
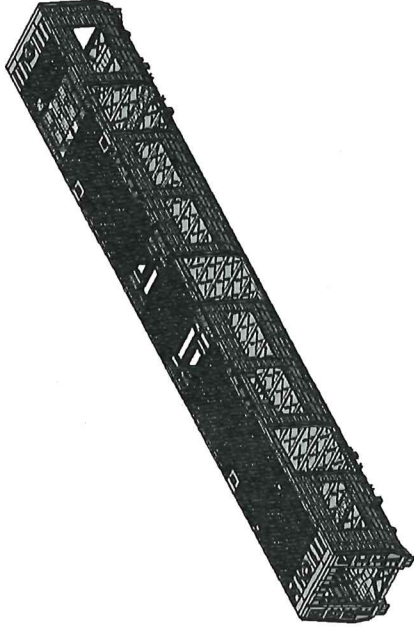
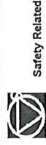


CONFIDENTIAL INFORMATION
This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE											
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE					WORK INSTRUCTION	SAFETY ?	
				TC1	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR30232487/3	CARBODYSHELL M3,M4 ASSEMBLY	CB2210		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
									COMPLIER	Thanyani Mabhegu	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
									REVISD 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
									REVISD 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
									REVISD 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
									REVISD 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
									REVISD 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
									REVISD BY	Nosizo Pindela	21/08/2019
15	06/08/2020	New Baseline 10.3.6							APPROVER	Timothy Maimela	
									CHECKER	Bongane Masina	06/08/2020
									REVISD BY	Bongane Masina	
20	19/04/2021	New Baseline change 10.3							APPROVER	Timothy Maimela	
									CHECKER	Bongane Masina	19/04/2021
									REVISD BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING							APPROVER	Mkhombi collins	
									CHECKER	Mpho Mulaudzi	17/08/2021
									REVISD BY	Mpho Mulaudzi	
25	19/02/2022	New Baseline change 10.3.1							APPROVER	Mkhombi collins	
									CHECKER	Andani Muthlelo	19/02/2022
									REVISD BY	Andani Muthlelo	
26	14/04/2023	Addition of welding consumable traceability							APPROVER	Ntuli Vanessa	
									CHECKER	Mohlamphe Amogelang	14/04/2023
									REVISD BY	Mohlamphe Amogelang	
30	20/07/2023	New Baseline change 10.4							APPROVER	Ngobeni Tyson	
									CHECKER	Mohlamphe Amogelang	28/07/2023
									REVISD BY	Mohlamphe Amogelang	
31	07/11/2023	Added traceability for welding sections							APPROVER	Ngobeni Tyson	
									CHECKER	Mohlamphe Amogelang	07/11/2023
									REVISD BY	Nickozo Zwane	
TRAINSET	CAR	OPERATOR NAME& ALPS NO	DATE	SELF INSPECTION NUMBER				PAGES			
215	M3	Idogo 482583	29/02/24	51.CB2210.254.V30				17			

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

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

I.1 - Documentation Control

Document	Type of car					
	TG1	M1	M2	M3	M4	TG2
DTR30225487/3				X		

Document	Revision	Observation	OK	NO	Revisi	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30225487/3			✓			<i>[Signature]</i> 29/02/24	<i>[Signature]</i> 29/02/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Validation Date	OK	NO	Signature/Date (Manufacturing)	Signature/Date (Quality)
Tubular	22713	04/10/23	✓		<i>[Signature]</i>	
Born tape	9181 P0084	23/03/31	✓		<i>[Signature]</i>	
hoper tape	125425924	03/01/24	✓		<i>[Signature]</i>	29/02/24

1.3 Consumables


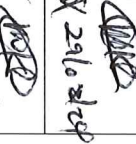

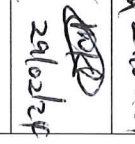

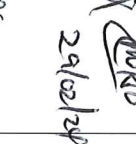


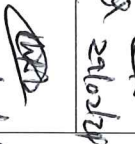
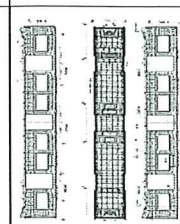

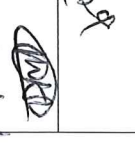

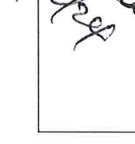
Welding Consumable Control - Used for Special Process


Filler Material	Heat Number	Welding Process	OK	NO	Signature/Date (Manufacturing)	Signature/Date (Quality)
Bowler 308	2604345	Mig	✓		<i>[Signature]</i>	
Hamisa 309	318394-747	Mig	✓		<i>[Signature]</i>	
Hamise 308c	299687-92322	Mig	✓		<i>[Signature]</i>	29/02/24

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		Rev. 31	Project: PRASA
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II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOK	Remove	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓			 29/10/24	 29/10/24
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	✓			 29/10/24	 29/10/24
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TPDEF - ARC - 0000	✓			 29/10/24	 29/10/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓			 29/10/24	 29/10/24
05		Functionals dimensions approved according drawing or complementary document approved by Astom engineering and registered in this document	Approved according specified on pages below.	✓			 29/10/24	 29/10/24
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.	✓			 29/10/24	 29/10/24

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
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Welding Tracedability

Roof ring welds



LHS

Boiler maker (Name & Sign): lunga MJO

Welder (Name & Sign): Barbra B. Bant

RHS

Boiler maker (Name & Sign): _____

Welder (Name & Sign): Keiru

END 1

LHS

Boiler maker (Name & Sign): lunga MJO

Welder (Name & Sign): Barbra B. Bant

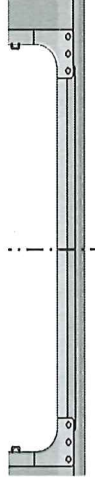
RHS

Boiler maker (Name & Sign): Keiru K. Nkomo

Welder (Name & Sign): _____

END 2

Door ring welds



LHS

Boiler maker (Name & Sign): lunga MJO

Welder (Name & Sign): Thabang K. Nkomo

RHS

Boiler maker (Name & Sign): _____

Welder (Name & Sign): Thabang K. Nkomo

RHS

Boiler maker (Name & Sign): lunga MJO

Welder (Name & Sign): Thabang K. Nkomo

RHS

Boiler maker (Name & Sign): _____

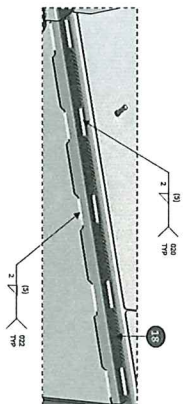
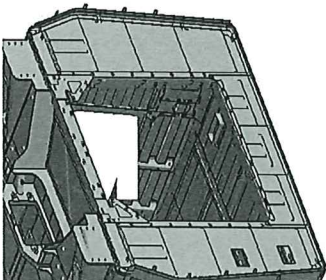
Welder (Name & Sign): _____



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

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EUF Reinforcement Plates



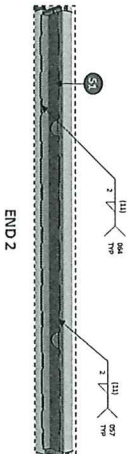
END 1

Boiler maker (Name & Sign):

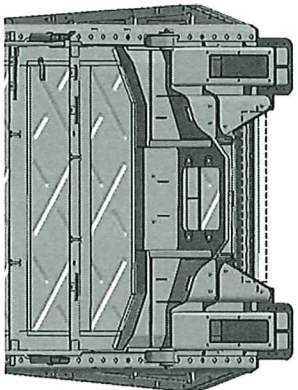
Sipho Mkh

Welder (Name & Sign):

Bonzi But



END 2



Underneath the CAR

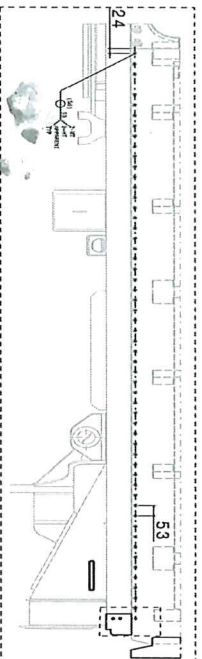
END 2

Boiler maker (Name & Sign):

Innocent Mkh

Welder (Name & Sign):

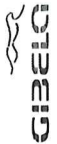
Kenn K Mkh



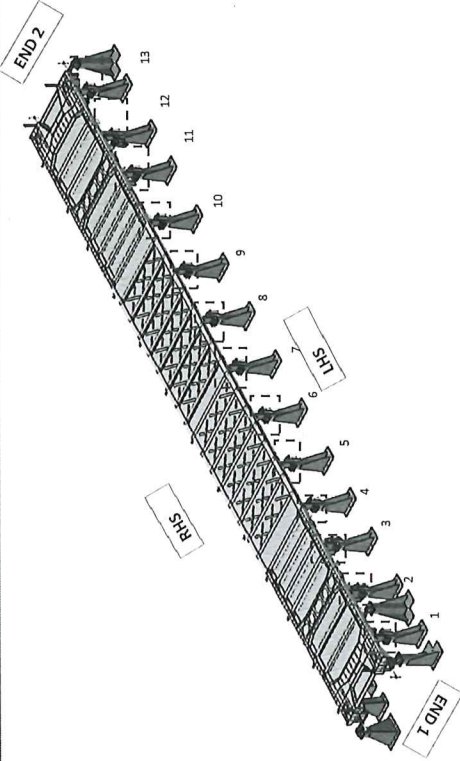
FEDOU

Operator:

Sipho Mkh

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev.	Project: PRASA
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		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					NA								
Right Hand Side													

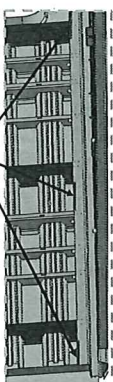
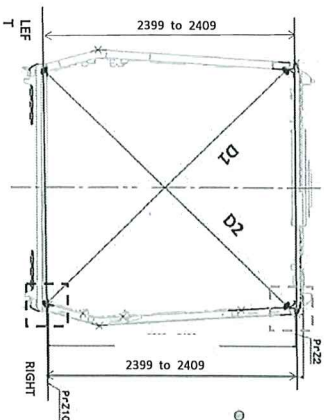
Signature Operations: *[Signature]* Date: 29/10/24

After Welding.

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

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

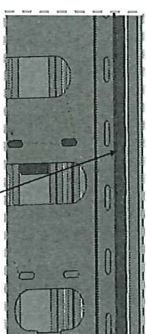
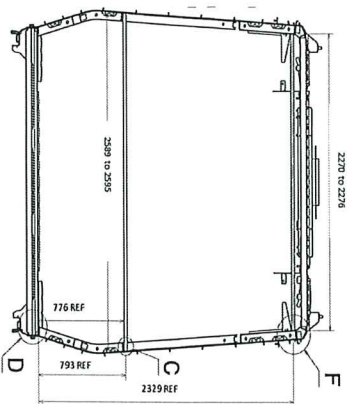
Signature Industrial Quality: *[Signature]* Date: 29/10/24



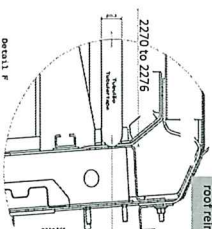
Measurement positions on roof rail and sidewall omega corner.



Measurement positions on sidewall and side sill corner.




Reinforcement area measurement positions on roof reinforcement area.

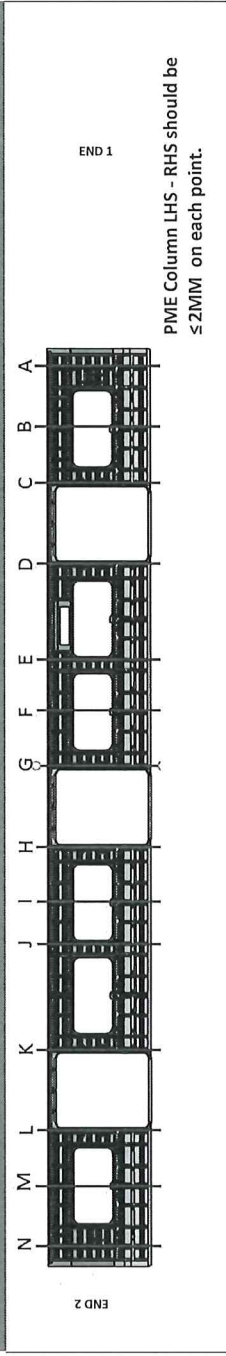


Detail F

Don't consider the reinforcement

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		Project: PRASA SI.CB2210.254.V30
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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

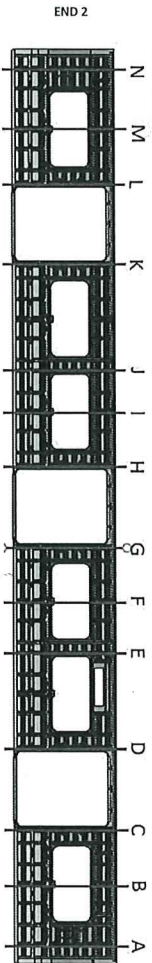
Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A 3266	3267	1	2403	2404	1
B 3265	3266	1	2403	2405	2
C 3268	3268	2	2406	2406	0
D 3266	3266	0	2406	2405	1
E 3264	3265	1	2406	2407	1
F 3265	3267	2	2406	2406	0
G 3263	3265	2	2405	2405	1
H 3266	3267	1	2404	2404	0
I 3268	3267	1	2406	2406	2
J 3269	3267	2	2403	2404	1
K 3266	3268	1	2406	2407	1
L 3266	3268	0	2406	2405	1
M 3265	3267	2	2407	2405	2
N 3268	3269	1	2407	2407	1



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3


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Specifications of Details for CBS measurement

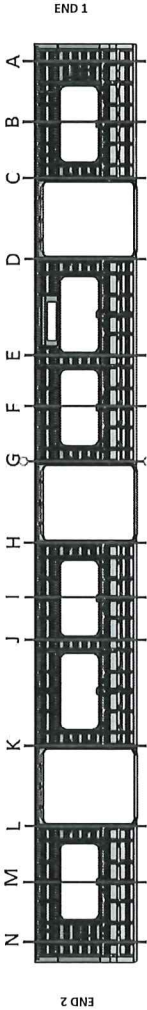
PME Column LHS - RHS should be
≤ 2MM on each point.

AFTER WELDING

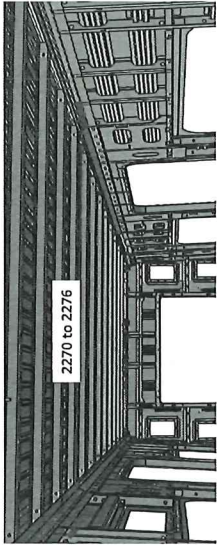
Record D1 values		Record D2 values		D1-D2 ≤ 5mm		2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3296	3298		2		2404	2403	1
B	3266	3267		1		2405	2406	1
C	3295	3296		1		2406	2405	1
D	3293	3298		1		2405	2405	0
E	3265	3267		2		2406	2404	2
F	3265	3266		1		2406	2405	1
G	3294	3295		1		2403	2404	1
H	3296	3296		0		2405	2405	0
I	3267	3266		1		2406	2407	1
J	3269	3268		1		2407	2405	2
K	3295	3295		0		2403	2405	2
L	3296	3297		1		2404	2405	1
M	3264	3267		3		2406	2407	1
N	3298	3299		1		2406	2407	1

	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		Rev. 31	Project: PRASA
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	CBS measurement			

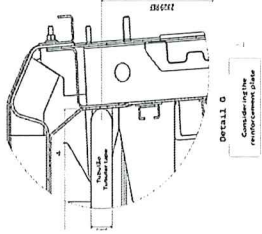
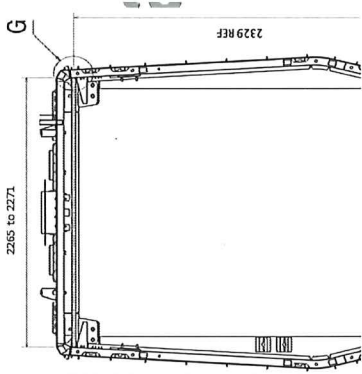
BEFORE WELDING



	2270 to 2276
A	2273
B	2276
C	2274
D	2271
E	2276
F	2274
G	2273
H	2271
I	2275
J	2276
K	2270
L	2272
M	2274
N	2271



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



2265 to 2271

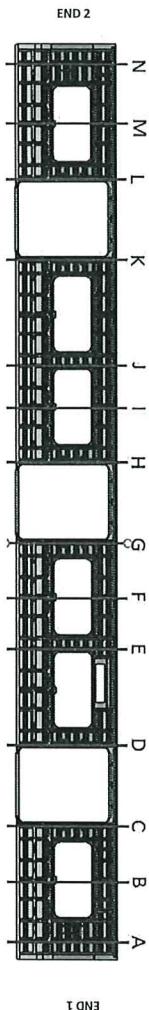


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

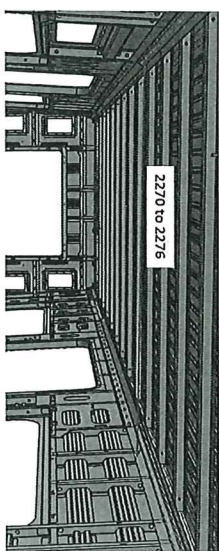
Rev.	31	Project: PRASA
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CBS measurement

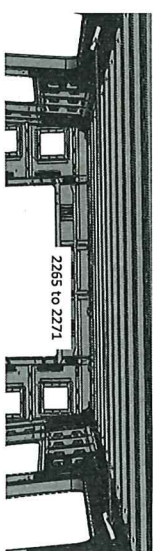
AFTER WELDING



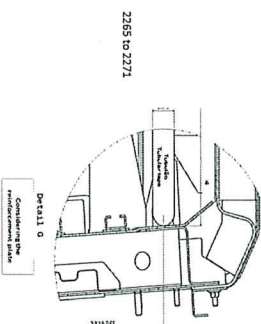
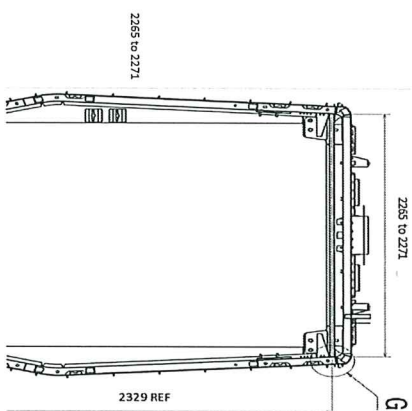
	2265 to 2271	2270 to 2276
A	2270	
B		2274
C	2271	
D	2269	
E		2273
F		2274
G	2270	
H	2268	
I		2276
J		2276
K	2270	
L	2271	
M		2275
N	2269	



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



Take measurement close to radius (considering reinforcement)





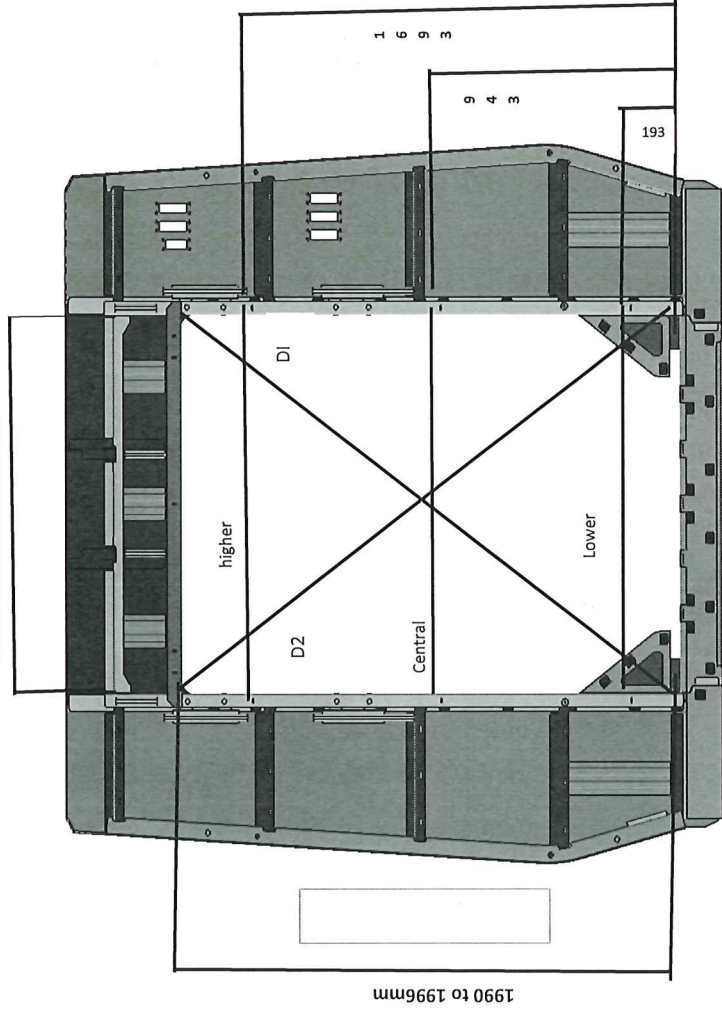
CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

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Specifications of Details for CBS measurement

End frame 1



DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

1380 to 1382 mm

Higher Dimension

D1

Central Dimension

D2

Lower Dimension

D1-D2



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

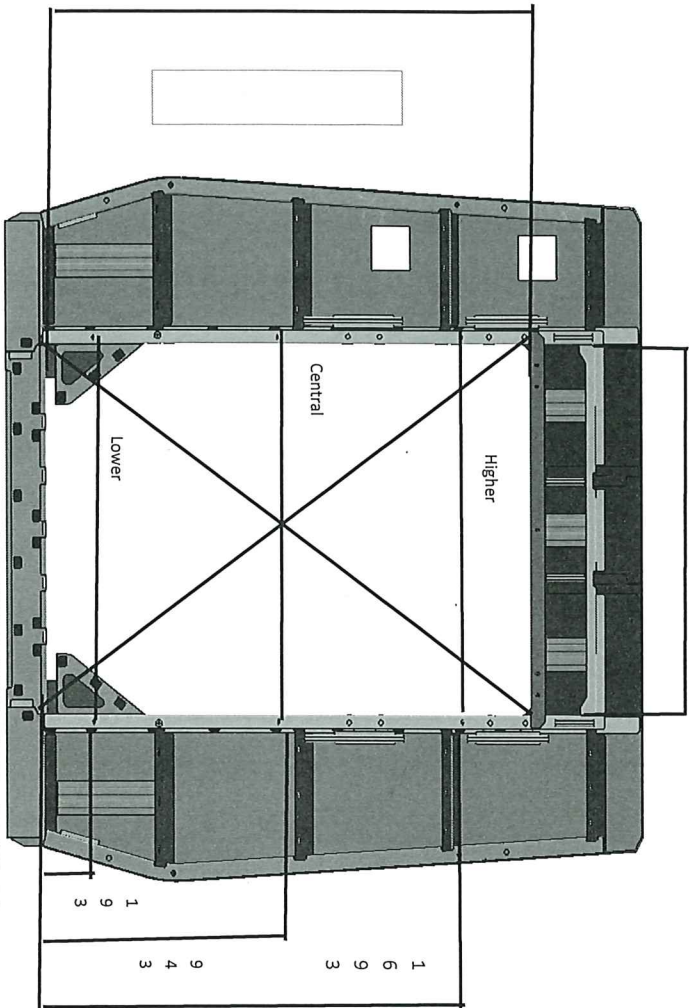
Rev.	Project: PRASA
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Date	
07/11/2023	

Specifications of Details for CBS measurement

Endframe 2

1380 to 1382 mm

1990 to 1996mm



Higher Dimension

D1

Central Dimension

D2

Lower Dimension

D1-D2

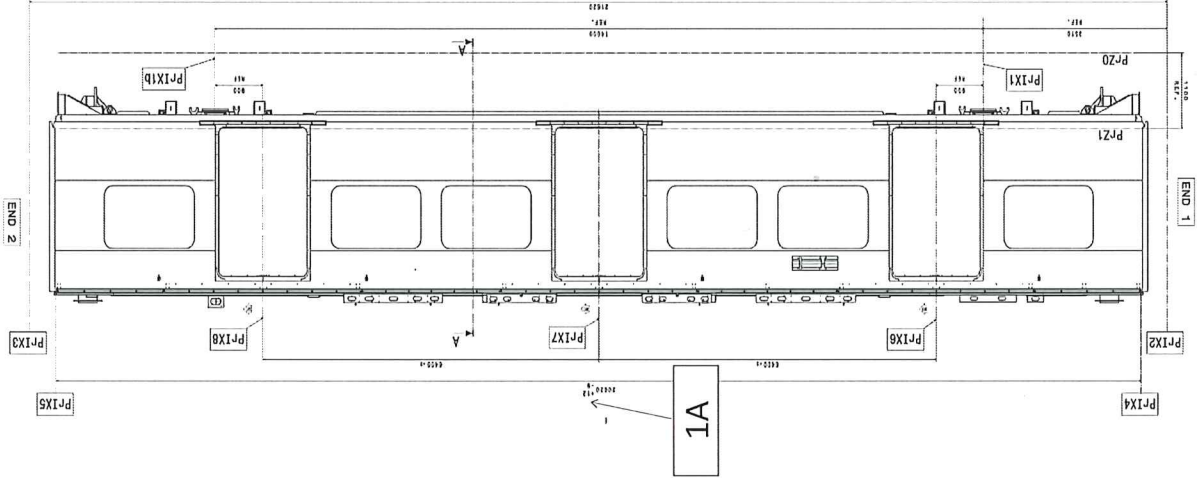


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

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Specifications of Details for CBS measurement



LEFT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20628

RIGHT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20628

Dye penetrant test

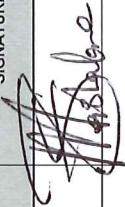
Dye-penetration test to be performed by quality personnel



[illegible]

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		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)	29/03/24 Operations	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	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	Status

Operations

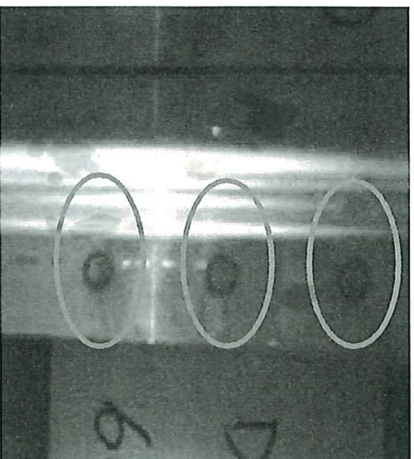
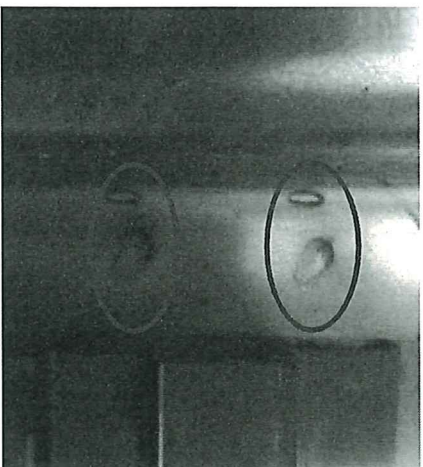
Quality



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.	Project: PRASA SI.CB2210.254.V30
31	
Date	
07/11/2023	

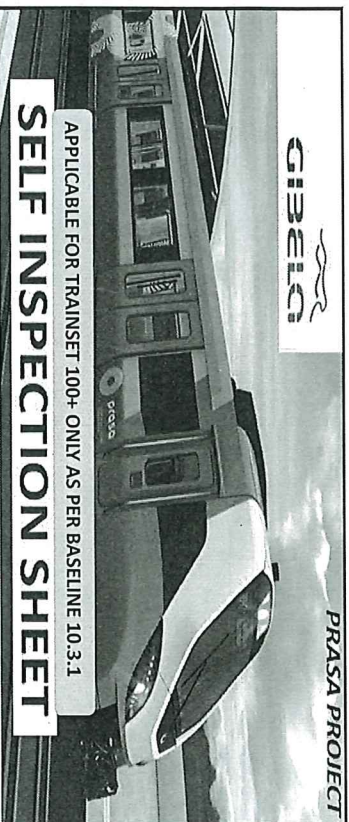
ANNEXURE A: Spot Welding Quality Acceptance Standard



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

ANNEXURE B: Arc Welding Quality Acceptance Standard



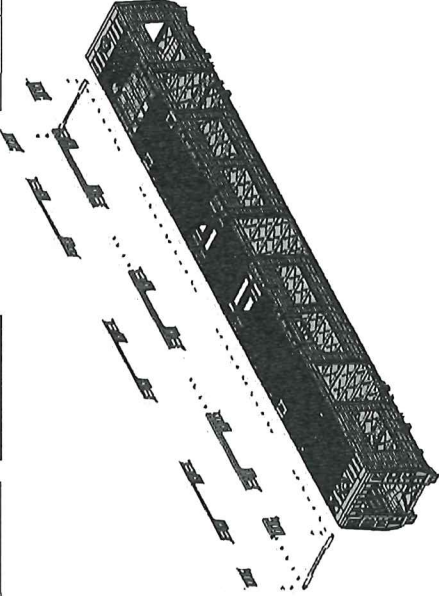




CONFIDENTIAL INFORMATION
This document and the information contemplated therein have to be considered as Confidential Information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE				WORK INSTRUCTION	SAFETY ?
				TC1	MA	MS	MS	TC2	
<input type="checkbox"/>	DTB022548/72	CARBODYSHELL ML,M2,M4,ASSEMBLY	CB2220		X	X		X	
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
<input type="checkbox"/>									
REV	DATE	MODIFICATION CONTENT				RESPONSIBLE		NAME	DATE
0	01/02/2018	GIBELA NEW CREATION				APPROVER		Izumeleng Modiba	01/02/2018
						CHECKER		Nosizo Pindela	01/02/2018
						COMPLER		Thanyani Mathegu	01/02/2018
						APPROVER		Izumeleng Modiba	18/05/2018
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PVE Manager to Quality manager				CHECKER		Nosizo Pindela	18/05/2018
						REVISED BY		Ramokone Mojana	18/05/2018
						APPROVER		Izumeleng Modiba	2018/07/05
						CHECKER		Nosizo Pindela	2018/07/05
2	2018/07/05	Certain dimensional checks added and others moved to CB2210				REVISED BY		Ramokone Mojana	2018/06/12
						APPROVER		Izumeleng Modiba	2018/06/12
						CHECKER		Nosizo Pindela	2018/06/12
3	2018/06/12	Width tolerance as per DT0000336600				REVISED BY		Nosizo Pindela	2018/06/12
						APPROVER		Izumeleng Modiba	24/01/2019
						CHECKER		Nosizo Pindela	24/01/2019
5	24/01/2019	As per Baseline 10.2				REVISED BY		Vanessa Ntuli	24/01/2019
						APPROVER		Izumeleng Modiba	13/03/2019
						CHECKER		Nosizo Pindela	13/03/2019
6	13/03/2019	Added D1 and D2 on Self - Inspection length measurements				REVISED BY		Izumeleng Modiba	22/08/2019
						APPROVER		Nosizo Pindela	22/08/2019
						CHECKER		Nosizo Pindela	22/08/2019
10	22/08/2019	New Baseline 10.2.5				REVISED BY		Nosizo Pindela	22/08/2019
						APPROVER		Timothy Mainela	06/08/2020
						CHECKER		Bongane Masina	06/08/2020
15	06/08/2020	New Baseline 10.2.6				REVISED BY		Bongane Masina	06/08/2020
						APPROVER		Timothy Mainela	19/04/2021
						CHECKER		Bongane Masina	19/04/2021
20	19/04/2021	New Baseline change 10.3				REVISED BY		Mbhombi Collins	17/08/2021
						APPROVER		Mpho Mulaudzi	17/08/2021
						CHECKER		Mpho Mulaudzi	17/08/2021
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING				REVISED BY		Collins Mbombhi	19/02/2022
						APPROVER		Andani Muthelo	19/02/2022
						CHECKER		Andani Muthelo	19/02/2022
25	20/02/2022	New Baseline change 10.3.1				REVISED BY		Collins Mbombhi	14/06/2022
						APPROVER		Andani Muthelo	14/06/2022
						CHECKER		Andani Muthelo	14/06/2022
26	14/06/2022	Update minimum temperature requirement for sealant application				REVISED BY		Collins Mbombhi	19/10/2022
						APPROVER		Ntokoza Zwane	19/10/2022
						CHECKER		Ntokoza Zwane	19/10/2022
27	19/10/2022	Addition of traceability for sealant application & welding				REVISED BY		Vanessa Ntuli	14/04/2023
						APPROVER		Amogelang Mohlamepe	14/04/2023
						CHECKER		Ntokoza Zwane	14/04/2023
28	14/04/2023	Added sealant batch number & welding consumables traceability				REVISED BY		Amogelang Mohlamepe	28/10/2023
						APPROVER		Ngobeni Tyson	28/10/2023
						CHECKER		Ntokoza Zwane	28/10/2023
29	28/10/2023	Addition of bracket quantity				REVISED BY		Amogelang Mohlamepe	28/10/2023
						APPROVER		Amogelang Mohlamepe	28/10/2023
						CHECKER		Amogelang Mohlamepe	28/10/2023
TRAINSET	CAR	OPERATOR NAME,ALPS NO	DATE	SELF INSPECTION NUMBER		PAGES			
215	M3	Mkhomasini 426954	01/05/24	SI.CB2220.250.V29		13			

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2		Rev. 29	Project: PRASA
			Date 28/10/2023	SI.CB2220.250.V29
Car: M1,M3,M4	NCR:		Work station: CB2220	
 Safety Related				
				
I - Documentation and Instruments Control				
I.1 - Documentation Control				
Document DTR30225487/2	Type of car TC1 LW ZW PW ZD1		Revision 29	Observation 01/03/24 OK <input checked="" type="checkbox"/> N/A <input type="checkbox"/>
				Signature/Date (Manufacturing) Signature/Date (Quality) 02/03/24
I.2 - Instruments Control				
Monitoring and Measuring Instrument Control - Used for Special Process				
Instruments	Serial number	Calibration or Verification Validation Date	OK <input checked="" type="checkbox"/>	Signature/Date (Quality)
Tubular	22737	29/11/2024	<input checked="" type="checkbox"/>	Signature/Date (Quality)
Tape measure	61671057	2024/04/05	<input checked="" type="checkbox"/>	Signature/Date (Quality)
				02/03/24
1.3 Consumables				
Welding Consumable Control - Used for Special Process				
Filler Material	Heat Number	Welding Process	OK <input checked="" type="checkbox"/>	Signature/Date (Quality)
308	E231057	308 MIG	<input checked="" type="checkbox"/>	Signature/Date (Quality)
				02/03/24










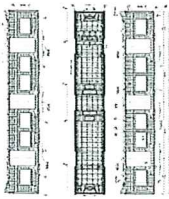















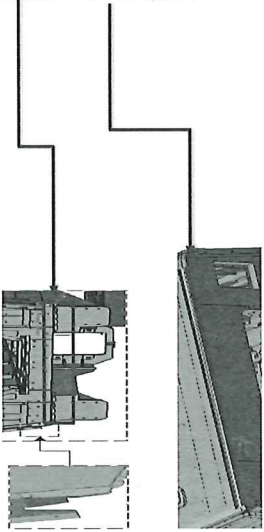


CARBODYSHELL M1 M3 M4 ASSEMBLY
DTR30225487/2


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II - Self Inspection - Items to Check

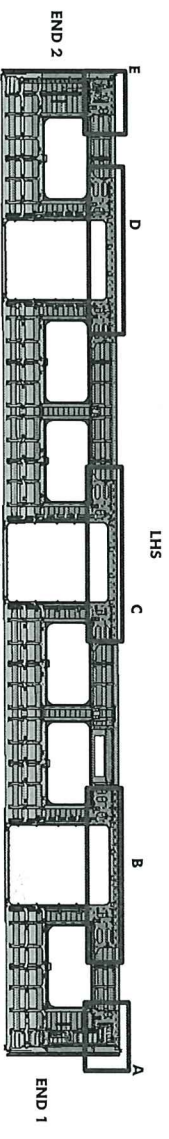
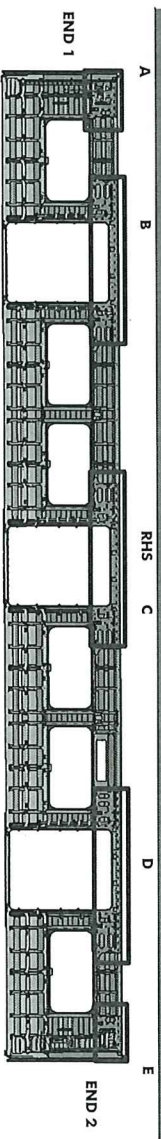
II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOX	REWORK	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	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210875	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 TO GIB - TYPDEF - ARC - 0000 REFER	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
04		Cleaning of all Stainless Steel Surface	According to GIB-WEL - PROC-0002	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
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-048. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210858.	As the welding procedure IND-SAL-WMS-048 and DTD0000210858.	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
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 (1) 10°C - 35°C Relative humidity Min - Max 25% - 80% Max (1)	Actuals Exp Date: <u>12/03/24</u> Temperature: <u>20</u> Humidity: <u>61</u>	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
08	NA	Verification of sealant application in certain regions in the drawing.	AA00001278556	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24
09		Verification of safety welds	Approved according to DTD0000210658 reference and Self inspection	<input checked="" type="checkbox"/>			 01/03/24	 02/03/24




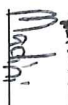






	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
		29	
		Date	SI.CB2220.250.V29
		28/10/2023	
II - Self Inspection - Items to Check			
SEALANT APPLICATION			
<div>AREA 1 & 2 END 1</div> <div><div>Operator (Name & sign): </div><div>Operator (Name & sign): </div></div>			


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

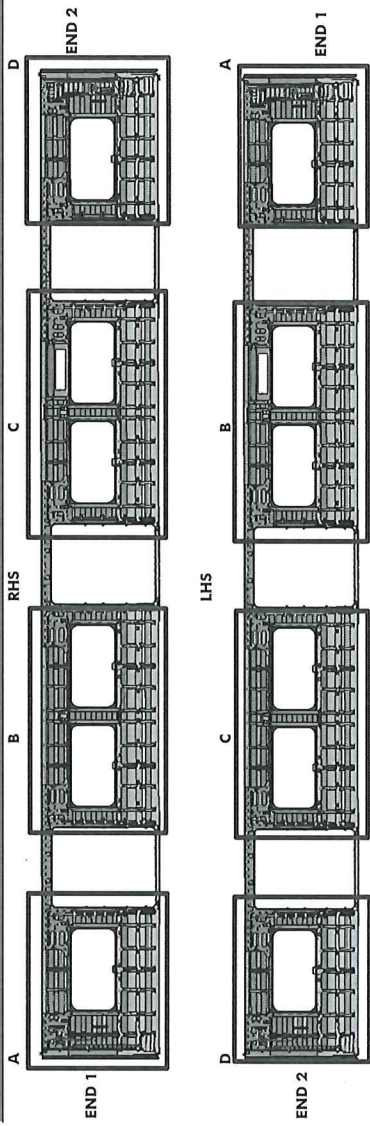
II - Self Inspection - Items to Check



REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): 	
B	Operator (Name&sign): 	
C	Operator (Name&sign): 	
D	Operator (Name&sign): 	
E	Operator (Name&sign): 	

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



BRACKETING

C-RAILS:	INSTALLATION	
	Operator:	<u>Mthokozisi</u>
	Operator:	<u>Mthokozisi</u>
	Operator:	<u>Mthokozisi</u>
	Operator:	<u>LINDO END1</u>
	Operator:	<u>LINDO END2</u>
DOOR MECHANISMS:		
TAPPING PADS		
SEAT & LUGGAGE BRACKETS:	INSTALLATION & VERIFICATION	
	Operator:	<u>Mthokozisi</u>
SEAT BRACKETS VERIFICATION:	Operator:	<u>Asanda</u>
	Operator:	
	Operator:	
	Operator:	

WELDING

AREA	LHS		RHS	
	A (Seat brackets)	: Operator (Name&sign): <u>Mthokozisi</u>	A (Seat brackets)	: Operator (Name&sign): <u>Mthokozisi</u>
B (Seat brackets)	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
C (Seat brackets)	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
D (Seat brackets)	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>	(C-rails, Luggage and earth bushes) : Operator (Name&sign): <u>Mthokozisi</u>
ENDS				
END 1 TAPPING PADS WELDING:	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>
END 1 TAPPING PADS WELDING:	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>	Operator (Name&sign): <u>LINDO</u>



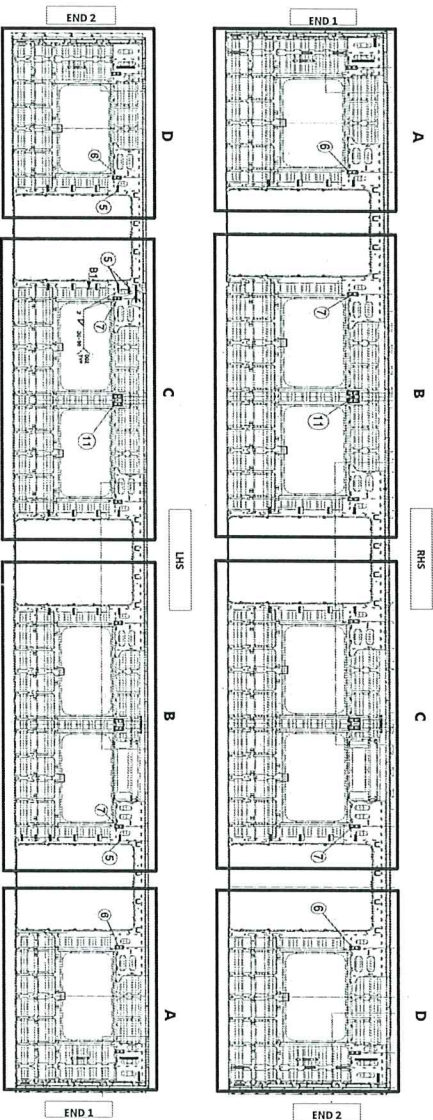
CARBODYSHELL M1/M3/M4 ASSEMBLY
DTR30225487/2

Rev. 29
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Project: PRASA

SI.CB2220.250.V29

II - Self Inspection - Items to Check

M1/M3/M4 BRACKET INSTALLATION



QUANTITIES (M3/M4)

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

ROOF ENDS:

GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END

VERIFICATION BY: *Ntshocei*

QUANTITIES (M1)

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

ROOF ENDS:

GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END

VERIFICATION BY: *Ntshocei*

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

ROOF ENDS:

GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END

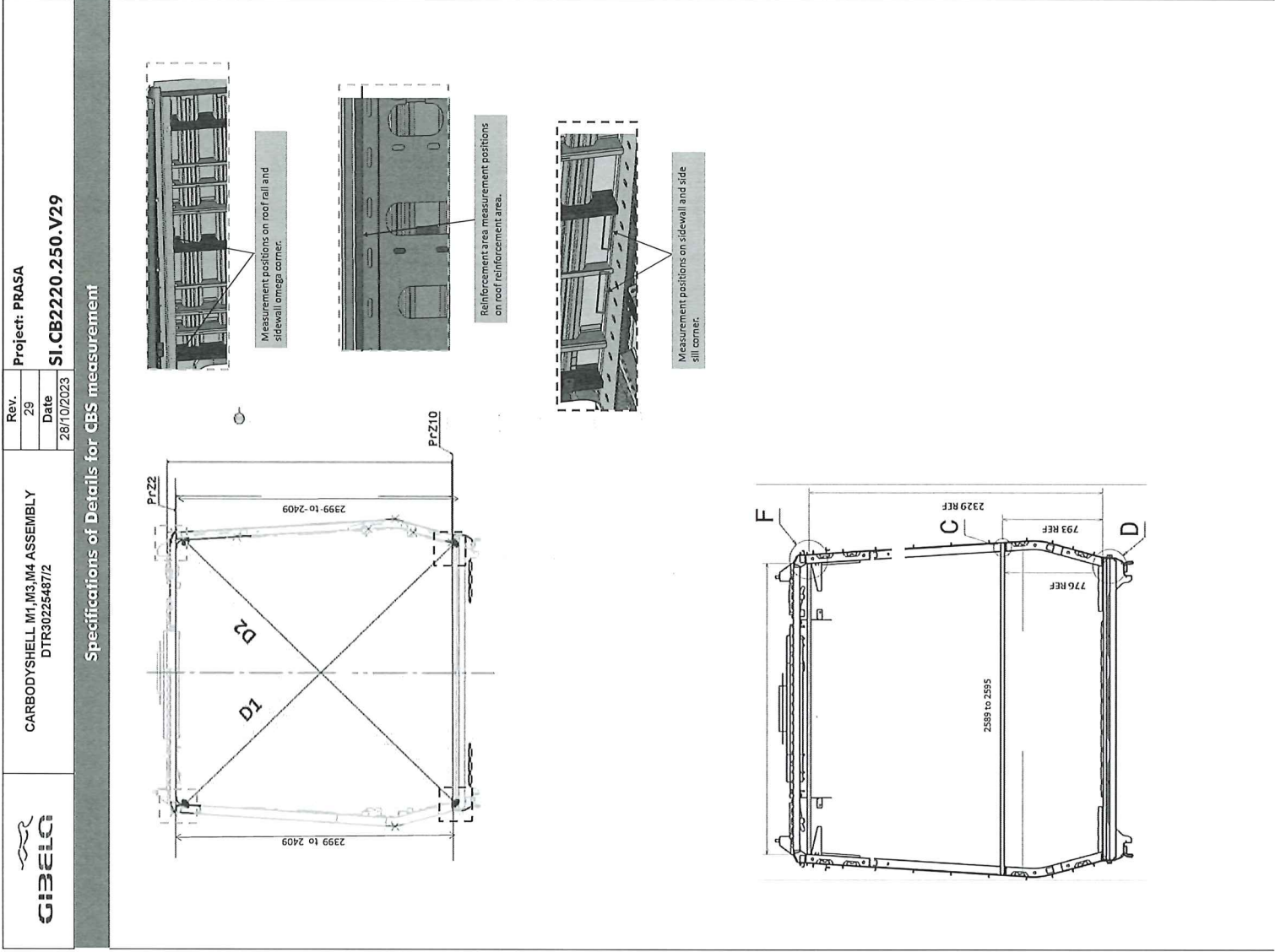
VERIFICATION BY: *NA*

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

ROOF ENDS:

GRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END

VERIFICATION BY: *NA*





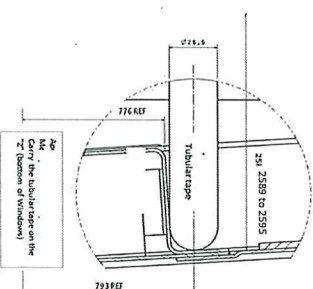
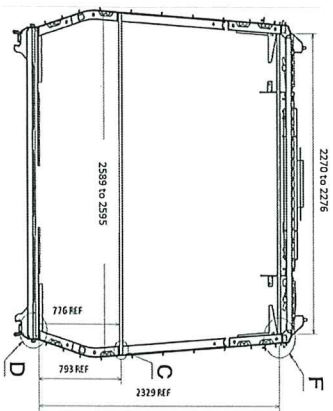
CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225467/2

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28/10/2023

Project: PRASA

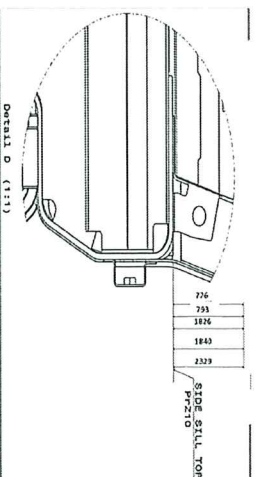
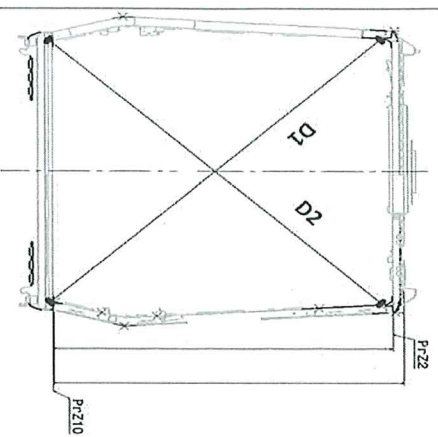
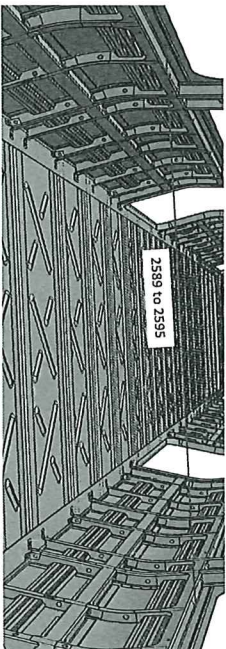
SI.CB2220.250.V29

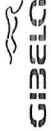
CB5 measurement

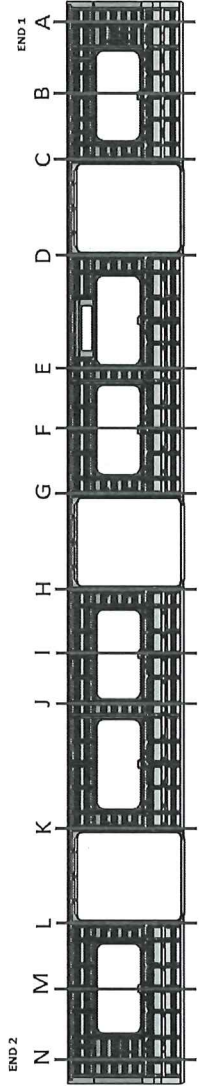


Detail C

Take measurement close to radius



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



BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3299	3300	1	-
B	3268	3267	1	-
C	3299	3254	5	-
D	3297	3297	0	-
E	3266	3270	4	-
F	3264	3267	3	-
G	3299	3295	4	-
H	3297	3295	2	-
I	3264	3266	2	-
J	3296	3268	2	-
K	3299	3300	1	-
L	3299	3298	1	-
M	3268	3268	0	-
N	3300	3255	5	-

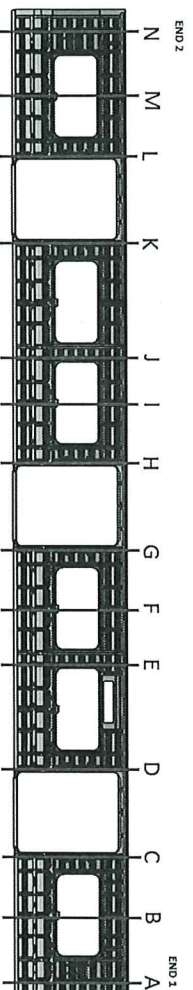


CARBODYSHELL M1,M3,M4 ASSEMBLY
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28/10/2023	


SI.CB2220.250.V29

CB5 measurement

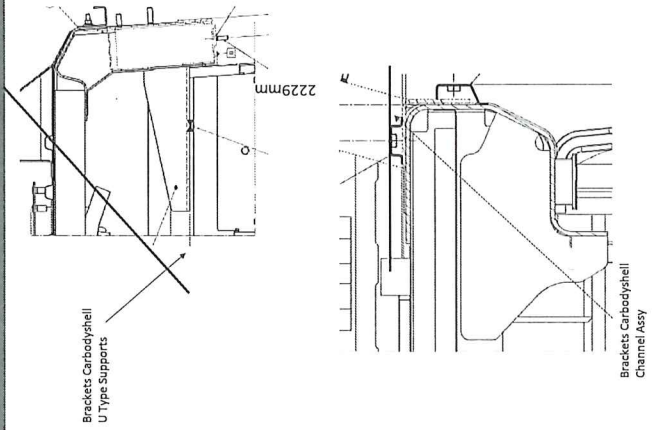
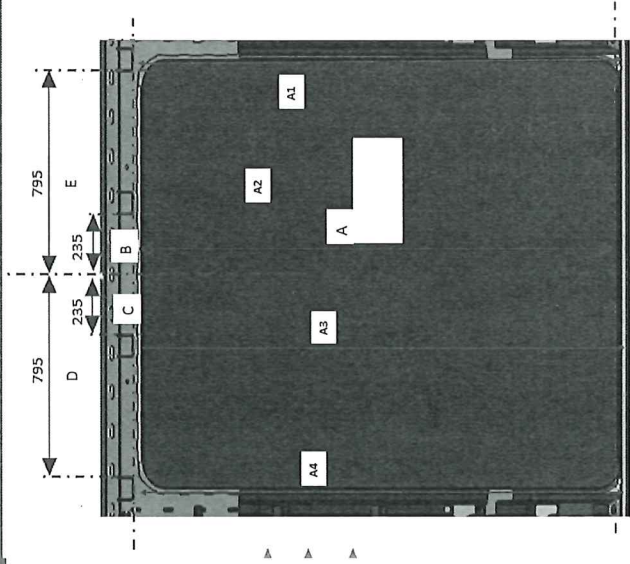


AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3298	3297	1	2595
B	3268	3264	4	2589
C	3299	3294	5	2589
D	3301	3297	4	2590
E	3265	3269	3	2594
F	3264	3269	5	2590
G	3295	3292	3	2589
H	3290	3292	2	2589
I	3264	3266	2	2593
J	3268	3268	0	2595
K	3297	3300	3	2590
L	3297	3297	0	2590
M	3269	3265	3	2590
N	3298	3296	2	2595

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

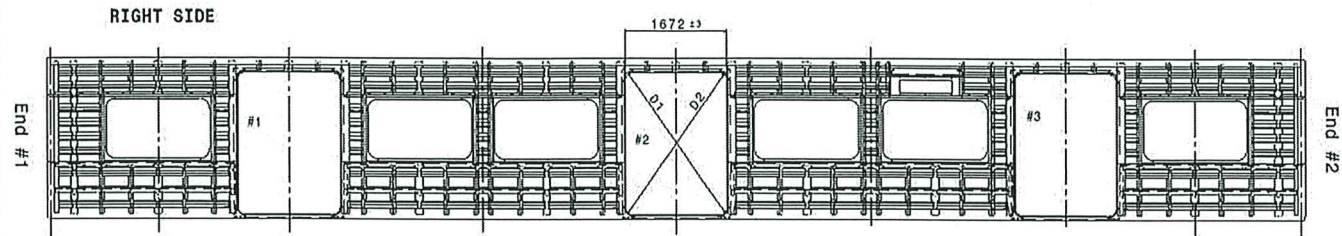
Specifications of Details for CBS measurement CB1220



DOOR 1 - LHS			DOOR 2 - LHS		
VALUE		ACTUAL	VALUE		ACTUAL
A1	2230 to 2232	2232	A1	2230 to 2232	2234
A2	2230 to 2232	2232	A2	2230 to 2232	2234
A3	2230 to 2232	2232	A3	2230 to 2232	2234
A4	2230 to 2232	2232	A4	2230 to 2232	2234
B	234 to 236	235	B	234 to 236	236
C	234 to 236	235	C	234 to 236	236
D	794 to 796	795	D	794 to 796	794
E	794 to 796	795	E	794 to 796	795

DOOR 1 - RHS			DOOR 2 - RHS		
VALUE		ACTUAL	VALUE		ACTUAL
A1	2230 to 2232	2233	A1	2230 to 2232	2232
A2	2230 to 2232	2233	A2	2230 to 2232	2232
A3	2230 to 2232	2233	A3	2230 to 2232	2232
A4	2230 to 2232	2233	A4	2230 to 2232	2232
B	234 to 236	235	B	234 to 236	235
C	234 to 236	235	C	234 to 236	235
D	794 to 796	795	D	794 to 796	795
E	794 to 796	795	E	794 to 796	795

Specifications of Details for CBS measurement CB1220

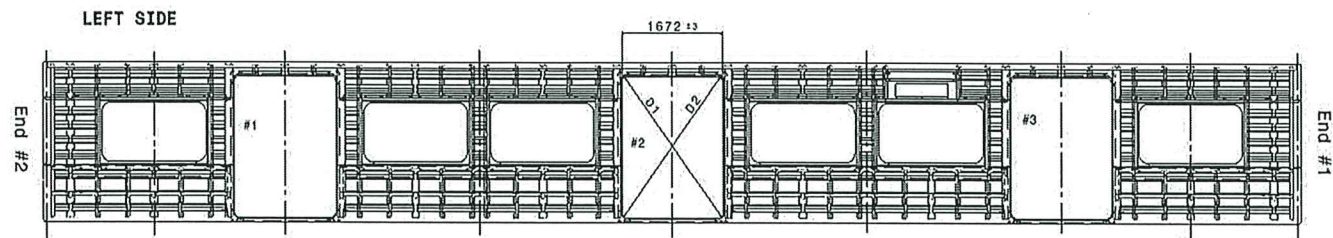


Doors length - 1672 ±3mm

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

Doors diagonal D1-D2 maximum difference ≤4mm

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



Doors length - 1672 ±3mm

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

Doors diagonal D1-D2 maximum difference ≤4mm

	#1	#2	#3
D1	2749	2749	2750
D2	2747	2748	2749
D1-D2	2	1	1



CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

Rev.	29	Project: PRASA
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SI.CB2220.250.V29

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) Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party)	01/03/24	Richardmond Operations	
	NO GO	There are activities pending that impact the activities of the next process Obs: (To describe problems below) There are non-conformities that impact the quality of the product and there is no corrective action defined yet)		Operations Industrial Quality	

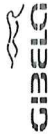
In case of "NO GO", describe blocking problems

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

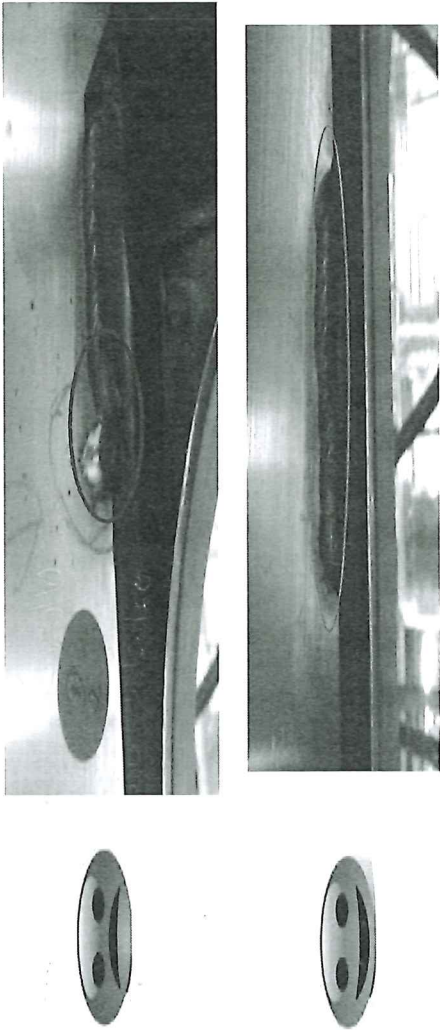
Item	Description	Responsible	Due date	Status

Operations

Quality

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

ANNEXURE A: Arc Welding Quality Acceptance Standard



Station: CB1220-004- U108 & U107

PART NO.	ITEM NO.	QTY	DESCRIPTION	MASS (KG)
DT7600074038	5	6	EARTH STUD 6	0.026
AA00001301A8	4	6	ASSEMBLY SUPPORT	0.275
DT76000094805	3	12	WELDING STUD G013918 PF - M20x3.5	0.107
AA0000118024	2	12	ASSEMBLY SUPPORT	0.195
AA0000118418	1	14	ASSEMBLY SUPPORT	0.522
AA0000116100	101	6	CARBODYSHELL BRACKETS CARBODYSHELL M1/M3/M4 CAR/SIDE FRAME MODULE END - 099	32.132

