


PRASA PROJECT




APPLICABLE FROM TRAINSET 100+ 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

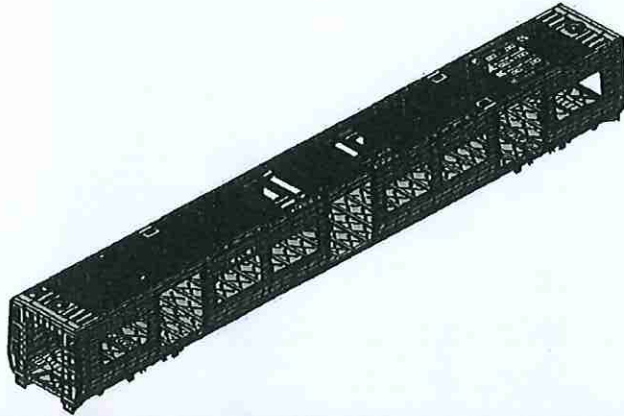
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 	
				TC1	M4	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR30225487/3	AAD0001278556	CARBODYSHELL M1 ASSEMBLY	CB1210							PRA.CB1210.DTR30225487/3.V25	YES
<input type="checkbox"/>												

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 CB1210	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	
			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	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021
			CHECKER	Mpho Mulaudzi	
			REVISED BY	Mpho Mulaudzi	
25	19/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi collins	19/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlampe Amogelang	
			REVISED BY	Mohlampe Amogelang	
27	27/07/2023	Added verification of loaded parts	APPROVER	Ngobeni Tyson	27/07/2023
			CHECKER	Zwane Ntokozo	
			REVISED BY	Mohlampe Amogelang	
28	07/11/2023	Addition of welding traceability	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Andani Muthelo	
			REVISED BY	Ntokozo Zwane	

TRAINSET	CAR	OPERATOR NAME& ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES
214	M1	LUNGA 471497	23/02/24	SI.CB1210.254.V28	17

	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
		Date 07/11/2023	

Car: M1	NCR:	Work station: CB1210
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I - Documentation and Instruments Control

1.1 - Documentation Control

Document	Type of car						Revision	Observation	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TCT	M1	M2	M3	M4	TCT						
DTR30225487/3		X					28		✓		<i>[Signature]</i>	<i>[Signature]</i>

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 (Manufacturing)	Signature/Date (Quality)
TUBULAR	22713	04/10/23	✓		<i>[Signature]</i> 23/02/24	<i>[Signature]</i>
30 M TAPE	61870084	23/03/31	✓		<i>[Signature]</i> 23/02/24	<i>[Signature]</i>
LASER TAPE	125425924	08/01/24	✓		<i>[Signature]</i> 23/02/24	<i>[Signature]</i>

1.3 Consumables

Welding Consumable Control - Used for Special Process












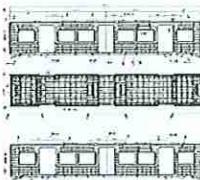




Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
AUT ROD 308LSI	E220880	MIG	✓		<i>[Signature]</i> 23/02/24	<i>[Signature]</i>
ER 309 LSI	318394	MIG	✓		<i>[Signature]</i> 23/02/24	<i>[Signature]</i>

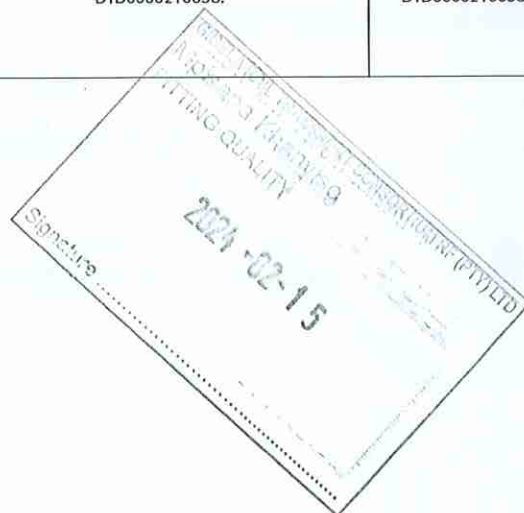
GIBELA RAIL TRANSPORT & INFRASTRUCTURE CONSORTIUM RF (PTY) LTD
Mpisana Khanyiso
FITTING QUALITY
2024-02-15
Signature


	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
		Date 07/11/2023	

II - Self Inspection - Items to Check

II.1 - Items to check





Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Review	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe)	DT00000311225	✓			 23/02/24	 23/02/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓			 23/02/24	 23/02/24
03	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	✓			 23/02/24	 23/02/24
04	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓			 23/02/24	 23/02/24
05		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓			 23/02/24	 23/02/24
06		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	✓			 23/02/24	 23/02/24
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.	✓			 23/02/24	 23/02/24




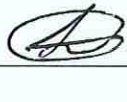


	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
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Welder Traceability			

Roof ring welds



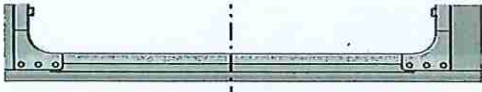
<div>LHS</div>	
Boiler maker (Name & Sign): <u>Justice </u>	Welder (Name & Sign): <u> Sign</u>
<div>RHS</div>	
Boiler maker (Name & Sign): <u>SEAN </u>	Welder (Name & Sign): <u>Sr  Sign</u>



END 1



<div>LHS</div>	
Boiler maker (Name & Sign): <u>Justice </u>	Welder (Name & Sign): <u>Sr  Sign</u>
<div>RHS</div>	
Boiler maker (Name & Sign): <u>SEAN </u>	Welder (Name & Sign): <u>Sr  Sign</u>

END 2


Door ring welds



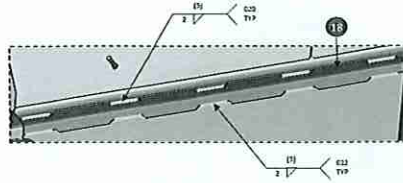
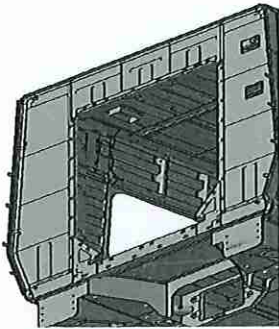
<div>LHS</div>
Boiler maker (Name & Sign): <u>Inno </u>
Welder (Name & Sign): <u>THABANG </u>



<div>RHS</div>
Boiler maker (Name & Sign): <u>Inno </u>
Welder (Name & Sign): <u>THABANG </u>

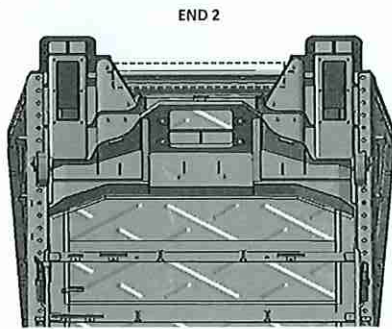
GIBELA PORT CONSTRUCTION (PVT) LTD
Mphahlele Khenyiso
FITTING SUPERVISOR
2024-02-15
Signature

	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
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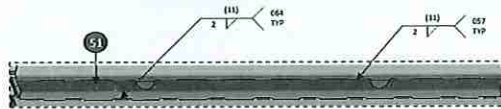
EUF Reinforcement Plates





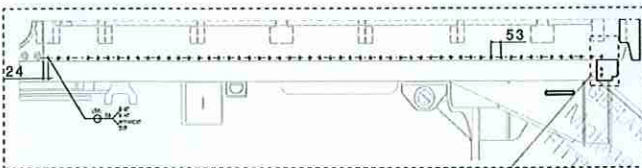
END 1
Boiler maker (Name & Sign): TUMELA 
Welder (Name & Sign): Wilson  22/02/24

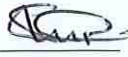


Underneath the CAR




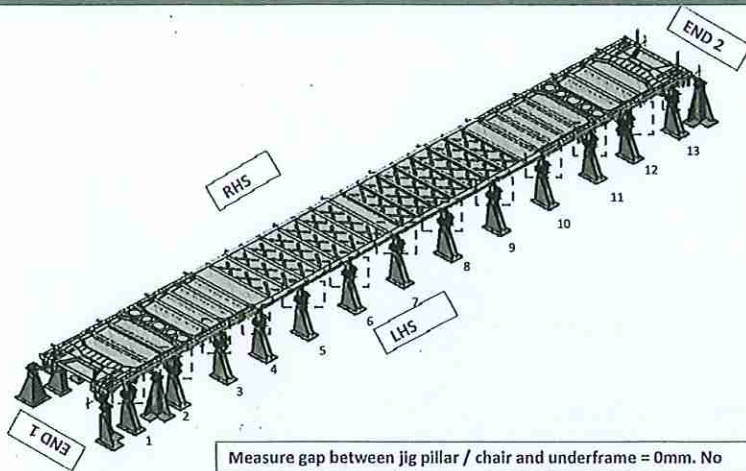
END 2
Boiler maker (Name & Sign): Innocent 
Welder (Name & Sign): THABANG 



FEDOLI
OPERATOR: SIPHOKAZI 

Signature
2024-02-15


	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
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		Specifications of Details for CBS measurement	



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

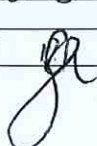
After loading and clamping
Fill in the gap found on each jig pillars / chair and underframe should be 0mm.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side	0	0	0	1	0	0	0	0	2	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	0	0	1	0	0

Signature Operations:  Date: 23/02/24

After Welding.
Fill in the gap found on 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 Industrial Quality:  Date: 23/02/24

GIBELA RAIL TRANSPORT DOCKING (PTY) LTD
Mphahlele Khanyiso
FITTING QUALITY
2024-02-15
Signature

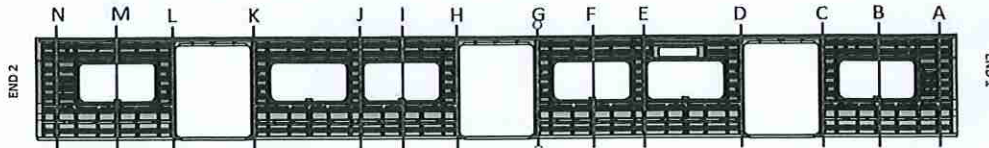


CARBODYSHELL M1 ASSEMBLY DTR30225487/3

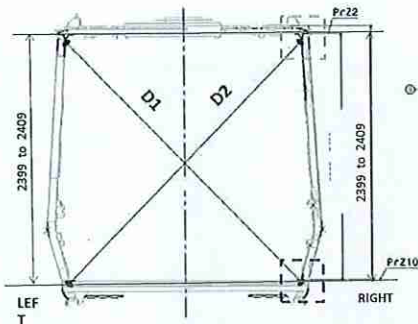
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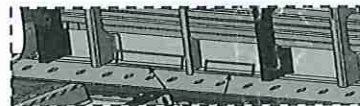
Specifications of Details for CBS measurement



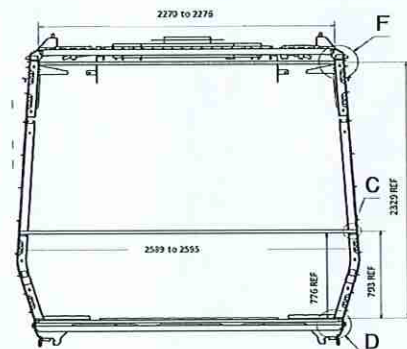
9



Measurement positions on roof rail and sidewall omega corner.



Measurement positions on sidewall and side sill corner.

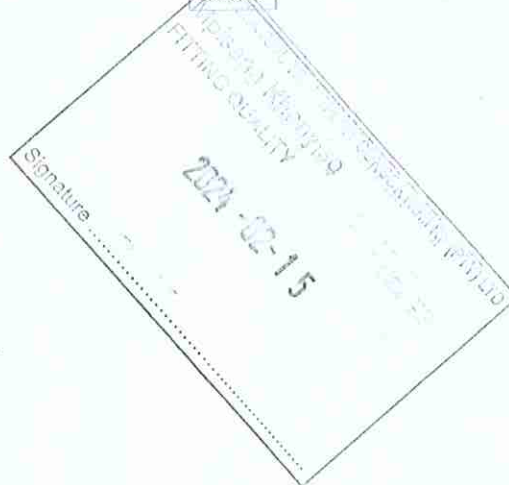


Reinforcement area measurement positions on roof reinforcement area.



Detail F

Don't consider the reinforcement





CARBODYSHELL M1 ASSEMBLY DTR30225487/3

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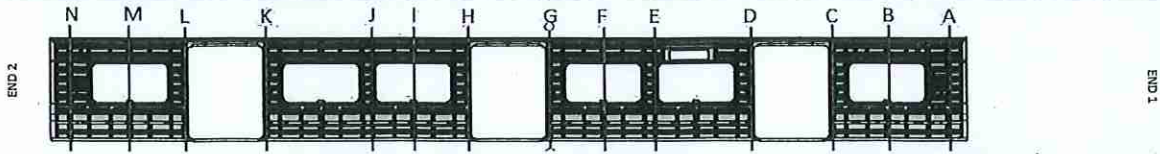
Date

07/11/2023

Project: PRASA

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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	3268	3268	0	2408	2408	0
B	3266	3267	1	2406	2405	1
C	3269	3268	1	2404	2406	2
D	3268	3269	1	2405	2404	1
E	3266	3266	0	2407	2406	1
F	3266	3264	2	2405	2405	0
G	3267	3267	0	2406	2404	2
H	3268	3268	0	2405	2406	1
I	3265	3266	1	2404	2404	0
J	3266	3266	0	2406	2405	1
K	3269	3262	7	2405	2407	2
L	3267	3267	0	2404	2406	2
M	3268	3268	3	2407	2407	0
N	3266	3267	1	2406	2408	2

10/11/23
25/08/24
2024-02-15
Signature

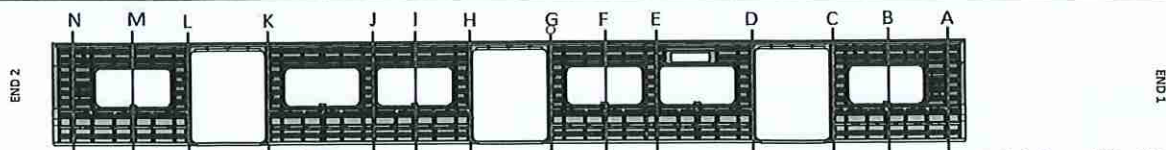
LABORATORY TRANSPORT CONSORTIUM (PT) LTD
Mphahlele Khanyiso
QUALITY



CARBODYSHELL M1 ASSEMBLY DTR30225487/3

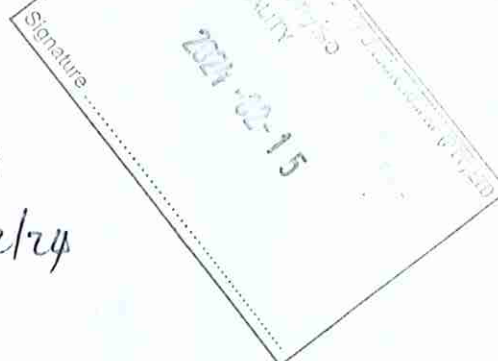
Rev.
28
Date
07/11/2023Project: PRASA
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Specifications of Details for CBS measurement

PME Column LHS - RHS should be
≤ 2MM on each point.

AFTER WELDING

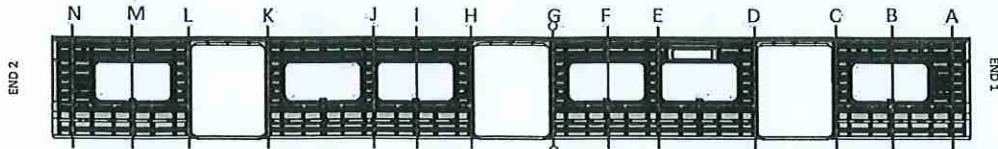
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3296	3296	0	2405	2407	2
B	3266	3268	2	2406	2406	0
C	3294	3295	1	2404	2405	1
D	3294	3295	1	2405	2405	2
E	3265	3265	0	2407	2406	1
F	3265	3266	1	2405	2405	0
G	3297	3295	2	2404	2406	2
H	3295	3295	0	2406	2404	2
I	3264	3265	1	2405	2405	0
J	3266	3266	0	2407	2406	1
K	3296	3295	1	2405	2404	1
L	3294	3294	0	2405	2404	1
M	3264	3267	3	2406	2406	0
N	3296	3297	1	2408	2408	0

Signature
23/02/24

	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRA5A SI.CB1210.254.V28
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CBS measurement

BEFORE WELDING

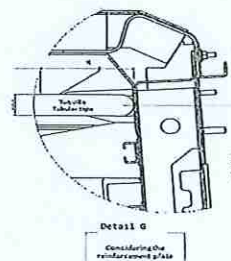
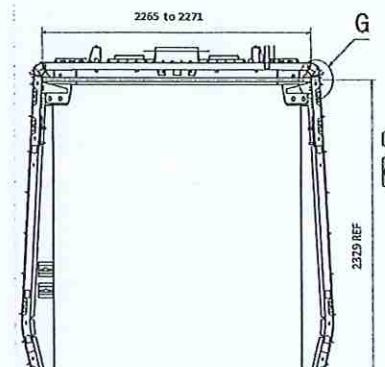


	2270 to 2276
A	2272
B	2274
C	2273
D	2272
E	2270
F	2270
G	2274
H	2272
I	2273
J	2277
K	2273
L	2274
M	2278
N	2272

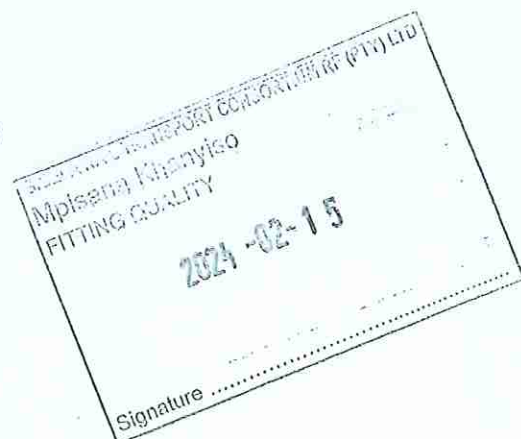
1990 to



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



10/10
23/01/24



CBS measurement

END 1

END 2

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



Take measurement close to radius (considering reinforcement)



2265 to 2271

338 666



011119

Considering the reinforcement plate

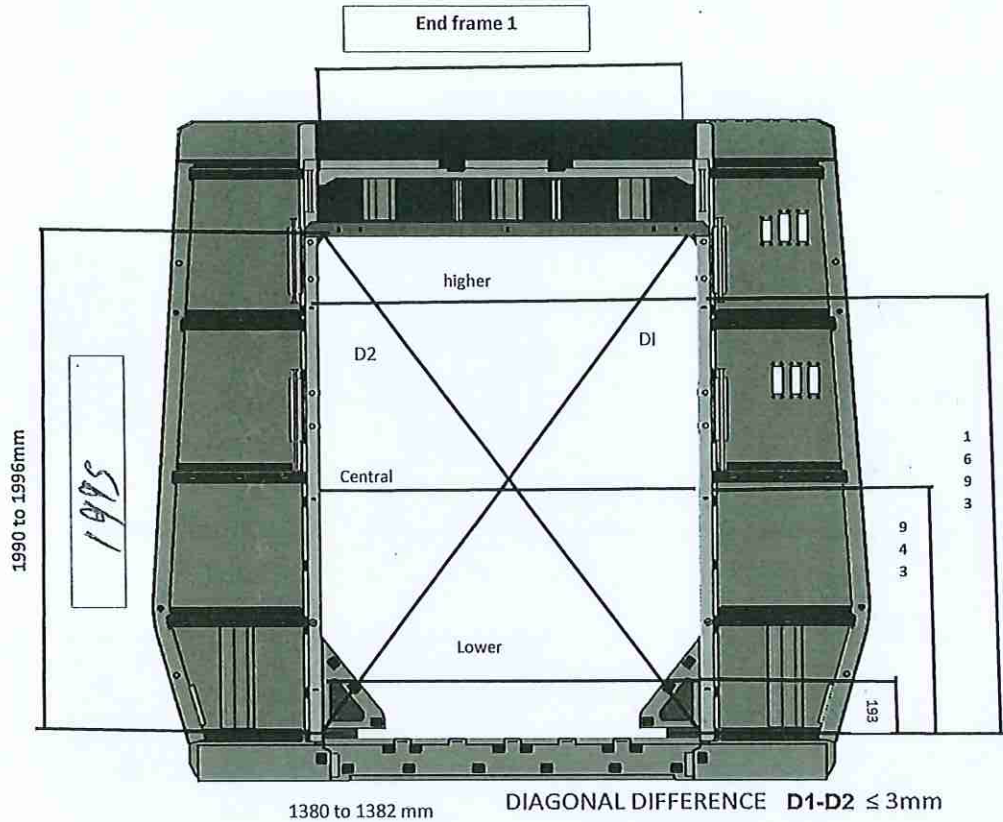
2265 to 2271



CARBODYSHELL M1 ASSEMBLY DTR30225487/3

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Specifications of Details for CBS measurement



Higher Dimension

1382

D1

2416

Central Dimension

1381

D2

2414

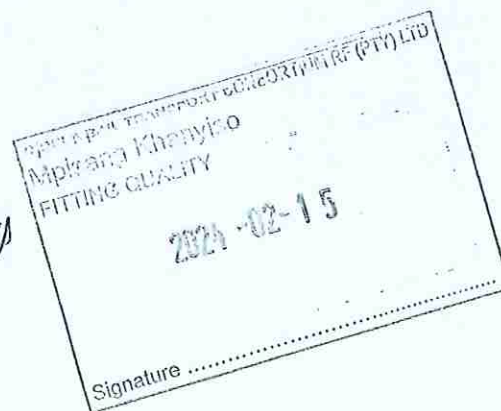
Lower Dimension

1381

D1-D2

2

23/02/24



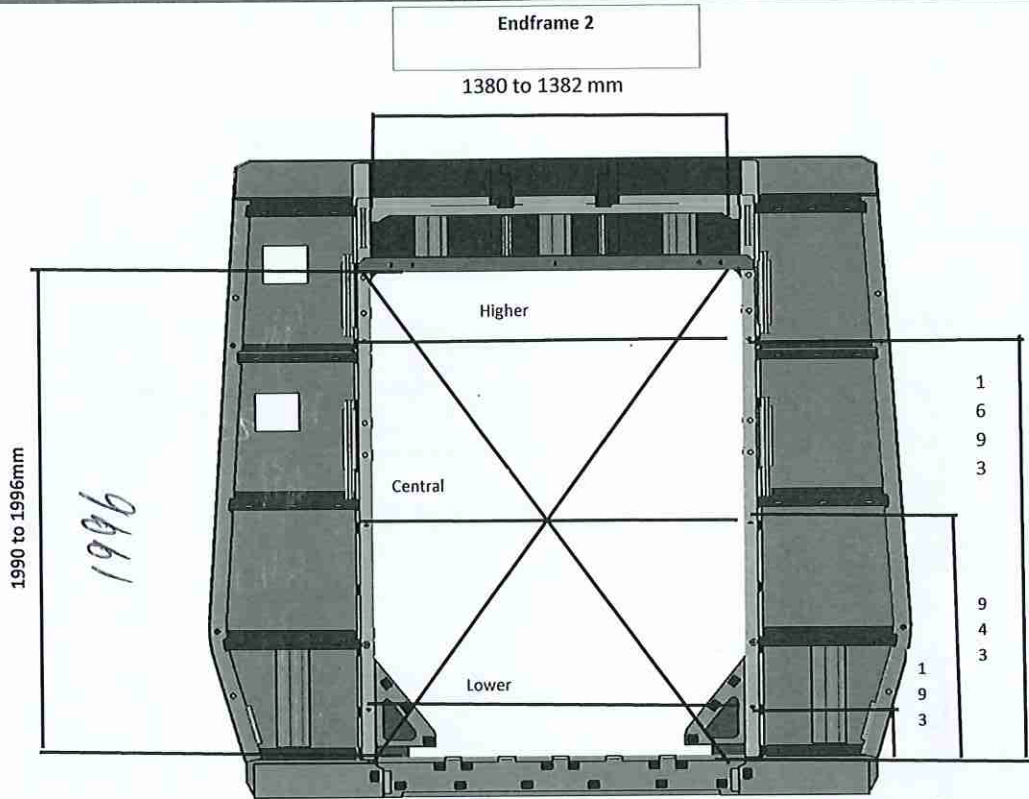


CARBODYSHELL M1 ASSEMBLY DTR30225487/3

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Date
07/11/2023

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SI.CB1210.254.V28

Specifications of Details for CBS measurement



1380 to 1382 mm

DIAGONAL DIFFERENCE $D1-D2 \leq 3mm$

Higher Dimension

1381

D1

2414

Central Dimension

1381

D2

2414

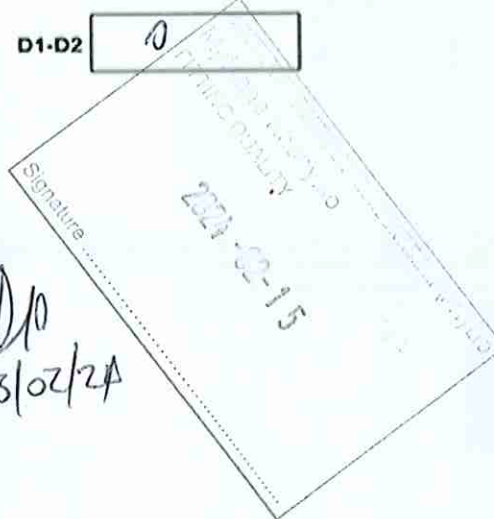
Lower Dimension

1380

D1-D2

10

Signature
23/02/24



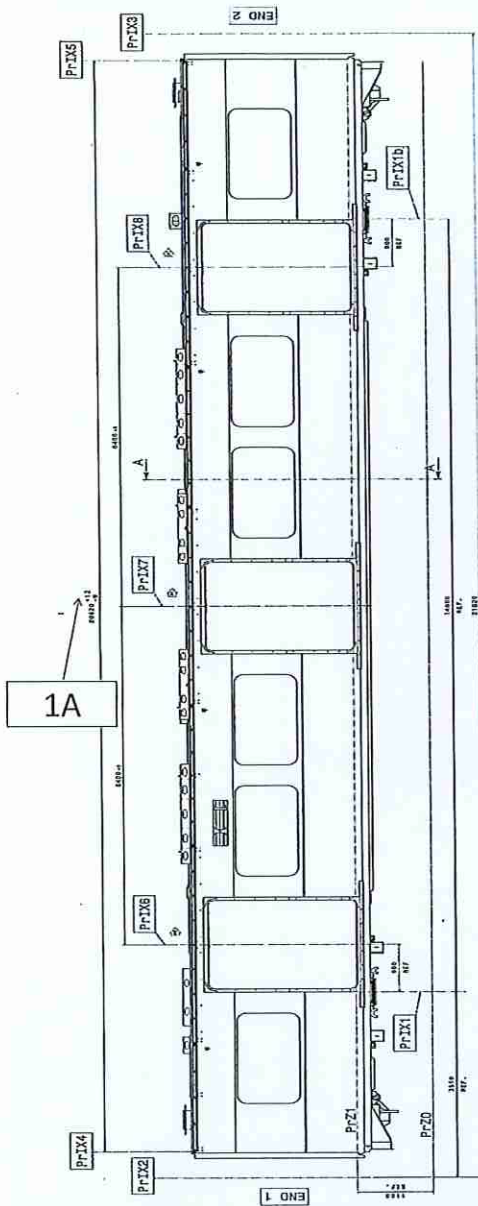


CARBODYSHELL M1 ASSEMBLY DTR30225487/3

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Date
07/11/2023

Project: PRASA
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Specifications of Details for CBS measurement

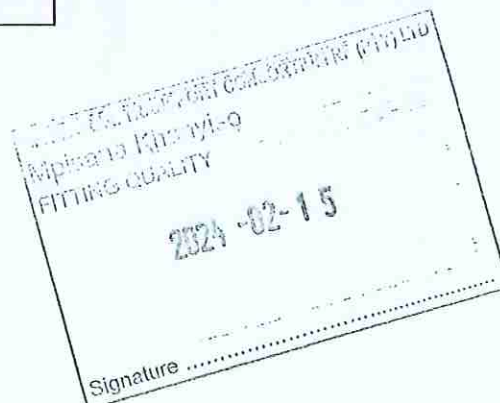



LEFT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20615

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


Dye penetrant test

Dye-penetration test to be performed by quality personnel


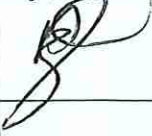


	CARBODYSHELL M1 ASSEMBLY DTR30226487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28					
		Date 07/11/2023						
Item	Description of the issue	OK	Signature/Date (Manufacturing)		Signature/Date (Quality)			
II.2 - Check List REX								
Check List Items								
Item	Picture/Drawing	Description	Criteria /Record	OK	NOK	Reason	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX					

Signature
2024-02-15
GIBELQ

	CARBODYSHELL M1 ASSEMBLY DTR30225487/3	Rev. 28	Project: PRASA SI.CB1210.254.V28
		Date 07/11/2023	

Self Inspection - Final Result

				DATE	NAME	SIGNATURE
HOLD POINT		GO	(If activities are not complete, the missing activities must not impact the next stage)	23/02/24	Lungu Operations	
		GO	Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	23/02/24	Molero Industrial Quality	
		NO GO	There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
		NO GO	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


q

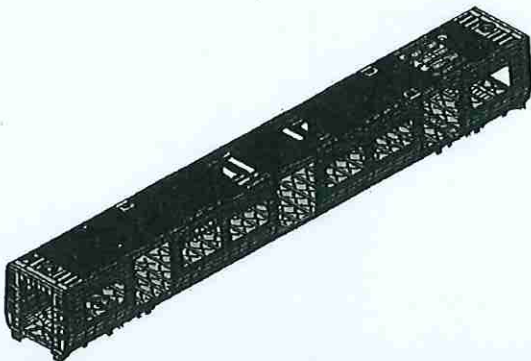
PORT CONSORTIUM (PTV) LTD
Kishara Khanyiso
FITTING QUALITY

2024-02-15

Signature



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.V29	
		29		
		Date		
		28/10/2023		
Car: M1,M3&M4	NGR:	Work station:	CB1220	


Safety Related







I - Documentation and Instruments Control



1.1 - Documentation Control


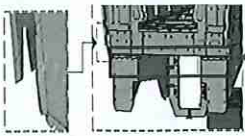

Document	Type of car					Revision	Observation	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
	TC1	M1	M2	M3	M4						
DTR30225487/2	✓					29	24/02/24	✓		N/A	<div style="display: flex; justify-content: space-between;"> <div>  24/02/24 </div> <div>  24/02/24 </div> </div>


1.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process						
Instruments	Serial number	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
Turbator	22713	04/03/2022 - 04/05/2024	X		 24/02/24	 24/02/24
Welding Tape	918710001	22/09/24 - 22/09/24	X		 24/02/24	 24/02/24


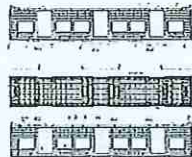


1.3 Consumables

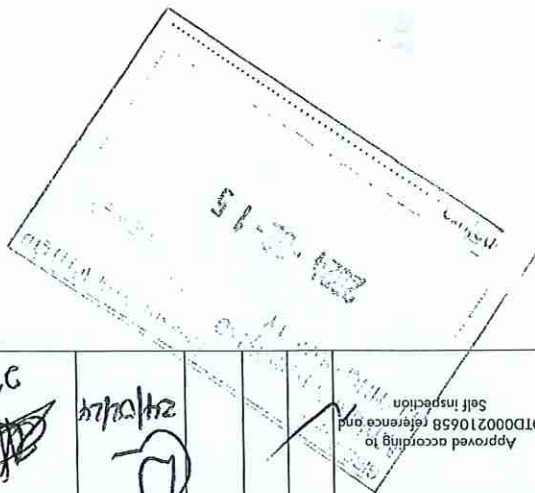
Welding Consumable Control - Used for Special Process						
Fiber Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
Welding 308 LSI	1224880	Mig	X		 24/02/24	 24/02/24


	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			
<div style="text-align: center;">SEALANT APPLICATION</div> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">   </div> <div style="flex: 2; border: 1px solid black; padding: 5px; margin-left: 10px;"> <div style="margin-bottom: 10px;"> AREA 1 & 2 END 1 </div> <div style="margin-bottom: 10px;"> Operator (Name & sign): <i>Priscilla</i> </div> <div> Operator (Name & sign): <i>Priscilla</i> </div> </div> </div>			

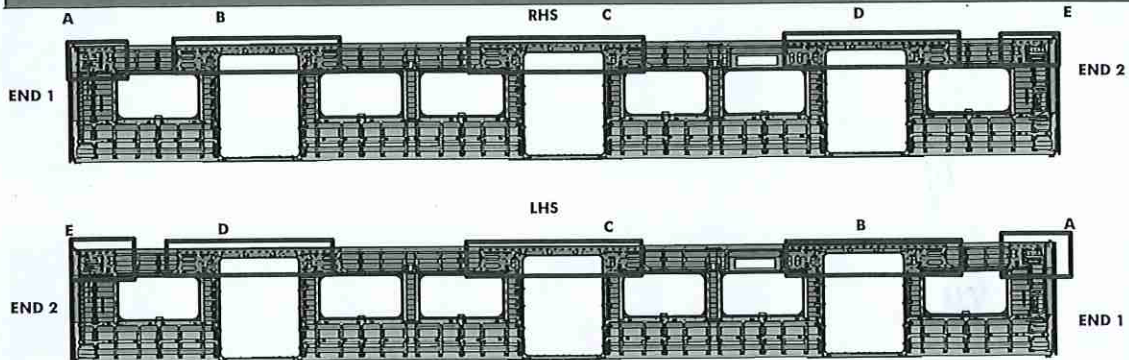
Rev. 29 Date 28/10/2023 Project: PRASA SI.CB1220.250.V29	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	

II - Self Inspection - Items to Check


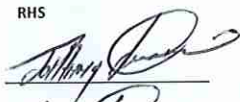

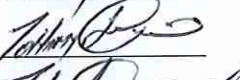


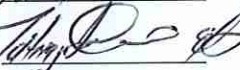
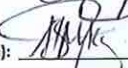
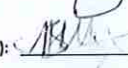
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220.DTR30225487/2 Verification of flange for all reinforcement brackets.	PRA.CB1220.DTR30225487/2	✓	24/02/24	24/02/24
02	N/A	Carshall free of significant flaws which compromise the appearance or functionality	DTD00000210575	✓	24/02/24	24/02/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	24/02/24	24/02/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC. 0002	✓	24/02/24	24/02/24
05		Functionals dimensions approved according drawing or complementary document approved by Atsom engineering and registered in this document.	Approved according specified on pages below.	✓	24/02/24	24/02/24
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 DTD0000210558.	As the welding procedure IND-SAL-WMS-018 and DTD0000210558.	✓	24/02/24	24/02/24
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 25% - 60% Max (T)	Actuals Temperature: 25°C Humidity: 40% Exp Date: 10/03/24 No. 1061803 Sealant Belch	✓	24/02/24	24/02/24
08	N/A	Verification of sealant application in certain regions in the drawing.	AA00001278555	✓	24/02/24	24/02/24
09		Verification of safety welds	Approved according to DTD000210658 reference and Self inspection	✓	24/02/24	24/02/24

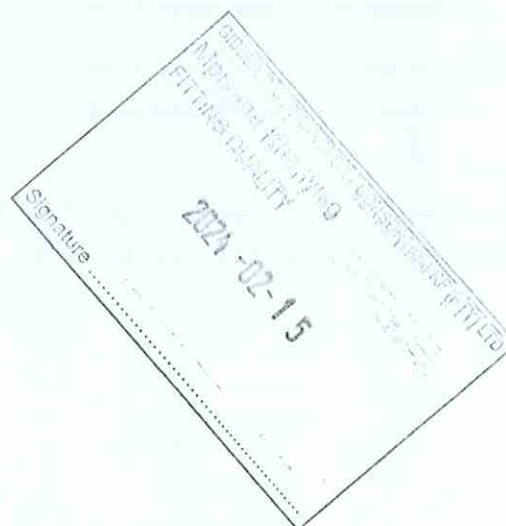



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRASA SI.CB1220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			



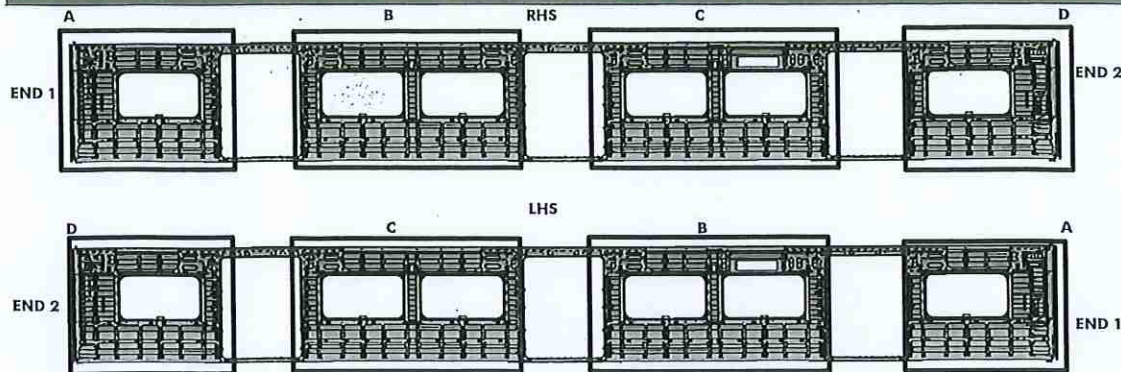
REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>LINDO</u> 	
B	Operator (Name&sign): <u>LINDO</u> 	
C	Operator (Name&sign):  / <u>LINDO</u> 	 <u>Holo Mba</u>
D	Operator (Name&sign): 	<u>Mmarueto Mba</u>
E	Operator (Name&sign): 	<u>Mmarueto Mba</u>



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
		29	
		Date	SI.CB1220.250.V29
		28/10/2023	


II - Self Inspection - Items to Check



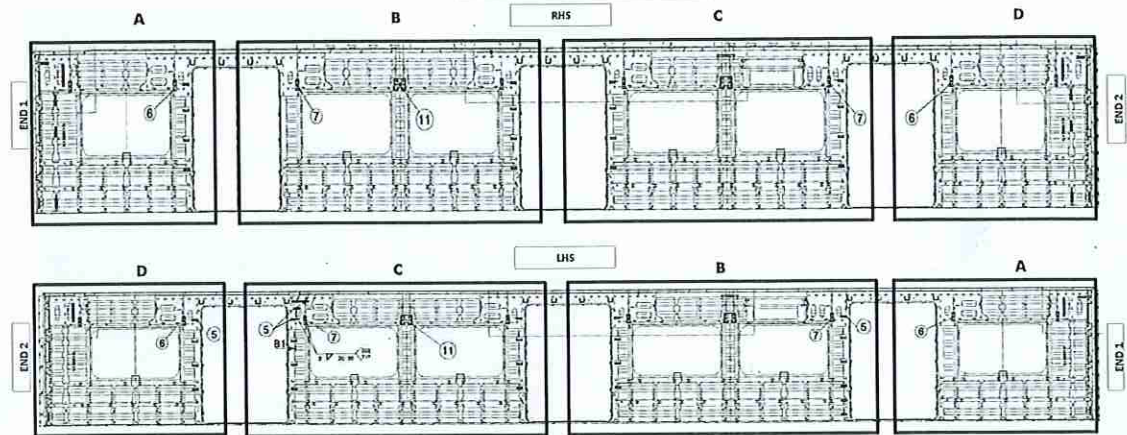
BRACKETING

C-RAILS:		Operator:	INSTALLATION <u>Triscilla</u>
		Operator:	
DOOR MECHANISMS:		Operator:	<u>Seun</u>
		Operator:	
TAPPING PADS		Operator:	<u>Justice</u>
		Operator:	
INSTALLATION & VERIFICATION			
SEAT & LUGGAGE BRACKETS:		Operator:	
		Operator:	<u>Lenep</u>
SEAT BRACKETS VERIFICATION:		Operator:	<u>Tetelo</u>
		Operator:	
WELDING			
AREA	LHS	RHS	
A (Seat brackets)	Operator (Name&sign):	<u>S. Madi</u>	
(C-rails, Luggage and earth bushes)	Operator (Name&sign):	<u>S. Madi</u>	
B (Seat brackets)	Operator (Name&sign):	<u>S. Madi</u>	
(C-rails, Luggage and earth bushes)	Operator (Name&sign):	<u>S. Madi</u>	
C (Seat brackets)	Operator (Name&sign):	<u>Sibiga</u>	
(C-rails, Luggage and earth bushes)	Operator (Name&sign):	<u>Sibiga</u>	
D (Seat brackets)	Operator (Name&sign):	<u>Sibiga</u>	
(C-rails, Luggage and earth bushes)	Operator (Name&sign):	<u>Sibiga</u>	
ENDS			
END 1 TAPPING PADS WELDING:		Operator (Name&sign):	<u>Nokutho</u>
END 1 TAPPING PADS WELDING:		Operator (Name&sign):	<u>Nokutho</u>

GIBELA RAIL TRANSPORT CONDUCTORS RF (PTY) LTD Mphahlele Khanyiso FITTING QUALITY 2024-02-15 Signature

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.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: N/A

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: N/A

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	✓	

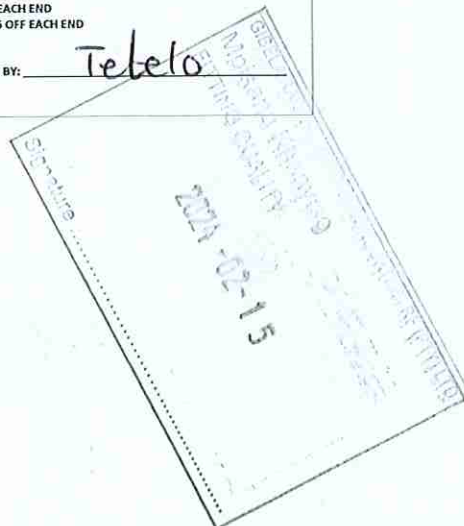
ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: Tebedo

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: Tebedo



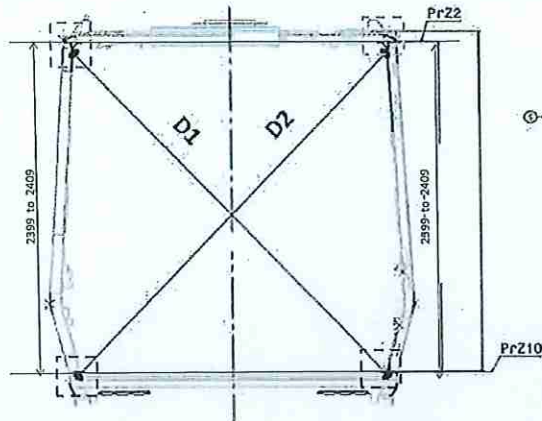


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

Rev.
29
Date
28/10/2023

Project: PRASA
SI.CB1220.250.V29

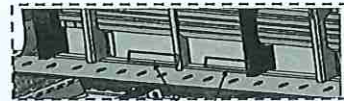
Specifications of Details for CBS measurement



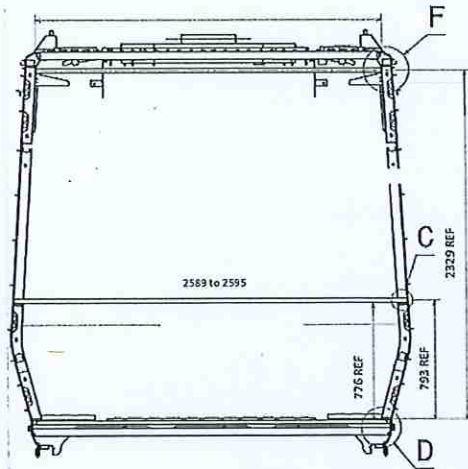
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



PRASA AIRPORT CONCORDIUM REF
Mphahlele Khanyiso
FITTING QUALITY

2024-02-15

Signature



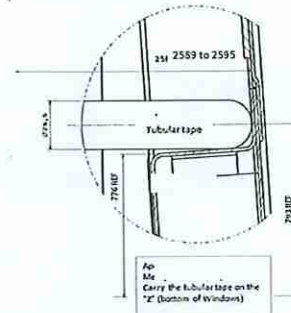
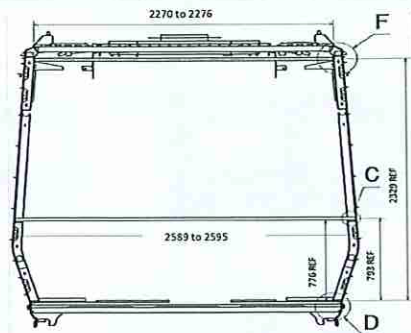
CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

Rev.
29
Date
28/10/2023

Project: PRASA

SI.CB1220.250.V29

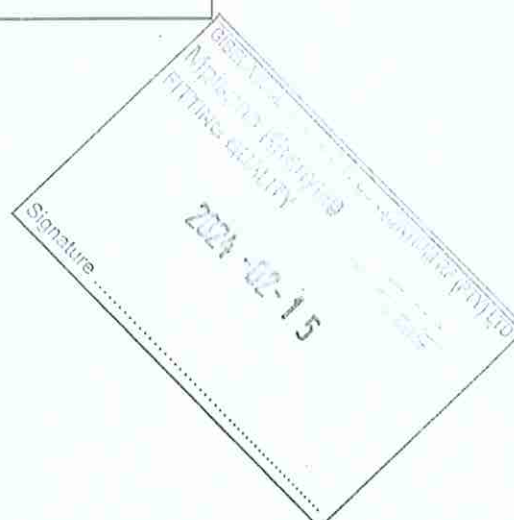
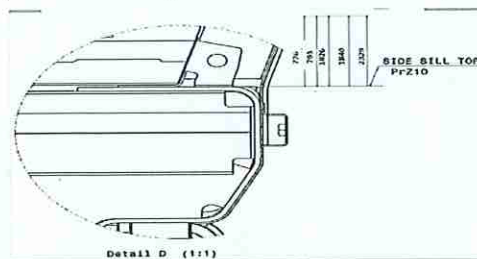
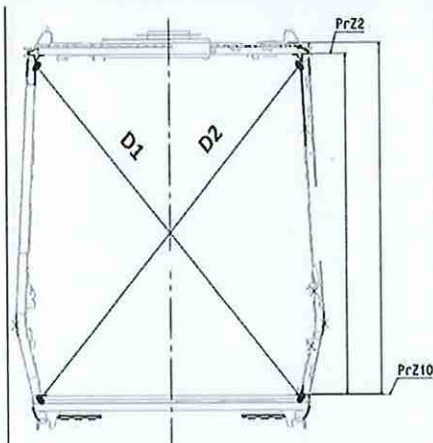
CBS measurement




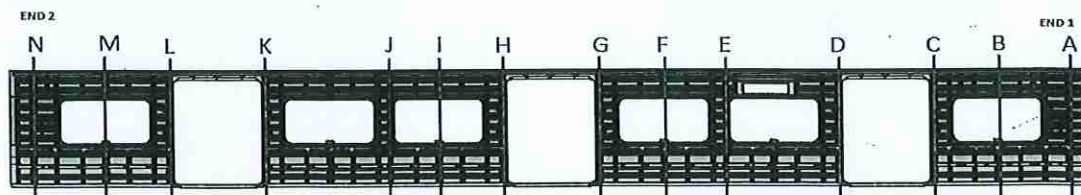
Detail C



Take measurement close to
radius



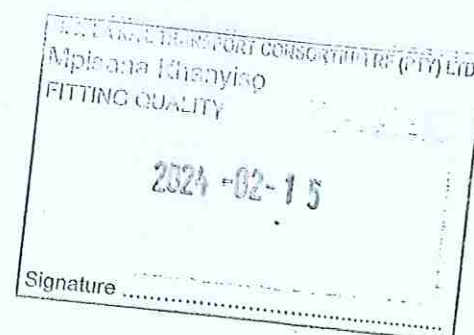
	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.V29
		29	
		Date	
		28/10/2023	
CBS measurement			


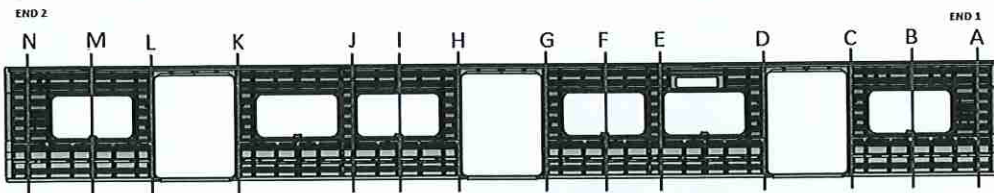


BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3295	3297	2	
B	3267	3265	2	
C	3300	3298	2	
D	3299	3295	4	
E	3267	3266	1	
F	3269	3268	1	
G	3291	3298	1	
H	3299	3298	1	
I	3265	3267	2	
J	3267	3265	2	
K	3297	3295	2	
L	3298	3295	3	
M	3267	3265	2	
N	3298	3295	3	

N/A



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.V29
		29	
		Date	
		28/10/2023	
CBS measurement			
			

AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3295	3297	2	2589
B	3267	3269	2	2589
C	3300	3297	3	2591
D	3297	3299	2	2589
E	3267	3269	2	2592
F	3269	3266	3	2592
G	3297	3298	1	2589
H	3297	3299	2	2589
I	3265	3268	3	2592
J	3268	3265	3	2592
K	3297	3299	2	2590
L	3299	3298	1	2590
M	3266	3267	1	2589
N	3296	3298	2	2591

GIBEL
 Mechanical Engineering
 FINISH QUALITY
 Signature
 2024-02-15

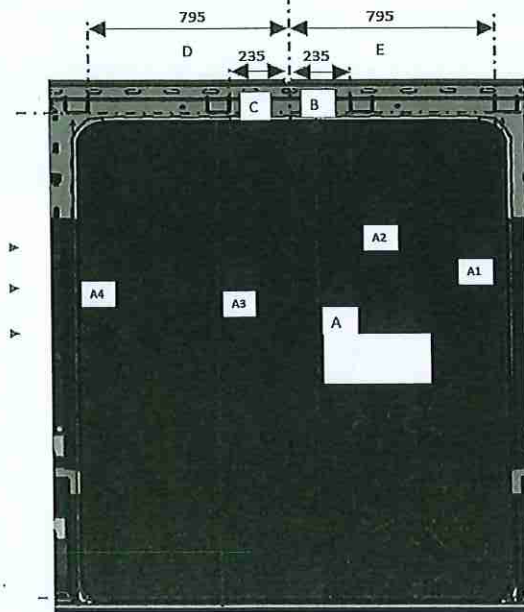


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30226487/2

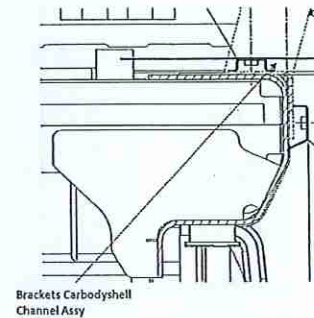
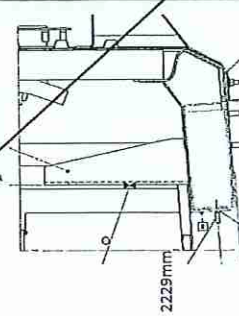
Rev.
29
Date
28/10/2023

Project: PRASA
SI.CB1220.250.V29

Specifications of Details for CBS measurement CB1220



Brackets Carbodyshell
U Type Supports



DOOR 1 - LHS

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

DOOR 2 - LHS

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

DOOR 2 - RHS

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

DOOR 1 - RHS

	VALUE	ACTUAL
A1	2230 to 2232	2231
A2	2230 to 2232	2230
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 2 - RHS

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

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

APPROVED FOR CONSTRUCTION BY IPTV LTD
Applied Khanyiso
FITTING QUALITY
2024-02-15
Signature



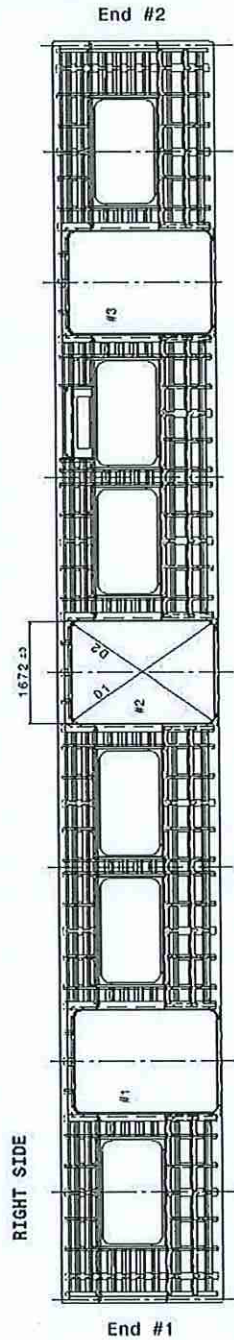
CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

Rev.
29
Date
28/10/2023

Project: PRASA

SI.CB1220.250.V29

Specifications of Details for CBS measurement CB1220

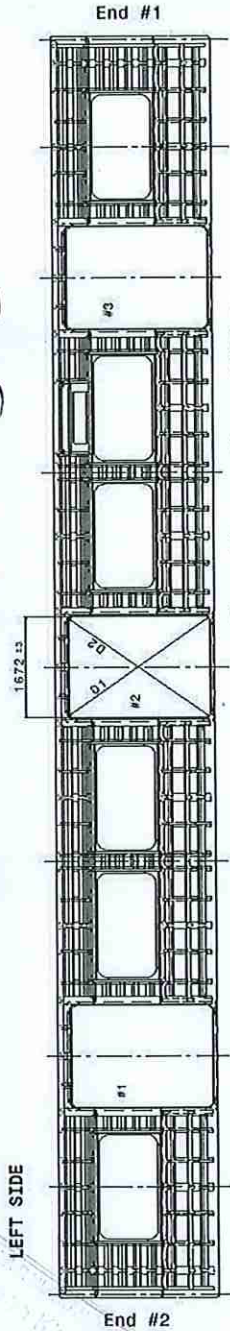


Doors diagonal D1-D2 maximum difference $\leq 4\text{mm}$

	#1	#2	#3
D1	2750	2748	2748
D2	2751	2751	2750
D1-D2	1	3	2

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

Doors Length - 1672.33mm






Doors diagonal D1-D2 maximum difference $\leq 4\text{mm}$

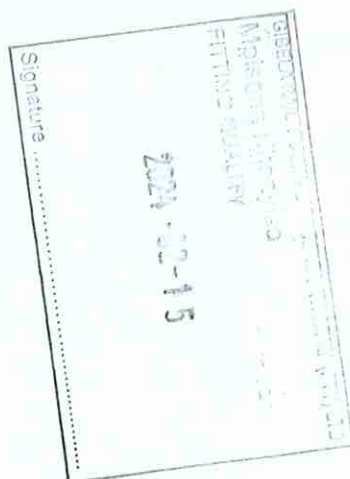
	#1	#2	#3
D1	2751	2749	2748
D2	2749	2750	2750
D1-D2	2	1	2

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

Doors Length - 1672.33mm

Signature.....
2024-02-15

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB1220.250.V29	
		29		
		Date		
		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 <small>(if activities are not complete, the missing activities must not impact the next stage!)</small> <small>Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)</small>	28/02/24	Levi Operations	
		24/02/24	Amo Industrial Quality	
	NO GO <small>There are activities pending that impact/stop the activities of the next process</small> <small>Obs: (To describe problems below)</small> <small>There are non-conformities impact the quality of the product and there is no corrective action defined yet)</small>			
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
		<div style="display: flex; justify-content: space-between;"> <div> Operations </div> <div> Quality </div> </div>		




APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

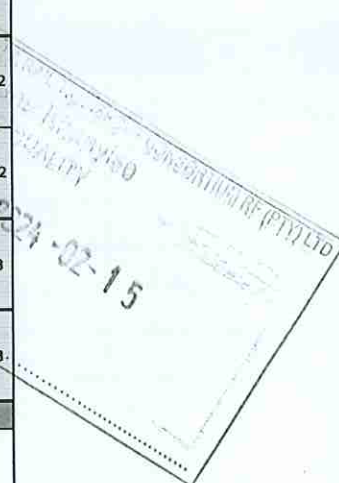
SELF INSPECTION SHEET

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	AAD0001278566	CARBODYSHELL M1,M3,M4 ASSEMBLY	CB1230		X	X		X		PRA CB1230.DT000002 25487.V20	YES
<input type="checkbox"/>												
<input type="checkbox"/>												
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE							
	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	19/10/2022	Addition of traceability for sealant application	APPROVER	Collins Mbombhi	19/10/2022							
			CHECKER	Ntokozo Zwane								
			REVISED BY	Amogelang Mohlampe								
28	14/04/2023	Added sealant batch number & welding consumables traceability	APPROVER	Vanessa Ntuli	14/04/2023							
			CHECKER	Ntokozo Zwane								
			REVISED BY	Amogelang Mohlampe								
29	06/11/2023	Added thresholds traceability for boiler makers and welders	APPROVER	Tyson Ngobeni	06/11/2023							
			CHECKER	Andani Muthelo								
			REVISED BY	Ntokozo Zwane								
TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES							
214	M1	CHOSI 447409	26.02.24	SI.CB1230.256.V28	11							





CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
29

Project: PRASA

Date

SI.CB1230.256.V28

06/11/2023

Car:

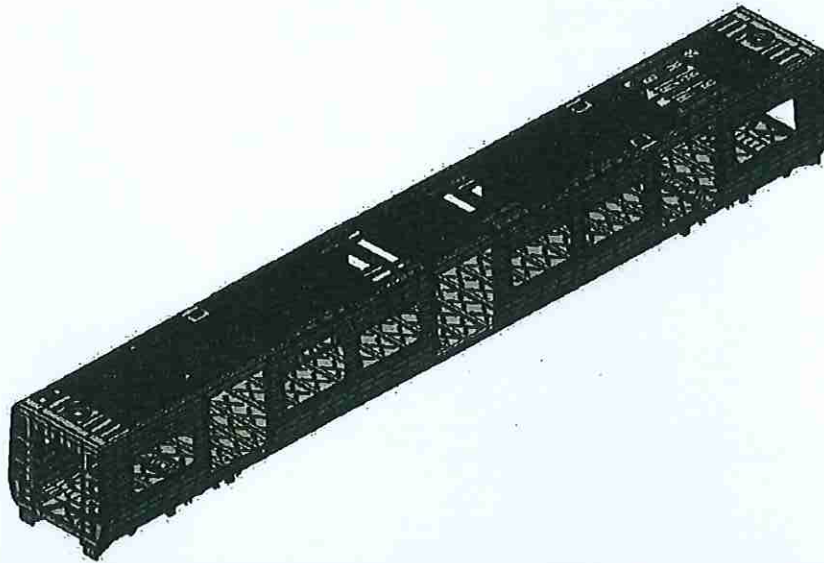
NCR:

Work station:

CB1230



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK		Signature/Date (Operations)	Signature/Date (Quality)
	M1	M2	M3	M4	TC2						
PRA.CB1230.DT00000225487	X					V29		OK		N/A	26.02.24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Validation Date	OK		Signature/Date (Operations)	Signature/Date (Quality)
TUBULAR	22615	2024/05/07	OK		26.02.24	
MEASURING TAPE	GIBTA0398	2024/04/05	OK		26.02.24	
COMBINATION SQUARE	GIBSQ0098	27/07/2024	OK		26.02.24	

1.3 Consumables


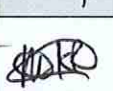
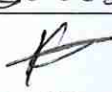
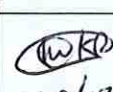

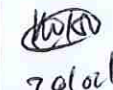
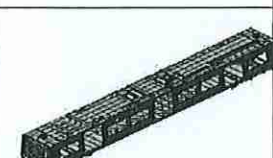
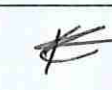
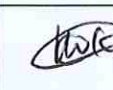
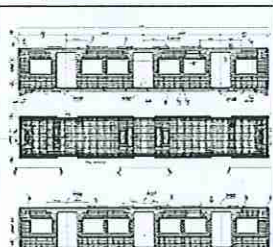

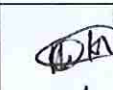


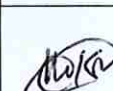

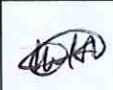
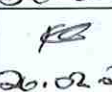
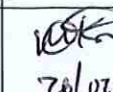
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
WELDING WIRE	E201880	MIG	OK		26.02.24	26/02/24

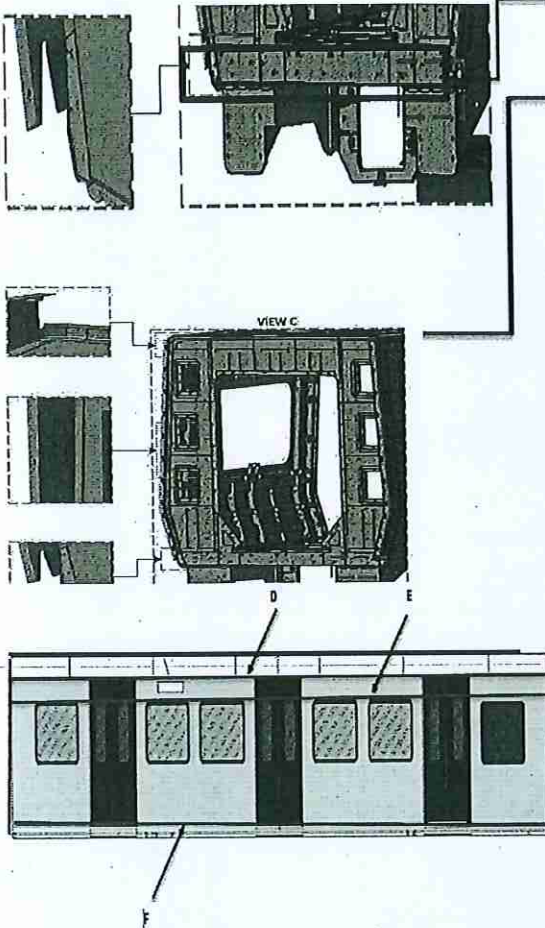
PTY) LTD

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			 26.02.24	 26/02/24						
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	OK			 26.02.24	 26/02/24						
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	OK			 26.02.24	 26/02/24						
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	OK			 26.02.24	 26/02/24						
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			 26.02.24	 26/02/24						
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 DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	OK			 26.02.24	 26/02/24						
07	N/A	Before appplication of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: <table><tr><td>Temperature Min - Max (1)</td><td>M'in-Max</td><td>10°C - 35°C</td></tr><tr><td>Relative humidity Min - Max (1)</td><td>M'in-Max</td><td>25% - 80%</td></tr></table>	Temperature Min - Max (1)	M'in-Max	10°C - 35°C	Relative humidity Min - Max (1)	M'in-Max	25% - 80%	Sealant Batch No: <u>ISE 10-03</u> Exp Date: <u>03 / 04</u> Actuals Temperature: <u>20,5°C</u> Humidity: <u>70%</u>	OK			 26.02.24	 26/02/24
Temperature Min - Max (1)	M'in-Max	10°C - 35°C												
Relative humidity Min - Max (1)	M'in-Max	25% - 80%												
08	N/A	Verification of sealant application in regions of roof and sideframe.	Sealant applied in regions of roof and sideframe.	OK			 26.02.24	 26/02/24						

AREA 1



END 2 SEALANT

OPERATOR
(Name & sign):

LERoy [Signature] P2

OPERATOR
(Name & sign):

LERoy [Signature] P2

OPERATOR
(Name & sign):

LERoy [Signature] P2

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

Operator (Name & sign):

LHS
F,H,D,E,I

RHS
F,E,H,I

Operator (Name & sign):

SHALE [Signature]
(F)

KHOSI [Signature]

Operator (Name & sign):

BHENOW [Signature]

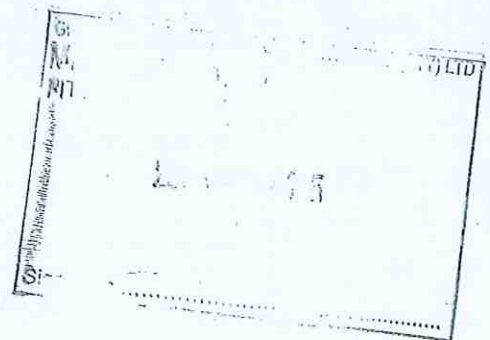
D

Operator (Name & sign):

BHENOW [Signature]

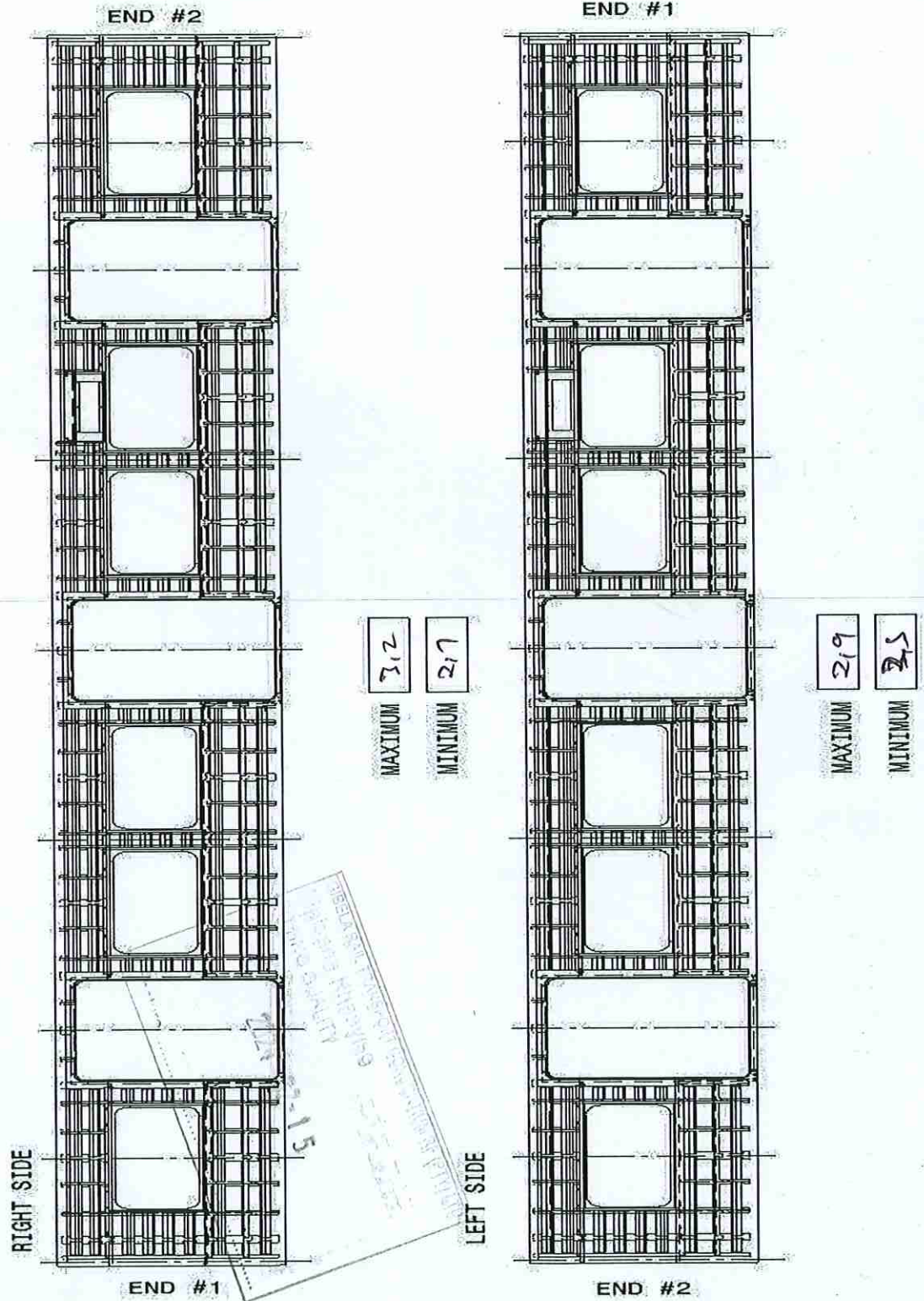
Operator (Name & sign):

Operator (Name & sign):



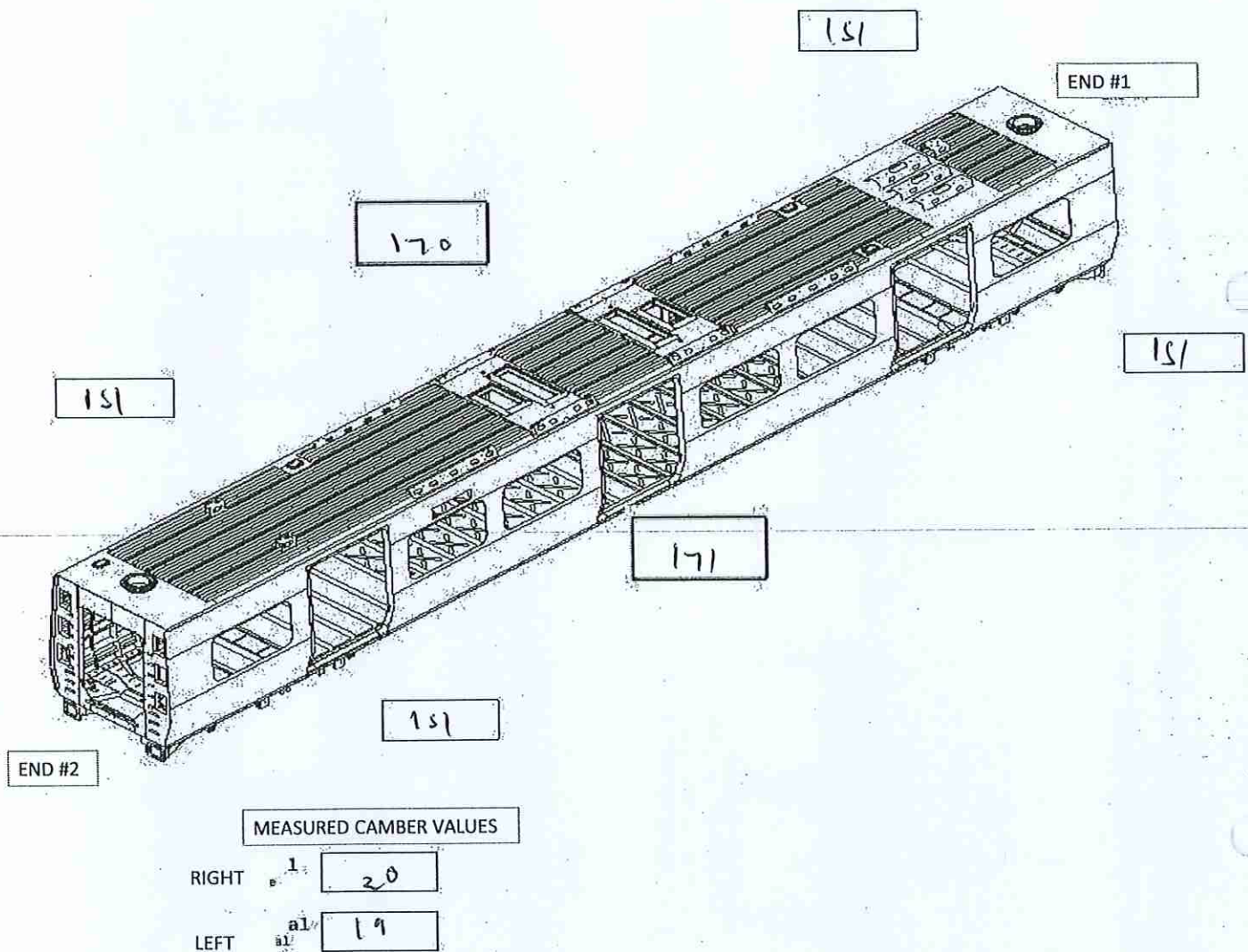
Specifications of Details for CBS measurement CB1230

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.



Specifications of Details for CBS measurement CB1230

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



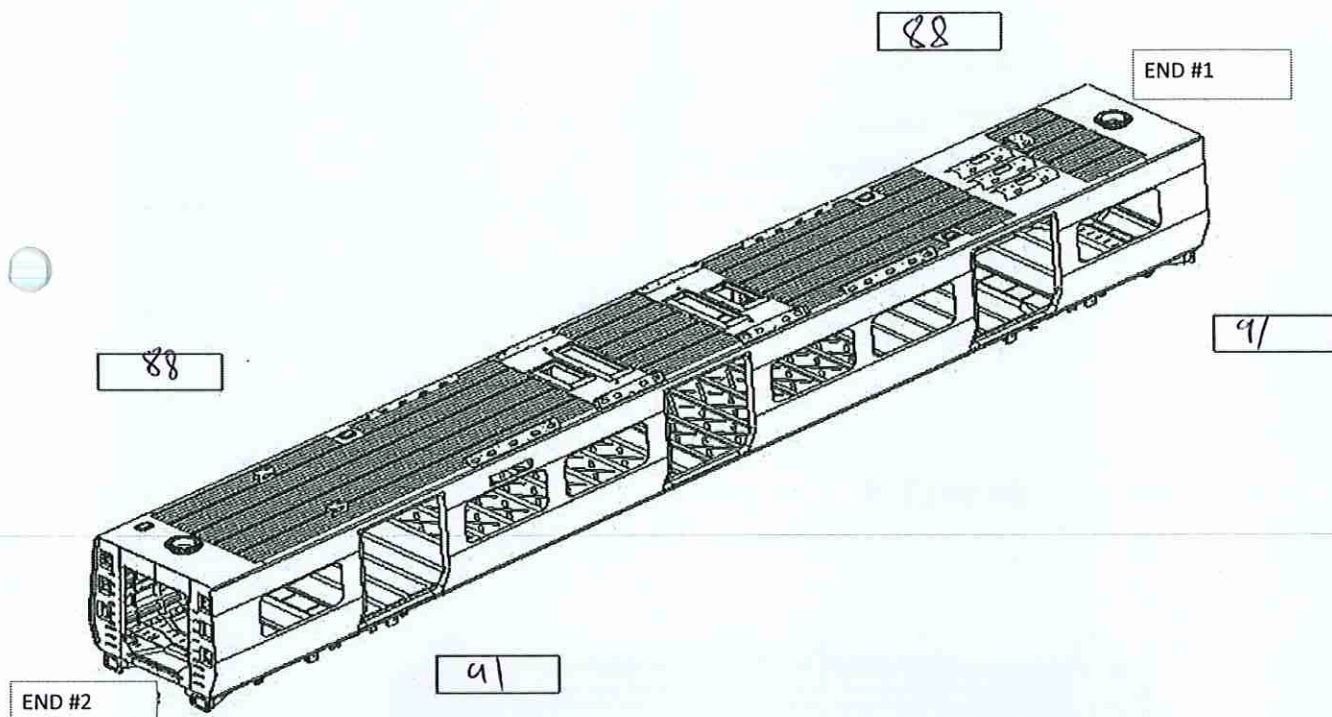
Signature

2023-11-15

(PTY) LTD

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

TRANVERS

3

LONGITUDIN

0

TWIST FOUND ON END 2

TRANVERSE

3

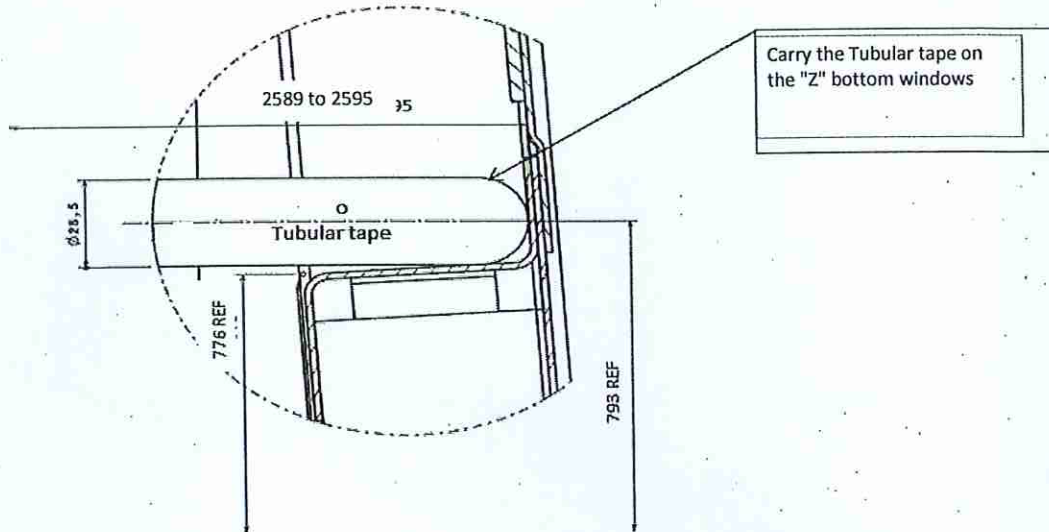
LONGITUDINAL

0

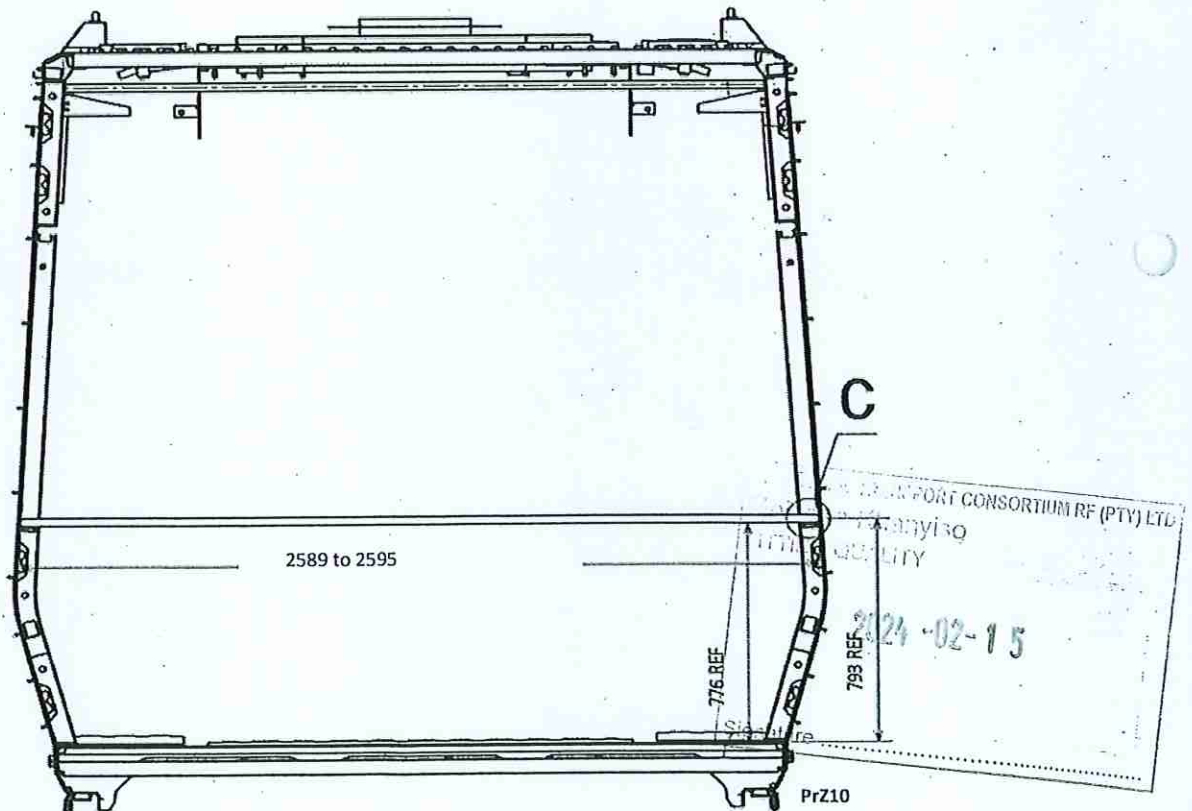
signature

2024-02-15

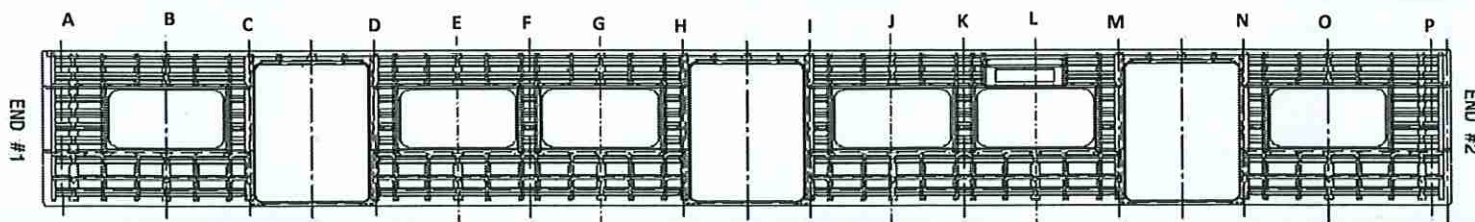
Specifications of Details for CBS measurement CB1230



Detail C

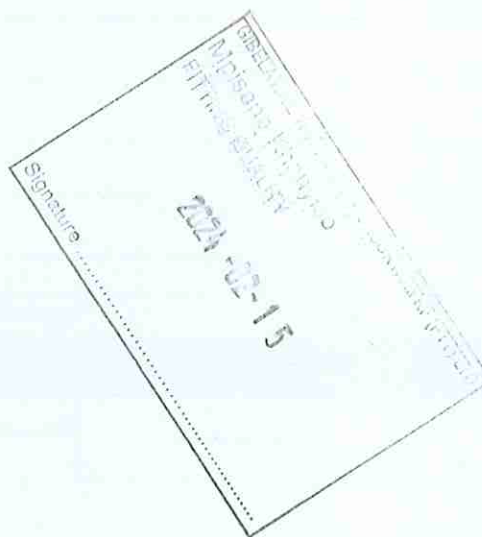


Specifications of Details for CBS measurement CB1230



2589 to 2595mm

A	25 95
B	25 95
C	25 95
D	25 90
E	25 89
F	25 89
G	25 92
H	25 95
I	25 89
J	25 95
K	25 95
L	25 92
M	25 90
N	25 95
O	25 89
P	25 95



Threshold verification

Nominal value :38

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

BOILER MAKER: TSNEKLO

WELDER: ZANGELE





CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
29

Date

06/11/2023

Project: PRASA

SI.CB1230.256.V28

Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT	GO	(If activities are not complete, the missing activities must not impact the next stage)		26.02.24	lctusy Operations	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)		26/02/24	Richmond Industrial Quality	
	NO GO	There are activities pending that impact/stop the activities of the next process Obs: (To describe problems below)			Operations	
		There are non-conformities impact the quality of the product and there is no corrective action defined yet)			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

