

GIBELA

PRASA PROJECT


APPLICABLE FROM TRAINSET 190+ AS PER BASELINE 10.4

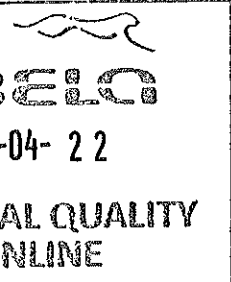
SELF INSPECTION SHEET


CONFIDENTIAL INFORMATION

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

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 	
				TC1	M4	M1	M2	M3	TC2			
<input type="checkbox"/>	DTR30225497/3	AAD0001276566	CARBODYSHELL M3,M4 ASSEMBLY	CB2210					X		PRA.CB2210.DTR30225497/3.V30	YES
<input type="checkbox"/>												
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE							
0	10/01/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	10/01/2018							
			CHECKER	Nosizo Pindela	10/01/2018							
			COMPILER	Thanyani Mathegu	10/01/2018							
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	2018/05/18							
			CHECKER	Nosizo Pindela	2018/05/18							
			REVISED BY	Ramokone Motama	2018/05/18							
2	2018/07/04	Certain dimensional checks moved to CB1220 and CB1230	APPROVER	Itumeleng Modiba	2018/07/04							
			CHECKER	Nosizo Pindela	2018/07/04							
			REVISED BY	Ramokone Motama	2018/07/04							
3	2018/12/12	Added dimensional check points to CB2210	APPROVER	Itumeleng Modiba	2018/12/12							
			CHECKER	Nosizo Pindela	2018/12/12							
			REVISED BY	Ramokone Motama	2018/12/12							
5	22/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	22/01/2019							
			CHECKER	Nosizo Pindela	22/01/2019							
			REVISED BY	Vanessa Ntuli	22/01/2019							
6	13/03/2019	Added D1 and D2 on Self - Inspection	APPROVER	Itumeleng Modiba	13/03/2019							
			CHECKER	Nosizo Pindela	13/03/2019							
			REVISED BY	Nosizo Pindela	13/03/2019							
10	21/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	21/08/2019							
			CHECKER	Nosizo Pindela	21/08/2019							
			REVISED BY	Nosizo Pindela	21/08/2019							
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020							
			CHECKER	Bongane Masina	06/08/2020							
			REVISED BY	Bongane Masina	06/08/2020							
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021							
			CHECKER	Bongane Masina	19/04/2021							
			REVISED BY	Bongane Masina	19/04/2021							
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021							
			CHECKER	Mpho Mulaudzi	17/08/2021							
			REVISED BY	Mpho Mulaudzi	17/08/2021							
25	19/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi collins	19/02/2022							
			CHECKER	Andani Muthelo	19/02/2022							
			REVISED BY	Andani Muthelo	19/02/2022							
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023							
			CHECKER	Mohlame Amogelang	14/04/2023							
			REVISED BY	Mohlame Amogelang	14/04/2023							
30	20/07/2023	New Baseline change 10.4	APPROVER	Ngobeni Tyson	20/07/2023							
			CHECKER	Mohlame Amogelang	20/07/2023							
			REVISED BY	Mohlame Amogelang	20/07/2023							
31	07/11/2023	Added traceability for welding sections	APPROVER	Ngobeni Tyson	07/11/2023							
			CHECKER	Mohlame Amogelang	07/11/2023							
			REVISED BY	Ntokozi Zwane	07/11/2023							
TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES							
TS 024	114	P. Mulaudzi	22/04/23	SI.CB2210.254.V30	17							

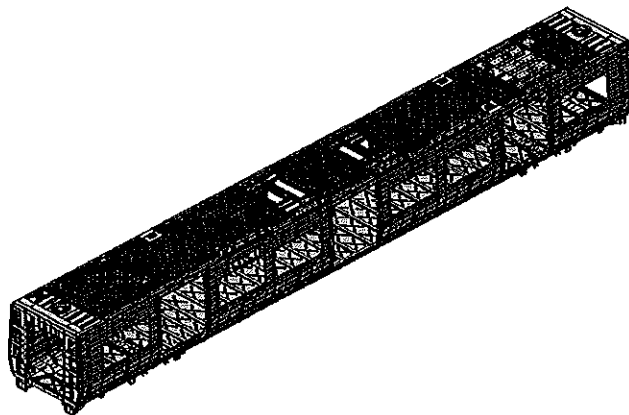


	CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Car: M3 & M4	NCR:	Work station: CB2210
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


Safety Related







I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
	1	2	3	4	5	6						
DTR30225487/3						X	V31		✓			 22/04/24




I.2 - Instruments Control

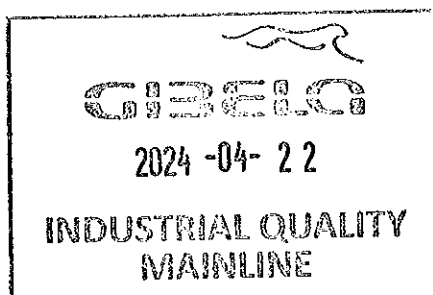
Monitoring and Measuring Instrument Control - Used for Special Process


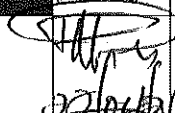
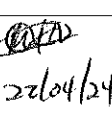
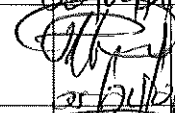
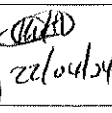
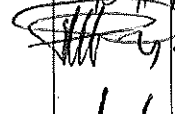
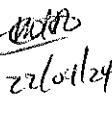


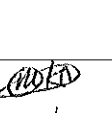
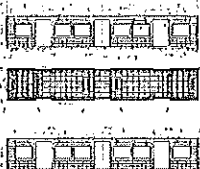

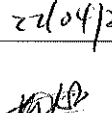
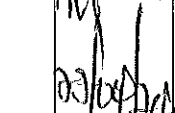
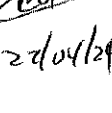
Instruments	Serial number	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
TUBULAR	32823-2	15/05/25	✓			
WIRE IAPÉ	105488924	08/01/25	✓			
WIRE IAPÉ	61810102	18/11/24	✓			22/04/24

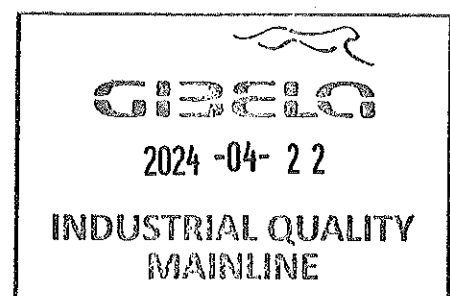
1.3 Consumables


Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 LSI	314018-74097	MIG	✓			
ER 308L	209687-70802	TIG	✓			 22/04/24

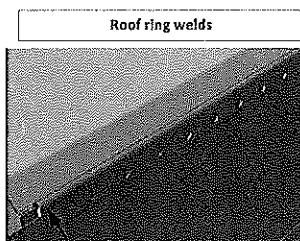


		CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31 Date 07/11/2023	Project: PRA5A SI.CB2210.254.V30		
II - Self Inspection - Items to Check						
II.1 - Items to check						
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓		 22/04/24
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	✓		 22/04/24
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		 22/04/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		 22/04/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	✓		 22/04/24
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.	✓		 22/04/24



	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
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Welding Traceability

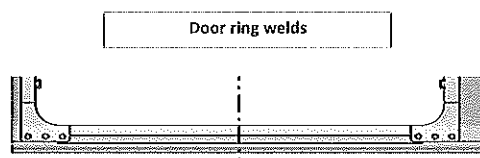


<div style="text-align: center; margin-bottom: 5px;"><u>LHS</u></div> Boiler maker (Name & Sign): <u>TIM P. [Signature]</u>	<div style="text-align: center; margin-bottom: 5px;"><u>RHS</u></div> Boiler maker (Name & Sign): <u>GERALD [Signature]</u>
Welder (Name & Sign): <u>KEITH K. [Signature]</u>	Welder (Name & Sign): _____

END 1

<div style="text-align: center; margin-bottom: 5px;"><u>LHS</u></div> Boiler maker (Name & Sign): <u>TIM [Signature]</u>	<div style="text-align: center; margin-bottom: 5px;"><u>RHS</u></div> Boiler maker (Name & Sign): <u>GERALD [Signature]</u>
Welder (Name & Sign): <u>KEITH K. [Signature]</u>	Welder (Name & Sign): <u>KEITH K. [Signature]</u>

END 2



LHS


Boiler maker (Name & Sign): GERALD [Signature]

Welder (Name & Sign): Thobeng [Signature]

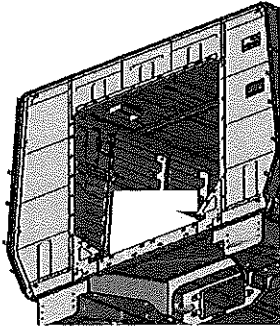
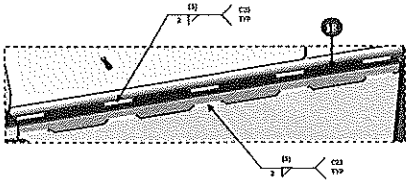
RHS

Boiler maker (Name & Sign): LUNGA [Signature]

Welder (Name & Sign): Thobeng [Signature]


	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

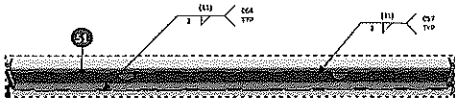
EUUF Reinforcement Plates



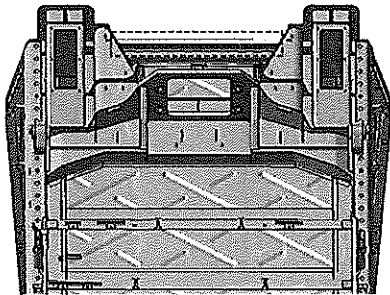
END 1,

Boiler maker (Name & Sign):

Welder (Name & Sign):



END 2

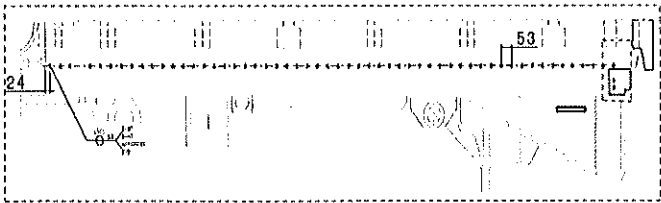


Underneath the CAR

END 2


Boiler maker (Name & Sign):

Welder (Name & Sign):




FEDOLI

Operator:

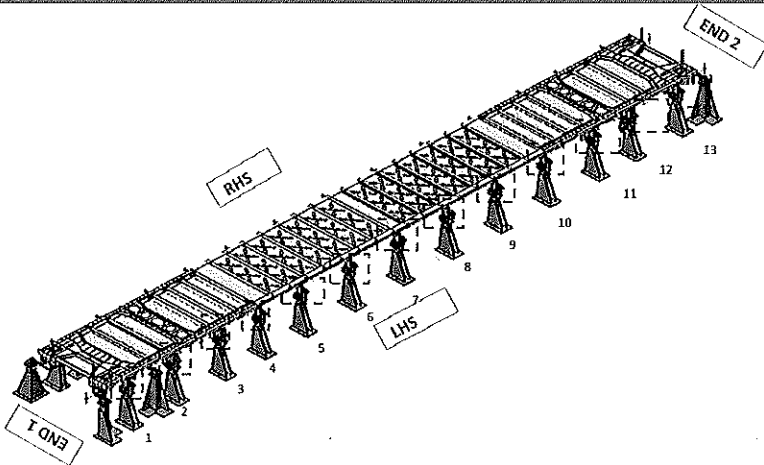


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INDUSTRIAL QUALITY
MAINLINE

	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Specifications of Details for CBS measurement




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

After loading and clamping

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


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

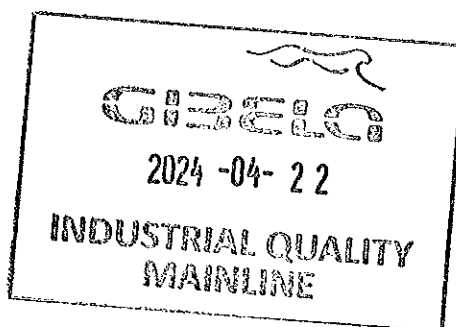
Signature Operations:  Date: 22/04/24

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													
Right Hand Side													

Signature Industrial Quality:  Date: 22/04/24





CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

31

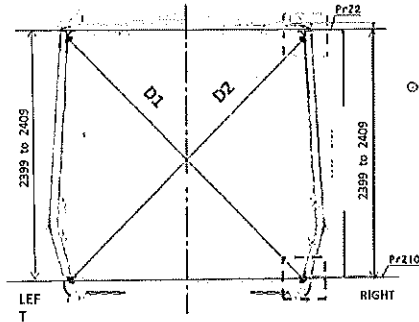
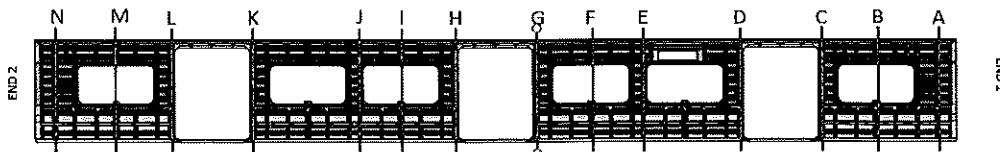
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07/11/2023

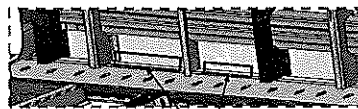
Project: PRASA

SI.CB2210.254.V30

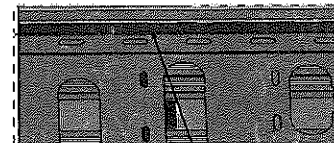
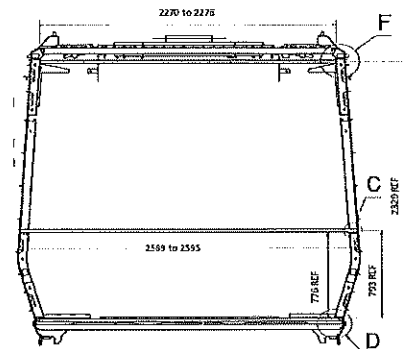
Specifications of Details for CBS measurement



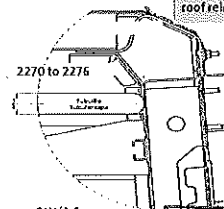
Measurement positions on roof rail and sidewall omega corner.



Measurement positions on sidewall and side sill corner.



Reinforcement area measurement positions on roof reinforcement area.



Details F

Don't consider the reinforcement

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2024 -04- 2 2

INDUSTRIAL QUALITY
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CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

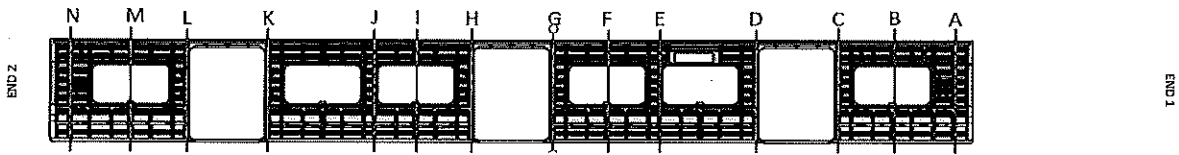
Rev.
31

Date

07/11/2023

Project: PRASA
SI.CB2210.254.V30

Specifications of Details for CBS measurement

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

BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3269	3268	1	2404	2404	0
B	3268	3268	0	2405	2406	1
C	3270	3271	1	2404	2404	0
D	3271	3269	2	2406	2404	2
E	3266	3268	2	2405	2404	1
F	3268	3268	0	2403	2404	1
G	3269	3270	1	2404	2404	0
H	3270	3270	0	2404	2406	2
I	3269	3268	1	2404	2405	1
J	3269	3268	1	2404	2403	1
K	3270	3271	1	2406	2406	0
L	3268	3269	1	2405	2404	1
M	3269	3269	2	2406	2404	2
N	3267	3267	0	2404	2403	1

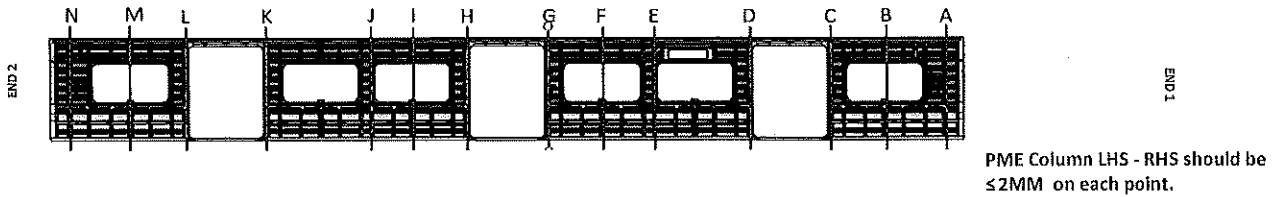
Handwritten signature and date: 22/04/24

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2024-04-22


INDUSTRIAL QUALITY
MAINLINE

Specifications of Details for CBS measurement

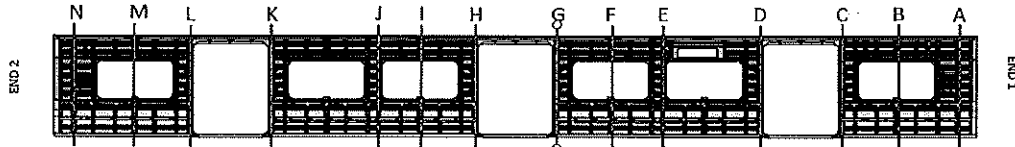


AFTER WELDING

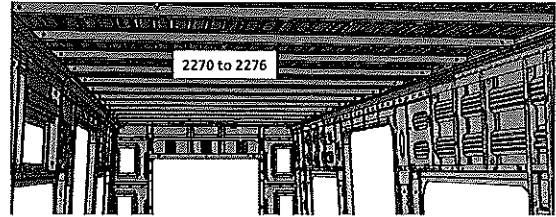
	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3296	3297	1	2404	2404	0
B	3268	3069	1	2406	2404	2
C	3298	3299	1	2405	2404	1
D	3297	3298	1	2404	2404	0
E	3268	3268	0	2405	2406	1
F	3270	3271	1	2404	2405	1
G	3297	3296	1	2404	2403	1
H	3298	3296	2	2404	2405	1
I	3291	3269	2	2406	2404	2
J	3269	3269	0	2405	2404	1
K	3296	3295	1	2406	2406	0
L	3298	3296	2	2405	2404	1
M	3269	3269	2	2404	2405	1
N	3296	3296	0	2406	2404	2


409964
22/04/24

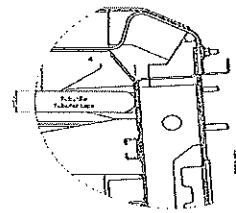
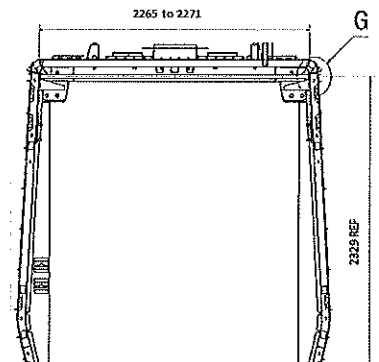
BEFORE WELDING




	2270 to 2276
A	22710
B	22713
C	22711
D	22715
E	22712
F	22714
G	22716
H	22715
I	22716
J	22715
K	22714
L	22712
M	22714
N	22715

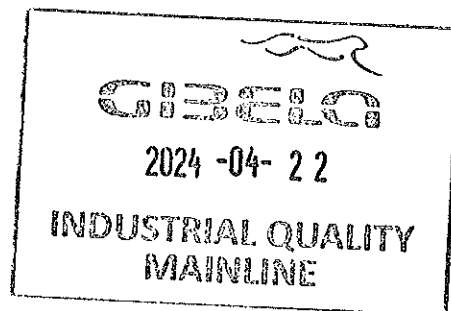


Do not consider reinforcement (Take measurements top area of zee profile

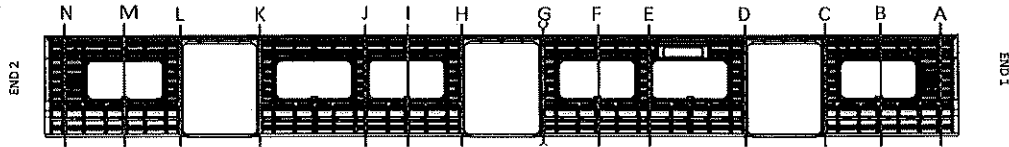


Detail D
Consider of the reinforcement plate

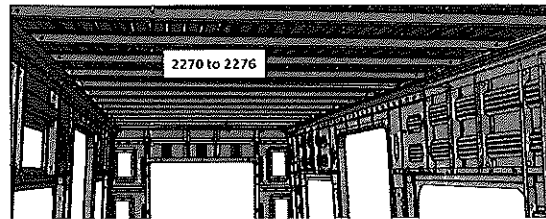

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22/04/24



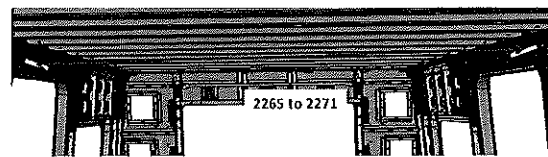
AFTER WELDING



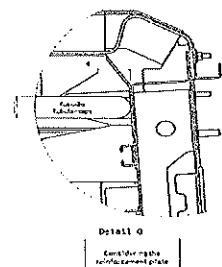
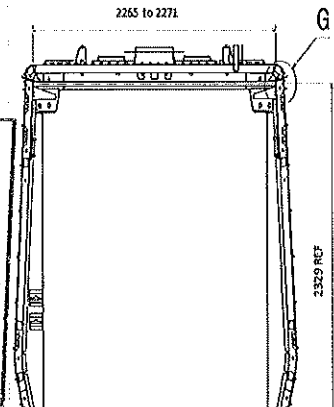
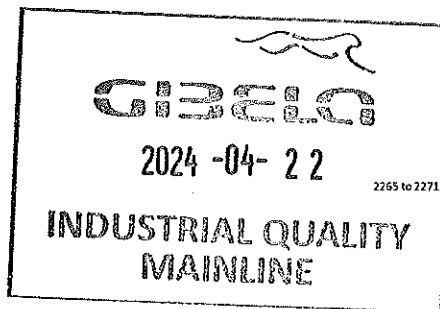
	2265 to 2271	2270 to 2276
A	2269	
B		2274
C	2270	
D	2269	
E		2276
F		2275
G	2265	
H	2268	
I		2274
J		2275
K	2269	
L	2266	
M		2274
N	2267	



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



Take measurement close to radius (considering reinforcement)



209964
22/04/24

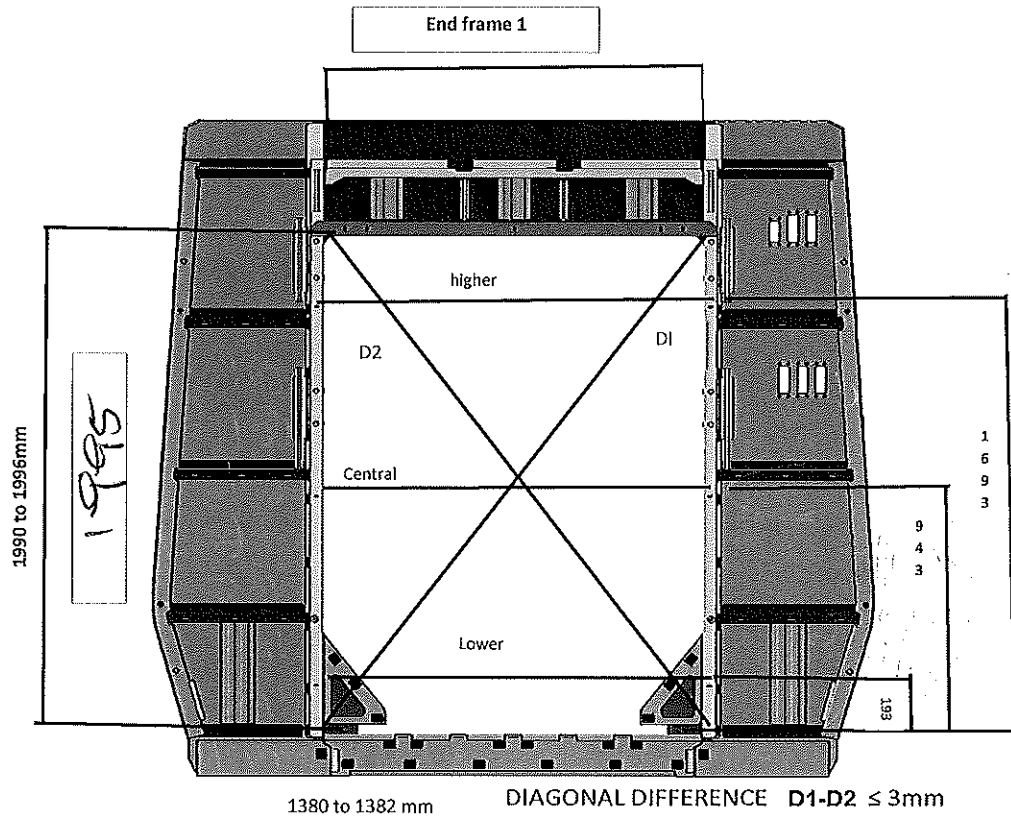


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.
31
Date
07/11/2023

Project: PRASA
SI.CB2210.254.V30

Specifications of Details for CBS measurement



Higher Dimenision

1582

Central Dimension

1351

Lower Dimension

1382

D1

2416

D2

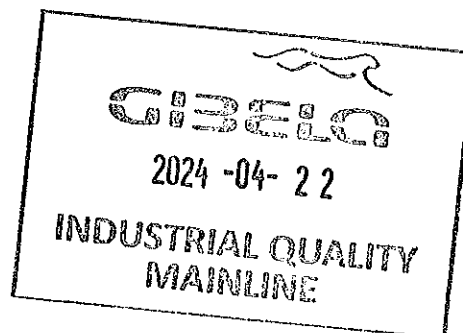
2416

D1-D2

0

DIAGONAL DIFFERENCE $D1-D2 \leq 3mm$

Handwritten signature and date: 20/04/24



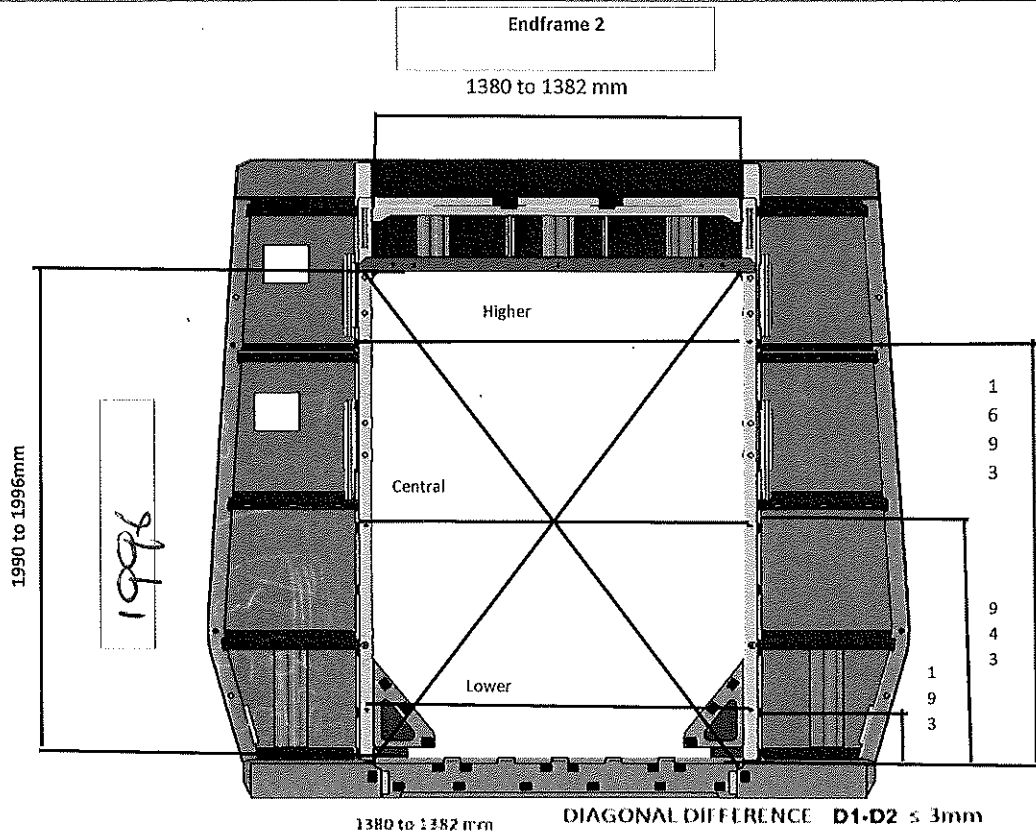


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.
31
Date
07/11/2023


Project: PRASA
SI.CB2210.254.V30

Specifications of Details for CBS measurement



Higher Dimension	1382	D1	2415
Central Dimension	1381	D2	2416
Lower Dimension	1381	D1-D2	1

[Handwritten signature]
200964
22/02/24



2024-04-22

INDUSTRIAL QUALITY
MAINLINE



CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

31

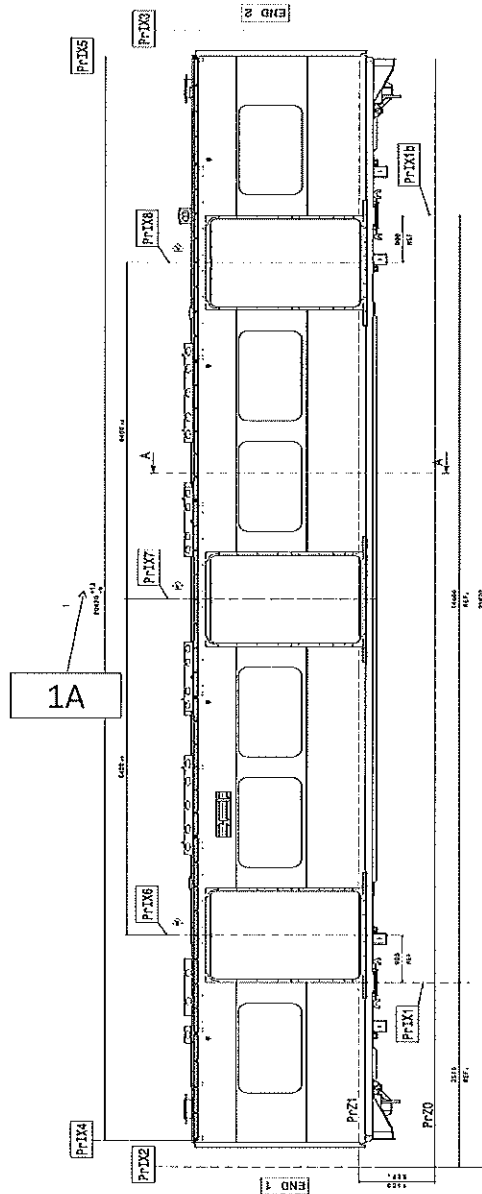
Date

07/11/2023

Project: PRASA

SI.CB2210.254.V30

Specifications of Details for CBS measurement



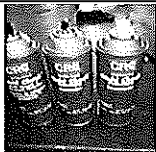
LEFT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20616

RIGHT SIDE		
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20616

Handwritten signature and date: 22/04/24


Dye penetrant test

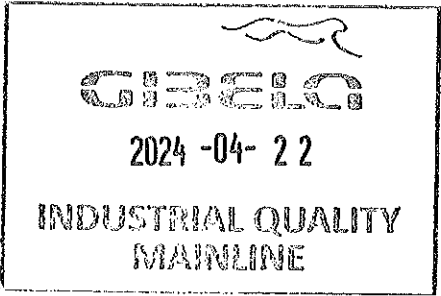
Dye-penetration test to be performed by quality personnel




2024-04-22

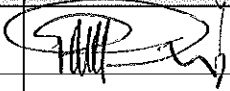

INDUSTRIAL QUALITY
MAINLINE

		CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		Rev. 31 Date 07/11/2023	Project: PRASA SI.CB2210.254.V30		
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		Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. New defects must be added on the REX				



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

Self Inspection - Final Result

				DATE	NAME	SIGNATURE
HOLD POINT		GO	(If activities are not complete, the missing activities must not impact the next stage)	22/04/24	Pow Poo Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	22/04/24	Kelebone Industrial Quality	
		NO GO	There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)			
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)			


In case of "NO GO", describe blocking problems

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

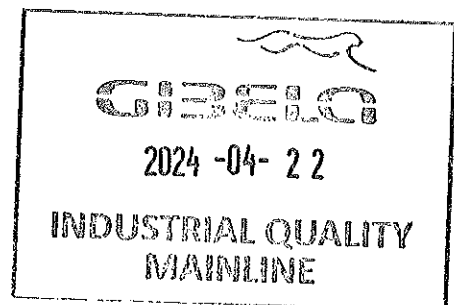
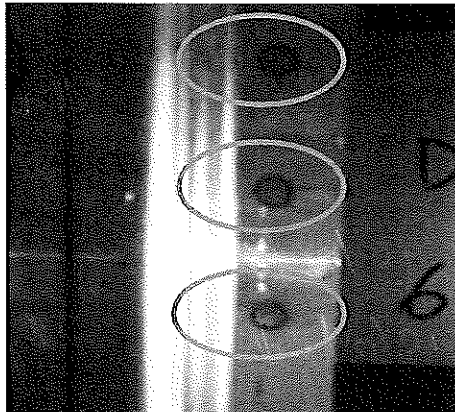
Operations


Quality



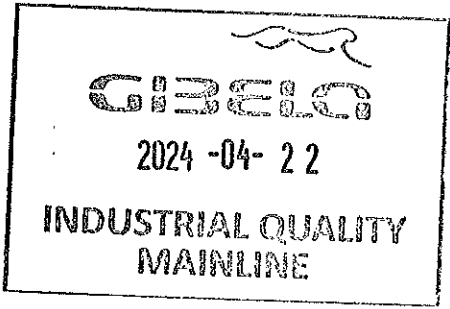
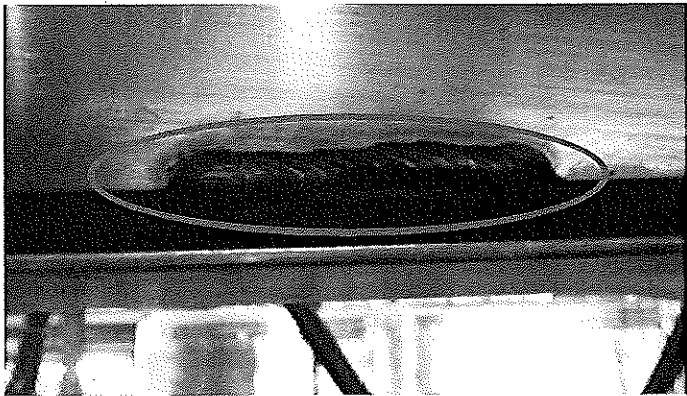
	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

ANNEXURE A: Spot Welding Quality Acceptance Standard



	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

ANNEXURE B: Arc Welding Quality Acceptance Standard





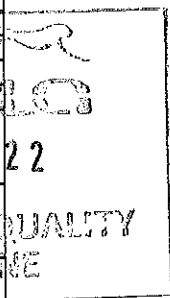




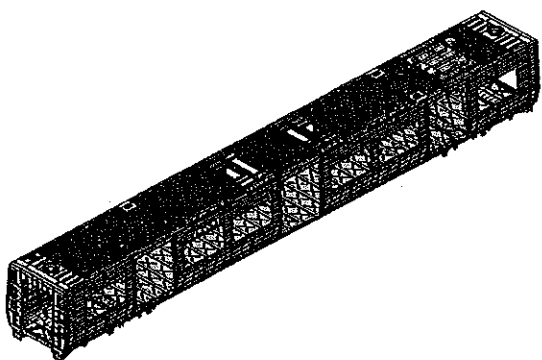








APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

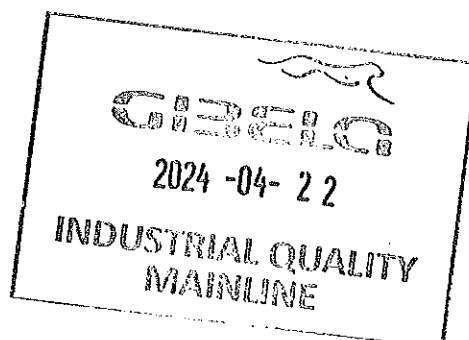
SELF INSPECTION SHEET


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

APPLICATION REFERENCE											
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ?
				TC1	MA	MA	MA	MA	TC2		
<input type="checkbox"/>	DTR30225497/2	CARBODYSHELL M1,M3,M4 ASSEMBLY	CB2220		X	X		X		PRA.CB2220.DTR3022548 7/2.V21	YES
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<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		Itumeleng Modiba		01/02/2018			
				CHECKER		Nosizo Pindela		01/02/2018			
				COMPILER		Thanyani Mathegu		01/02/2018			
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager		APPROVER		Itumeleng Modiba		18/05/2018			
				CHECKER		Nosizo Pindela		18/05/2018			
				REVISED BY		Ramokone Motama		18/05/2018			
2	2018/07/05	Certain dimensional checks added and others moved to CB1210		APPROVER		Itumeleng Modiba		2018/07/05			
				CHECKER		Nosizo Pindela		2018/07/05			
				REVISED BY		Ramokone Motama		2018/07/05			
3	2018/06/12	Width tolerance as per DT0000336600		APPROVER		Itumeleng Modiba		2018/06/12			
				CHECKER		Nosizo Pindela		2018/06/12			
				REVISED BY		Nosizo Pindela		2018/06/12			
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 D1 and D2 on Self - Inspection length measurements		APPROVER		Itumeleng Modiba		13/03/2019			
				CHECKER		Nosizo Pindela		13/03/2019			
				REVISED BY		Nosizo Pindela		13/03/2019			
10	22/08/2019	New Baseline 10.2.5		APPROVER		Itumeleng Modiba		22/08/2019			
				CHECKER		Nosizo Pindela		22/08/2019			
				REVISED BY		Nosizo Pindela		22/08/2019			
15	06/08/2020	New Baseline 10.2.6		APPROVER		Timothy Maimela		06/08/2020			
				CHECKER		Bongane Masina		06/08/2020			
				REVISED BY		Bongane Masina		06/08/2020			
20	19/04/2021	New Baseline change 10.3		APPROVER		Timothy Maimela		19/04/2021			
				CHECKER		Bongane Masina		19/04/2021			
				REVISED BY		Bongane Masina		19/04/2021			
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING		APPROVER		Mbhombi Collins		17/08/2021			
				CHECKER		Mpho Mulaudzi		17/08/2021			
				REVISED BY		Mpho Mulaudzi		17/08/2021			
25	20/02/2022	New Baseline change 10.3.1		APPROVER		Collins Mbombi		19/02/2022			
				CHECKER		Andani Muthelo		19/02/2022			
				REVISED BY		Andani Muthelo		19/02/2022			
26	14/06/2022	Update minimum temperature requirement for sealant application		APPROVER		Collins Mbombi		14/06/2022			
				CHECKER		Andani Muthelo		14/06/2022			
				REVISED BY		Andani Muthelo		14/06/2022			
27	19/10/2022	Addition of traceability for sealant application & welding		APPROVER		Collins Mbombi		19/10/2022			
				CHECKER		Ntokozo Zwane		19/10/2022			
				REVISED BY		Amogelang Mohlampe		19/10/2022			
28	14/04/2023	Added sealant batch number & welding consumables traceability		APPROVER		Vanessa Ntuli		14/04/2023			
				CHECKER		Ntokozo Zwane		14/04/2023			
				REVISED BY		Amogelang Mohlampe		14/04/2023			
29	28/10/2023	Addition of bracket quantity		APPROVER		Ngobeni Tyson		28/10/2023			
				CHECKER		Ntokozo Zwane		28/10/2023			
				REVISED BY		Amogelang Mohlampe		28/10/2023			
TRAINSET	CAR	OPERATOR NAME & ALPS NO		DATE	SELF INSPECTION NUMBER		PAGES				
224	M04	Telelo		23/04/24	SI.CB2220.250.V29		13				












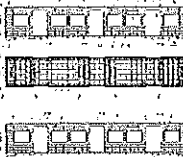












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		29										
		Date	SI.CB2220.250.V29									
Car: M1,M3&M4		NCR:		Work station: CB2220								
 Safety Related												
												
I - Documentation and Instruments Control												
1.1 - Documentation Control												
Document	Type of car	Revision	Observation	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)						
DTR30225487/2	<table border="1"> <tr> <th>M1</th> <th>M3</th> <th>M4</th> </tr> <tr> <td></td> <td></td> <td>✓</td> </tr> </table>	M1	M3	M4			✓			✓	N/A	 23/04/2024
M1	M3	M4										
		✓										
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)							
Tubular	32823-3	15/03/2025	✓		 23/04/2024							
Measuring tape	618780399	16/04/2025	✓		 23/04/2024							
1.3 Consumables												
Welding Consumable Control - Used for Special Process												
Filler Material	Heat Number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)							
306 1.0 mm	E231067	MB6	✓		 23/04/2024							

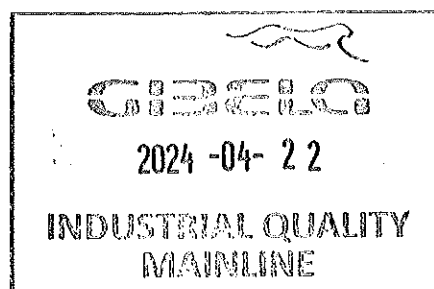



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		29	
		Date	
		28/10/2023	

II - Self Inspection - Items to Check

B.1 - Items to check

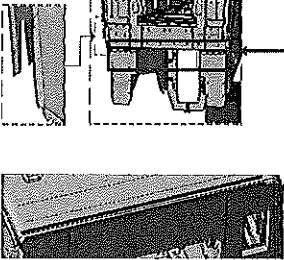
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB2220.DTR30225487/2 Verification of moment for all reinforcement brackets.	PRA.CB2220.DTR30225487/2	✓	 28/04/24	 23/04/2024
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210575	✓	 23/04/24	 23/04/2024
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	 23/04/24	 23/04/2024
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓	 23/04/24	 23/04/2024
05		Functional dimensions approved according drawing or complementary document approved by Abtom engineering and registered in this document.	Approved according specified on pages below.	✓	 23/04/24	 23/04/2024
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-016. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-016 and DTD0000210658.	✓	 23/04/24	 23/04/2024
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 (°C) Min - Max 10°C - 35°C Relative humidity Min - Max (%) Min - Max 25% - 60%	Sealant Batch No: 20019340 Exp Date: 10/05/24 Actuals Temperature: 25 Humidity: 37	✓	 23/04/24	 23/04/2024
08	NA	Verification of sealant application in certain regions in the drawing.	AAD0003278566	✓	 23/04/24	 23/04/2024
09		Verification of safety welds	Approved according to DTD0000210658 reference and Self inspection	✓	 23/04/24	 23/04/2024



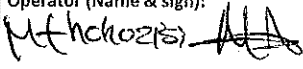
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		29	
		Date	
		28/10/2023	

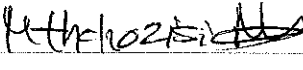
II - Self Inspection - Items to Check

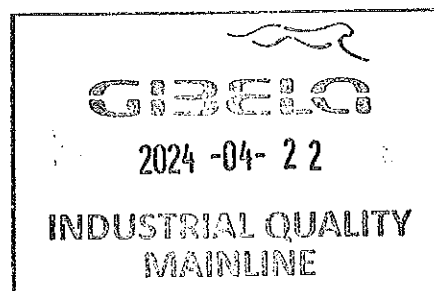
SEALANT APPLICATION




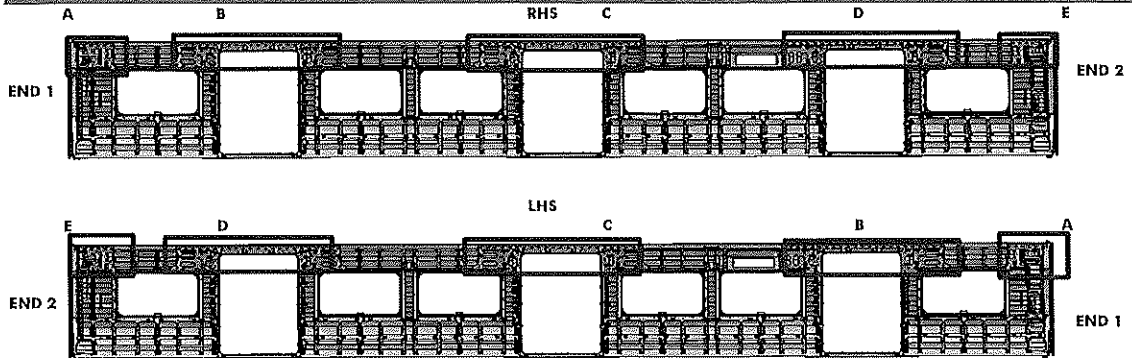
AREA 1 & 2 END 1

Operator (Name & sign):


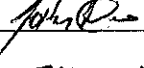

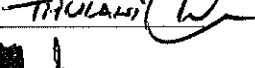
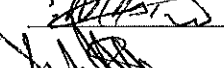

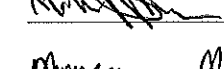
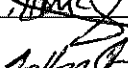
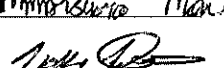


Operator (Name & sign):


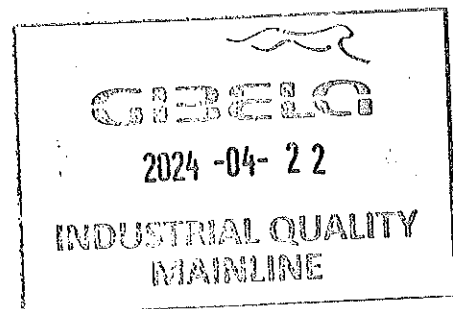



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			

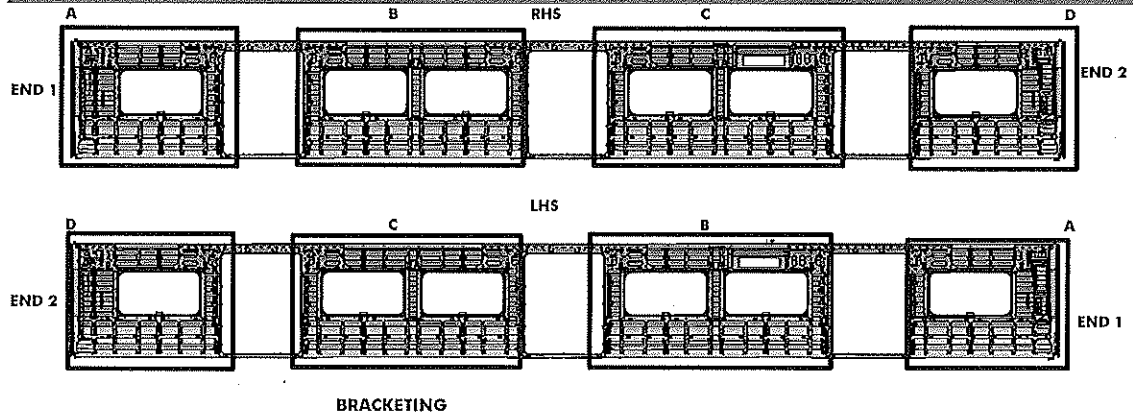


REINFORCEMENT WELDING

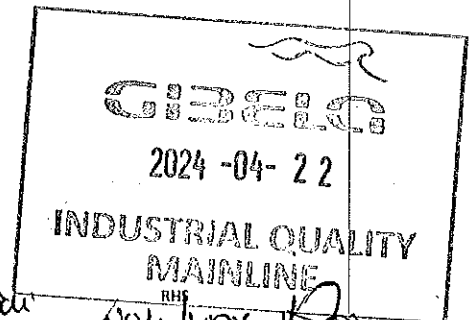
AREA	LHS	RHS
A	Operator (Name&sign): 	
B	Operator (Name&sign): 	
C	Operator (Name&sign): 	
D	Operator (Name&sign): 	
E	Operator (Name&sign): 	

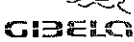


	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRA5A SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			

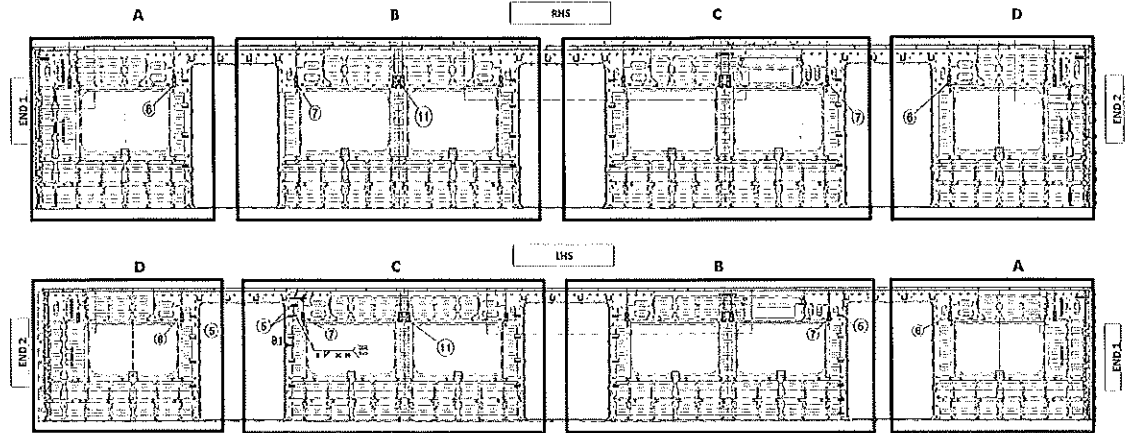


INSTALLATION	
C-RAILS:	Operator: <u>Ntsholozi</u>
	Operator: _____
DOOR MECHANISMS:	Operator: <u>Tetelo</u>
	Operator: _____
TAPPING PADS	Operator: <u>Mkhize</u>
	Operator: _____
INSTALLATION & VERIFICATION	
SEAT & LUGGAGE BRACKETS:	Operator: <u>Asanda</u>
	Operator: _____
SEAT BRACKETS VERIFICATION:	Operator: <u>Leni</u>
	Operator: _____
WELDING	
AREA	LHS
A (Seat brackets)	: Operator (Name&sign): <u>Ntsholozi</u>
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>John</u>
B (Seat brackets)	: Operator (Name&sign): <u>Mkhize</u>
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>John</u>
C (Seat brackets)	: Operator (Name&sign): <u>Sibiga</u>
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>John</u>
D (Seat brackets)	: Operator (Name&sign): <u>Sibiga</u>
(C-rails, Luggage and earth bushes)	: Operator (Name&sign): <u>Mkhize</u>
ENDS	
END 1 TAPPING PADS WELDING:	Operator (Name&sign): <u>John</u>
END 1 TAPPING PADS WELDING:	Operator (Name&sign): <u>John</u>



	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			

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: Tetelo

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: Tetelo

QUANTITIES (M1)

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

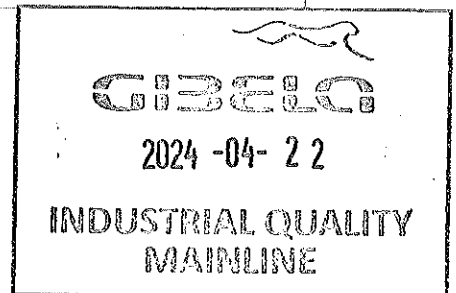
ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END

VERIFICATION BY: N/A

LHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	2		
	B	10		
	C	11		
	D	9		
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: N/A



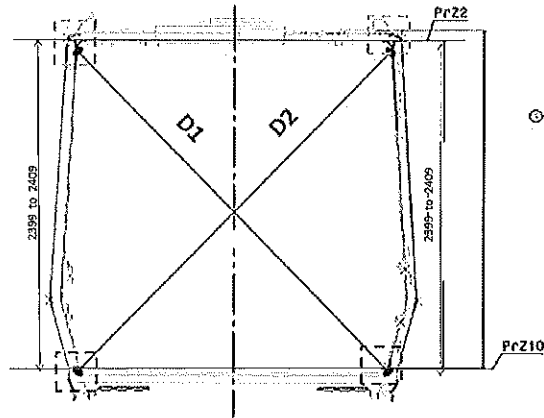


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30226487/2

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29
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Project: PRASA
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Specifications of Details for CBS measurement



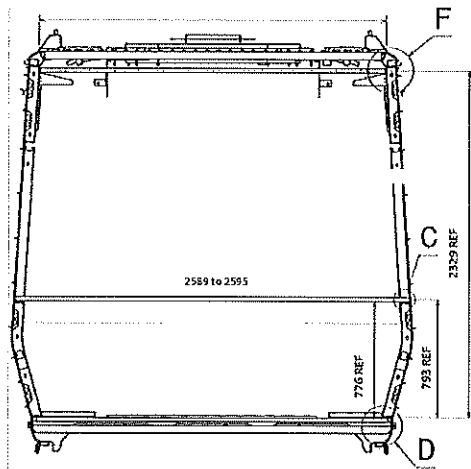
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



GIBELG

2024-04-22

INDUSTRIAL QUALITY
MAINLINE



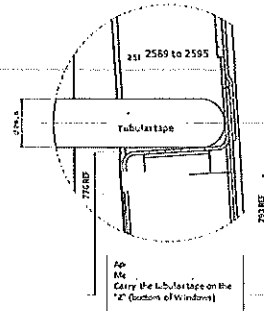
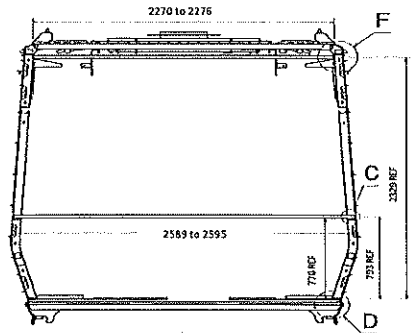
CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30226487/2

Rev.
29
Date
28/10/2023

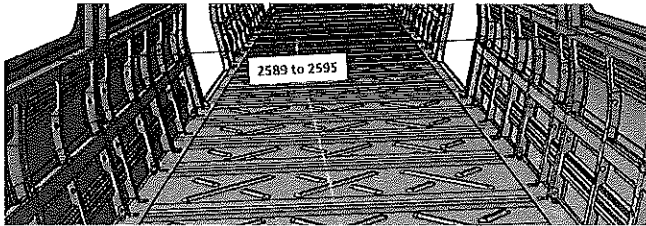
Project: PRASA

SI.CB2220.250.V29

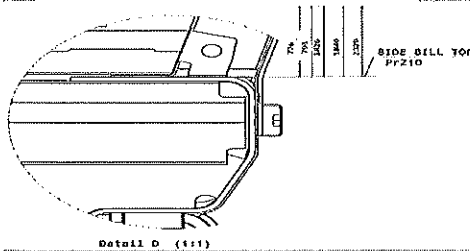
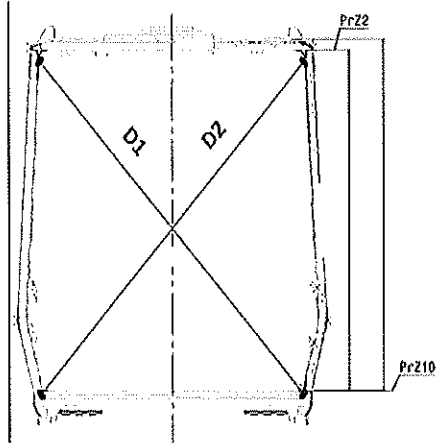
CBS measurement



Detail C



Take measurement close to
radius




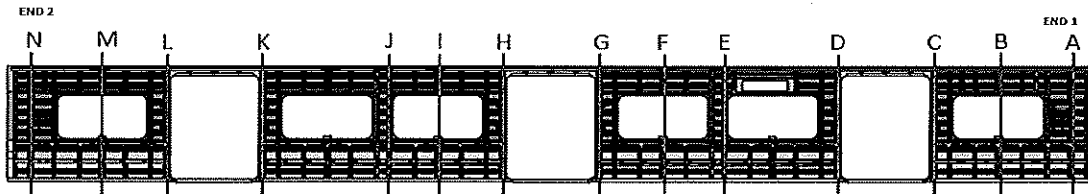
Detail D (1:1)

GIBELQ

2024-04-22

INDUSTRIAL QUALITY
MAINLINE


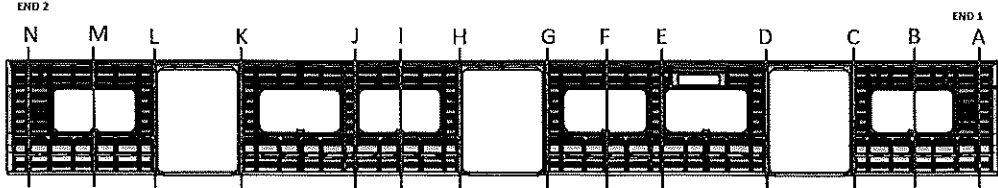
	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRA5A SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
CBS measurement			



BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3300	3287	3	
B	3266	3264	2	
C	3297	3299	2	
D	3299	3297	2	
E	3266	3268	2	
F	3267	3265	2	
G	3295	3297	2	
H	3296	3297	1	
I	3295	3296	1	
J	3287	3289	2	
K	3296	3295	1	
L	3297	3296	1	
M	3265	3268	3	
N	3299	3300	1	



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRASA
		29	
		Date	
		28/10/2023	SI.CB2220.250.V29
CBS measurement			
			

AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3300	3298	2	2593
B	3268	3266	2	2595
C	3245	3297	2	2592
D	3247	3298	1	2593
E	3267	3265	2	2591
F	3266	3268	2	2593
G	3297	3298	1	2592
H	3295	3297	2	2594
I	3267	3268	1	2589
J	3269	3269	0	2591
K	3300	3297	3	2593
L	3296	3245	1	2592
M	3267	3206	1	2593
N	3300	3296	4	2591



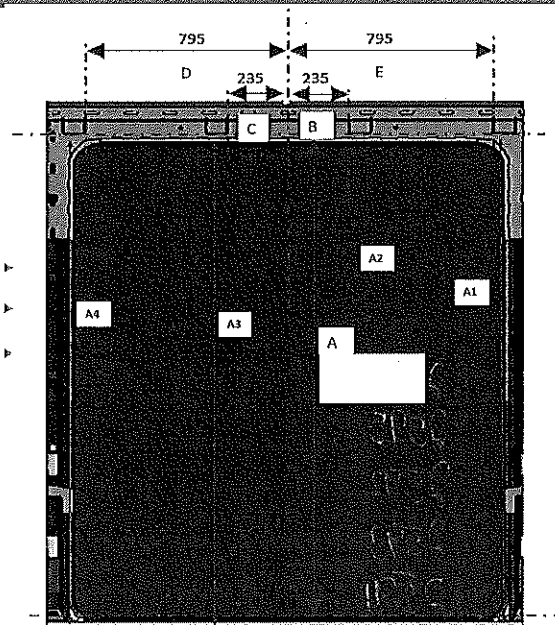


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR30225487/2

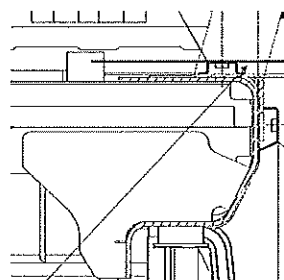
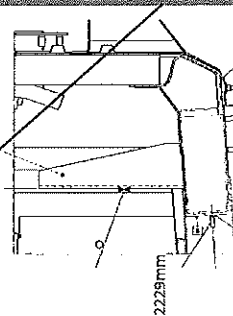
Rev.
29
Date
28/10/2023

Project: PRASA
SI.CB2220.250.V29

Specifications of Details for CBS measurement CB1220



Brackets Carbodysell
U Type Supports



Brackets Carbodysell
Channel Assy

DOOR 1 - LHS

	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 2 - LHS

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

DOOR 2 - 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	234
D	794 to 796	794
E	794 to 796	794

DOOR 1 - RHS

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

DOOR 2 - RHS

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

DOOR 3 - RHS

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



2024-04-22

INDUSTRIAL QUALITY
MAINLINE

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	

Specifications of Details for CBS measurement CB1220

End #2

RIGHT SIDE

End #1

LEFT SIDE

Doors Length = 1672 ±0.5

#1	#2	#3
1672	1672	1671
1671	1671	1671
1672	1672	1672

HIGHER DIMENSION		
D1	D2	D1-D2
2751	2750	1

CENTRAL DIMENSION		
D1	D2	D1-D2
2751	2750	1

LOWER DIMENSION		
D1	D2	D1-D2
2751	2750	1

Doors diagonal D1-D2 maximum difference ≤4mm

Doors Length = 1672 ±0.5

#1	#2	#3
1672	1672	1671
1671	1671	1671
1672	1672	1672

HIGHER DIMENSION		
D1	D2	D1-D2
2751	2750	1



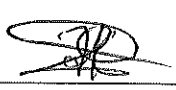
CENTRAL DIMENSION		
D1	D2	D1-D2
2751	2750	1

LOWER DIMENSION		
D1	D2	D1-D2
2751	2750	1

Doors diagonal D1-D2 maximum difference ≤4mm

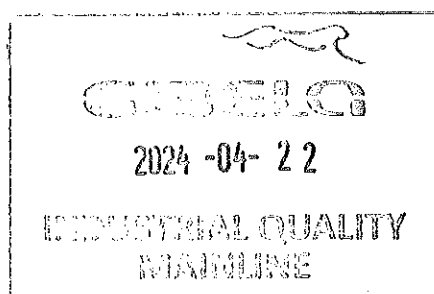
2024-04-22


INDUSTRIAL QUALITY
MAINLINE

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA		
		29			
		Date	SI.CB2220.250.V29		
		28/10/2023			
Self Inspection - Final Result					
Is the car good to advance to the next workstation/process? (Approval of Operations Manager and Industrial Quality)		DATE	NAME	SIGNATURE	
HOLD POINT	<input checked="" type="checkbox"/>	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>	23/04/24	Tetelo Operations	
			23/04/24	Amo Industrial Quality	
	<input type="checkbox"/>	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>		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	

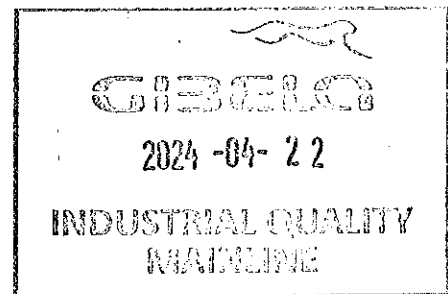
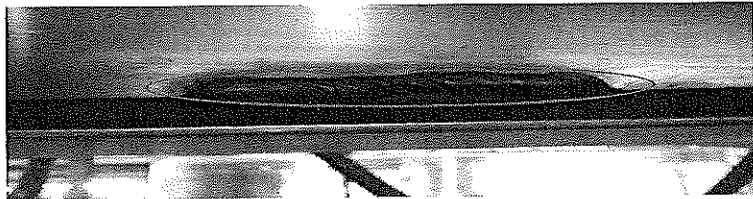
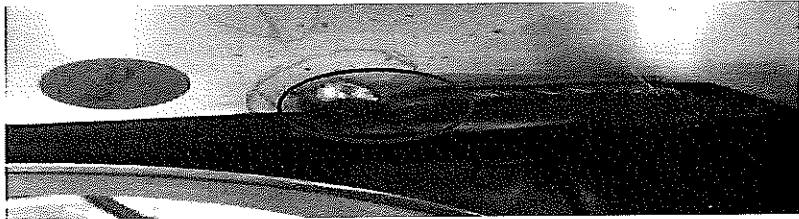
Tetelo
Operations

Quality



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRA5A SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	

ANNEXURE A: Arc Welding Quality Acceptance Standard



GIBELA

PRASA PROJECT


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		
0	2018/08/02	GIBELA NEW CREATION				APPROVER	Philippe 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 Mbhombhi	20/02/2022				
						CHECKER	Andani Muthelo					
						REVISED BY	Andani Muthelo					
26	14/06/2022	Update minimum temperature requirement for sealant application				APPROVER	Collins Mbhombhi	14/06/2022				
						CHECKER	Andani Muthelo					
						REVISED BY	Andani Muthelo					
27	19/10/2022	Addition of traceability for sealant application				APPROVER	Collins Mbhombhi	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				
224	Moy	Isendo 440454		23/04/24		SI.CB1230.256.V28		11				

GIBELA

2024-04-24

INDUSTRIAL QUALITY
MANUAL



CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
29

Date

06/11/2023

Project: PRASA

SI.CB1230.256.V28

Car:

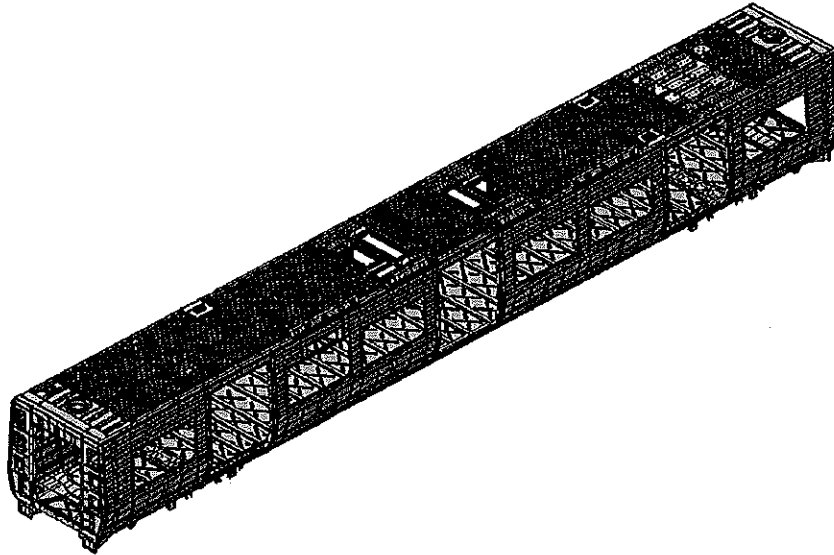
NCR:

Work station:

CB1230



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car					Revision	Observation	OK	NOK	Signature/Date (Operations)	Signature/Date (Quality)
	M1	M2	M3	M4	TC2						
PRA.CB1230.DT00000225487			X			29		OK		N/A	11/11/23 23/04/24

I.2 - Instruments Control

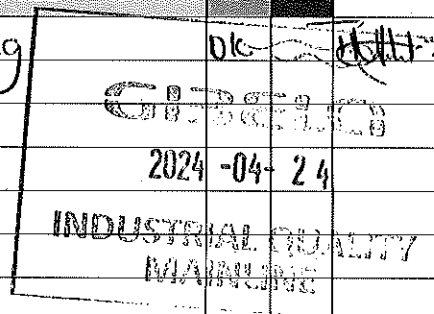
Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Validation Date	OK	NOK	Signature/Date (Operations)	Signature/Date (Quality)
lubular	22713	26/06/24	OK		11/11/23 23/04/24	23/04/24
Combination Square	Fi 30794	27/07/24	OK		11/11/23 23/04/24	23/04/24
Measuring tape	Fi 30794	25/04/24	OK		11/11/23 23/04/24	23/04/24

1.3 Consumables

Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK	NOK	Signature/Date (Manufacturing)	Signature/Date (Quality)
1570-03 Lsi 308	310180	Mig welding	OK		11/11/23 23/04/24	23/04/24





CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
29

Date

06/11/2023

Project: PRASA

SI.CB1230.256.V28

II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Not OK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1230.DT00000225487 Verification of fillet for all brackets.	PRA.CB1230.DT00000225487	OK		 23/04/24	 23/04/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	OK		 23/04/24	 23/04/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	OK		 23/04/24	 23/04/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	OK		 23/04/24	 23/04/24
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		 23/04/24	 23/04/24
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		 23/04/24	 23/04/24
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) : Min-Max : 10°C - 35°C Relative humidity Min - Max (1) : Min-Max : 25% - 80%	Sealant Batch No: 15R-7003 Exp Date: ____/____/24 Actuals Temperature: 26°C Humidity: 72%	OK		 23/04/24	 28/04/24 Exterior
08	N/A	Verification of sealant application in regions of roof and sideframe.	Sealant applied in regions of roof and sideframe.	OK		 23/04/24	 28/04/24

2024-04-24
INDUSTRIAL QUALITY
MAINLINE



CARBODYSHELL M1,M3,M4 ASSEMBLY
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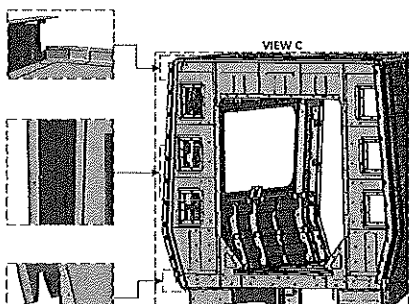
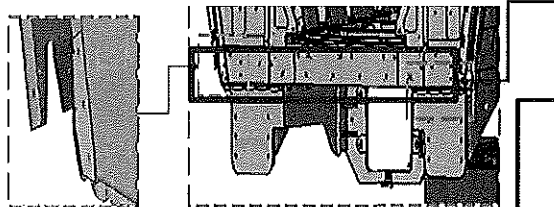
Date

06/11/2023

Project: PRASA

SI.CB1230.256.V28

AREA 1



H



END 2 SEALANT

OPERATOR
(Name & sign):

Leroy

OPERATOR
(Name & sign):

Leroy

OPERATOR
(Name & sign):

Leroy

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

Operator (Name & sign):

LHS
DEFGHI

RHS
E

Operator (Name & sign):

Ishenolo

Ishenolo

Operator (Name & sign):

Operator (Name & sign):

Sihle

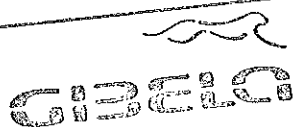
DEFGHI

Operator (Name & sign):

Boitume

Operator (Name & sign):

Nonhlanhla



2024-04-24

INDUSTRIAL QUALITY
MAINLINE

Specifications of Details for CBS measurement CB1230

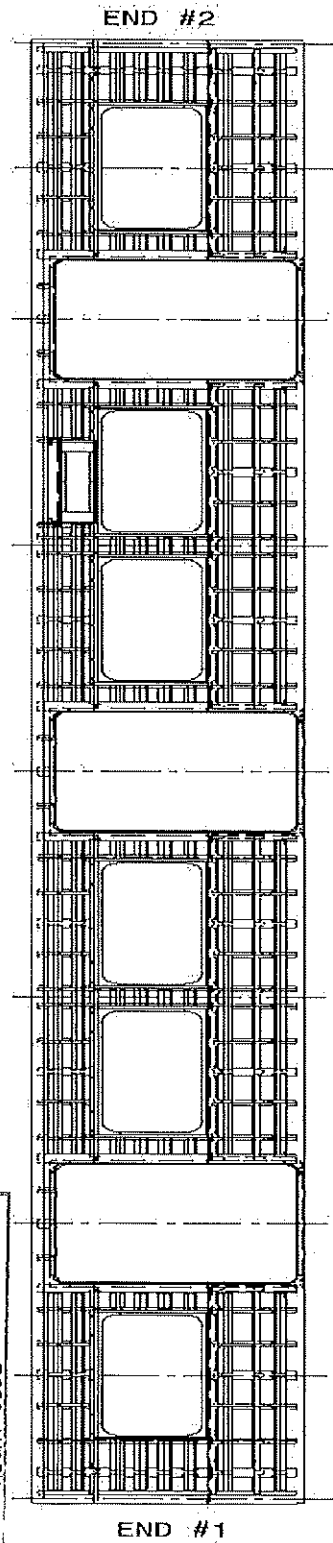
maximum of 2mm in the valley to peak measured in minimum and minimum value found and indicate the corresponding region.

INDUSTRIAL CUTTING
900690477900mm

201-0-2

60000

~~RIGHT SIDE~~



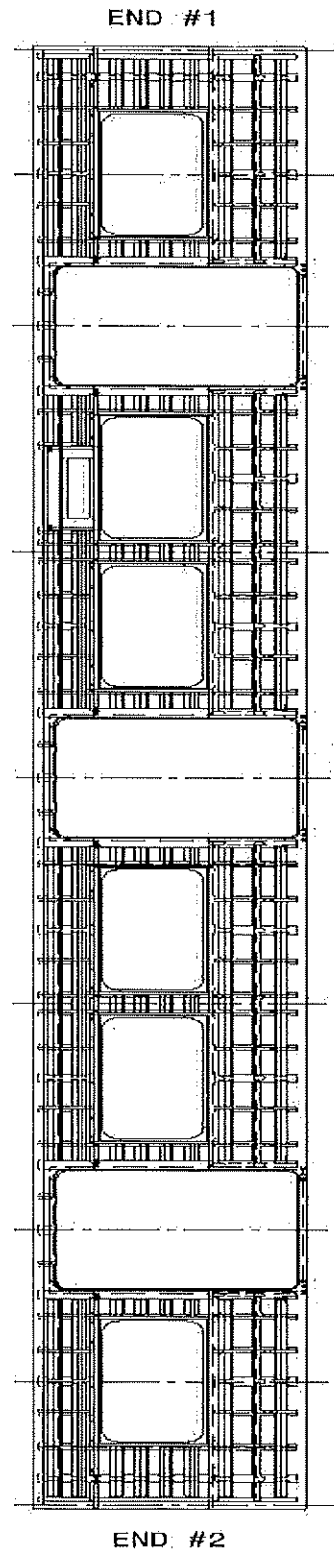
MAXIMUM

6.7

MINI

1.5

LEFT SIDE



MAXIMUM

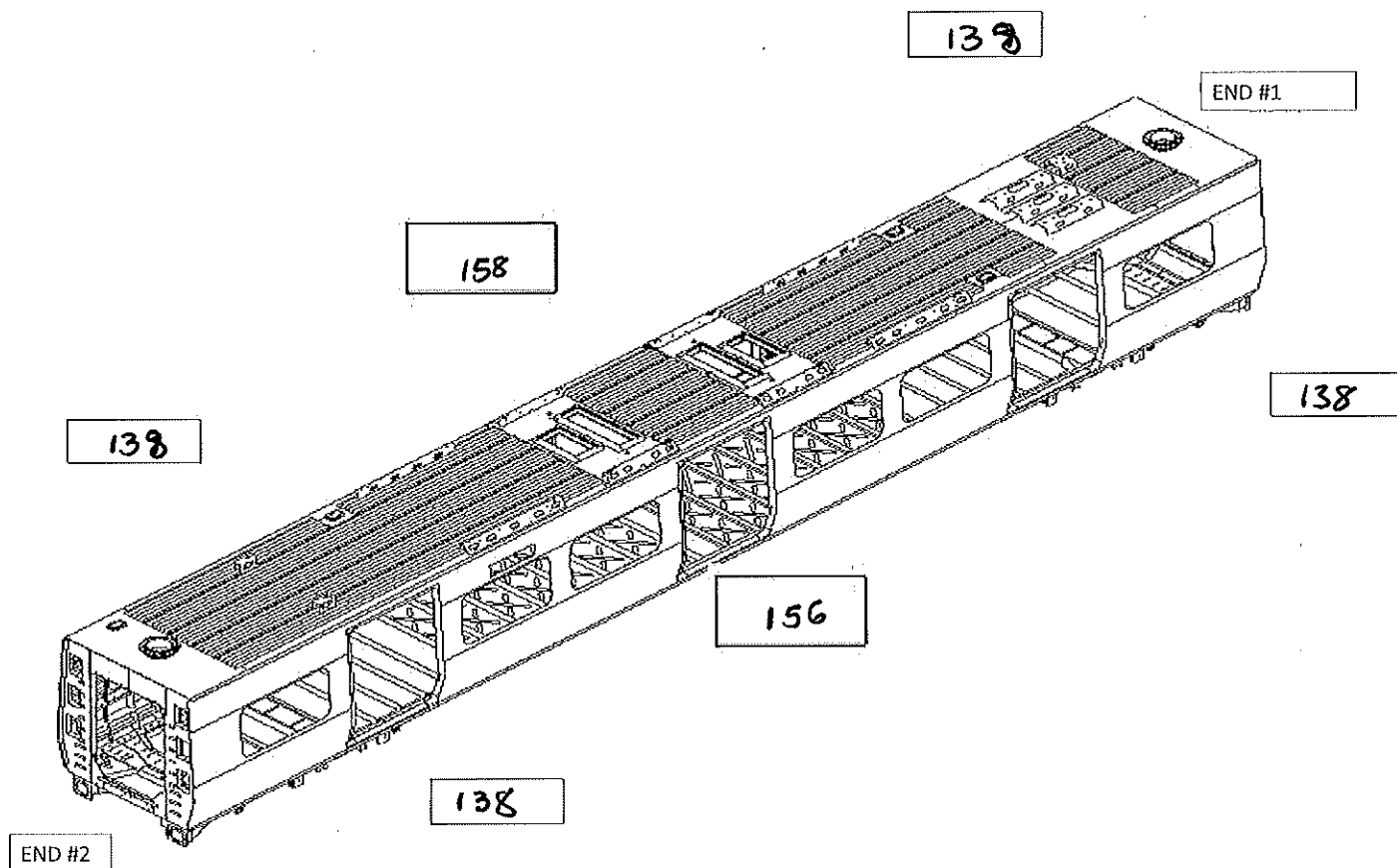
1.7

MINIMUM

1.2

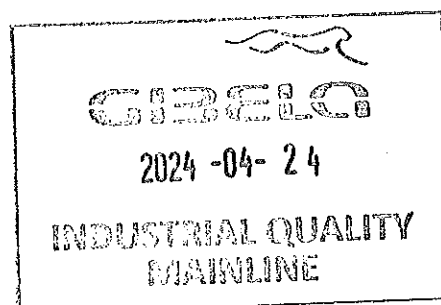
Specifications of Details for CBS measurement CB1230

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



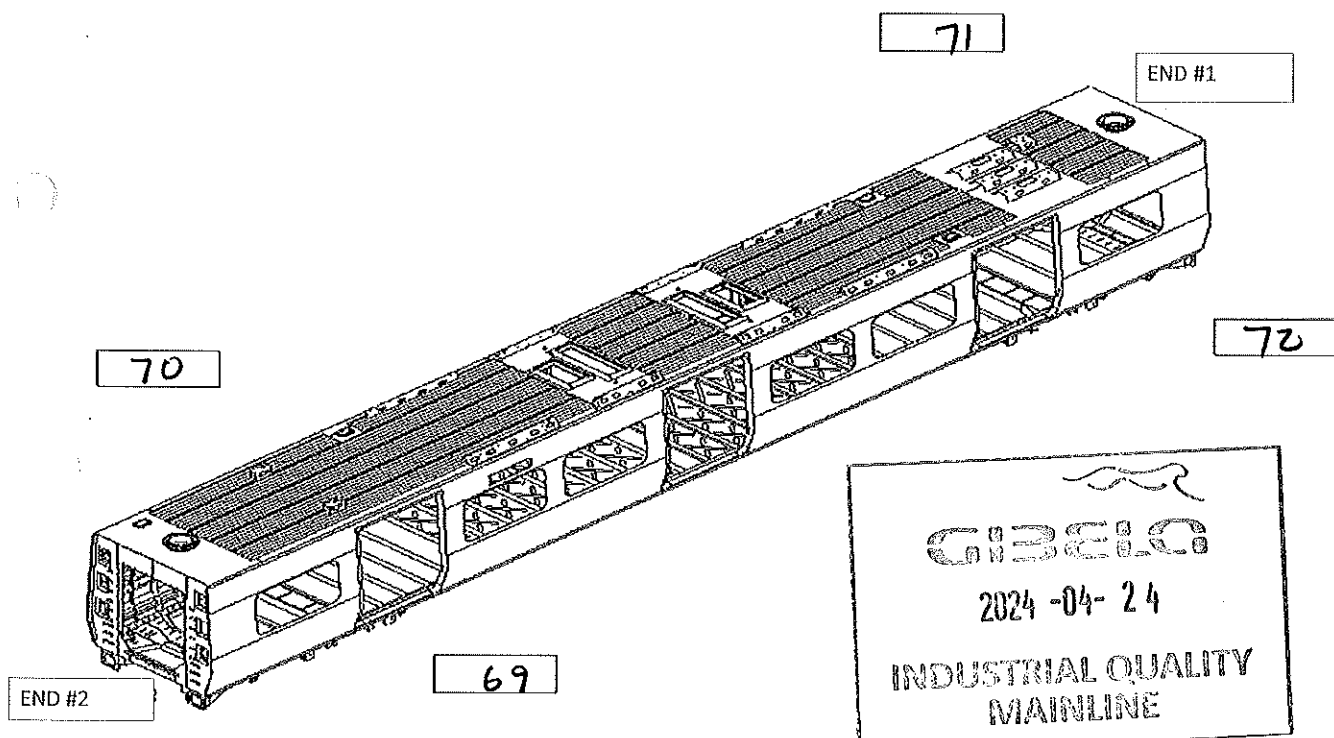
MEASURED CAMBER VALUES

RIGHT	e^1	18
LEFT	$a1$	20



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
LONGITUDIN

TWIST FOUND ON END 2

TRANVERSE
LONGITUDINAL



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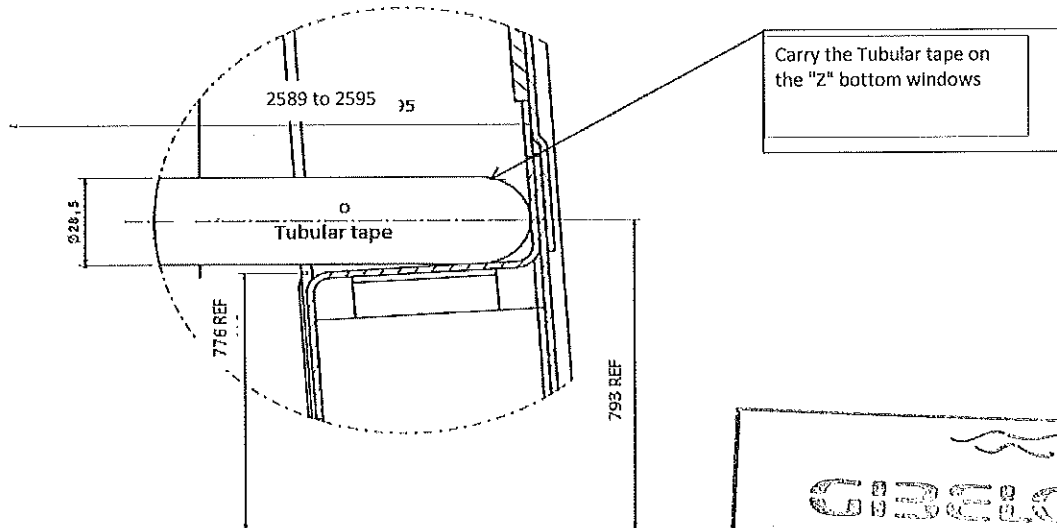
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06/11/2023

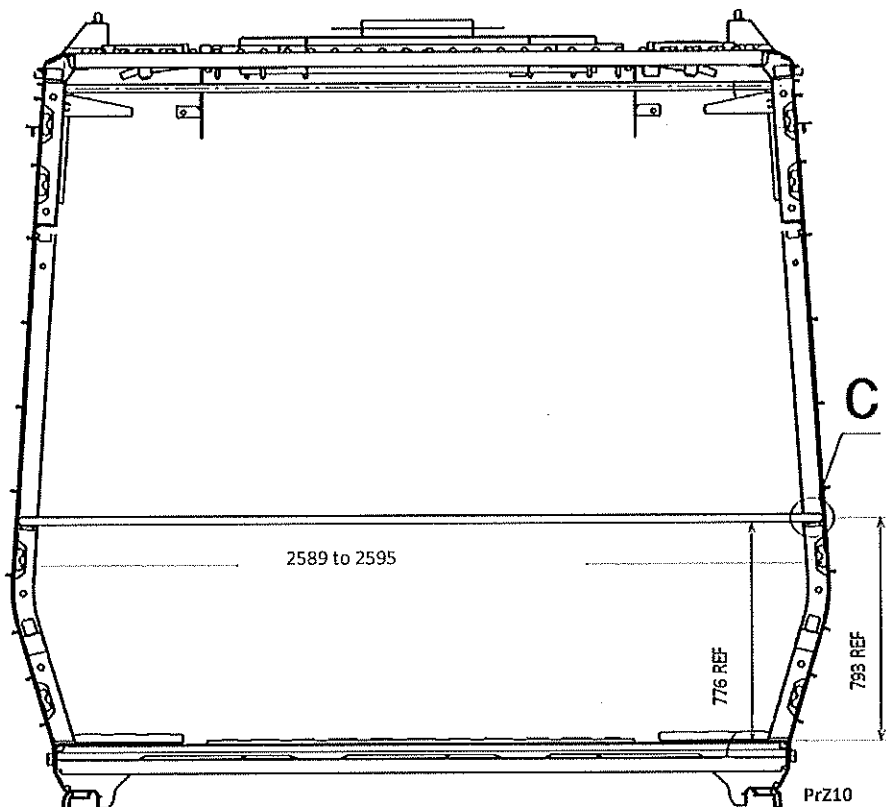
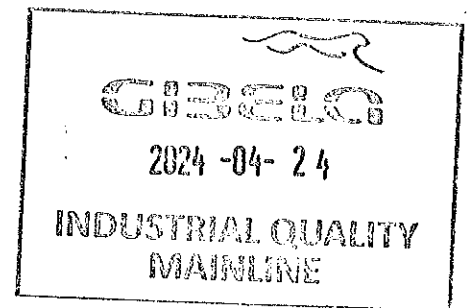
Project: PRASA

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Specifications of Details for CBS measurement CB1230



Detail C





CARBODYSHELL M1,M3,M4 ASSEMBLY
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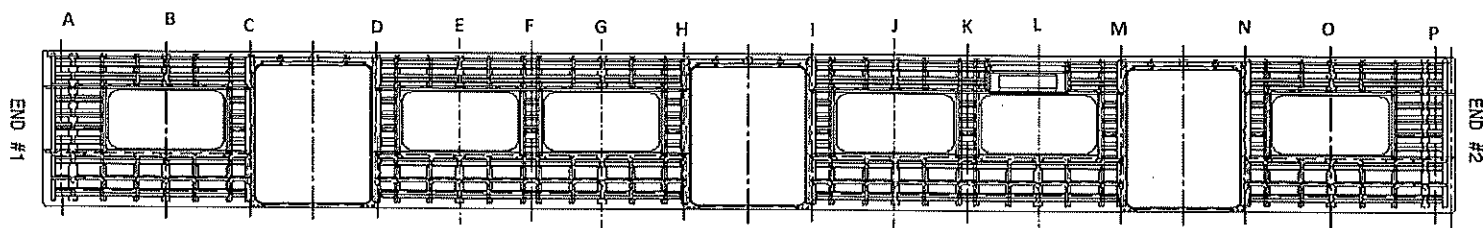
Date

06/11/2023

Project: PRASA

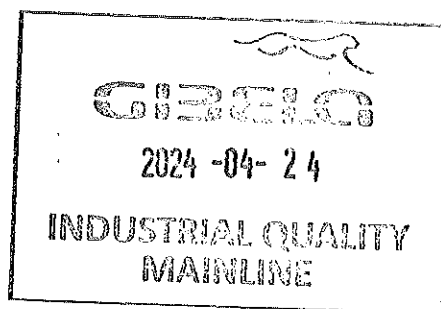
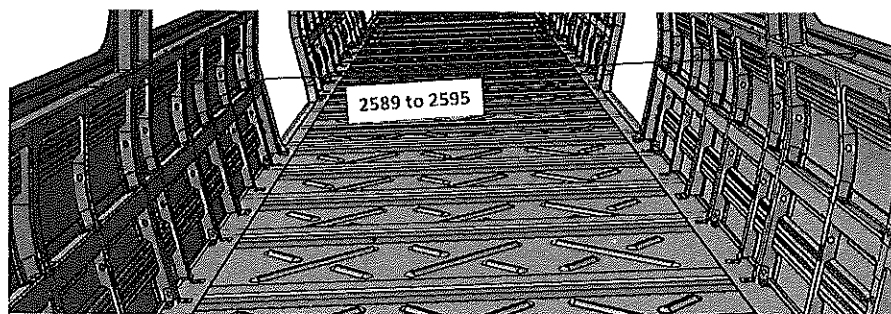
SI.CB1230.256.V28

Specifications of Details for CBS measurement CB1230



2589 to 2595mm

A	2595
B	2593
C	2590
D	2591
E	2593
F	2591
G	2595
H	2589
I	2591
J	2592
K	2591
L	2590
M	2594
N	2595
O	2593
P	2591



Threshold verification

Nominal value :38

Door 1

Door 2

Door 3

Door 4

Door 5

Door 6


L	R	L	R	L	R
38	38	39	38	38	38
L	R	L	R	L	R
39	38	38	38	39	38

BOILER MAKER:

Buhle M. Job

WELDER:

M. Mathepele

	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 29	Project: PRASA SI.CB1230.256.V28
		Date	
		06/11/2023	

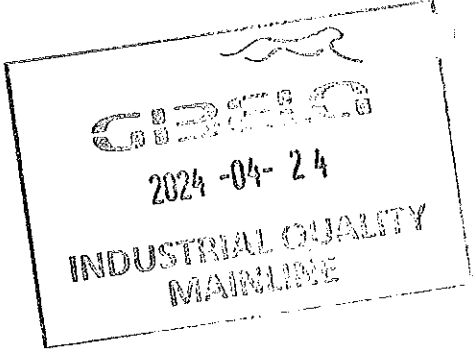
Dye penetrant test


Dye-penetration test to be performed by quality personnel



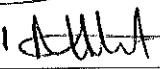

Specifications of Details for CBS measurement

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



	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 29	Project: PRASA SI.CB1230.256.V28
		Date	
		06/11/2023	

Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT		GO	(If activities are not complete, the missing activities must not impact the next stage)	23/04/24	Shenolo Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	24/04/2024	Amo Industrial Quality	
		NO GO	There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

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

Operations

