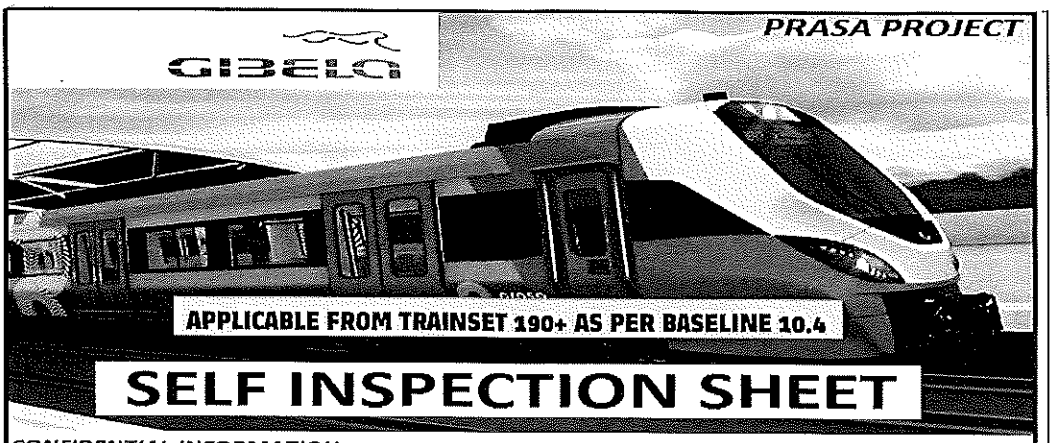
GIBELA

PRASA PROJECT



APPLICABLE FROM TRAINSET 190+ AS PER BASELINE 10.4

SELF INSPECTION SHEET

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	M4	M1	M2	M3	TC2	WORK INSTRUCTION	SAFETY?
☐ DTR30225487/3	AAD0001278566	CARBODYSHELL M3,M4 ASSEMBLY	CB2210		X			X		PRA.CB2210.DTR30225 487/3.V30	YES
☐											

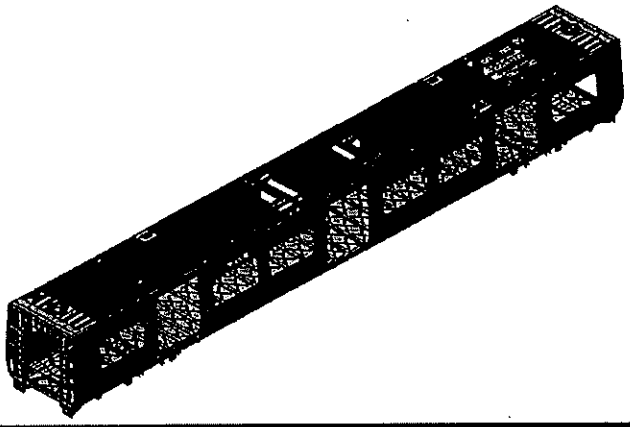
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	10/01/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	10/01/2018
			CHECKER	Nosizo Pindela	10/01/2018
			COMPILER	Thanyani Mathegu	10/01/2018
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality 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	
			REVISED BY	Bongane Masina	
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	
			REVISED BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021
			CHECKER	Mpho Mulaudzi	
			REVISED BY	Mpho Mulaudzi	
25	19/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi collins	19/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlampe Amogelang	
			REVISED BY	Mohlampe Amogelang	
30	20/07/2023	New Baseline change 10.4	APPROVER	Ngobeni Tyson	28/07/2023
			CHECKER	Mohlampe Amogelang	
			REVISED BY	Mohlampe Amogelang	
31	07/11/2023	Added traceability for welding sections	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Mohlampe Amogelang	
			REVISED BY	Ntokozo Zwane	

TRAINSET	CAR	OPERATOR NAME& ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES
Z12	M4	Tumelo 41008	16.02.24	SI.CB2210.254.V30	17

GIBELA	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

Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK			Signature/Date (Manufacturing)	Signature/Date (Quality)
	T01	M1	M2	M3	M4	T11							
DTR30225487/3					✓		61		✓			16.02.24	16/02/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibration or Verification Validation Date	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
Measuring tape	125495924	2024.01.08	ok		16.02.24	
Insulon	22216	2024.07.07	ok		16.02.24	16/02/24
30M TAPE	C415P00884	2025.03.31	ok		16.02.24	16/02/24

I.3 Consumables

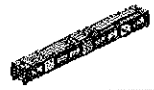
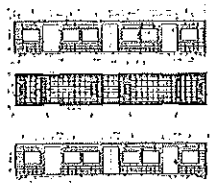
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
308L Hamisa	227730-76791	MIG	ok		16.02.24	
308L	299687-7082	TIG	ok		16.02.24	16/02/24

GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR302254B7/3	Rev. 31 Date 07/11/2023	Project: PRASA SI.CB2210.254.V30

II - Self Inspection - Items to Check

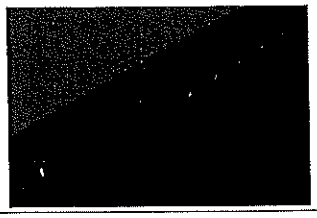
II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK			Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓			16.02.24	16/02/24
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	**IND-SAL-WMS-016 e DTD0000210675**	✓			16.02.24	16/02/24
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	**IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000**	✓			16.02.24	16/02/24
04		Cleaning of all Stainless Steel Surface	**According TO GIB-WEL - PROC-0002**	✓			16.02.24	16/02/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	✓			16.02.24	16/02/24
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.	✓			16.02.24	16/02/24

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

Welding Traceability

Roof ring welds



END 1

LHS

Boiler maker (Name & Sign): Tonfso Welder (Name & Sign): Bobbert

RHS

Boiler maker (Name & Sign): Tonfso Welder (Name & Sign): Bobbert

END 2

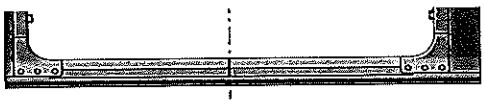
LHS

Boiler maker (Name & Sign): Tonfso Welder (Name & Sign): Bobbert

RHS

Boiler maker (Name & Sign): Tonfso Welder (Name & Sign): Bobbert

Door ring welds



LHS

Boiler maker (Name & Sign): Innocent

Welder (Name & Sign): Bobbert

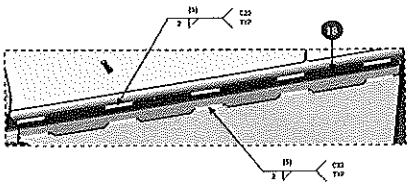
RHS

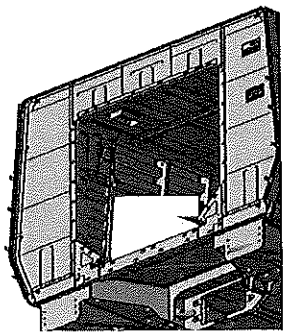
Boiler maker (Name & Sign): Gerald

Welder (Name & Sign): Bobbert

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

EUF Reinforcement Plates

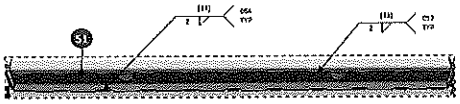




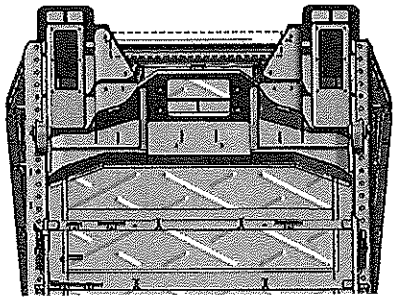
END 1

Boiler maker (Name & Sign): SEAN

Welder (Name & Sign): SIPHOKAZI



END 2

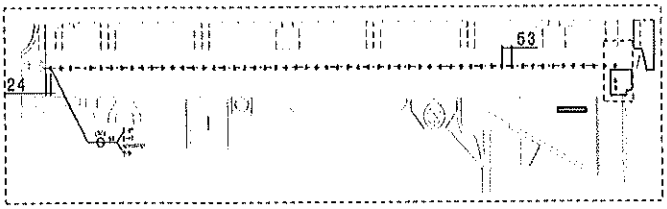


Underneath the CAR

END 2

Boiler maker (Name & Sign): TUMELO

Welder (Name & Sign): THABANG

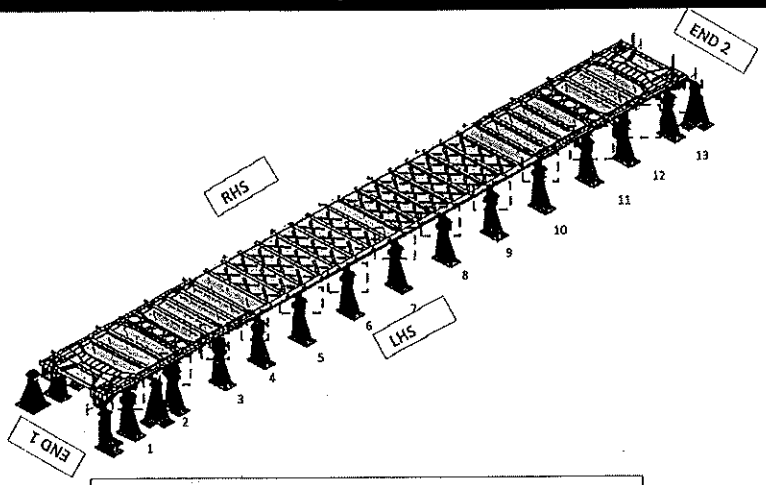


FEDOLI

Operator: LAWRENCE

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

Specifications of Details for CBS measurement



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

After loading and clamping

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

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

Signature Operations: [signature] Date: 16.02.24

After Welding.

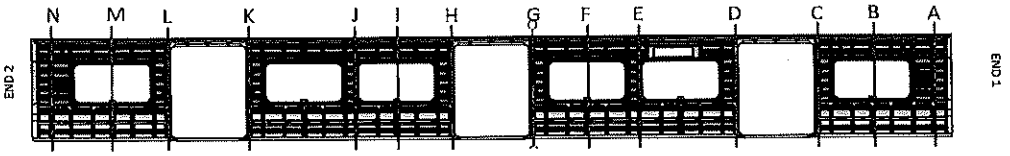
Fill in the gap found each jig pillars / chair and underframe should be 0mm.

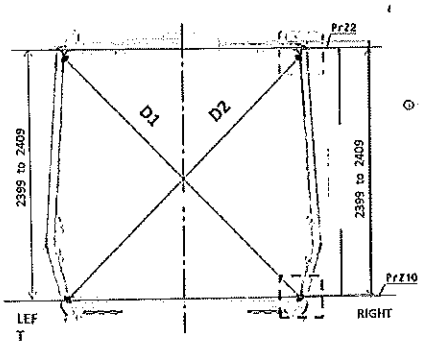
	1	2	3	4	5	6	7	8	9	10	11	12	13
Left Hand Side						N/A							
Right Hand Side													

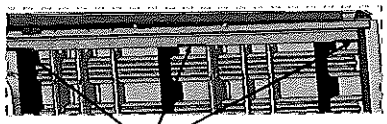
Signature Industrial Quality: [signature] Date: 16/02/24

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

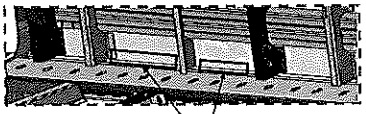
Specifications of Details for CBS measurement



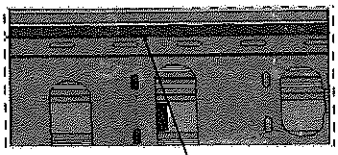




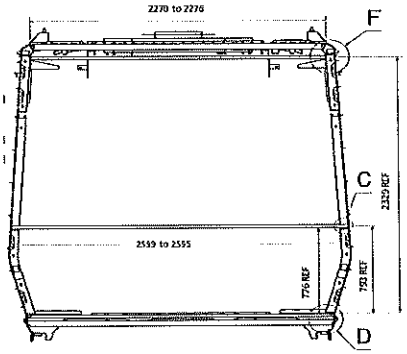
Measurement positions on roof rail and sidewall omega corner.

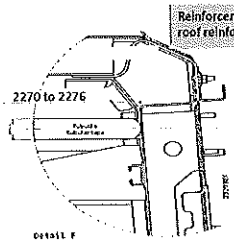


Measurement positions on sidewall and side sill corner.



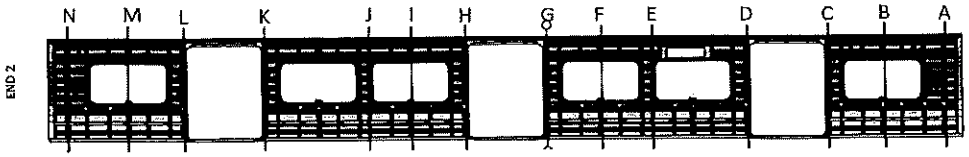
Reinforcement area measurement positions on roof reinforcement area.





GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR30225467/3	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Specifications of Details for CBS measurement



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

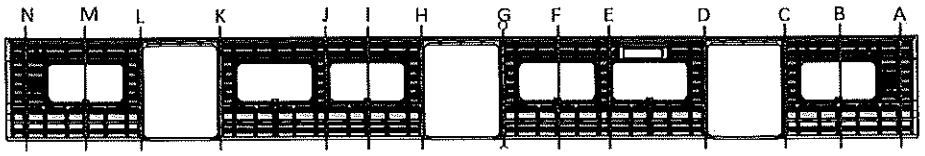
BEFORE WELDING

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

16.02.24

GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR302264873	Rev. 31	Project: PRASA SI.CB2210.254.V30
		Date 07/11/2023	

Specifications of Details for CBS measurement



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

AFTER WELDING

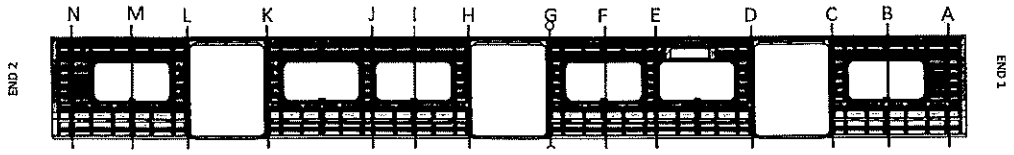
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3298	3298	0	2406	2406	0
B	3267	3265	2	2405	2406	1
C	3296	3296	0	2406	2405	1
D	3298	3298	0	2406	2406	0
E	3270	3270	0	2405	2404	1
F	3269	3267	2	2406	2406	0
G	3297	3297	0	2406	2406	0
H	3298	3298	0	2406	2405	1
I	3267	3268	2	2404	2406	2
J	3269	3271	2	2406	2406	0
K	3296	3296	0	2406	2405	1
L	3298	3298	0	2406	2406	0
M	3267	3269	2	2406	2405	1
N	3298	3298	0	2406	2406	0

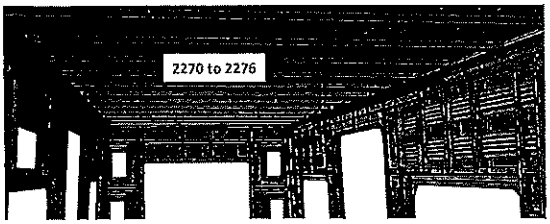
16.02.24

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

CBS measurement

BEFORE WELDING

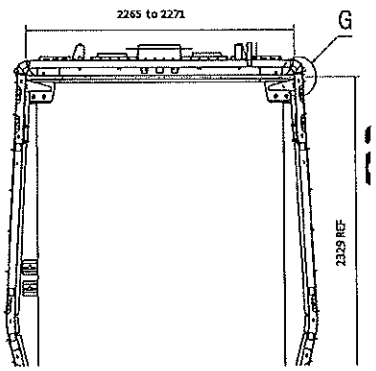


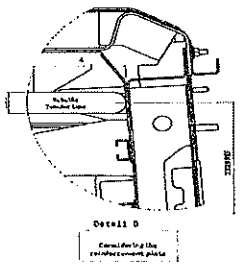


2270 to 2276

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

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





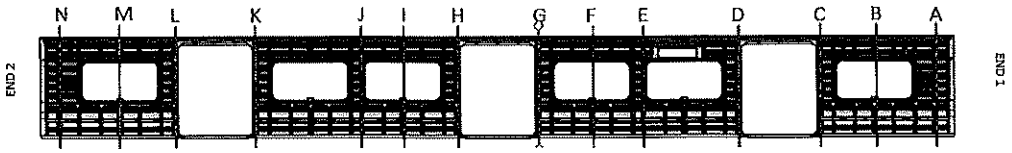
2265 to 2271

16.02.24

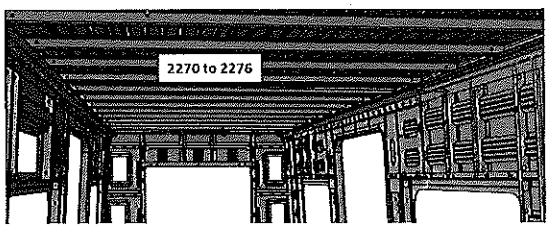
GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3	Rev. 31	Project: PRASA
		Date 07/11/2023	SI.CB2210.254.V30

CBS measurement

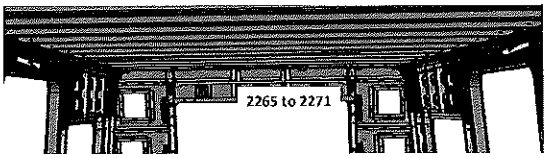
AFTER WELDING



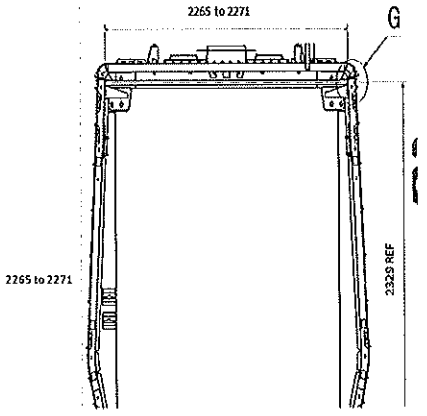
	2265 to 2271	2270 to 2276
A	2268	
B		2271
C	2267	
D	2265	
E		2275
F		2276
G	2265	
H	2266	
I		2273
J		2275
K	2267	
L	2269	
M		2270
N	2268	

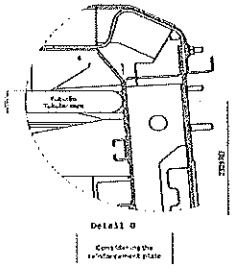


Do not consider reinforcement (Take measurements top area of zee profile



Take measurement close to radius (considering reinforcement)

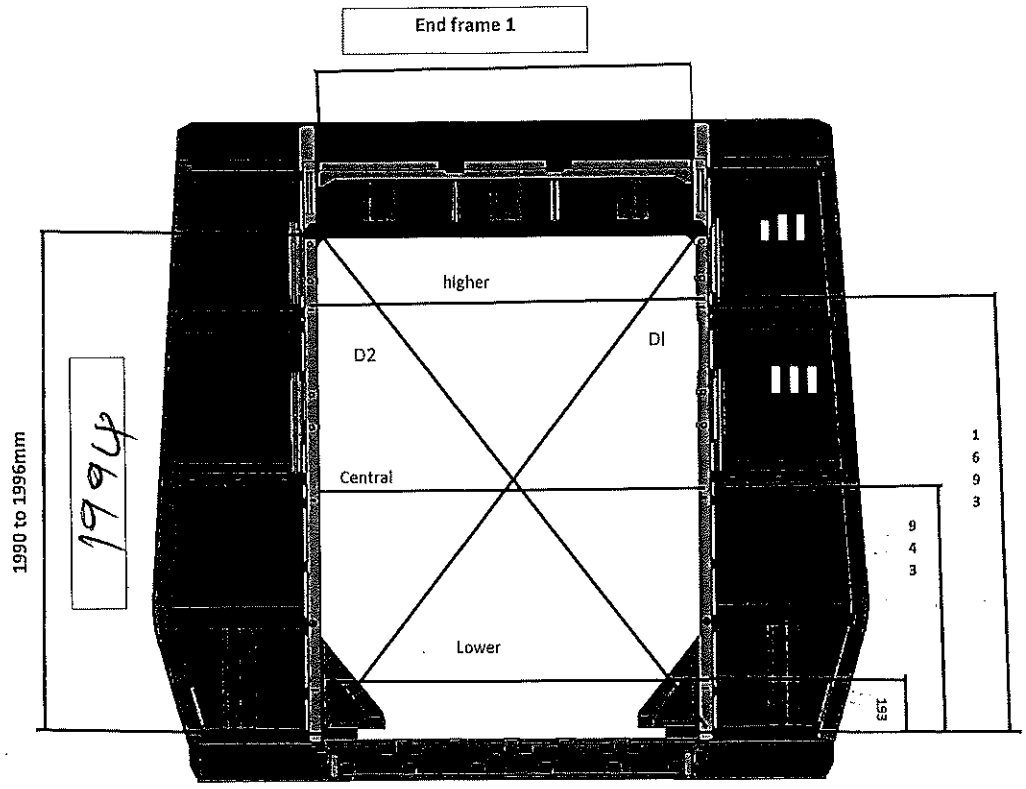




16.02.24

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

Specifications of Details for CBS measurement



1380 to 1382 mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Higher Dimension	1381	D1	2417
Central Dimension	1380	D2	2415
Lower Dimension	1380	D1-D2	2

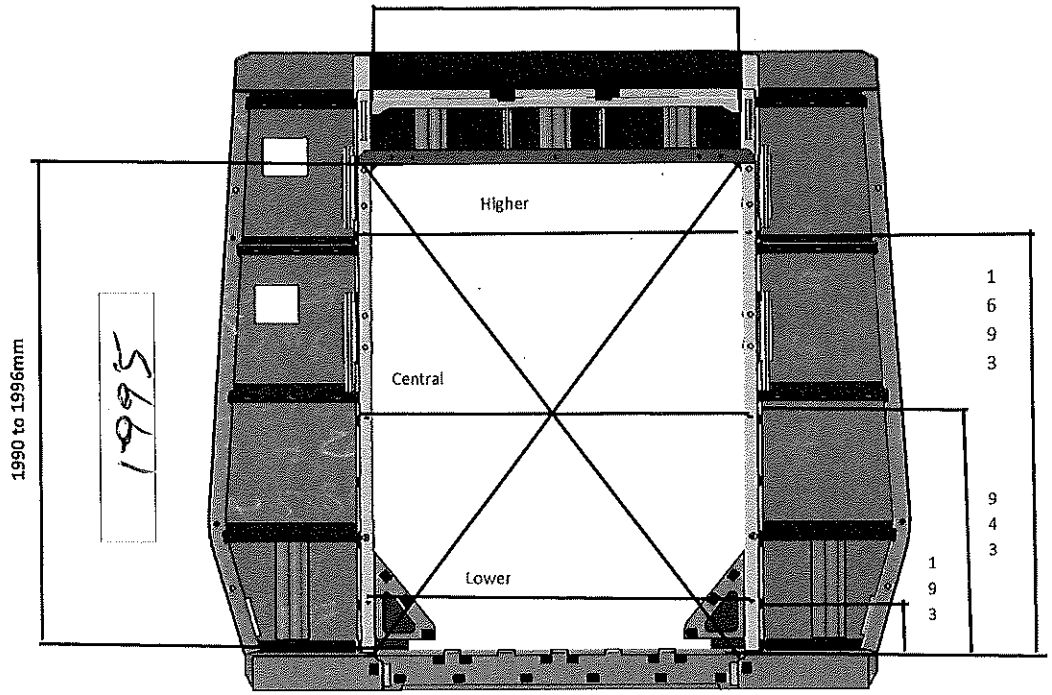
16.02.24

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

Specifications of Details for CBS measurement

Endframe 2

1380 to 1382 mm



1380 to 1382 mm

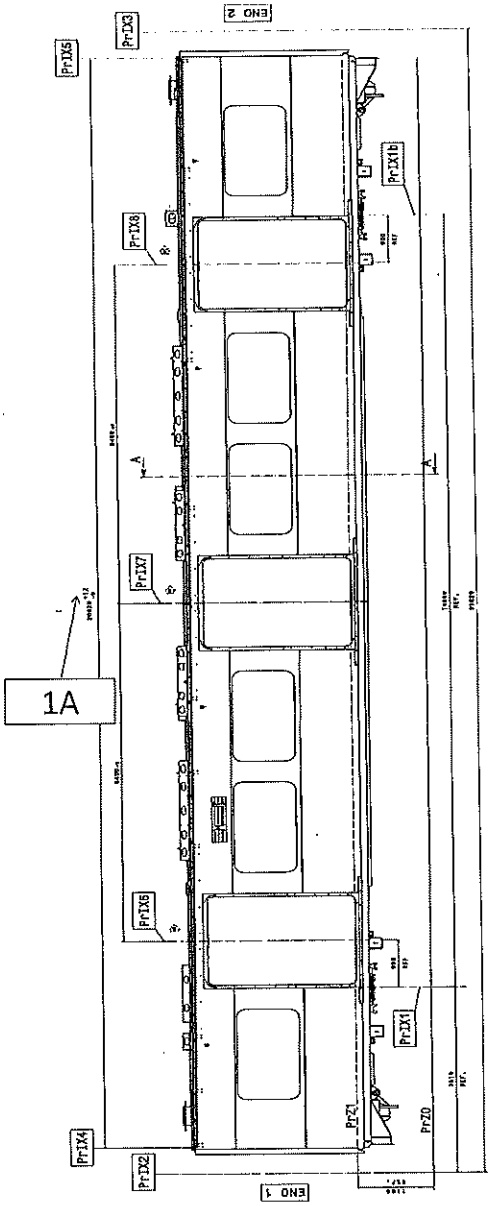
DIAGONAL DIFFERENCE **D1-D2** ≤ 3mm

Higher Dimension	1380	D1	2415
Central Dimension	1381	D2	2417
Lower Dimension	1381	D1-D2	2

16.02.24

GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR30225467/3	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	20630

	RIGHT SIDE	
	SPECIFICATION SIZE	ACTUAL SIZE
1A	20632 - 20614	20631

16.02.24

Dye penetrant test

Dye-penetration test to be performed by quality personnel

GIBELA	CARBODYSHELL M3,M4 ASSEMBLY DTR302254487/3	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					

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

Self Inspection - Final Result

				DATE	NAME	SIGNATURE
HOLD POINT		[redacted]	(If activities are not complete, the missing activities must not impact the next stage)	16 02 24	Tumelo Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	16/02/24	Andani Industrial Quality	
			There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

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

Item	Description		Responsible	Due date	Status

Operations

Quality

PRASA PROJECT

GIBELA

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

APPLICATION REFERENCE

	MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	M4	M1	M2	M3	TC2	WORK INSTRUCTION	SAFETY ?
☐	DTR3022548?/2	AAD0001276566	CARBODYSHELL M1,M3,M4 ASSEMBLY	EB5220		⊘	X		X		PRA.CB1220.DTR3022548 7/2.V21	YES
☐												
☐												
☐												
☐												
☐												

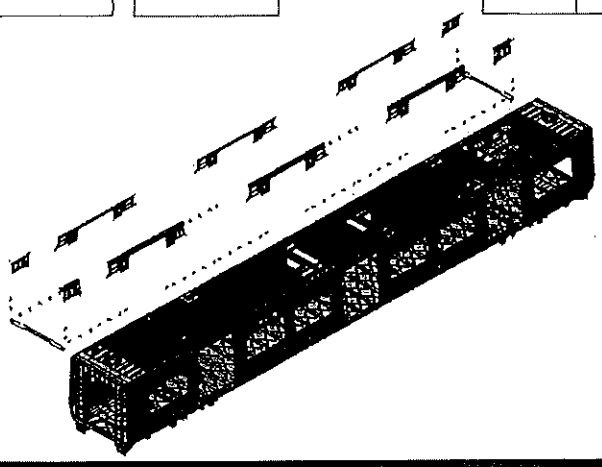
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	01/02/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	01/02/2018
			CHECKER	Nosizo Pindela	01/02/2018
			COMPILER	Thanyani Mathegu	01/02/2018
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality 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 Remove 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	
			REVISED BY	Bongane Masina	
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021
			CHECKER	Mpho Mulaudzi	
			REVISED BY	Mpho Mulaudzi	
25	20/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombhi collins	19/02/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
26	14/06/2022	Update minimum temperature requirement for sealant application	APPROVER	Mbhombhi Collins	14/06/2022
			CHECKER	Andani Muthelo	
			REVISED BY	Andani Muthelo	
27	17/10/2022	Addition of traceability for sealant application and welding	APPROVER	Mbhombhi Collins	17/10/2022
			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	28/10/2023	Addition of bracket quantity	APPROVER	Ngobeni Tyson	28/10/2023
			CHECKER	Ntokozo Zwane	
			REVISED BY	Amogelang Mohlampe	

TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES
212	M4	THULANI U16788	16/02/24	SI.CB1220.250.V29	14

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

Car: M1,M3&M4	NCR:	Work station:	CB1220

Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of car						Revision	Observation	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
	TCB	TCT	TH	CO	M4	TCL						
DTR30225487/2					X		29	28/10/2023	✓		N/A	

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)
TUBULOR	22713	03/08/2023	✓		16/02/24	
TAPE-MEASURE	GIBTA071	2023/08/05	✓		16/02/24	

I.3 Consumables

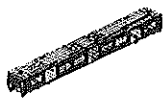
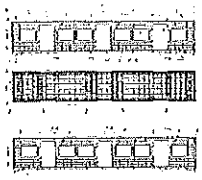
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process	OK		Signature/Date (Manufacturing)	Signature/Date (Quality)
308 1MM	77480	MIG WELD	✓		16/02/24	

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

II - Self Inspection - Items to Check

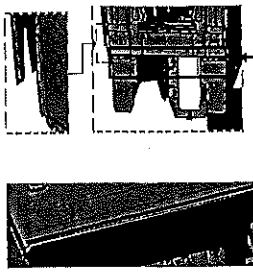
II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	N/A	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	PRA.CB1220.DTR30225487/2	L		16/02/24	17/02/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	L		16/02/24	17/02/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	L		16/02/24	17/02/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	L		16/02/24	17/02/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	L		16/02/24	17/02/24
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	L		16/02/24	17/02/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max [1] Min-Max 10°C - 35°C Relative Humidity Min - Max [1] Min-Max 25% - 80%	Sealant Batch No: LV7003 Exp Date: 1/02/24 Actuals Temperature: 36 Humidity: 46	✓		17/02/24	17/02/24
08	NA	Verification of sealant application in certain regions in the drawing.	AAD0001278566	✓		17/02/24	17/02/24
09		Verfication of safety welds	Approved according to DTD0002106S8 reference and Self inspection	✓			17/02/24

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

II - Self Inspection - Items to Check

SEALANT APPLICATION



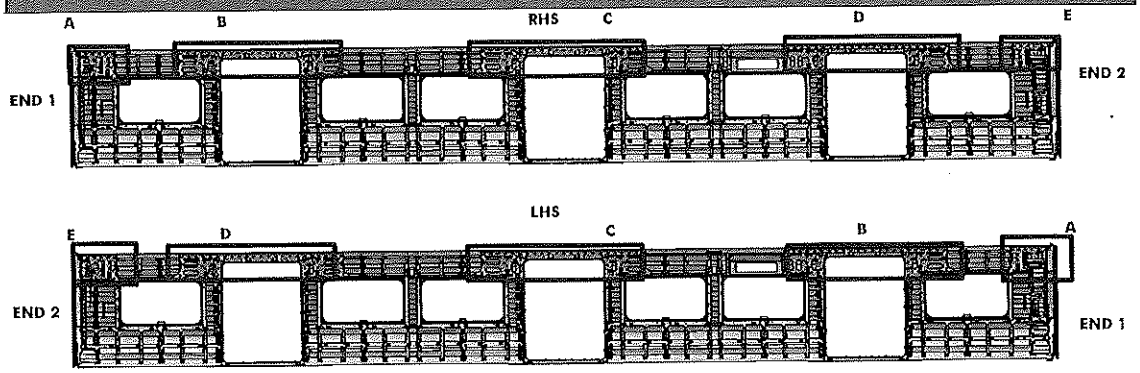
AREA 1 & 2 END 1

Operator (Name & sign):

Operator (Name & sign):

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

II - Self Inspection - Items to Check

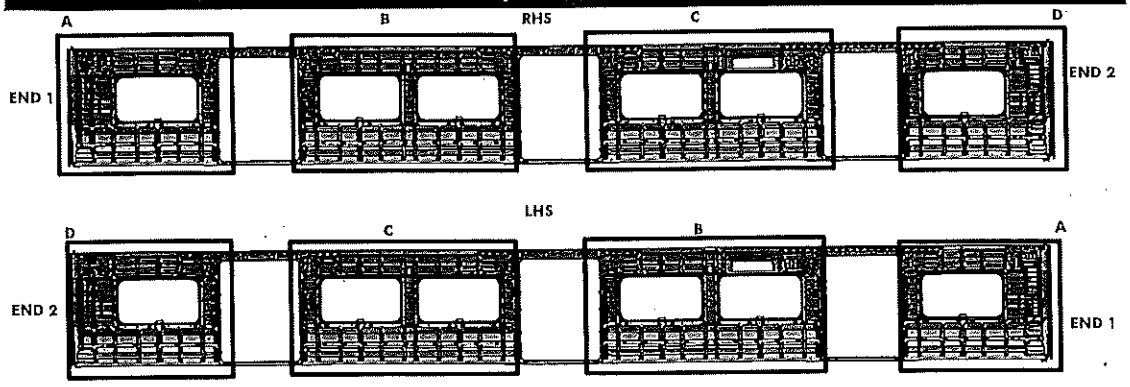


REINFORCEMENT WELDING

AREA		LHS	RHS
A	Operator (Name&sign):	MGIDI	MADINI
B	Operator (Name&sign):	MGIDI	MADINI
C	Operator (Name&sign):	MGIDI	MADINI / THULANI
D	Operator (Name&sign):	SIBIYA	THULANI
E	Operator (Name&sign):	SIBIYA	THULANI

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

II - Self Inspection - Items to Check



BRACKETING

INSTALLATION

C-RAILS: Operator: Leni

Operator:

DOOR MECHANISMS: Operator: Mbhlokoza

Operator:

TAPPING PADS Operator: Priscilla

Operator: Priscilla

INSTALLATION & VERIFICATION

SEAT & LUGGAGE BRACKETS: Operator: LENI

Operator:

SEAT BRACKETS VERIFICATION: Operator: Thulani

Operator: Thulani

WELDING

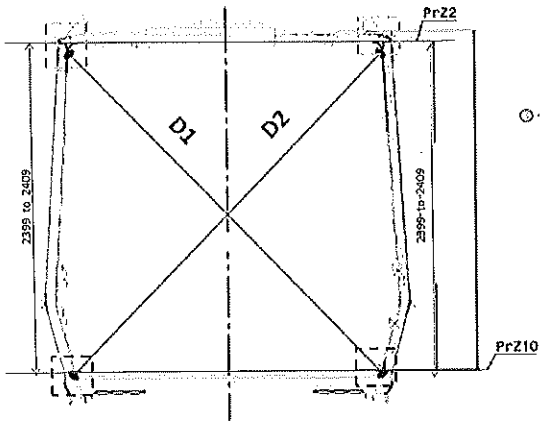
AREA		LHS	RHS
A (Seat brackets)	: Operator (Name&sign):		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):		
B (Seat brackets)	: Operator (Name&sign):	Mmaphelo Mkwa	
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):		
C (Seat brackets)	: Operator (Name&sign):	Sibiya	
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	Mmaphelo Mkwa	
D (Seat brackets)	Operator (Name&sign):	THULANI	THULANI
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	Sibiya	THULANI

ENDS

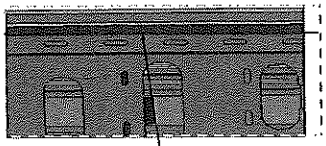
END 1 TAPPING PADS WELDING: Operator (Name&sign): NDLULUNGA

END 2 TAPPING PADS WELDING: Operator (Name&sign): NDLULUNGA

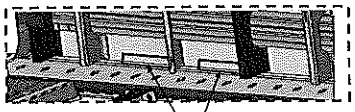
Specifications of Details for CBS measurement



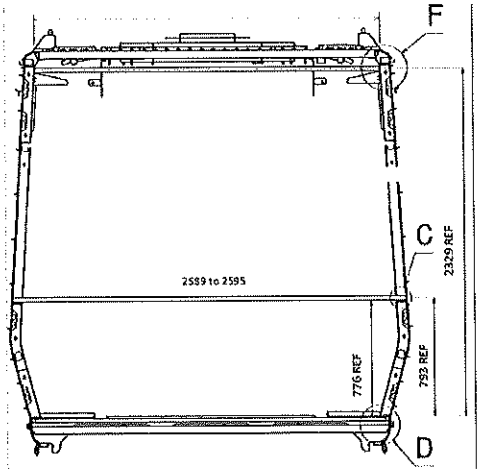
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.

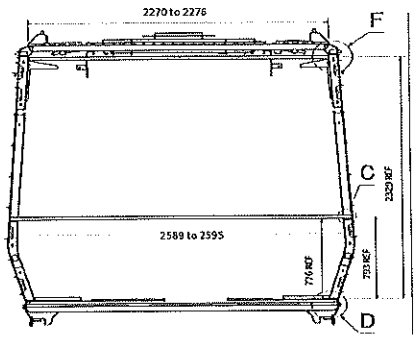


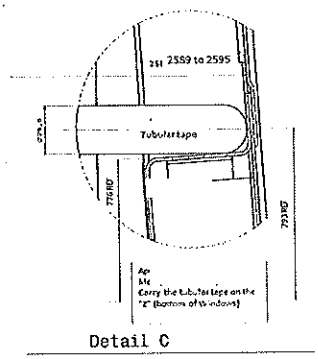
Measurement positions on sidewall and side sill corner.



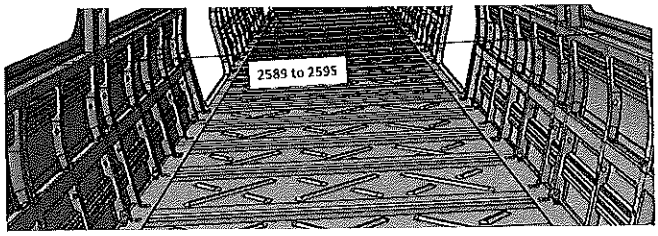
GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30228487/2	Rev. 29 Date 28/10/2023	Project: PRASA SI.CB1220.250.V29

CBS measurement

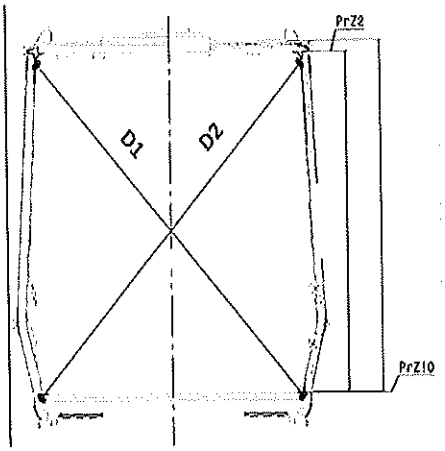


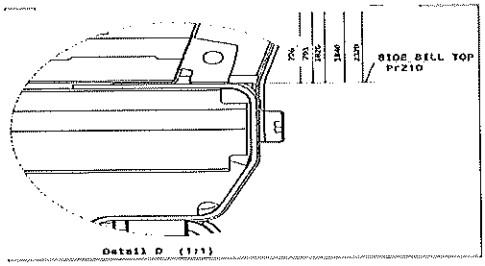


Detail C



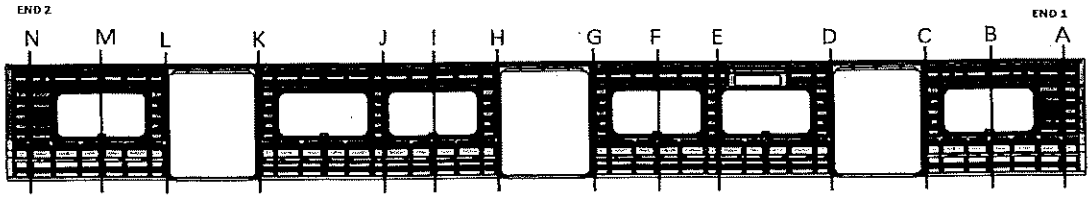
Take measurement close to radius





GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR3022548T/2	Rev. 29 Date 28/10/2023	Project: PRASA SI.CB1220.250.V29

CBS measurement

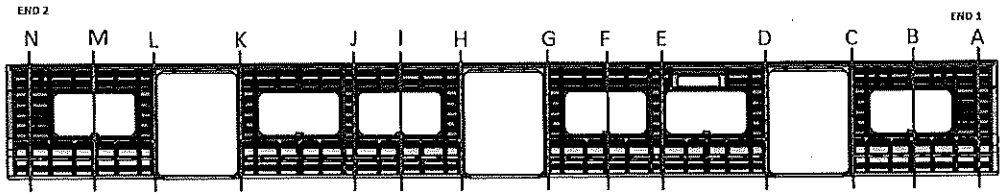


BEFORE WELDING

	ecord D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3298	3295	3	—
B	3295	3298	3	—
C	3291	3295	4	—
D	3265	3268	3	—
E	3295	3295	0	—
F	3295	3290	3	—
G	3265	3265	0	—
H	3268	3270	2	—
I	3293	3295	2	—
J	3268	3265	3	—
K	3293	3295	2	—
L	3295	3295	0	—
M	3265	3264	1	—
N	3296	3294	2	—

GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev. 29 Date 28/10/2023	Project: PRASA SI.CB1220.250.V29

CBS measurement

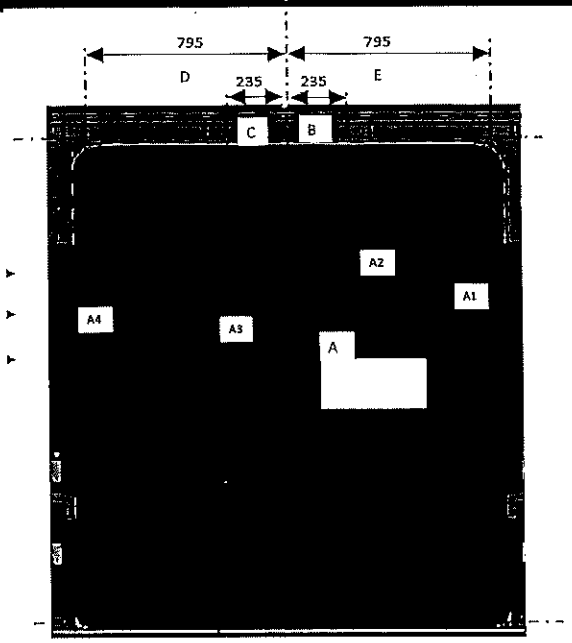


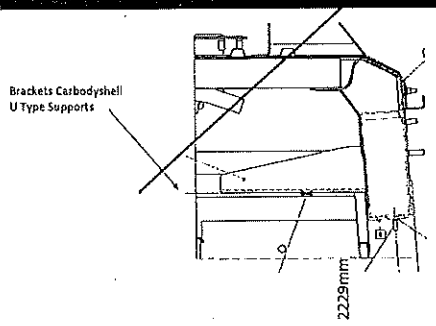
AFTER WELDING

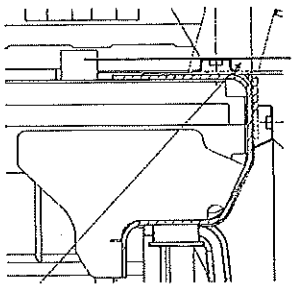
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3300	3296	4	2596
B	3272	3270	2	2585
C	3294	3300	6	2586
D	3291	3297	2	2589
E	3269	3272	6	2595
F	3271	3266	4	2590
G	3294	3298	4	2590
H	3298	3296	2	2595
I	3267	3267	0	2595
J	3268	3270	2	2594
K	3300	3293	7	2588
L	3300	3300	0	2590
M	3271	3268	3	2587
N	3300	3300	0	2599

GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev. 29 Date 28/10/2023	Project: PRA5A SI.CB1220.250.V29

Specifications of Details for CBS measurement CB1220







DOOR 1 - LHS

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

DOOR 2 - LHS

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

DOOR 2 - LHS

	VALUE	ACTUAL
A1	2230 to 2232	2236
A2	2230 to 2232	2236
A3	2230 to 2232	2230
A4	2230 to 2232	2232
B	234 to 236	234
C	234 to 236	236
D	794 to 796	794
E	794 to 796	794

DOOR 1 - RHS

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

DOOR 2 - RHS

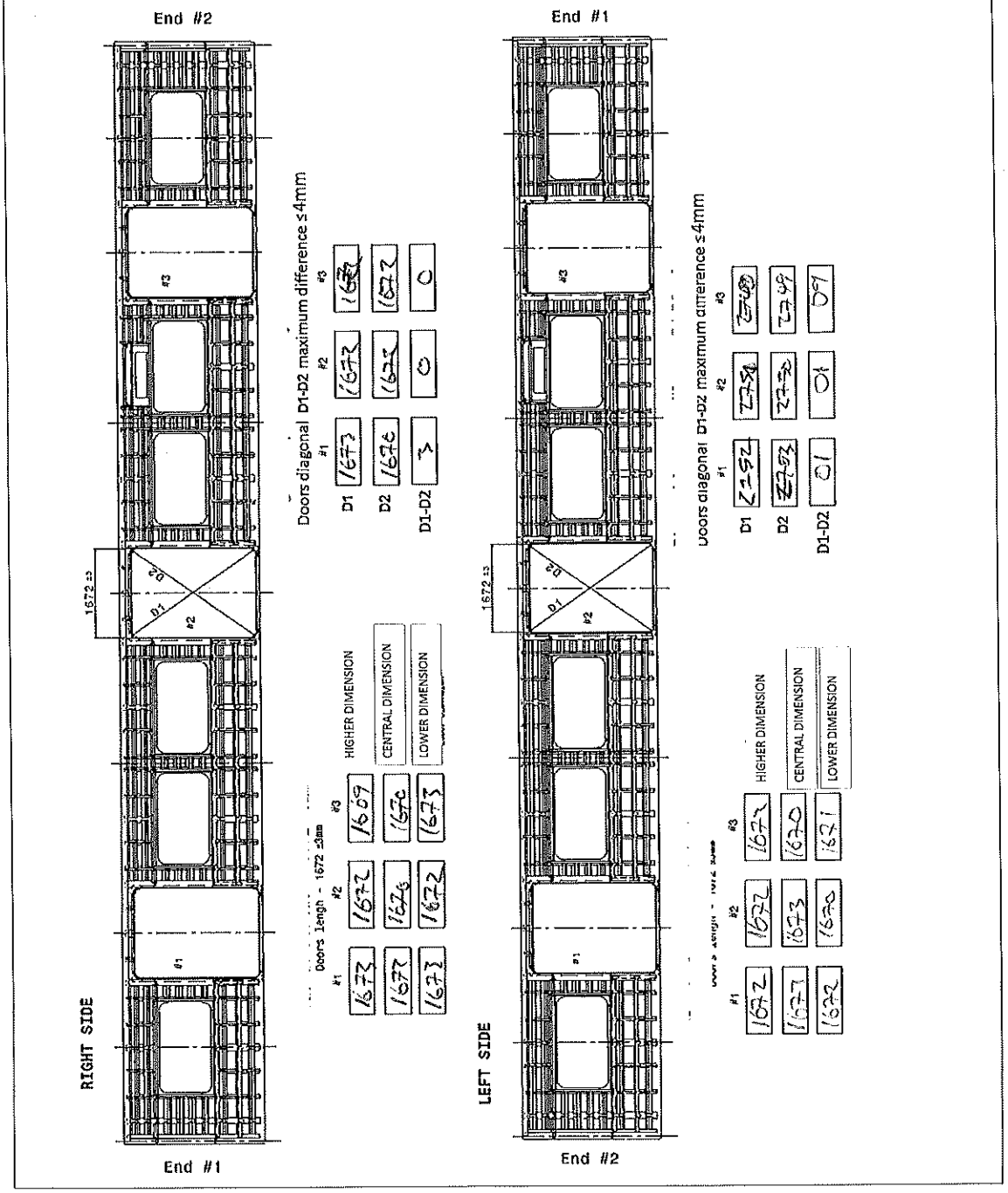
	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2232
A3	2230 to 2232	2230
A4	2230 to 2232	2232
B	234 to 236	234
C	234 to 236	234
D	794 to 796	794
E	794 to 796	796

DOOR 3 - RHS

	VALUE	ACTUAL
A1	2230 to 2232	2232
A2	2230 to 2232	2230
A3	2230 to 2232	2236
A4	2230 to 2232	2232
B	234 to 236	234
C	234 to 236	234
D	794 to 796	794
E	794 to 796	794

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

Specifications of Details for CBS measurement CB1220



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

CBS measurement (Manufacturing)

Dye penetrant test

Dye-penetration test to be performed by quality personnel

Item	Description of the Issue	QV	Signature/Date (Manufacturing)	Signature/Date (Quality)

II.2 - Check List REX

Check List Items

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

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

Self Inspection - Final Result

Is Is the car good to advance to the next workstation/process? (Approval of Operations Manager and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT	L	GO	(If activities are not complete, the missing activities must not impact the next stage)	16/02/24	THOLANI Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	16/02/24	Mokoto Industrial Quality	
		NO GO	There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

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

Item	Description		Responsible	Due date	Status

Operations

Quality

GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE TC1	M4	M1	M2	M3	TC2	WORK INSTRUCTION	SAFETY ?
☐ DT00000225487	AAD0001278566	CARBODYSHELL M1,M3,M4 ASSEMBLY	CB1230		X	X		X		PRA.CB1230.DT000002 25487.V20	YES
☐											
☐											

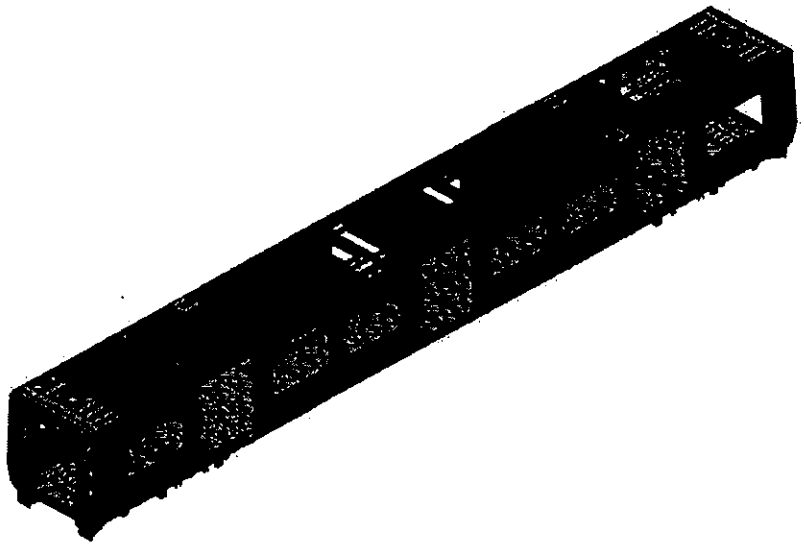
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	2018/08/02	GIBELA NEW CREATION	APPROVER	Philipe Marques	2018/08/02
			CHECKER	Nosizo Pindela	2018/08/02
			COMPILER	Nosizo Pindela	2018/08/02
1	30/5/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	30/5/2018
			CHECKER	Nosizo Pindela	30/5/2018
			REVISED BY	Nosizo Pindela	30/5/2018
2	2018/05/07	Certain dimensional checks moved to CB1220	APPROVER	Itumeleng Modiba	2018/05/07
			CHECKER	Nosizo Pindela	2018/05/07
			REVISED BY	Ramokone Motama	2018/05/07
5	24/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	24/01/2019
			CHECKER	Nosizo Pindela	24/01/2019
			REVISED BY	Vanessa Ntuli	24/01/2019
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements	APPROVER	Itumeleng Modiba	13/03/2019
			CHECKER	Nosizo Pindela	13/03/2019
			REVISED BY	Nosizo Pindela	13/03/2019
10	23/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	23/08/2019
			CHECKER	Nosizo Pindela	23/08/2019
			REVISED BY	Nosizo Pindela	23/08/2019
	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
15212	M4	410454 Khenolo	18/02/24	SI.CB1230.256.V28	11

GIBELA	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

Documents	Check on Production					Revision	Observation			Signature/Date (Operations)	Signature/Date (Quality)
	M1	M2	M3	M4	TUBE						
PRA.CB1230.DT00000225487				Y		29		Ok		N/A	18/02 18/02/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

Instruments	Serial number	Calibrations or Verifications Validation Dates			Signature/Date (Operations)	Signature/Date (Quality)
Tubular	22615	2024/02/07	Ok		18/02	18/02/24
Measuring tape	GIBTM0394	2024/04/05	Ok		18/02	
Combination Square.	GIBSQ0137	2023/10/11	Ok		18/02	

1.3 Consumables

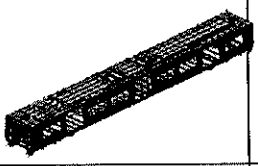
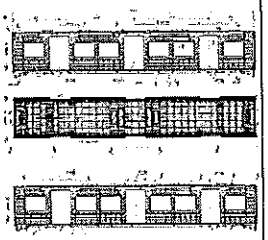
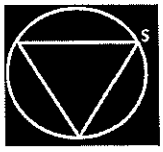
Welding Consumable Control - Used for Special Process

Filler Material	Heat Number	Welding Process			Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 L 1.0mm	310180	Mig Welding	Ok		18/02/24	18/02/24

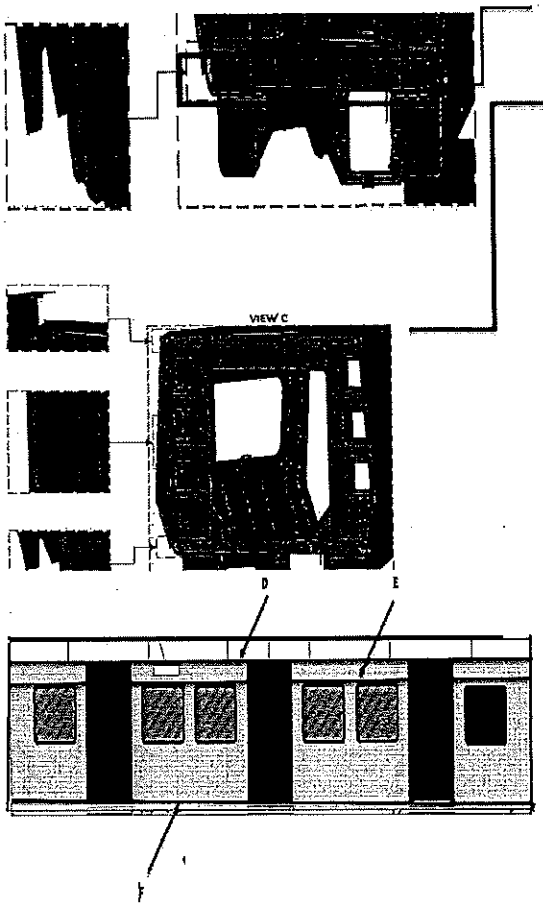
GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 29 Date 06/11/2023	Project: PRASA SI.CB1230.256.V28

II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK			Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering nº PRA.CB1230.DT00000225487 Verification of fitment for all brackets.	PRA.CB1230.DT00000225487	Ok			18/02/24	18/02/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	Ok			18/02/24	18/02/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	**IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000**	Ok			18/02/24	18/02/24
0		Cleaning of all Stainless Steel Surface	**According TO GIB-WEL - PROC-0002**	Ok			18/02/24	18/02/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	Ok			18/02/24	18/02/24
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	Ok			18/02/24	18/02/24
07	N/A	Before appplication of sealant record the expiry date and make sure that the room temperature and humidity are withion 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: ISR 70-05 Exp Date: ____ / 05 / 24 Actuals Temparature: 17ºC Humidity: 27%	Ok			18/02/24	18/02/24
08	N/A	Verification of sealant application in regions of roof and sideframe.	Sealant applied in regions of roof and sideframe.	✓			18/02/24	18/02/24

AREA 1



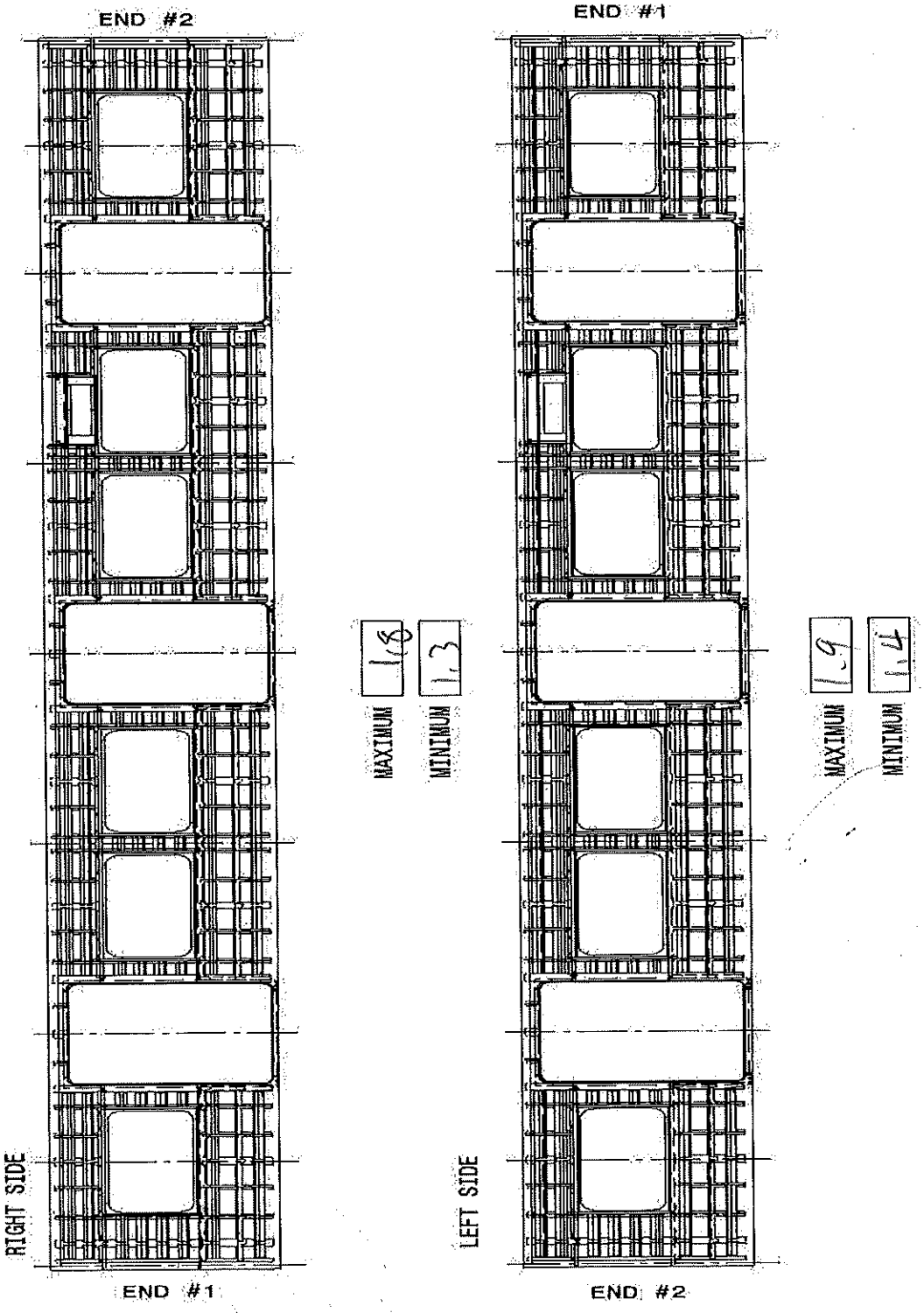
END 2 SEALANT

OPERATOR (Name & sign):	Leroy
OPERATOR (Name & sign):	Leroy
OPERATOR (Name & sign):	Leroy

Area D,E,F,G,H,I	LHS	RHS
Operator (Name & sign) :	F	F
Operator (Name & sign) :	Lerato	Lerato
Operator (Name & sign) :	D,E,H,I	D,E,H,I
Operator (Name & sign) :	Khosi	Khosi
Operator (Name & sign) :	Ishendo	Ishendo
Operator (Name & sign) :		

Specifications of Details for CBS measurement CB1230

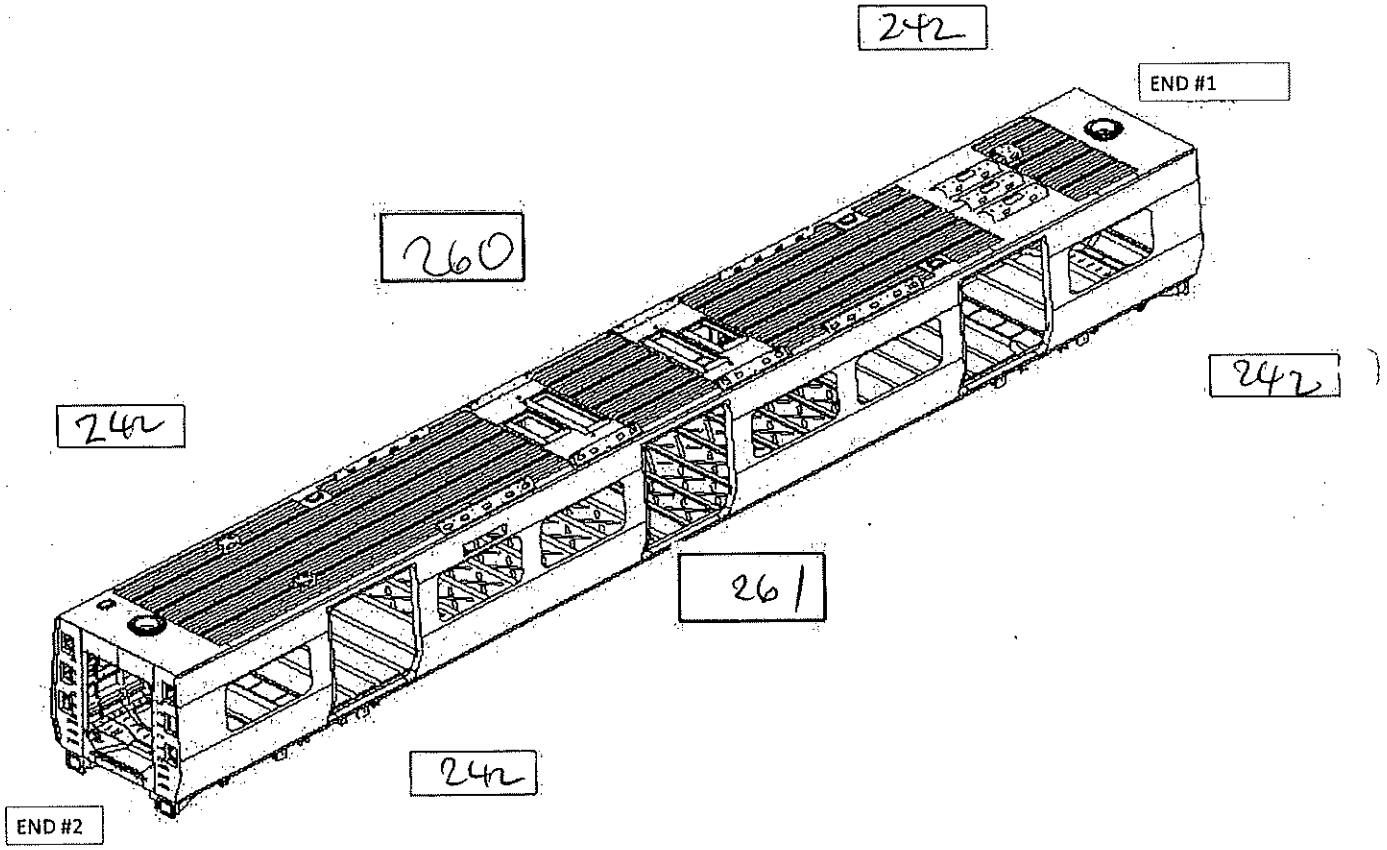
Flatness side left and right maximum of 2mm in the valley to peak measured in 900mm. Recod the maximum and minimum value foundand indicate the corresponding region.



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

Specifications of Details for CBS measurement CB1230

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

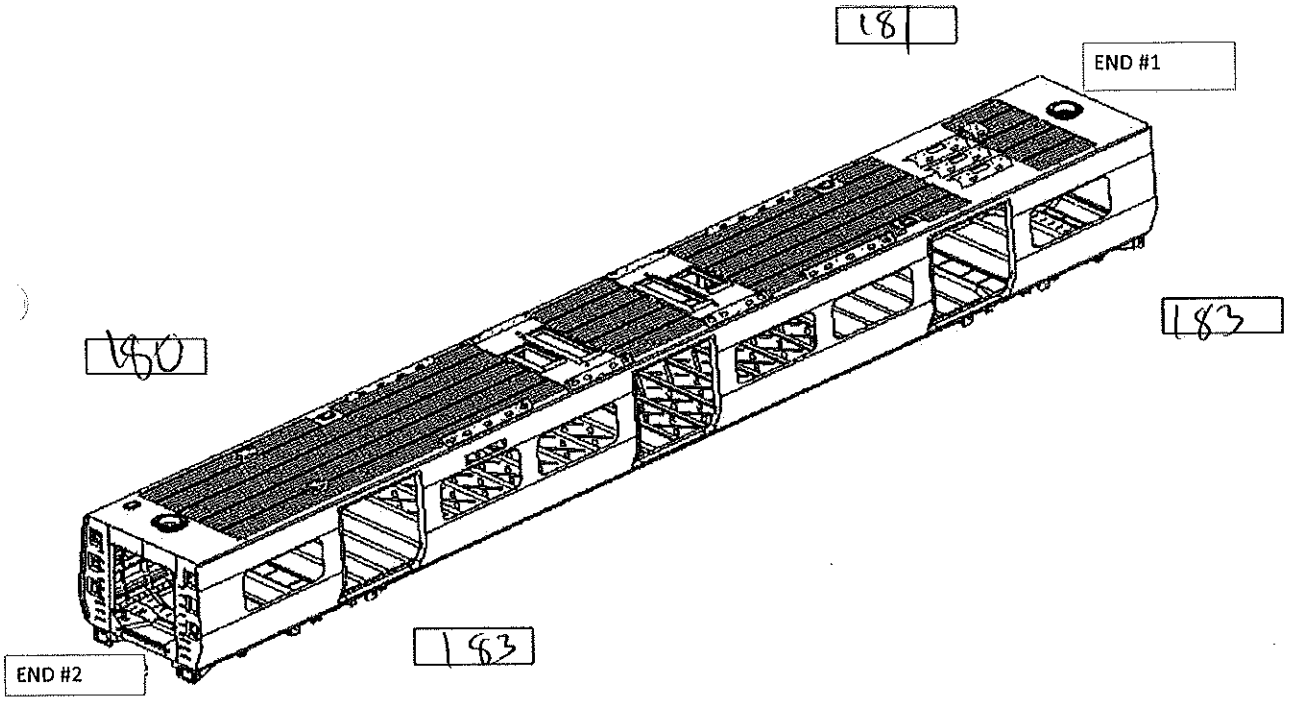


MEASURED CAMBER VALUES	
RIGHT	19
LEFT	18

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

Specifications of Details for CBS measurement CB1230

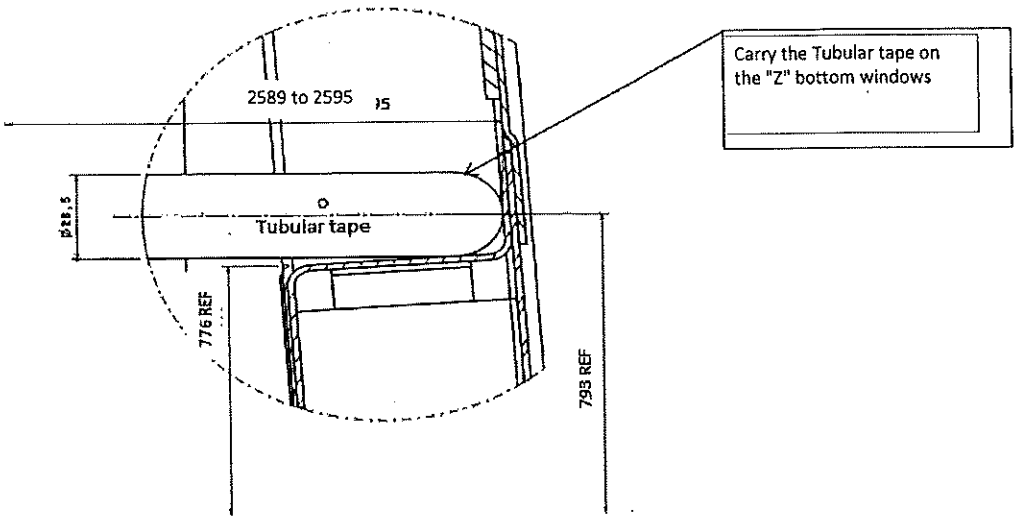
Twist measured in transversal and longitudinal = Maximum 3mm. Measure twist on air spring plates (LHS and RHS), both End 1 and End 2 folllowing twist measurement document.



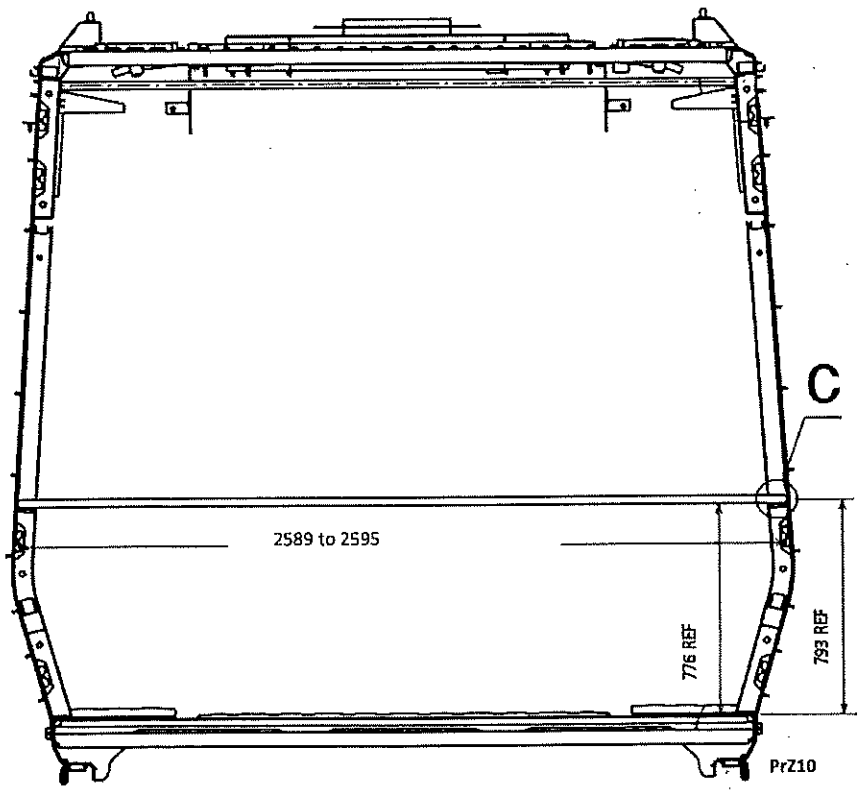
TWIST FOUND ON END 1	
TRANVERS	3
LONGITUDIN	1

TWIST FOUND ON END 2	
TRANVERSE	2
LONGITUDINAL	0

Specifications of Details for CBS measurement CB1230

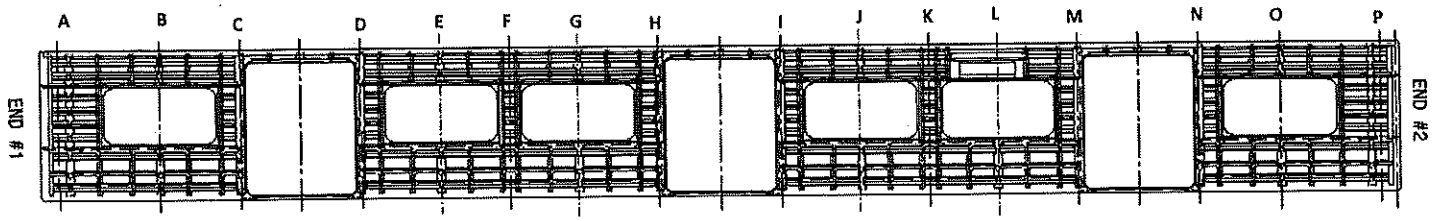


Detail C



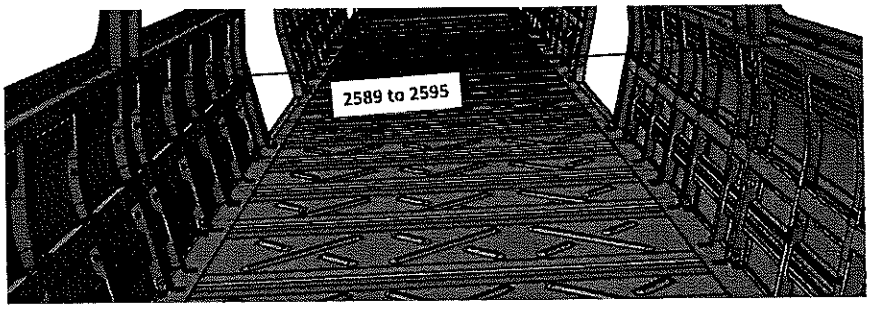
GIBELA	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev. 29 Date 06/11/2023	Project: PRASA SI.CB1230.256.V28

Specifications of Details for CBS measurement CB1230



2589 to 2595mm

A	2595
B	2596
C	2595
D	2593
E	2591
F	2593
G	2594
H	2591
I	2591
J	2593
K	2594
L	2595
M	2590
N	2589
O	2591
P	2590



Threashold verification

Nominal value :38

Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	38	38	39	38	38
Door 4		**Door 5**		**Door 6**	
L	R	L	R	L	R
38	38	39	38	39	38

BOILER MAKER: Kgotso

Welder Zanele

Welder Kgotso

Dye penetrant test

Dye-penetration test to be performed by quality personnel

Specifications of Details for CBS measurement

Item	Description of the task		Signature/Date (Operations)	Signature/Date (Quality)

II.2 - Check List REX

Check List Items

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

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

Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT		GO	(If f activities are not complete, the missing activities must not impact the next stage!	18/02/2024	Ishenoid Operations	
			Every auto inspection performed conforms to specification or In case of discrepancy the same is approved by the competent party.)	19/02/24	N Tokuro Industrial Quality	
			There are activities pendings that impact/stop the activities of the next process Obs: (To describe problems below)		Operations	
			There are non-conformities impact the quality of the product and there is no corrective action defined yet)		Industrial Quality	

In case of "NO GO", describe blocking problems

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

Item	Description		Responsible	Due date	Status

Operations

Quality