
	B	21		
	C	21		
	D	13		
EARTH BUSH	A	2		
	B	4		
	C	5		
	D	3		

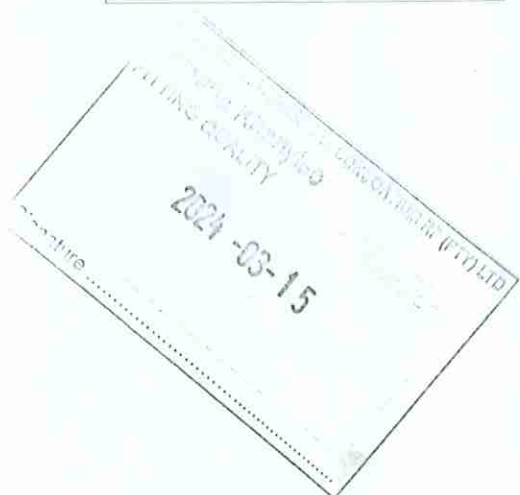
ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: _____

LHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	2		
	B	10		
	C	11		
	D	6		
SEAT BRACKETS	A	13		
	B	21		
	C	21		
	D	13		
EARTH BUSH	A	3		
	B	7		
	C	6		
	D	2		

ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: _____



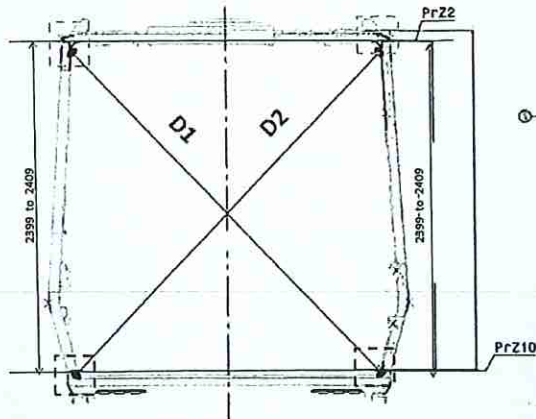


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

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29
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SI.CB2220.250.V29

Specifications of Details for CBS measurement



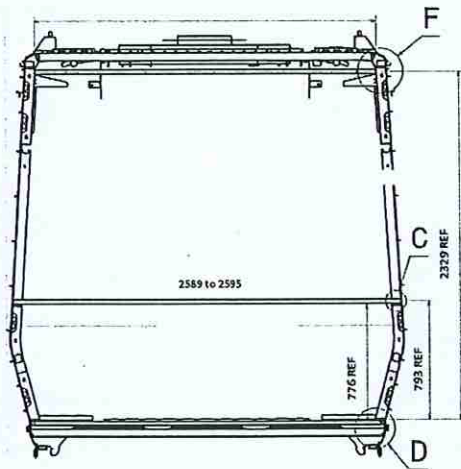
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



2024-03-15

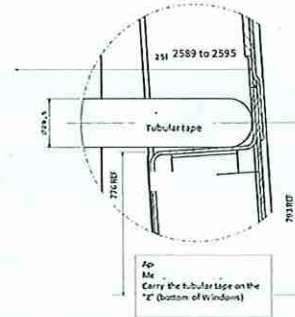
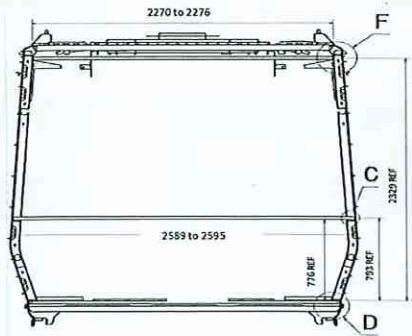


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

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29
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28/10/2023

Project: PRASA
SI.CB2220.250.V29

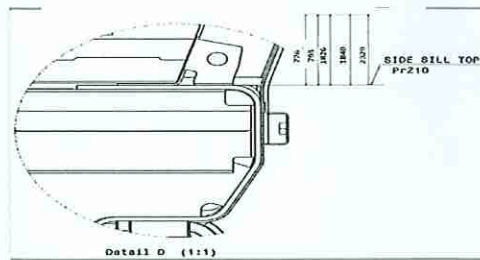
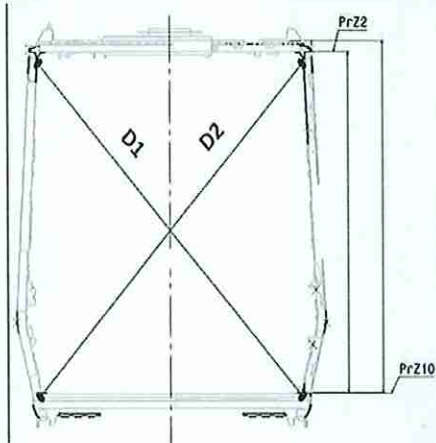
CBS measurement



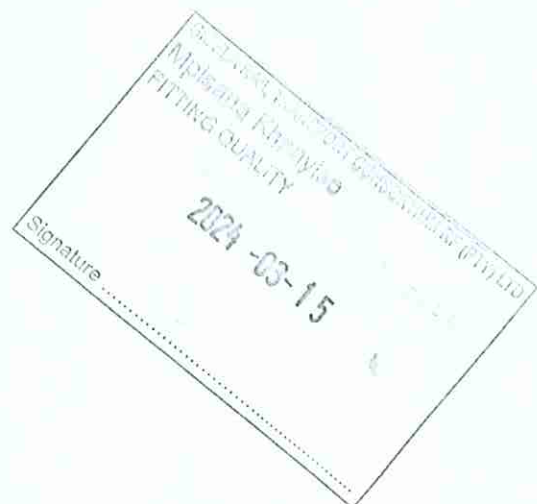
Detail C




Take measurement close to
radius

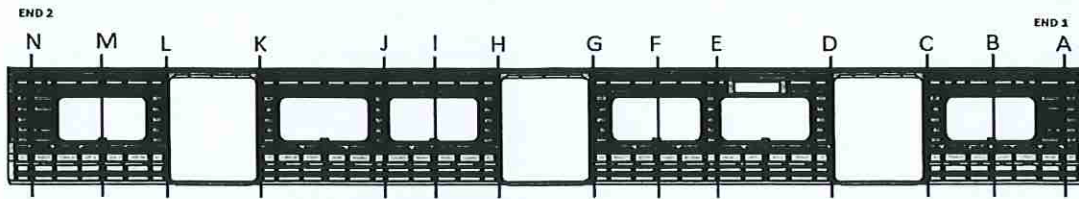


Detail D (1:1)




	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
		29	
		Date	
		28/10/2023	SI.CB2220.250.V29

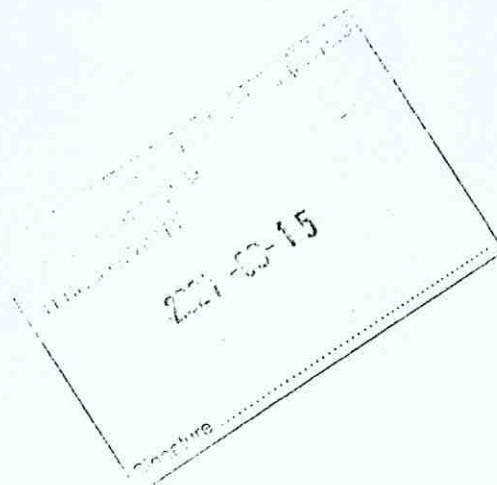
CBS measurement




BEFORE WELDING

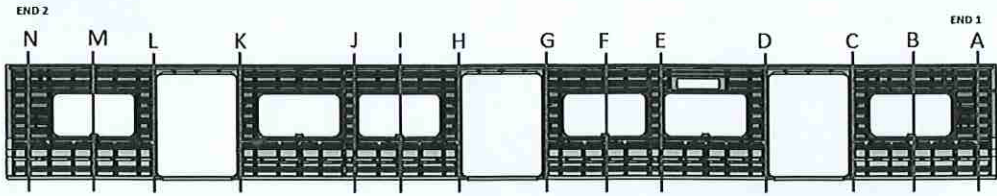
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3300	3300	0	—
B	3269	3266	3	—
C	3296	3297	1	—
D	3297	3299	2	—
E	3262	3266	4	—
F	3262	3267	5	—
G	3295	3300	5	—
H	3294	3299	5	—
I	3262	3269	5	—
J	3265	3269	4	—
K	3299	3300	1	—
L	3300	3299	1	—
M	3268	3267	1	—
N	3300	3300	0	—


05-03-24




	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	


CBS measurement



AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3200	3300	0	2598
B	3270	3265	5	2589
C	3300	3295	5	2589
D	3300	3300	0	2595
E	3270	3265	5	2593
F	3263	3266	3	2590
G	3299	3299	0	2592
H	3299	3296	3	2593
I	3268	3264	4	2594
J	3268	3274	6	2594
K	3309	3295	14	2595
L	3309	3294	15	2594
M	3269	3263	6	2589
N	3303	3300	3	2595

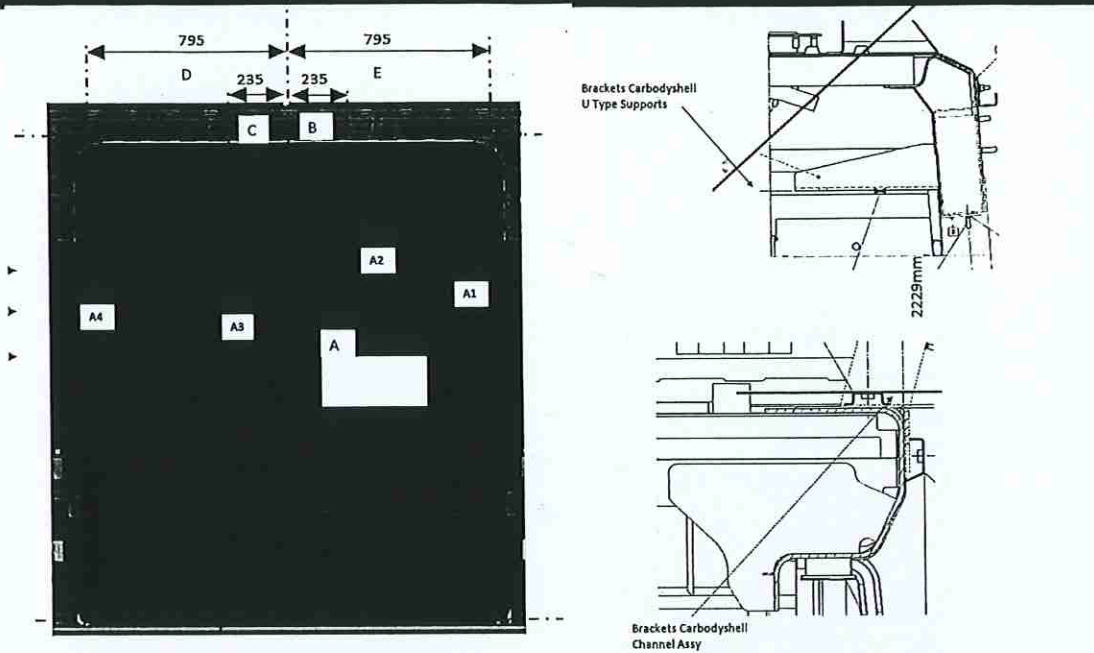

05-03-24


INSPECTION
QUALITY

2024-03-15

Signature

Specifications of Details for CBS measurement CB1220



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

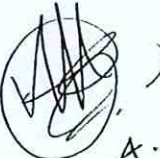
DOOR 2 - LHS		
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2231
A3	2230 to 2232	2231
A4	2230 to 2232	2232
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

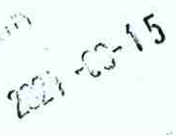
DOOR 2 - RHS		
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2232
A4	2230 to 2232	2231
B	234 to 236	235
C	234 to 236	235
D	794 to 796	795
E	794 to 796	795

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

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

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


05-03-24.


Signature

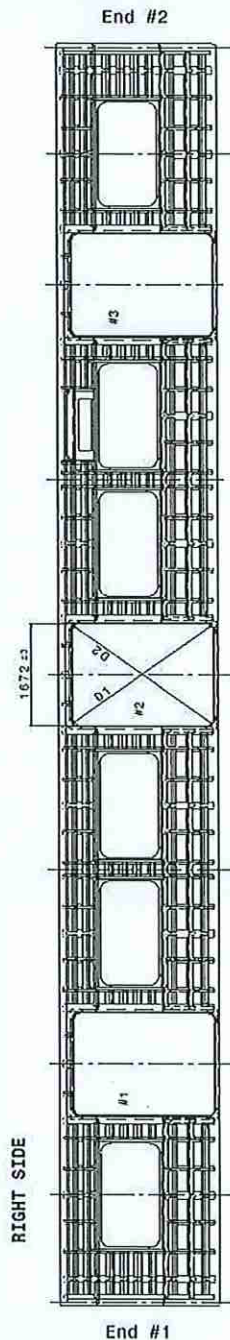


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

Rev.
29
Date
28/10/2023

Project: PRASA
SI.CB2220.250.V29

Specifications of Details for CBS measurement CB1220

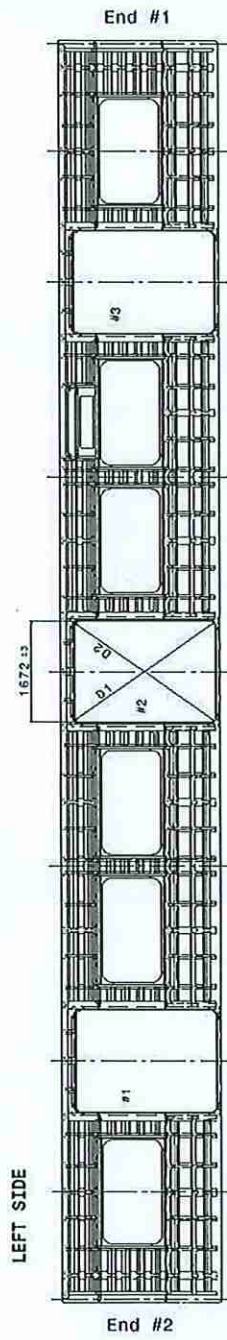


Doors diagonal D1-D2 maximum difference ≤ 4mm

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

Doors length = 1672 ±3mm

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



Doors diagonal D1-D2 maximum difference ≤ 4mm


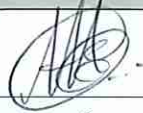

	#1	#2	#3
D1	2747	2744	2744
D2	2745	2746	2747
D1-D2	2	2	3

Doors length = 1672 ±3mm

	#1	#2	#3
HIGHER DIMENSION	1676	1674	1672
CENTRAL DIMENSION	1673	1673	1671
LOWER DIMENSION	1671	1671	1671

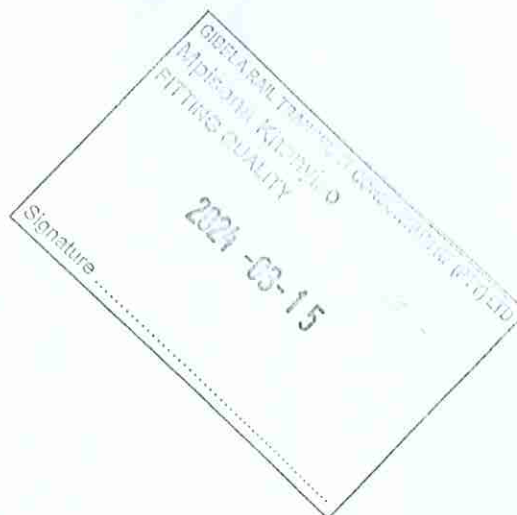
Handwritten signature and date: 05-0-24

GIBEL TRADING COMPANY LTD.
Mphahlele, KwaZulu-Natal
FITTING QUALITY
2024-03-15
Signature.....

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRASA			
		29				
		Date	SI.CB2220.250.V29			
		28/10/2023				
Self Inspection - Final Result						
Is the car good to advance to the next workstation/process? (Approval of Operations Manager and Industrial Quality)		DATE	NAME	SIGNATURE		
HOLD POINT	GO	(if activities are not complete, the missing activities must not impact the next stage!)	05-03-24	ASAVIDIA Operations		
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party)	05/03/24	Ntkaw 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	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.


APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 		
				TC1	M4	M1	M2	M3	TC2				
<input type="checkbox"/>	DT00000225487	AAD0001278556	CARBODYSHELL M1,M3,M4 ASSEMBLY	CB2230		X	X			X		PRA.CB2230.DT000002 25487.V20	YES
<input type="checkbox"/>													
<input type="checkbox"/>													
	DATE	MODIFICATION CONTENT		RESPONSIBLE	NAME	DATE							
0	2018/08/02	GIBELA NEW CREATION		APPROVER	Philipe Marques	2018/08/02							
				CHECKER	Nosizo Pindela	2018/08/02							
				COMPILER	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 Motama	2018/05/07							
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							
				REVISED BY	Nosizo Pindela	13/03/2019							
10	23/08/2019	New Baseline 10.2.5		APPROVER	Itumeleng Modiba	23/08/2019							
				CHECKER	Nosizo Pindela	23/08/2019							
				REVISED BY	Nosizo Pindela	23/08/2019							
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 change 10.3		APPROVER	Timothy Maimela	19/04/2021							
				CHECKER	Bongane Masina								
				REVISED BY	Bongane Masina								
25	20/02/2022	New Baseline change 10.3.1		APPROVER	Collins Mbombhi	20/02/2022							
				CHECKER	Andani Muthelo								
				REVISED BY	Andani Muthelo								
26	14/06/2022	Update minimum temperature requirement for sealant application		APPROVER	Collins Mbombhi	14/06/2022							
				CHECKER	Andani Muthelo								
				REVISED BY	Andani Muthelo								
27	26/07/2022	Threshold measurements addition		APPROVER	Collins Mbombhi	26/07/2022							
				CHECKER	Andani Muthelo								
				REVISED BY	Andani Muthelo								
28	17/10/2022	Added traceability of sealant application		APPROVER	Collins Mbombhi	17/10/2022							
				CHECKER	Ntokozo Zwane								
				REVISED BY	Amogelang Mohlampe								
29	14/04/2023	Added sealant batch number & welding consumables traceability		APPROVER	Vanessa Ntuli	14/04/2023							
				CHECKER	Ntokozo Zwane								
				REVISED BY	Amogelang Mohlampe								
30	06/11/2023	Added threshold traceability for boiler makers and welders		APPROVER	Ngobeni Tyson	06/11/2023							
				CHECKER	Andani Muthelo								
				REVISED BY	Ntokozo Zwane								
TRAINSET	CAR	OPERATOR NAME & ALPS NO		DATE	SELF INSPECTION NUMBER		PAGES						
216	M04	EMMANUEL 410478		06/03/24	SI.CB2230.256.V29		12						

Signature: 

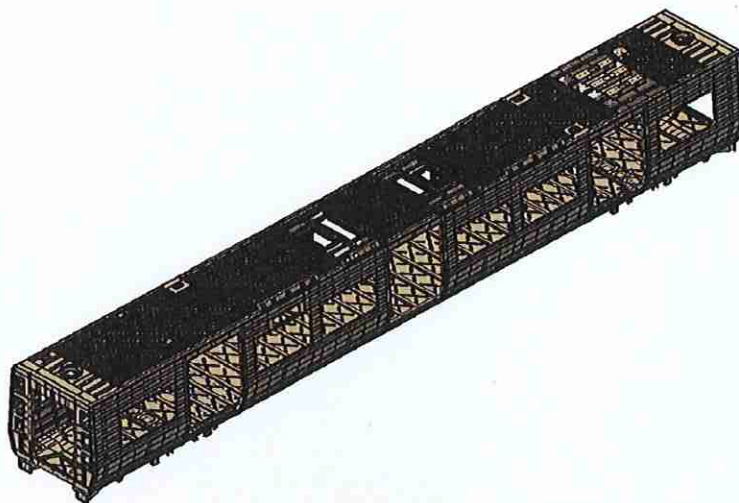
2024-03-15

Andani Muthelo
FITTING QUALITY

	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 30	Project: PRASA SI.CB2230.256.V29
		Date 06/11/2023	
Car:	NCR:	Work station: CB2230	



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
	M1	M2	M3	M4	TC2							
PRA.CB2230.DT00000225487				X		30		X		N/A	Emmanuel 06/03/24	06/03/24

I.2 - Instruments Control

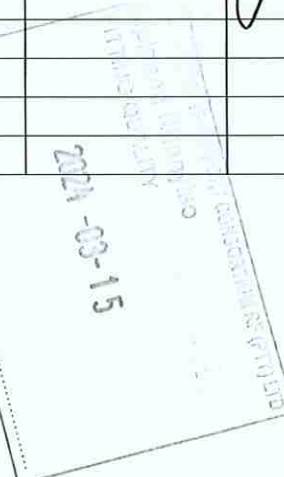
Monitoring and Measuring Instrument Control - Used for Special Process


Instruments	Serial number	Calibration or Verification Validation Date	OK	NOK	Signature/Date (Operations)	Signature/Date (Quality)
Ruler	4180394	27/04/24	X			
Combination Square	41853022	05/04/24	X		Emmanuel 06/03/24	06/03/24
Huber	22713	26/06/24	X			

1.3 Consumables

Welding Consumable Control - Used for Special Process

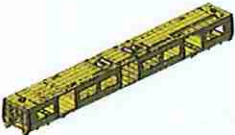
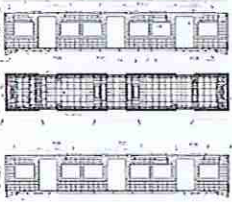
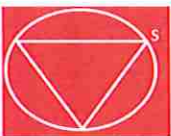
Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
308LSi	E221067	MIG	X		MAJ 06/03/24	06/03/24



	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 30	Project: PRASA SI.CB2230.256.V29
		Date	
		06/11/2023	

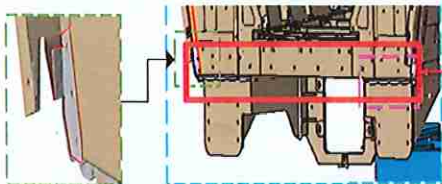
II - Self Inspection - Items to Check

II.1 - Items to check

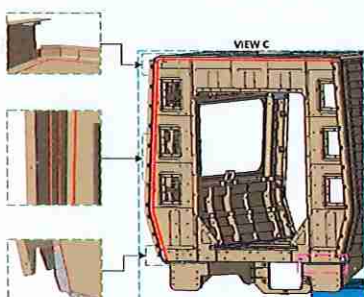
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Rework	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1230.DT00000225487 Verification of fitment for all brackets.	PRA.CB1230.DT00000225487	OK			06/03/24	06/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD00000210675	OK				06/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	OK			06/03/24 Thapi Mdsda	06/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	OK			06/03/24 Thapi Mdsda	06/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	OK			06/03/24 Thapi Mdsda	06/03/24
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 fillet sampling as described in DTD00000210658.	As the welding procedure IND-SAL-WMS-018 and DTD00000210658.	OK			06/03/24 Thapi Mdsda	06/03/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: <div> <div>Temperature Min - Max (I) Min-Max</div> <div>10°C - 35°C</div> <div>Relative humidity Min - Max (I)</div> <div>25% - 80%</div> </div>	LOT FA Sealant Batch No: 23324250 Exp Date: 03/24 Actuals Temperature: 20°C Humidity: 28%	OK			06/03/24	06/03/24
08	N/A	Verification of sealant application on the roof and sidewall finishers.	Sealant must be: -Applied straight and even -Free of gaps, cracks, damage and debris (flashes, dirt, dust) Refer to Annexure B	OK			06/03/24	06/03/24
09	N/A	Verification of sealant application in certain regions in the drawing.	AAD0001278566	OK			06/03/24	06/03/24

II - Self Inspection - Items to Check

AREA 1



AREA 2 (VIEW C)



END 2 SEALANT

OPERATOR
(Name & sign):

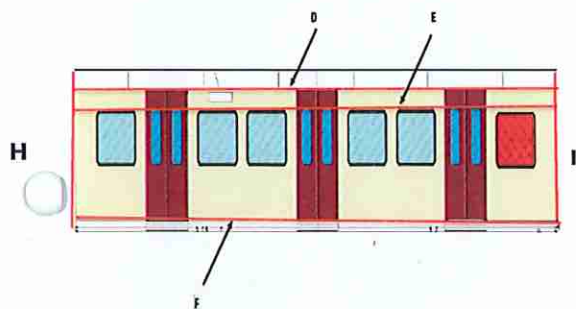
Thami (Signature)

OPERATOR
(Name & sign):

Lenny (Signature)

OPERATOR
(Name & sign):

Lenny (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):

Lerato (Signature)

Lerato (Signature)

Operator (Name & sign):

Boity (Signature)

Boity (Signature)

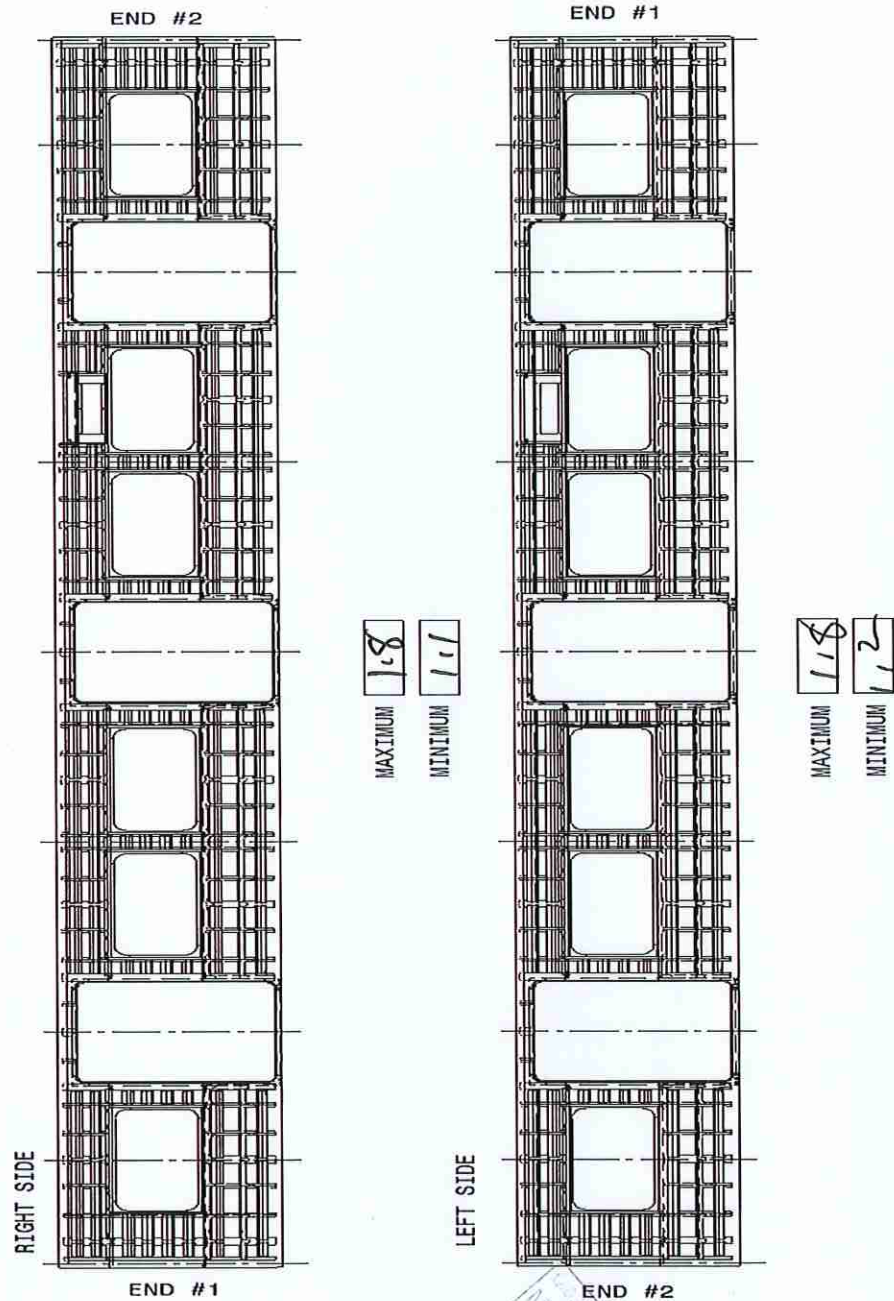
Operator (Name & sign):

Operator (Name & sign):

Operator (Name & sign):

Specifications of Details for CBS measurement CB1230

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



Signature

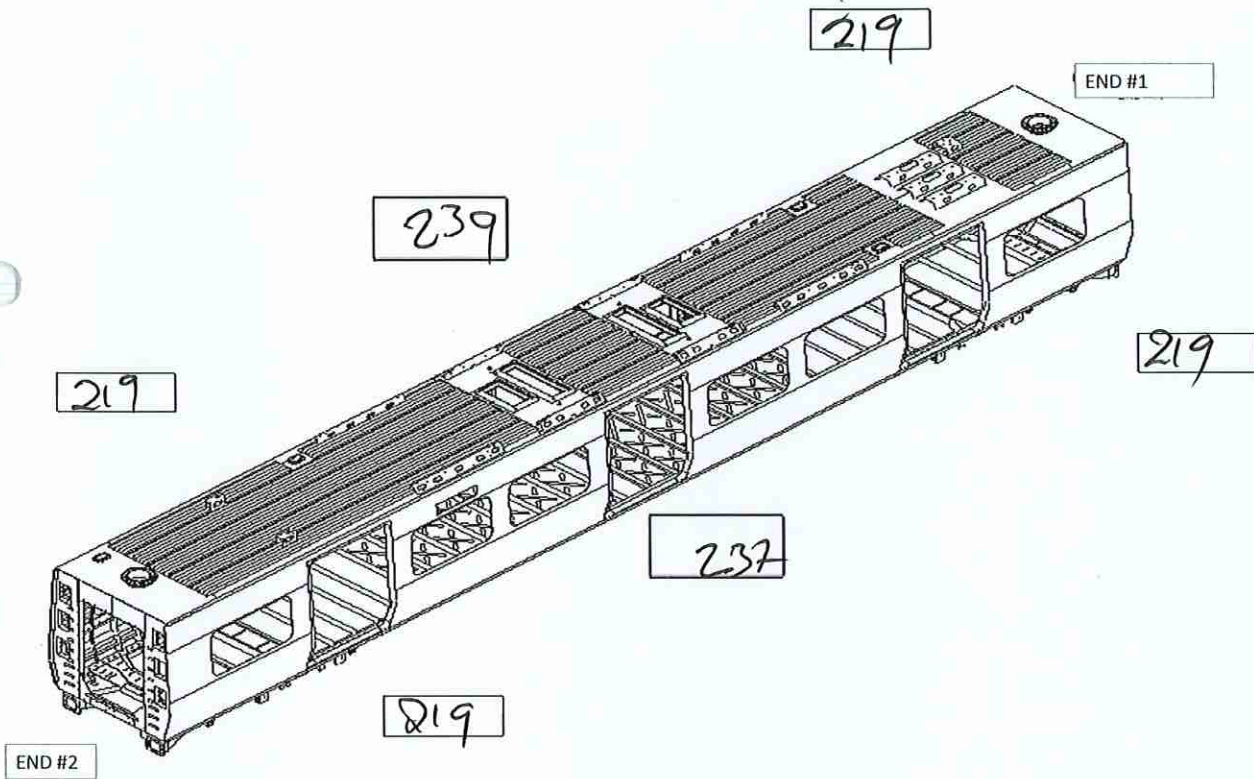
2024-03-15

Alphonsa Pimenta

FITTING QUALITY

Specifications of Details for CBS measurement CB1230

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



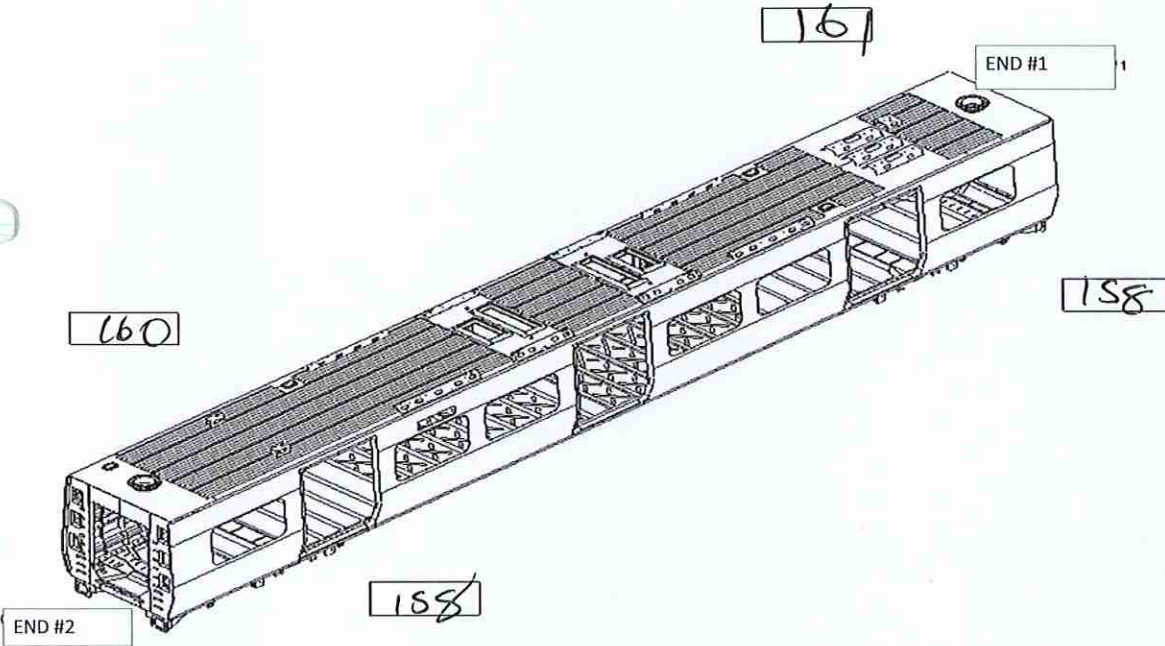
MEASURED CAMBER VALUES

RIGHT i1 18
LEFT a1 20

Signature.....
2024-03-15
GIBELA-PRASA-2024-03-15
Mipiana 1000000000
FITTING QUALITY

Specifications of Details for CBS measurement CB1230

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



TWIST FOUND ON END 1

TRANVERSE

2

LONGITUDINAL

1

TWIST FOUND ON END 2

TRANVERSE

3

LONGITUDINAL

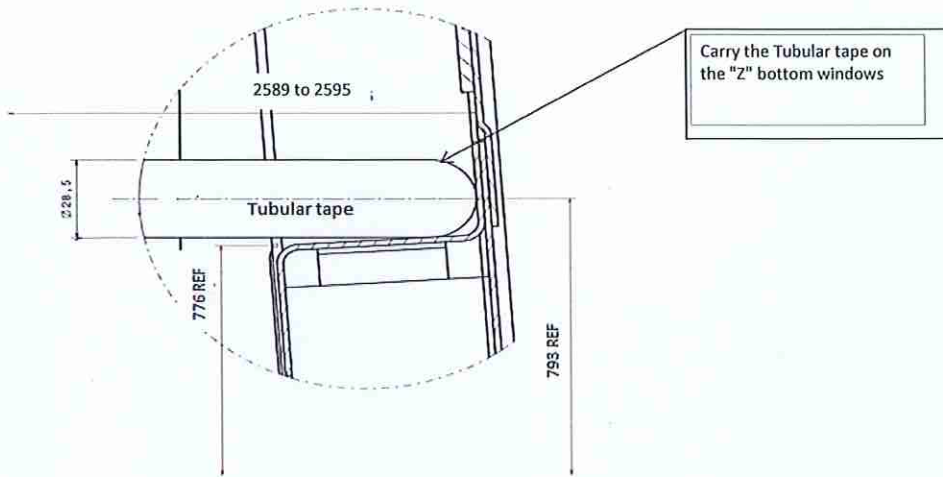
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Signature

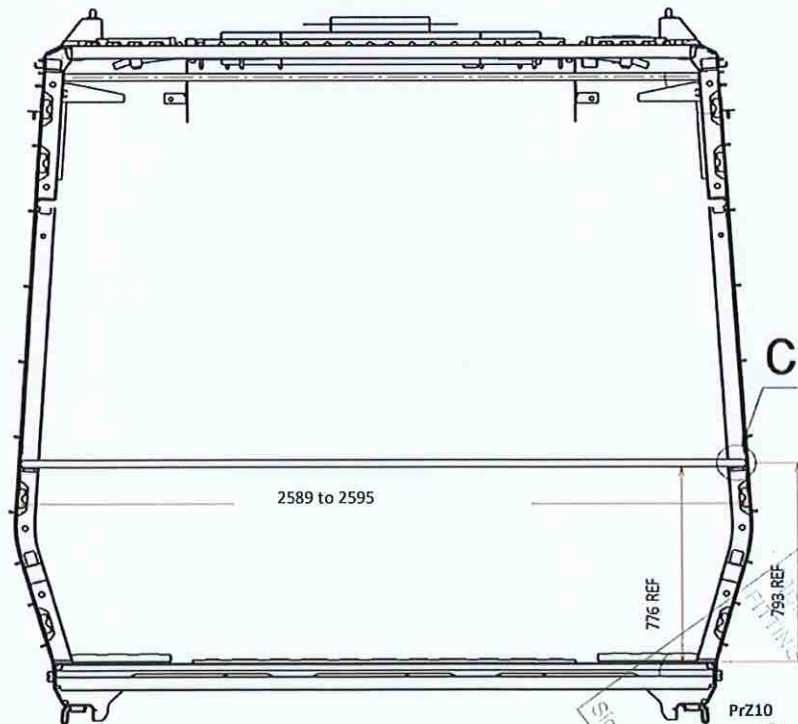
2024-03-15

GIBELA - TRAVEL & CONSTRUCTION
Nipitana Pichayiso
FITTING QUALITY


Specifications of Details for CBS measurement CB1230



Detail C



Signature.....
2024-03-15
GIBELCO PRASA
FITTING QUALITY

	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 30	Project: PRASA SI.CB2230.256.V29
		Date	
		06/11/2023	

Specifications of Details for CBS measurement

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

II.2 - Check List REX

Check List Items

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

Signature

2024-03-15

Signature

2024-03-15

Quality

Self Inspection - Final Result

In case of "NO GO", describe blocking problems

Quality

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