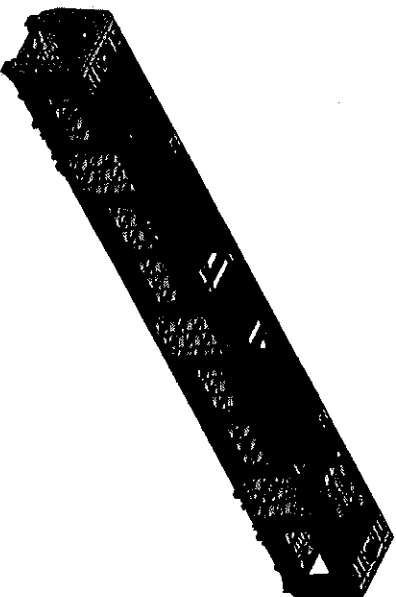


CB2210



I - Documentation and Instruments Control


Document	Type of call				Reasoning	Comment	Signature/Date (Inspector/Manager)	Signature/Date (Quality)
	1st	2nd	3rd	4th				
07800254873		X			21		11/01/2018	15/01/2018

CF


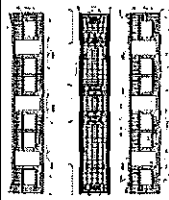
Signature/Date (Manufacturer)	Signature/Date (Quality)
<i>[Signature]</i> 06/13/24	<i>[Signature]</i> 06/13/24

Monitoring and Measuring Instrument Control - Used for Special Process				
Instrument	Serial number	Calibration/Verification Reference Date	✓	Signature/Date (Manufacturing)
ALBU 12	3282-5	15/05/24	✓	04/05/24
SOM 1142E	617P0050	14/03/24	✓	04/05/24
LASER 1142E	125425924	08/01/24	✓	04/05/24

[illegible]

	CARBODYSHELL M3,M4 ASSEMBLY DTR302254873		Rev. 31	Project: PRASA SLCB2210.254.V30
			Date 07/11/2023	

II - Self Inspection - Items to Check

II.1 - Items to check								
Item	Photo/Drawing	Description	Acceptance criteria /Specified				Signature/Date (Inspector)	Signature/Date (Quality)
01	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	/			26/03/24 [Signature]	26/03/24 [Signature]
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 DTD0000210675	/			26/03/24 [Signature]	26/03/24 [Signature]
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPED - AEC - 0000	/			26/03/24 [Signature]	26/03/24 [Signature]
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	/			26/03/24 [Signature]	26/03/24 [Signature]
05		Functional dimensions approved according drawing or complementary document approved by Atsom engineering and registered in this document	Approved according specified on pages below.	/			26/03/24 [Signature]	26/03/24 [Signature]
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 filler sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	/			26/03/24 [Signature]	26/03/24 [Signature]



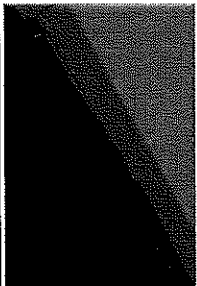
CARBODYSHELL M3, M4 ASSEMBLY DTR30225487/3

Rev. Project PRASA
31 SL CBZ210.254.V30

Date
07/11/2023

Welding Traceability

Roof ring welds



LHS

Boiler maker (Name & Sign):

Imacio B's

Welder (Name & Sign):

Sipek B

END 1

RHS

Boiler maker (Name & Sign):

SEAN B

Welder (Name & Sign):

Sipek B

LHS

Boiler maker (Name & Sign):

Isogo

Welder (Name & Sign):

Sipek B

END 2

RHS

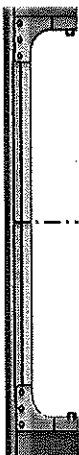
Boiler maker (Name & Sign):

SEAN B

Welder (Name & Sign):

Sipek B

Door ring welds



LHS

Boiler maker (Name & Sign):

Imacio B's

Welder (Name & Sign):

Sipek B

RHS

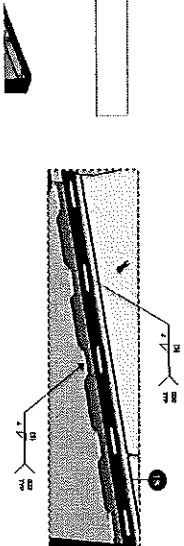
Boiler maker (Name & Sign):

Imacio B's

Welder (Name & Sign):

Sipek B

ELF Reinforcement Plates

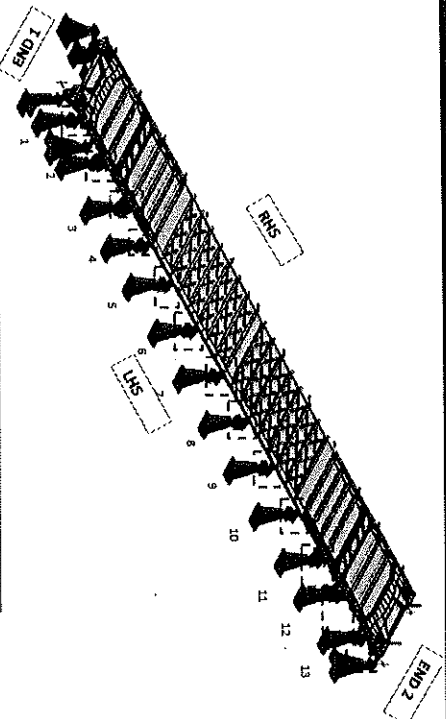




CARBOVUSHELL M3,MM ASSEMBLY DTR302254873

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

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 found each jig pillars / chair and underframe should be 0mm.

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

Signature Operations:

Date: 26/05/24

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	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Hand Side	0	0	0	0	0	0	0	0	5	7	6	0	0

Signature Industrial Quality:

Date:

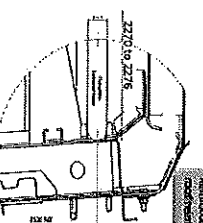
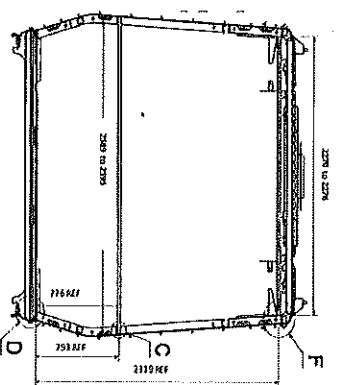
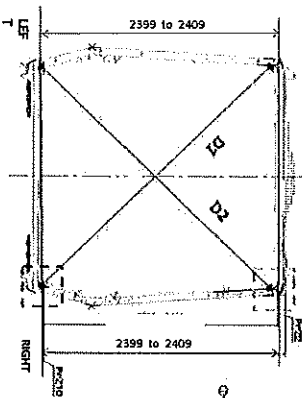
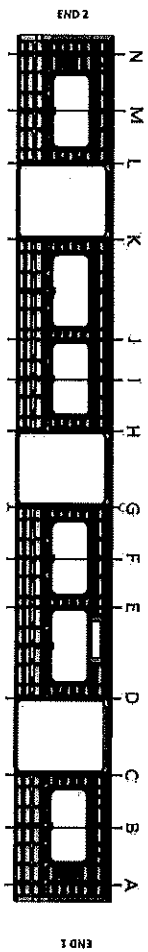
26/05/24



CARBODYSHELL M3,M4 ASSEMBLY DTR3025487/3

Rev. 31 Project: PR65A
Date 07/11/2023 SI:CB2210.254.V30

Specifications of Details for CBS measurement

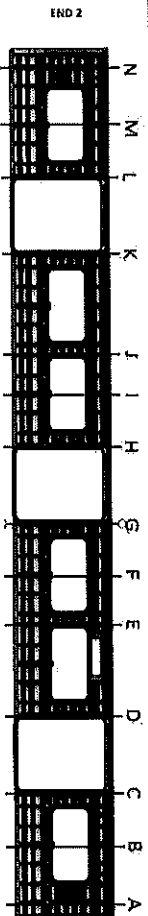




CARBODYSHELL M3,M4 ASSEMBLY DTR302254873

Rev.
31Project: PRASA
SI.CB2210.254.V30Date
07/11/2023

Specifications of Details for CBS measurement



END 2

END 1

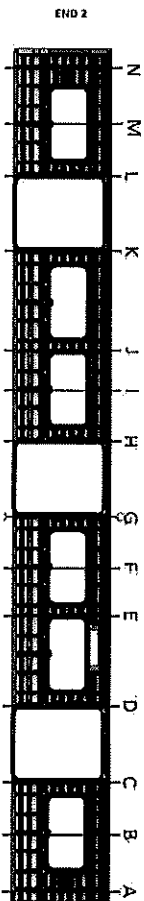
PME Column LHS - RHS should be
≤ 2MM/ on each point

BEFORE WELDING

Record D1 values		Record D2 values		D1-D2 ≤ 5mm		2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3269	3271		2		2405	2407	2
B	3268	3265		3		2406	2406	0
C	3267	3266		1		2405	2406	1
D	3266	3268		2		2406	2406	0
E	3266	3266		0		2406	2405	1
F	3265	3266		1		2404	2406	2
G	3268	3269		1		2405	2404	1
H	3270	3267		3		2406	2406	0
I	3266	3265		1		2407	2406	1
J	3266	3266		0		2406	2405	1
K	3268	3270		2		2405	2405	0
L	3269	3268		1		2406	2404	2
M	3264	3268		4		2406	2406	0
N	3268	3270		2		2406	2408	2

MD/0
26/05/24

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	3294	3296	2	2406	2407	1
B	3218	3265	3	2406	2406	0
C	3294	3294	0	2408	2406	1
D	3293	3295	2	2404	2406	2
E	3218	3265	0	2405	2405	0
F	3264	3264	0	2406	2404	2
G	3295	3296	1	2408	2406	1
H	3294	3294	0	2406	2405	1
I	3264	3266	2	2406	2406	0
J	3265	3265	0	2405	2404	1
K	3295	3294	1	2406	2405	1
L	3295	3295	0	2406	2406	2
M	3264	3268	4	2406	2406	0
N	3294	3295	1	2406	2407	1

210
210/05/24

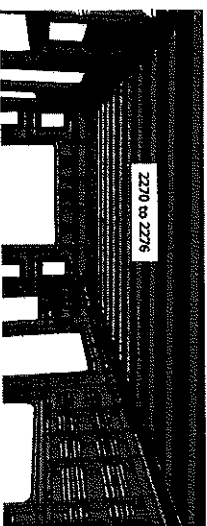
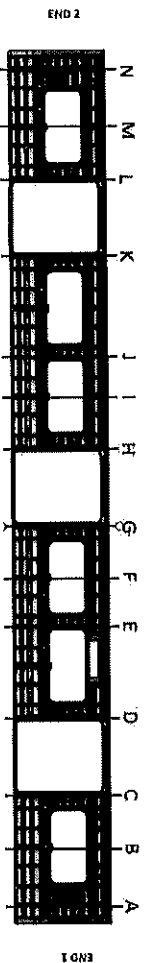
GIBBELD

CARBODYSHELL M3, M4 ASSEMBLY DTR30225487/3

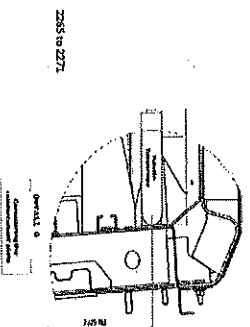
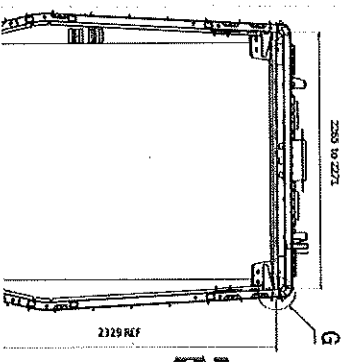
Rev. 31 Project: PRASA
Date 07/11/2023 SLCB2210.254.V30

CBS Measurement


BEFORE WELDING

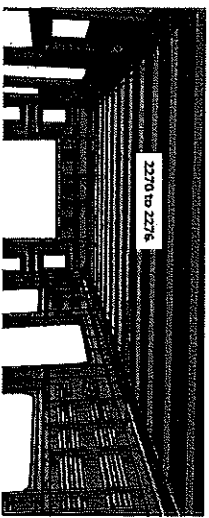
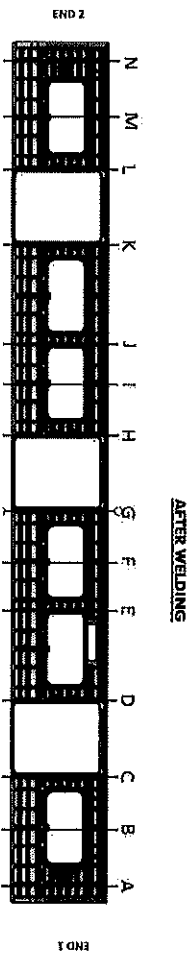


Do not consider reinforcement (Take measurements top area of zee profile)



26/03/24

	CARBOV-SHELL M3,M4 ASSEMBLY DTR30225-487/3		Rev. 31 Date 07/11/2023	Project: PRASA SLCB2210.254.V30
	CBS measurement			

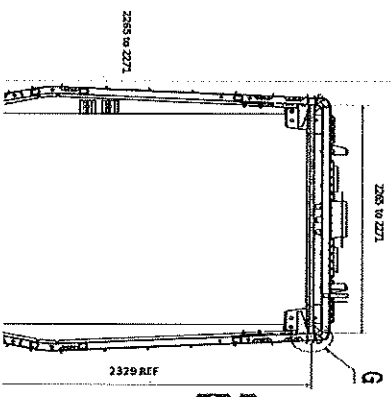


Do not consider reinforcement (Take measurements top area of zee profile)

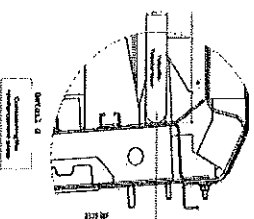
	2265 to 2271	2270 to 2276
A	2269	
B		2274
C	2266	
D	2269	
E		2276
F		2276
G	2269	
H	2265	
I		2273
J		2276
K	2266	
L	2269	
M		2274
N	2268	



Take measurement close to radius (considering reinforcement)



2265 to 2271



26/03/24



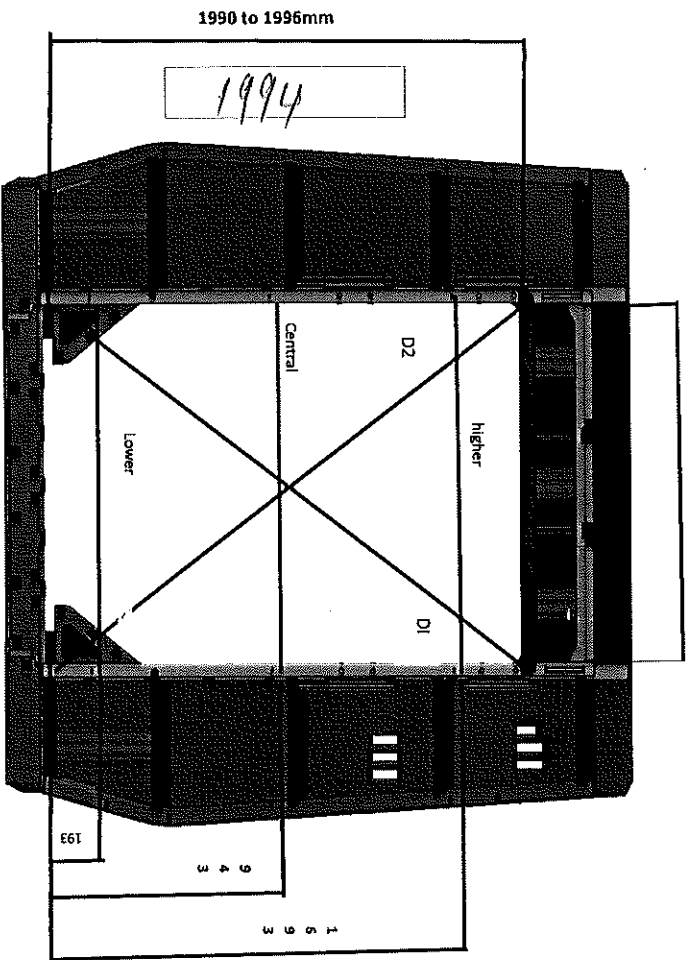
CARBODYSHELL M3.M4 ASSEMBLY DTR3022487/3

Rev. 31
Date 07/11/2023

Project: PRASA
SI.CB2210.25A.V30

Specifications of Details for CB5 measurement

End frame 1



1380 to 1382 mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Higher Dimension

1382

D1

2215

Central Dimension

1281

D2

2414

Lower Dimension

1381

D1-D2

1

10/10

26/03/24



CARBODYSHELL M3,M4 ASSEMBLY DTR302254873

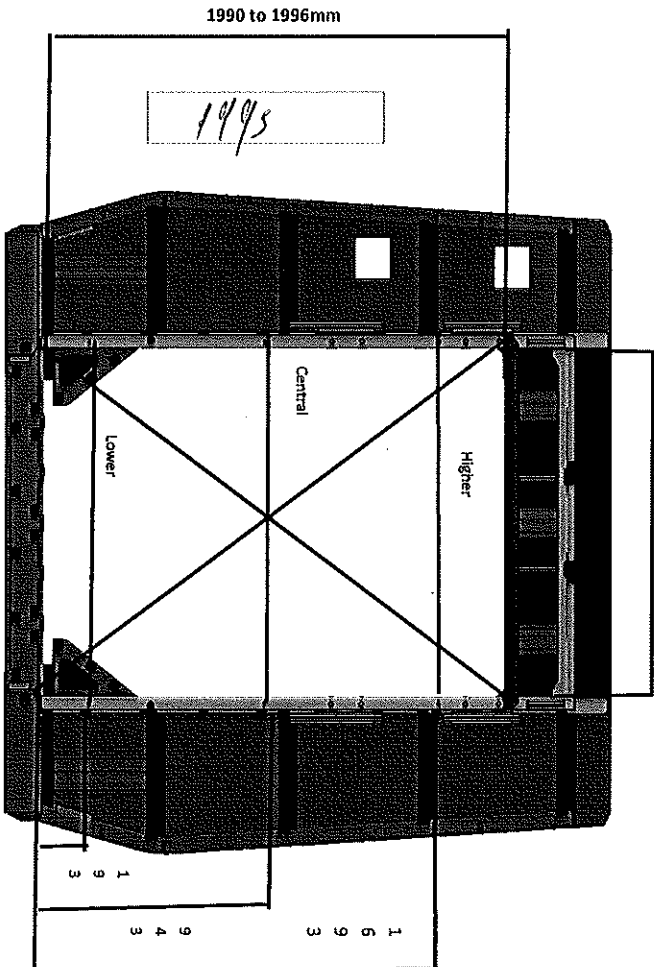
Rev.
31
Date
07/11/2023

Project: PRASA
SLCB2210.254.V30

Specifications of Details for CBS measurement

Endframe 2

1380 to 1382 mm



1380 to 1382 mm

DIAGONAL DIFFERENCE D1-D2 3mm

Higher Dimension

1381

D1

2413

Central Dimension

1581

D2

2413

Lower Dimension

1380

D1-D2

0

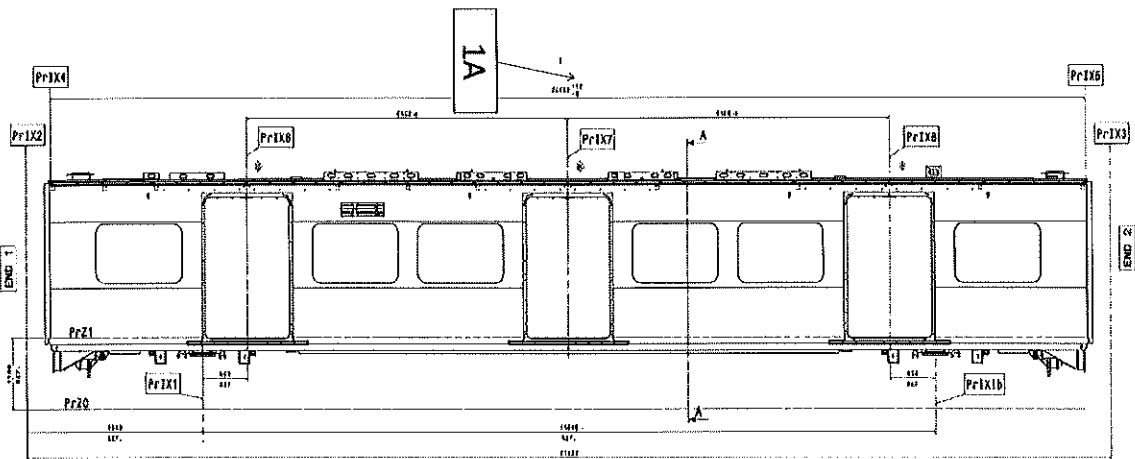
10/10

96/03/24

Specifications of Details for CBS measurement

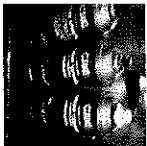
LEFT SIDE	
SPECIFICATION SIZE	ACTUAL SIZE
1A 20632 - 20614	20615

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



Dye penetrant test

Dye-penetration test to be performed by quality personnel





CARBODYSHELL M3,M4 ASSEMBLY DTR302254873

Rev. 31
Date 07/11/2023
Project: PRASA
SLCB2210.254.V30

Item

Description of the Issue

Signature (Manufacturer)

Signature (Quality)

Validate Canister at 1230

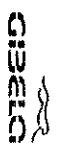
27/5

27/5



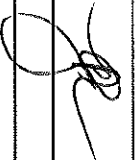
12 - Check List REX

Check List Items

Item	Requirement	Description	Critical / Reported	Yes	No	Signature (Manufacturer)	Signature (Quality)
01	N/A	To complete REX	Refer to REX, New address 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	(If activities are not completed, the missing activities must not impact the next stage)	26/05/24	M.M.G.R.	
	Every auto inspection performed conforms to specification or in case of discrepancy the action is approved by the competent party.	26/05/24	M.H.E.S.U.	
	There are activities pending that impact the activities of the next process Ode. (To describe problems below)			
	There are non-conformities impact the quality of the product and there is no corrective action defined yet.	26/05/24	M.T.O.P.E.R.U.	

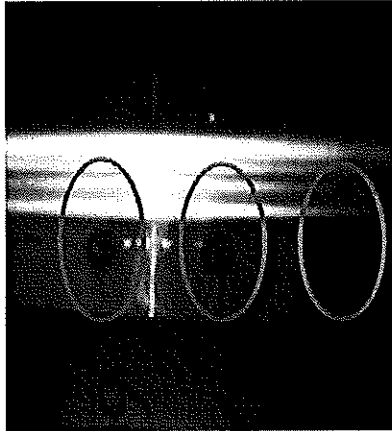
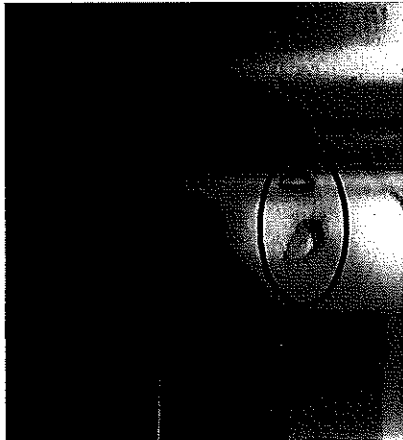
In case of "NO GO", describe blocking problems

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 DTR30225487/3		Rev. 31 Date 07/11/2023	Project: PRASA SI.CB2210.254.V30
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ANNEXURE A: Spot Welding Quality Acceptance Standard





CARBODYSHELL M3,M4 ASSEMBLY DTR302294873

Rev.

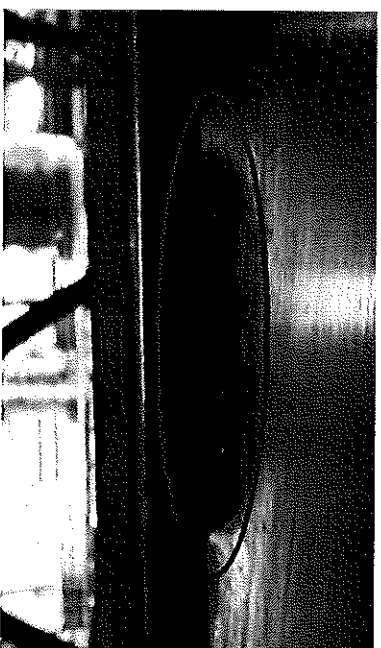
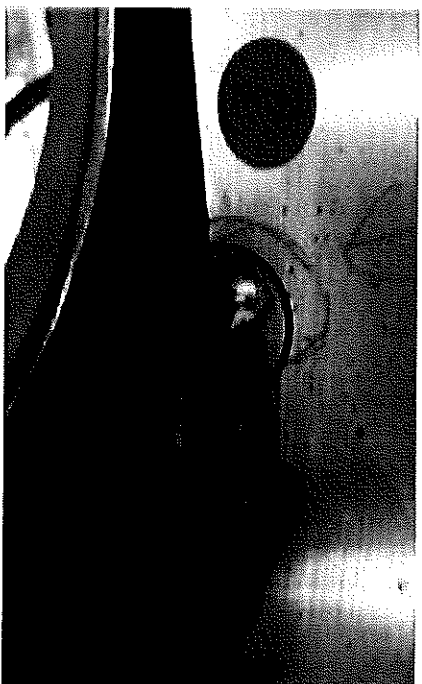
31

Date

07/11/2023

Project: PG45A
SI.CB2210.254.V30

ANNEXURE B: Arc Welding Quality Acceptance Standard





APPLICATION REFERENCE											SAFETY	
MOVING	DRAWING	DESCRIPTION	STATION	CARTAGE				WORE INSTRUCTIONS	YES			
				TEL	MAIL	TRUCK	TRUCK					
<input type="checkbox"/>	DT0020467/2	CARDON-HILL M.L.P.M.A. ASSEMBLY	Q023A		X	X	X		PALCB2220.07R022548			
<input type="checkbox"/>									7/2 V21	YES		
<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	Ismaelng Mochla	03/02/2018		
								CHECKER	Mozzo Prida	01/02/2018		
								COMPLER	Ismaelng Mochla	01/02/2018		
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from P.M.E Manager to Quality Manager						APPROVER	Ismaelng Mochla	18/05/2018		
								CHECKER	Mozzo Prida	18/05/2018		
								REVISD BY	Banadone Mochma	18/05/2018		
2	2018/07/05	Carton dimensional checks added and others moved to G2220						APPROVER	Ismaelng Mochla	2018/07/05		
								CHECKER	Mozzo Prida	2018/07/05		
								REVISD BY	Banadone Mochma	2018/07/05		
3	2018/06/12	Width tolerance as per DT0000398600						APPROVER	Ismaelng Mochla	2018/06/12		
								CHECKER	Mozzo Prida	2018/06/12		
								REVISD BY	Banadone Mochma	2018/06/12		
5	24/01/2019	As per Baseline 10.2						APPROVER	Ismaelng Mochla	24/01/2019		
								CHECKER	Mozzo Prida	24/01/2019		
								REVISD BY	Banadone Mochma	24/01/2019		
6	13/03/2019	Added D1 and D2 on Self - Inspection length measurements						APPROVER	Ismaelng Mochla	13/03/2019		
								CHECKER	Mozzo Prida	13/03/2019		
								REVISD BY	Banadone Mochma	13/03/2019		
10	22/09/2019	New Baseline 10.2.5						APPROVER	Ismaelng Mochla	22/09/2019		
								CHECKER	Mozzo Prida	22/09/2019		
								REVISD BY	Banadone Mochma	22/09/2019		
15	06/08/2020	New Baseline 10.2.6						APPROVER	Ismaelng Mochla	06/08/2020		
								CHECKER	Mozzo Prida	06/08/2020		
								REVISD BY	Banadone Mochma	06/08/2020		
20	19/04/2021	New Baseline change 10.3						APPROVER	Ismaelng Mochla	19/04/2021		
								CHECKER	Mozzo Prida	19/04/2021		
								REVISD BY	Banadone Mochma	19/04/2021		
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING						APPROVER	Ismaelng Mochla	17/08/2021		
								CHECKER	Mozzo Prida	17/08/2021		
								REVISD BY	Banadone Mochma	17/08/2021		
25	20/02/2022	New Baseline change 10.3.1						APPROVER	Ismaelng Mochla	20/02/2022		
								CHECKER	Mozzo Prida	20/02/2022		
								REVISD BY	Banadone Mochma	20/02/2022		
26	14/06/2022	Update minimum temperature requirement for sealant application						APPROVER	Ismaelng Mochla	14/06/2022		
								CHECKER	Mozzo Prida	14/06/2022		
								REVISD BY	Banadone Mochma	14/06/2022		
27	19/10/2022	Addition of feasibility for sealant application & welding						APPROVER	Ismaelng Mochla	19/10/2022		
								CHECKER	Mozzo Prida	19/10/2022		
								REVISD BY	Banadone Mochma	19/10/2022		
28	14/04/2023	Added sealant batch number & welding consumables traceability						APPROVER	Ismaelng Mochla	14/04/2023		
								CHECKER	Mozzo Prida	14/04/2023		
								REVISD BY	Banadone Mochma	14/04/2023		
29	28/10/2023	Addition of product quantity						APPROVER	Ismaelng Mochla	28/10/2023		
								CHECKER	Mozzo Prida	28/10/2023		
								REVISD BY	Banadone Mochma	28/10/2023		
TRANSFET	CAR	OPERATOR NAME/ALPS NO.	DATE	SELF INSPECTION NUMBER				PAGES				
220	M13	Ismaelng Mochla	21/03/24	SI.CB2220.250.V29				13				



CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR02254872

Rev. 29
Date 28/10/2023
Project: PRASA
SI.CB2220.250.V29

Car: M1,M3,M4

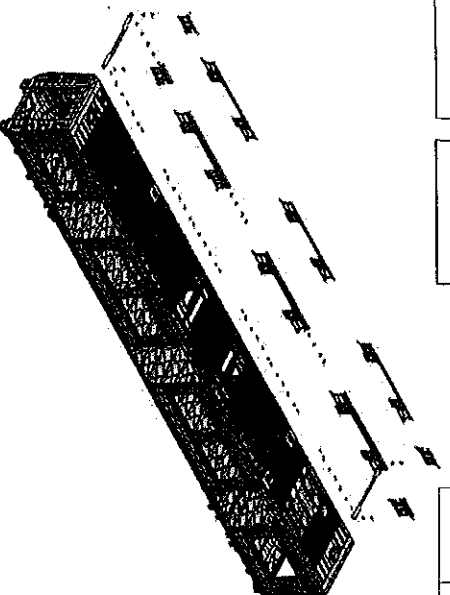
NCB

Work station:

CB2220



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

Document	Type of Doc					Revision	Classification	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
	EC	TE	SE	FE	IE					
DTR02254872						29	28/10/2023	X	N/A	27/03/24 27/03/24

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process					
Instruments	Serial number	Calibration/Verification Validative Date	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
Tubular	3282-3	15/03/2024-15/03/25		15/03/24 15/03/24	27/03/24 27/03/24
Measuring Tape	5157A01	22/07/2023-22/07/2024		22/07/23 22/07/23	27/03/24 27/03/24

I.3 Consumables

Welding Consumable Control - Used for Special Process					
Splice Material	Batch Number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
Welding 308LSi	E24800	MIG	X	27/03/24 27/03/24	27/03/24 27/03/24

GIBELCO
2024-03-27
INDUSTRIAL QUALITY
MAINLINE



CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR302254872

Rev. 29
Date 28/10/2023
Project: PRASA
SI,CB22220.250.V29

II - Self inspection - Items to Check

II.1 - Items to check

Item	Revised Drawing	Description	Acceptance criteria /Procedure	Is	Signature/Date (Manufacturer)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA-CB2220.DTR302254872 Verification of fitment for all reinforcement brackets.	PRA-CB2220.DTR302254872	✓	27/03/24 L. J. B.	27/03/24 [Signature]
02	N/A	Control free of significant flaws which compromise the appearance or functionality	DT00000210875	✓	27/03/24 L. J. B.	27/03/24 [Signature]
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-S4L-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	27/03/24 L. J. B.	27/03/24 [Signature]
04		Cleaning of all Stainless Steel Surfaces	According to GIB-WEL - PROC-0002	✓	27/03/24 L. J. B.	27/03/24 [Signature]
05		Functional dimensions approved according drawing or complementary document approved by Alcom engineering and registered in this document.	Approved according specified on pages below.	✓	27/03/24 L. J. B.	27/03/24 [Signature]
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-S4L-WMS-016. Run by penetrant testing welds (weld ring) and fillet sampling as described in DT000002210658.	As the welding procedure IND-S4L-WMS-016 and DT000002210658.	✓	27/03/24 L. J. B.	27/03/24 [Signature]
07	N/A	Before application of sealant record the epoxy data and make sure that the room temperature and humidity are within specified values as per Work Instructions Specified: Temperature Min. - Max (T) Min-Max 10°C - 35°C Relative humidity Min - 33% - 65% Max (T) Min-Max 65%	Sealing Batch No: 152-70-V3 Exp Date: 1/05/24 Actuals Temperature: 20°C Humidity: 37%	✓	27/03/24 [Signature]	27/03/24 [Signature]
08	N/A	Verification of sealant application in certain regions in the drawing.	AA00001278555	✓	27/03/24 [Signature]	27/03/24 [Signature]
		Verification of active welds	Approved according to DT00000210658 reference and Self inspection	✓	27/03/24 L. J. B.	27/03/24 [Signature]



2024-03-27

INDUSTRIAL QUALITY
MAINLINE



CARBODYSHELL MT.M3.M4 ASSEMBLY
DTR3022548712

Rev.	29
Date	28/10/2023

Project: PRASA
SI.CB2220.250.V29

II - Self Inspection - Items to Check

SEALANT APPLICATION

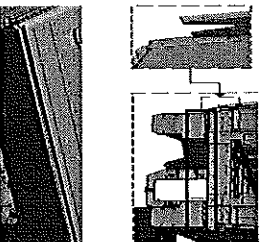
AREA 1 & 2 END 1

Operator (Name & sign):


Levy
Levy

Operator (Name & sign):

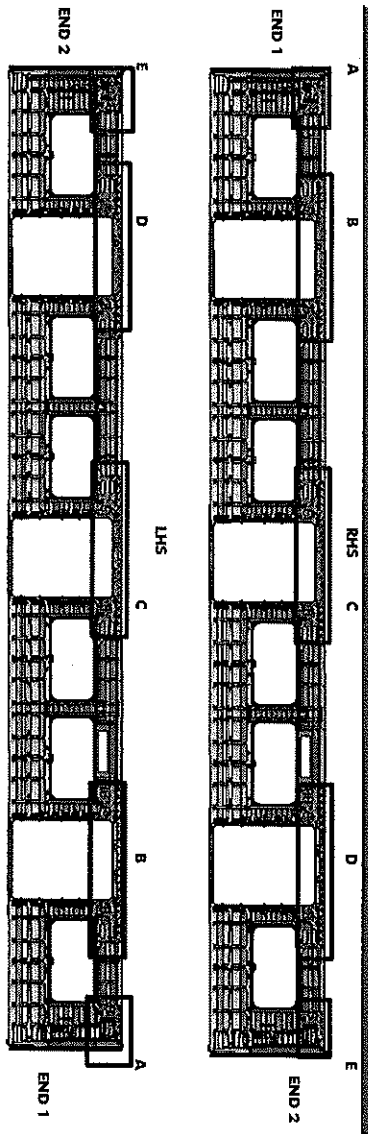
Levy
Levy



W
CIBELQ
2024-03-27
INDUSTRIAL QUALITY
MAINLINE


	CARBOYSHELL M1 M3 M4 ASSEMBLY DTR3022546712		Rev. 29	Project: PRASA
			Date 28/10/2023	SI.CB2220.250.V29

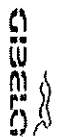
II - Self Inspection - Items to Check



REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>[Signature]</u>	<u>Lino3</u> <u>MB</u>
B	Operator (Name&sign): <u>[Signature]</u>	<u>Lino3</u> <u>MB</u>
C	Operator (Name&sign): <u>[Signature]</u>	<u>X.M.B.</u>
D	Operator (Name&sign): <u>[Signature]</u>	<u>Monsieur Mbeck</u>
E	Operator (Name&sign): <u>[Signature]</u>	<u>Monsieur Mbeck</u>

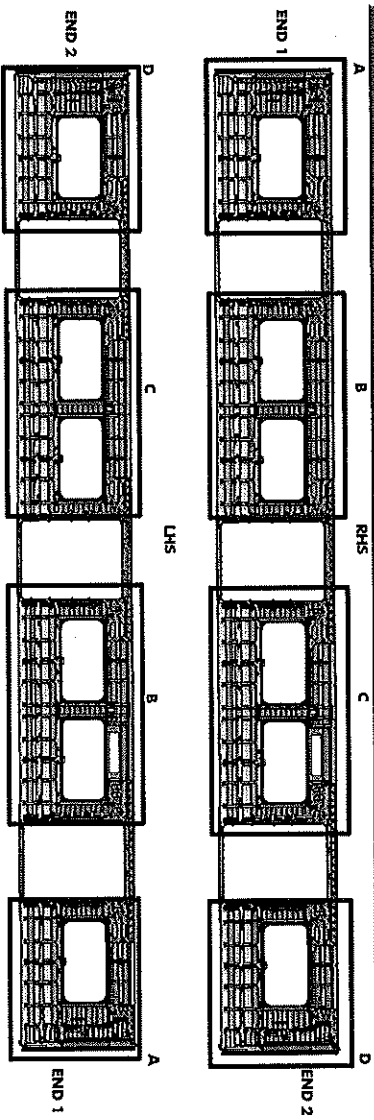

 2024-03-27
**INDUSTRIAL QUALITY
MAINLINE**



CARBODYSHELL M1 M3 M4 ASSEMBLY
DTR3032254872

Rev. 29
Date 28/10/2023
Project: PPA5A
SI CB2220.250.V29

II - Self Inspection - Items to Check



BRACKETING

INSTALLATION
C-RAILS: Operator: Phyllis

DOOR MECHANISMS: Operator: LINDO

TAPPING PADS: Operator: LINDO

SEAT & LUGGAGE BRACKETS: Operator: Michael

SEAT BRACKETS VERIFICATION: Operator: METITE

WELDING

AREA

LHS

RHS

A (Seat brackets) : Operator (Name&sign): [Signature]

LINDO

B (Seat brackets) : Operator (Name&sign): [Signature]

LINDO

C (c-rails, Luggage and earth bushes) : Operator (Name&sign): [Signature]

LINDO

D (Seat brackets) : Operator (Name&sign): [Signature]

LINDO

ENDS

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

[Signature]

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

[Signature]



2024-03-27

INDUSTRIAL QUALITY
MAINLINE

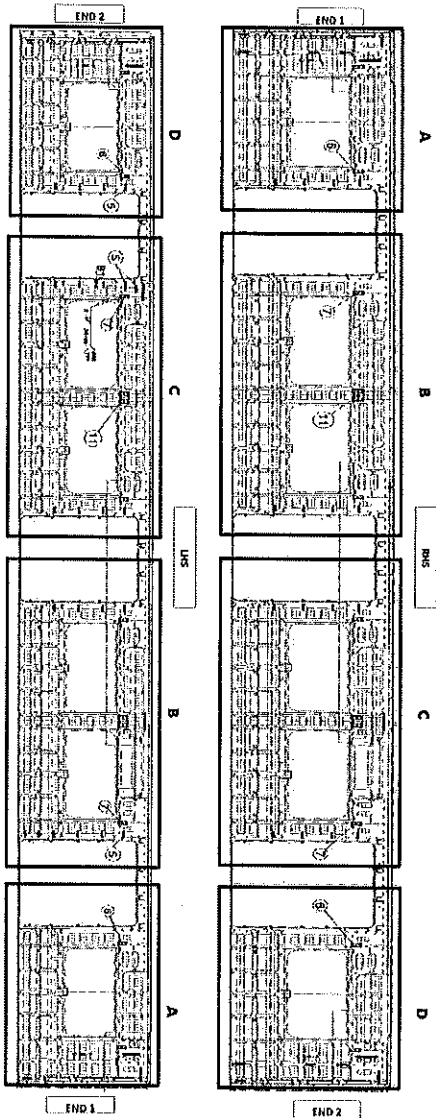


CARBODYSHELL M1/M3/M4 ASSEMBLY
DTR3022548772

Rev. 29
Date 28/10/2023
Project PRASA
SI.CB2220.250.V29

II - Self Inspection - Items to Check

M1/M3/M4 BRACKET INSTALLATION



QUANTITIES (M3/M4)

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

ROOF ENDS:
CRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY:

LHS			
SECTION	QUANTITY	OK	NOK
C-RAILS	A	2	
	B	10	
	C	8	
	D	8	
SEAT BRACKETS	A	13	
	B	21	
	C	13	
	D	13	
EARTH BUSH	A	3	
	B	5	
	C	4	
	D	2	

ROOF ENDS:
CRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY:

QUANTITIES (M1)

MHS			
SECTION	QUANTITY	OK	NOK
C-RAILS	A	7	
	B	8	
	C	8	
	D	8	
SEAT BRACKETS	A	13	
	B	21	
	C	13	
	D	13	
EARTH BUSH	A	4	
	B	4	
	C	5	
	D	1	

ROOF ENDS:
CRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY: _____

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

ROOF ENDS:
CRAILS 2 OFF EACH END
EARTH BUSH 6 OFF EACH END
VERIFICATION BY: _____



2024-03-27
INDUSTRIAL QUALITY
MAINLINE

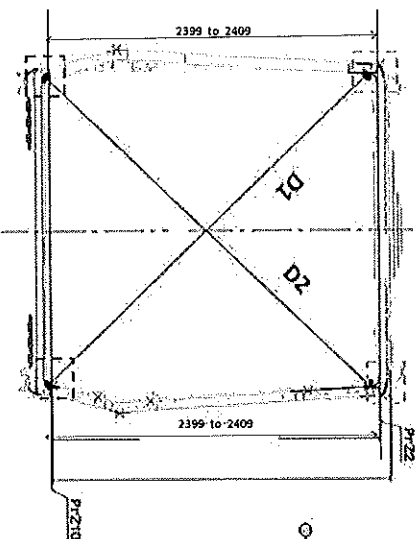
GIBELCO

CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR3022348712

Rev.	29
Date	28/10/2023

Project: PRASA
SI.CB2220.250.V29

Specifications of Details for CBS measurement



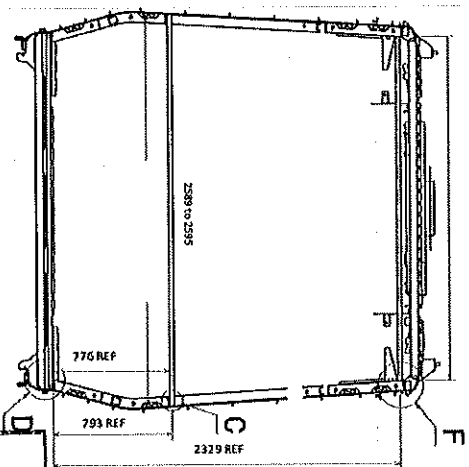
Measurements positions on roof and side
Koradl Group corner



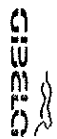
Measurements positions on roof and side
Koradl Group corner



Measurements positions on side wall and side
all corner



GIBELCO
2024-03-27
INDUSTRIAL QUALITY
MAINLINE

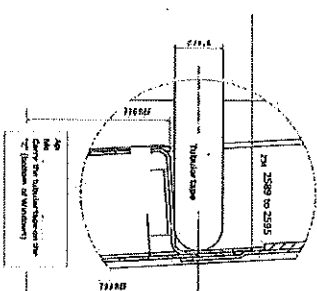
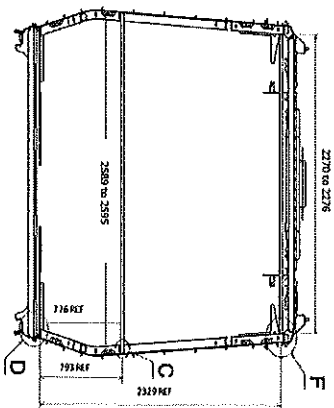


CARBOVYSHELL M1 M3 M4 ASSEMBLY
DTR302254872

Rev.
29
Date
28/10/2023

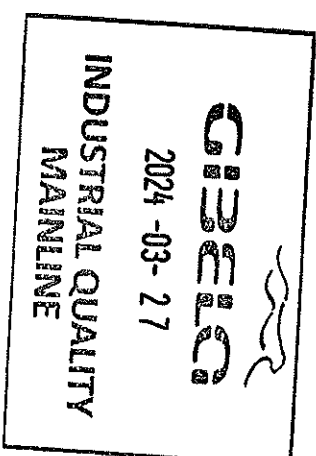
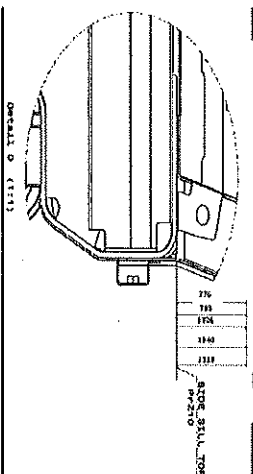
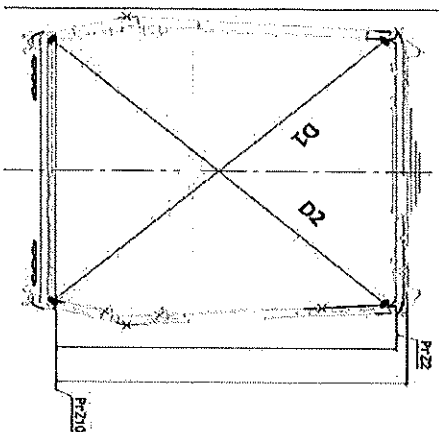
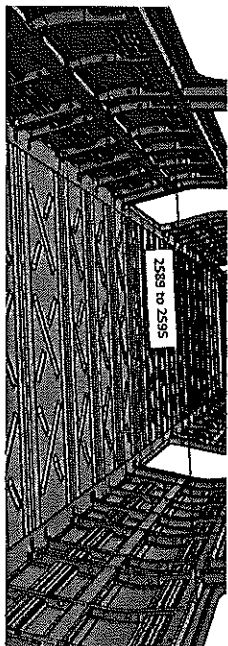
Project: PRASA
SI.CB2220.250.V29

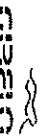
CBS measurement



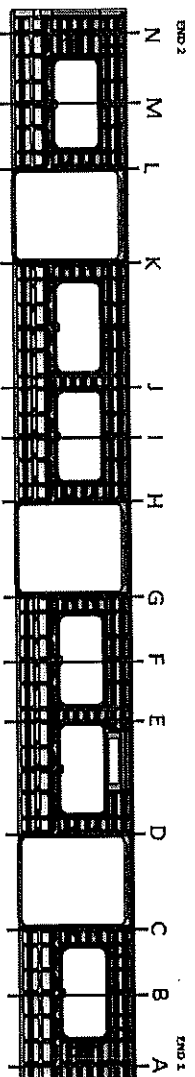
Detail C

Take measurement close to
radius




	CARBODYSHELL M1, M3, M4 ASSEMBLY		Rev.	Project: PRASA
	DTR30226487/2		29	
			Date	SI.CB22220.250.V29
			29/10/2023	

CBS measurement



BEFORE WELDING

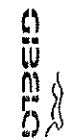
	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3294	3299	5	
B	3265	3262	3	
C	3293	3295	2	
D	3294	3295	1	
E	3261	3264	3	
F	3262	3265	3	
G	3295	3295	2	
H	3293	3293	0	
I	3260	3262	2	
J	3262	3264	2	
K	3296	3295	1	
L	3295	3295	0	
M	3263	3265	3	
N	3291	3299	2	



2024-03-27

INDUSTRIAL QUALITY

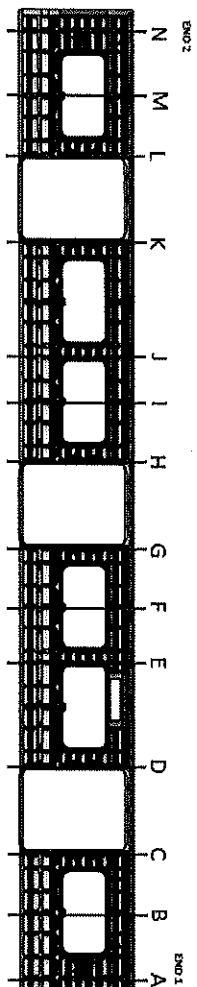
MAINLINE



CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR302254872

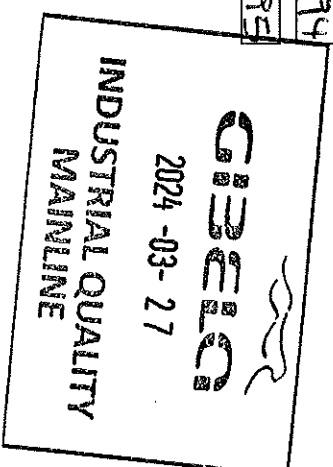
Rev.	29
Date	28/10/2023
Project: PRASA	SI,CB2220.250.V29

CBS measurement



AFTER WELDING

Record D1 values	Record D2 values	D1-D2 5.5mm	2589 to 2595
A 3293	3295	2	2595
B 3262	3263	1	2589
C 3297	3293	4	2589
D 3297	3294	3	2596
E 3264	3262	2	2593
F 3263	3262	1	2594
G 3293	3295	2	2590
H 3298	3295	3	2589
I 3264	3265	1	2590
J 3264	3265	1	2595
K 3298	3294	4	2592
L 3294	3297	3	2591
M 3264	3265	1	2594
N 3300	3297	3	2595



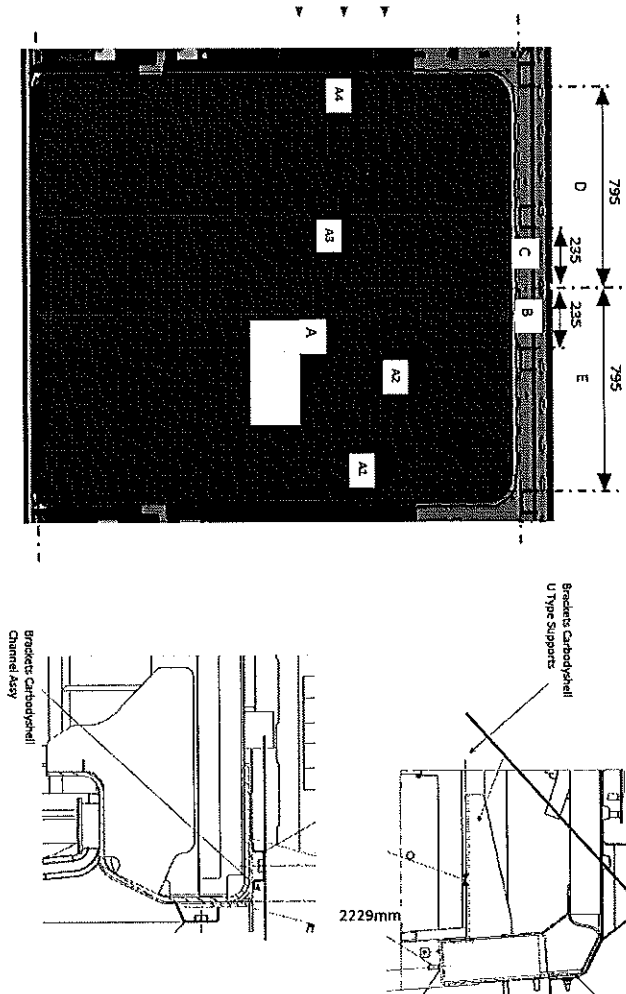


CARBOOYSHELL M1,M3,M4 ASSEMBLY
DTR302246712

Rev. 29
Date 28/10/2023

Project: PRASA
SI.CB2220.250.V79

Specifications of Details for CBS measurement CB1220



DOOR 1 - LHS

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

DOOR 2 - LHS

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

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

DOOR 1 - RHS

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

DOOR 2 - RHS

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

DOOR 3 - RHS

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

GIBCO
2024-03-27
INDUSTRIAL QUALITY
MAINLINE

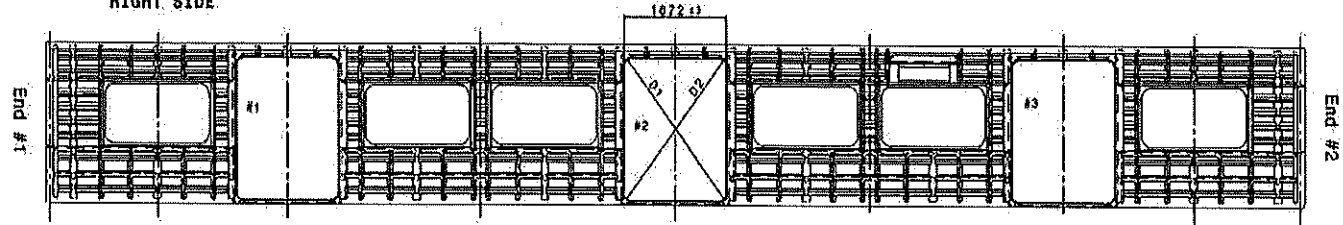


CARBODYSHELL M1,M3,M4 ASSEMBLY
DTR3022254872

Rev.	Project: PRASA
29	
Date	
28/10/2023	
	SI.CB2220.250.V29

Specifications of Details for CBS measurement CB1220

RIGHT SIDE



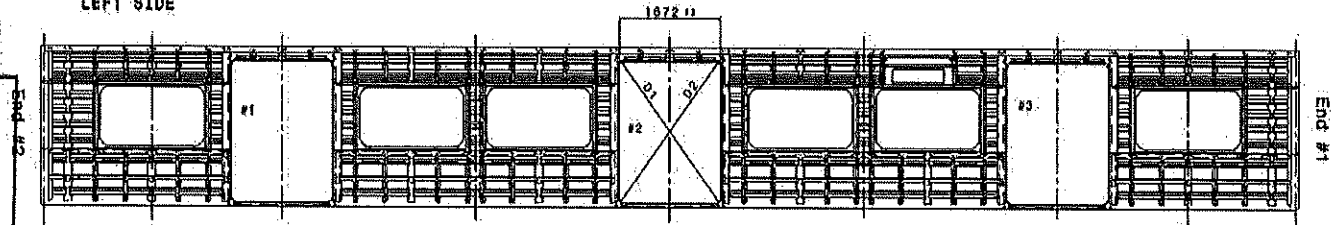
Doors length - 1672 ±3mm

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

Doors diagonal D1-D2 maximum difference ≤4mm

#1	#2	#3
D1 2748	2749	2746
D2 2746	2748	2748
D1-D2 2	1	2

LEFT SIDE



Doors length - 1672 ±3mm

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


Doors diagonal D1-D2 maximum difference ≤4mm

#1	#2	#3
D1 2749	2748	2748
D2 2749	2746	2746
D1-D2 2	2	2

CIBELD

2024-03-27

INDUSTRIAL QUALITY
MAINLINE

	CARBODYSHELL M1 M3 M4 ASSEMBLY DTR3022548712	Rev.	Project: PRASA
		29	
		Date	SI: CB2220.250.V29
		28/10/2023	

Self Inspection - Final Result

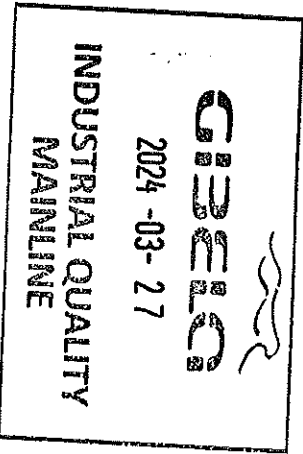
Is the car good to advance to the next workstage/process? (Approval of Operations Manager and Industrial Quality)		DATE	NAME	SIGNATURE
HOLD POINT	GO			


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

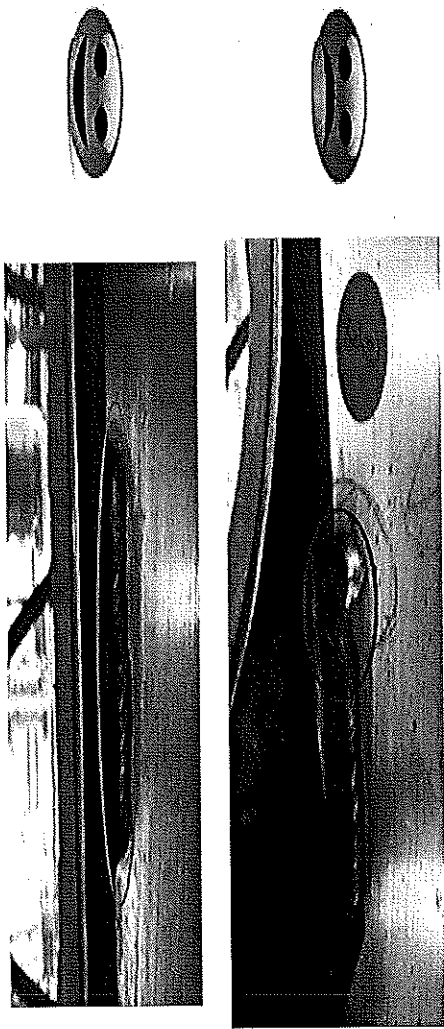
Operations

Quality



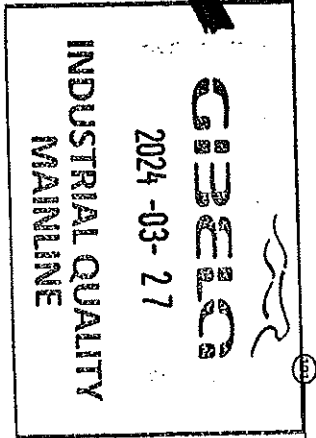
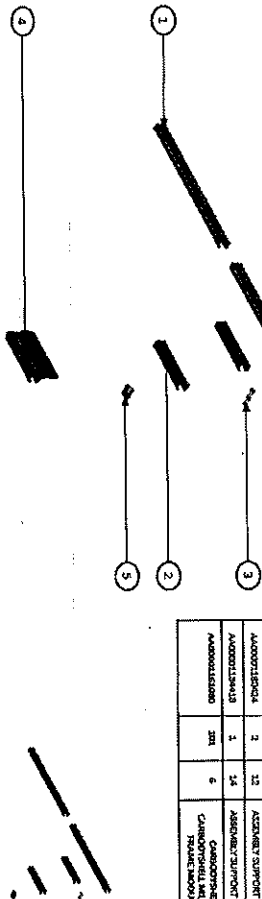
	CARBOOYSHELL M1,M3,M4 ASSEMBLY DTR3022548712	Rev.	Project: PRASA
		29	
		Date	SI, CB2220.250.V29
		28/7/2023	

ANNEXURE A: Arc Welding Quality Acceptance Standard



Station: CB1220-004- U108 & U107

PART NO.	ITEM NO.	QTY	DESCRIPTION	WMS (MM)
DTW00007080	5	6	SAFETY STUD S	0.08
AA0000120530	4	6	ASSEMBLY SUPPORT	0.27
DTW00004815	3	12	WELDING STUD SECURAS PT - A0000 - 20	0.07
AA000015004	2	12	ASSEMBLY SUPPORT	0.19
AA000015040	1	14	ASSEMBLY SUPPORT	0.22
AA000016000	20	6	CARBOOYSHELL BRACKETTS TRAVEL MOVABLE END - ONE	12.13



APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

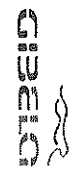
CONFIDENTIAL INFORMATION

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 ?		
				TCS	MA	MC	MS			TCR	
<input type="checkbox"/>	DT00002354-87	CARBIDY/SHL M4,M4, ASSEMBLY	CB230		X	X	<input checked="" type="checkbox"/>	PRA,CB2230,DT000002 25487,V20	YES		
<input type="checkbox"/>											
<input type="checkbox"/>											
REV	DATE	MODIFICATION CONTENT							RESPONSIBLE	NAME	DATE
	2018/06/02	GIBELI NEW CREATION							APPROVER	Philip Marique	2018/08/02
									CHECKER	Nosizo Pindela	2018/08/02
									COMPILER	Nosizo Pindela	2018/08/02
									APPROVER	humeleg Modiba	30/5/2018
									CHECKER	Nosizo Pindela	30/5/2018
									REVISED BY	Nosizo Pindela	30/5/2018
									APPROVER	humeleg Modiba	2018/05/07
									CHECKER	Nosizo Pindela	2018/05/07
									REVISED BY	Ramokone Motama	2018/05/07
									APPROVER	humeleg Modiba	24/01/2019
									CHECKER	Nosizo Pindela	24/01/2019
									REVISED BY	Vanessa Ntuli	24/01/2019
									APPROVER	humeleg Modiba	13/03/2019
									CHECKER	Nosizo Pindela	13/03/2019
									REVISED BY	Nosizo Pindela	13/03/2019
									APPROVER	humeleg Modiba	23/08/2019
									CHECKER	Nosizo Pindela	23/08/2019
									REVISED BY	Nosizo Pindela	23/08/2019
									APPROVER	Timothy Maimela	06/08/2020
									CHECKER	Bongane Masina	06/08/2020
									REVISED BY	Bongane Masina	06/08/2020
									APPROVER	Timothy Maimela	19/04/2021
									CHECKER	Bongane Masina	19/04/2021
									REVISED BY	Bongane Masina	19/04/2021
									APPROVER	Collins Mkhombhi	20/02/2022
									CHECKER	Andani Muthelo	20/02/2022
									REVISED BY	Andani Muthelo	20/02/2022
									APPROVER	Collins Mkhombhi	14/06/2022
									CHECKER	Andani Muthelo	14/06/2022
									REVISED BY	Andani Muthelo	14/06/2022
									APPROVER	Collins Mkhombhi	26/07/2022
									CHECKER	Andani Muthelo	26/07/2022
									REVISED BY	Andani Muthelo	26/07/2022
									APPROVER	Collins Mkhombhi	17/10/2022
									CHECKER	Ntokozo Zwane	17/10/2022
									REVISED BY	Anogelang Moflampe	17/10/2022
									APPROVER	Vanessa Ntuli	
									CHECKER	Ntokozo Zwane	14/04/2023
									REVISED BY	Anogelang Moflampe	14/04/2023
									APPROVER	Ngothen Tyson	
									CHECKER	Andani Muthelo	06/11/2023
									REVISED BY	Ntokozo Zwane	06/11/2023
TRAINSET	CAR	OPERATOR NAMES, ALPS NO		DATE		SELF INSPECTION NUMBER		PAGES			
230	N03	BULANTU		08/04/23		SI.CB2230.256.V29		12			

2404778



CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
30
Date
06/11/2023

Project: PRASA
SI.CB2230.256.V29

II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	NOX	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1230.DT00000225487 Verification of filament for all brackets.	PRA.CB1230.DT00000225487	OK		08/04/24	08/04/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DT00000210675	OK		08/04/24	08/04/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	OK		08/04/24	08/04/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	OK		08/04/24	08/04/24
05		Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	OK		08/04/24	08/04/24
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 filler sampling as described in DTD0000210658.	As the welding procedure IND-SAL-WMS-018 and DTD0000210658.	OK		08/04/24	08/04/24
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 (°) Min-Max 10°C - 35°C Relative Humidity Min - Max (%) 25% - 80%	Sealant Batch No: 300753P Exp Date: 05/24 Actuals Temperature: 19°C Humidity: 71%	OK		08/04/24	08/04/24
08	N/A	Verification of sealant application on the roof and sidewall finishers.	Sealant must be: -Applied straight and even -Free of gaps, cracks, damage and debris (flashes, dirt, dust) Refer to Annexure B	OK		08/04/24	08/04/24
09	N/A	Verification of sealant application in certain regions in the drawing.	AAD0001278566	OK		08/04/24	08/04/24



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II - Self Inspection - Items to Check

END 2 SEALANT

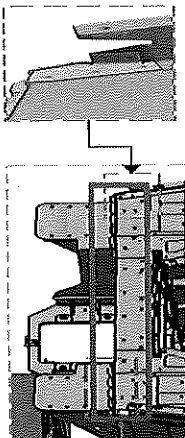
OPERATOR
(Name & sign):

Enorio Silva

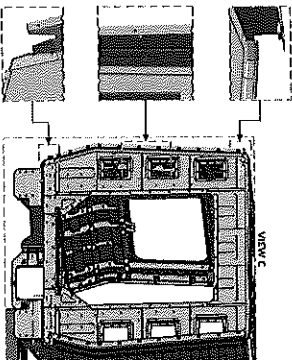
OPERATOR
(Name & sign):

OPERATOR
(Name & sign):

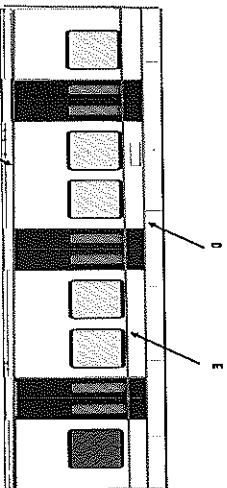
AREA 1



AREA 2 (VIEW C)



H



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

Operator (Name & sign):

Enorio Silva

Operator (Name & sign):

Enorio Silva

Operator (Name & sign):

Enorio Silva

Operator (Name & sign):

Enorio Silva

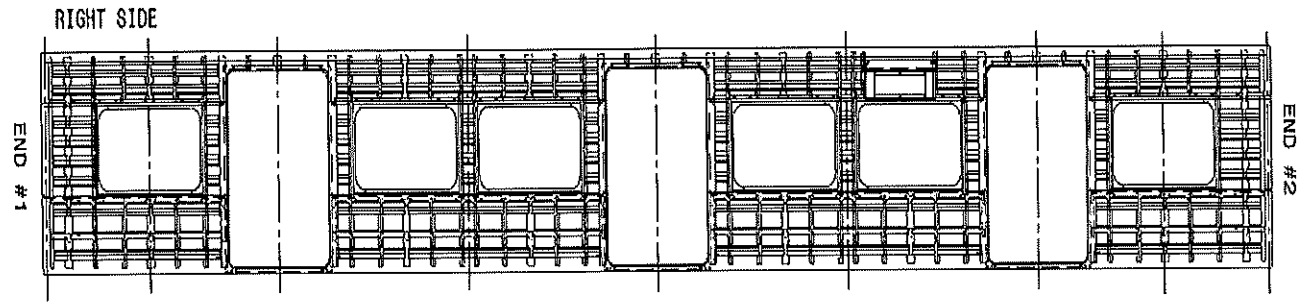
Operator (Name & sign):

Enorio Silva

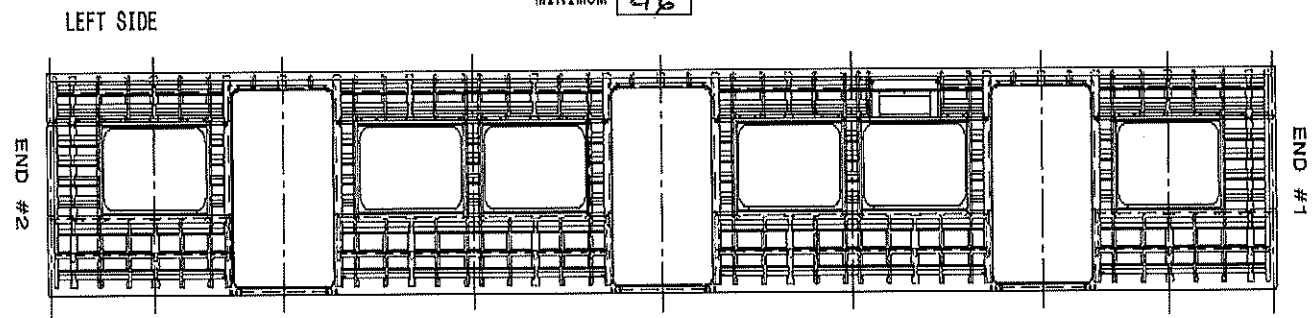
Operator (Name & sign):

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.



MAXIMUM 28
MINIMUM 216



MAXIMUM 29
MINIMUM 216



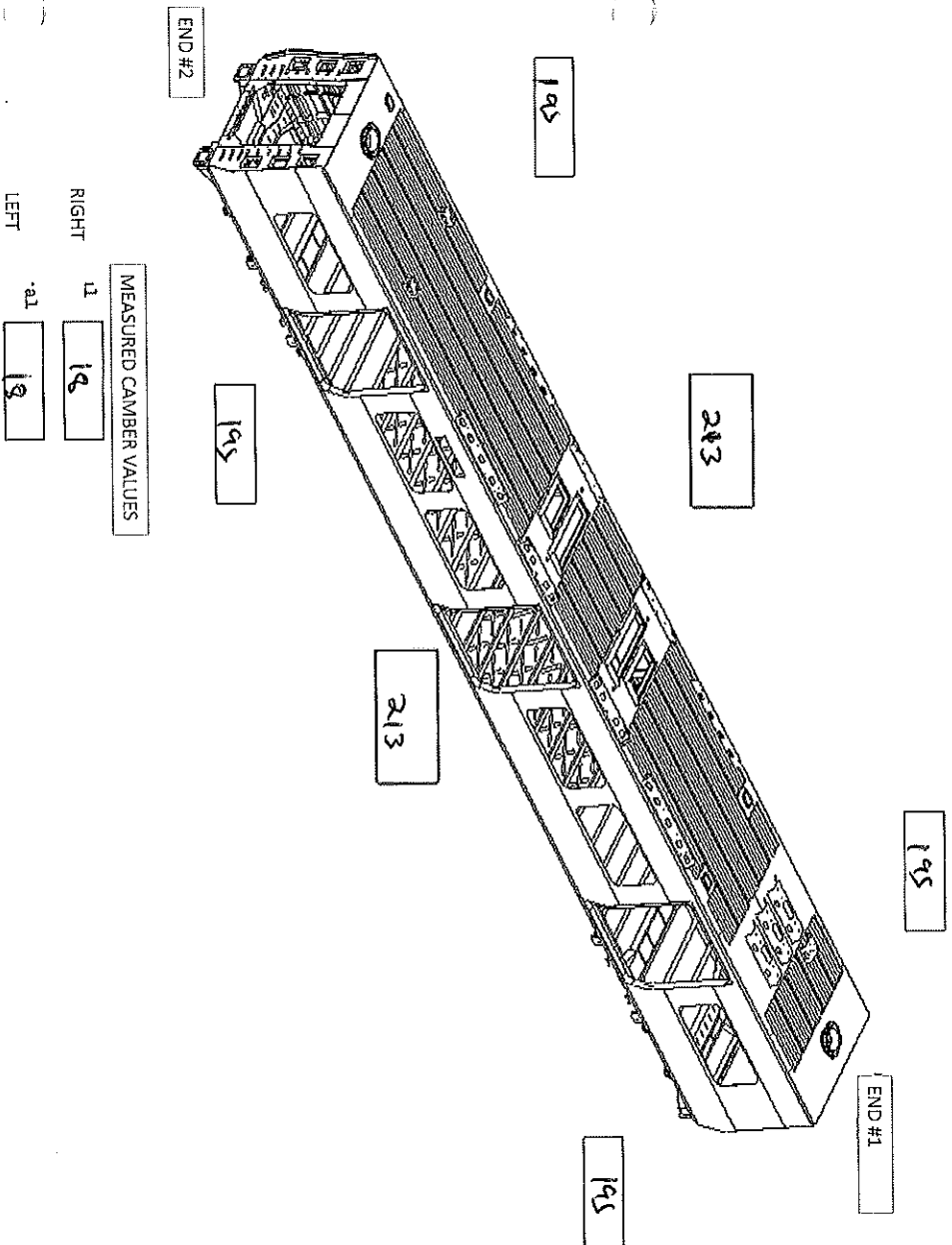
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Specifications of Details for CBS measurement CB1230

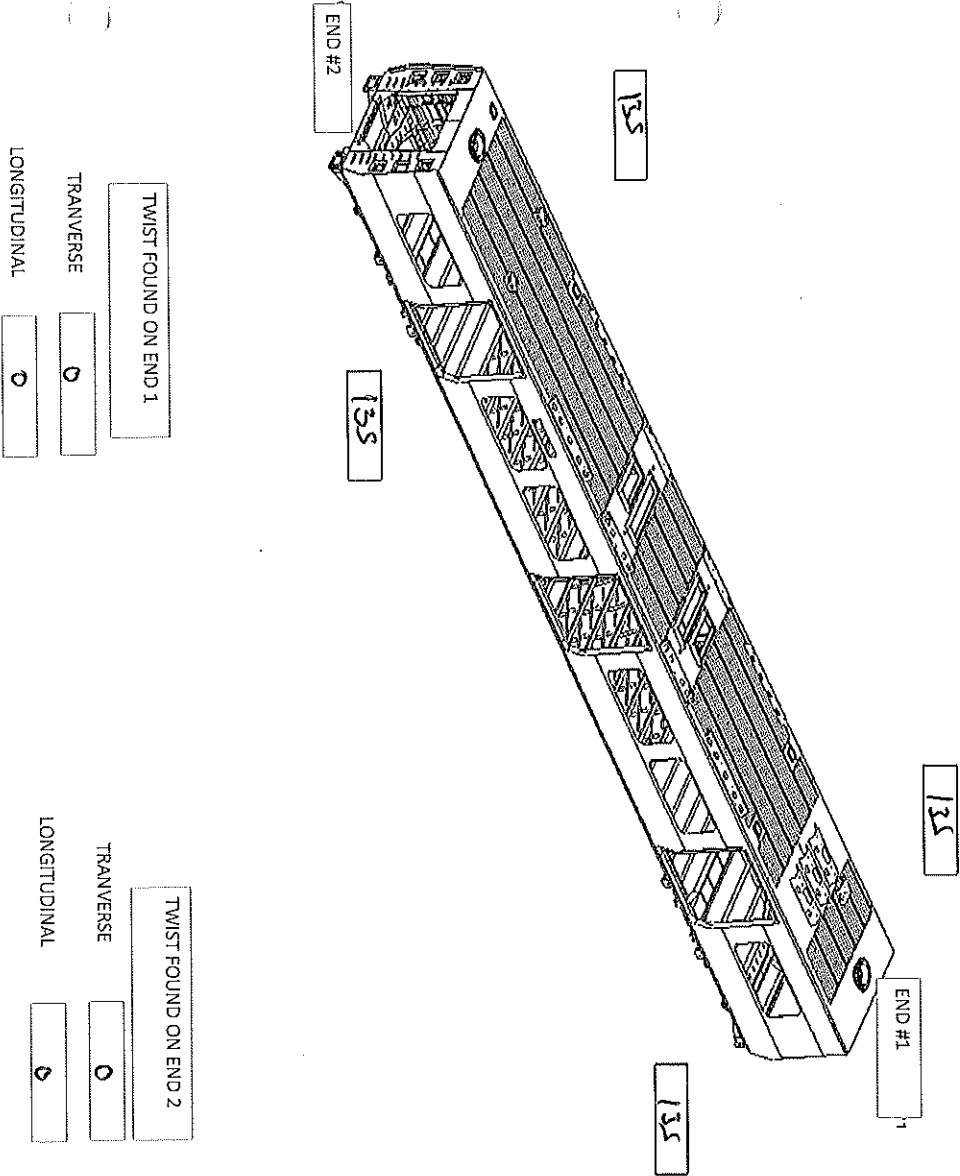
Specified Camber for car out of jig is 18mm(-0mm + 2mm)



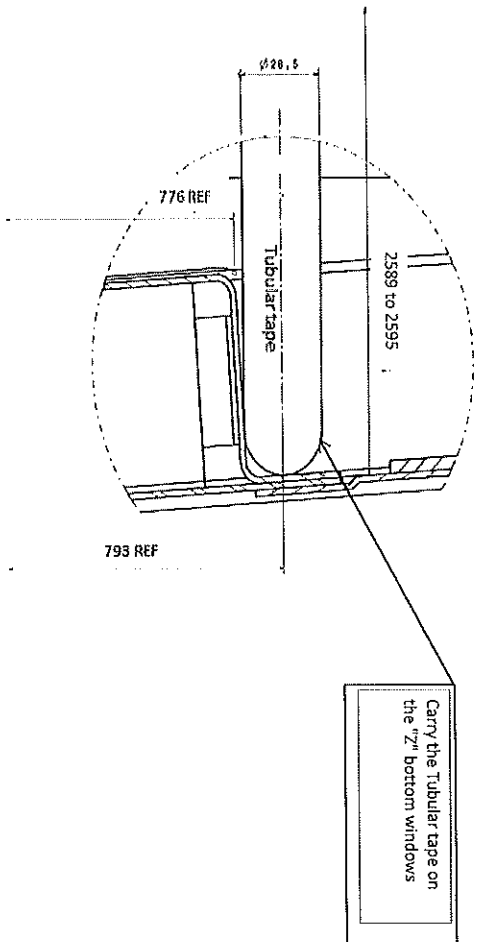
	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000225487	Rev.	Project: PRASA
		30 Date 06/11/2023	SI.CB2230.256.V29

Specifications of Details for CBS measurement CB1230

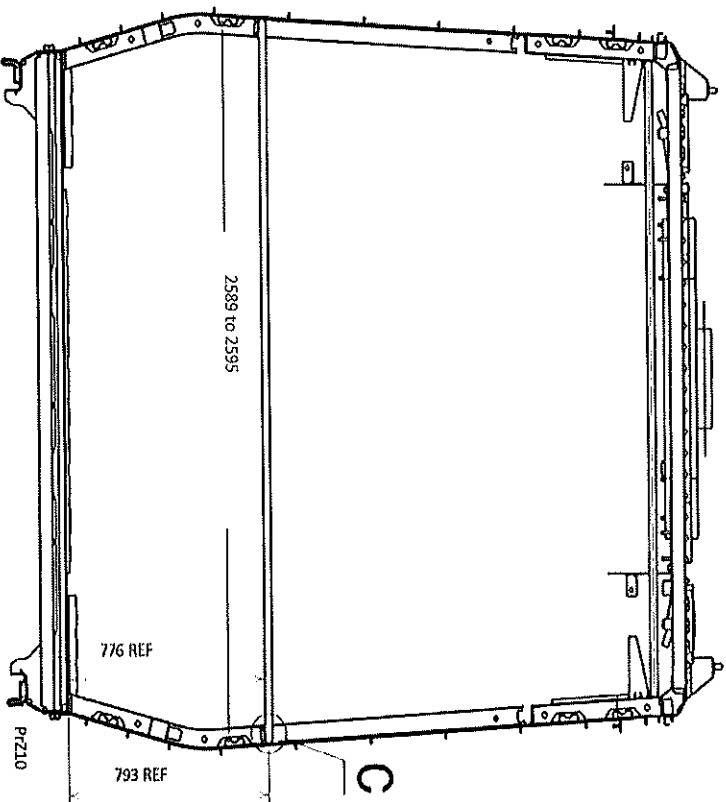
Twist measured in transversal and longitudinal = Maximum 3mm. Measure twist on air spring plates (LHS and RHS), both End 1 and End 2 following twist measurement document.



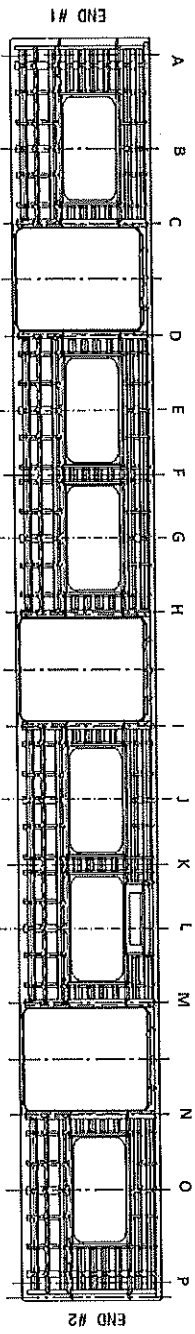
Specifications of Details for CBS measurement CB1230



Detail C

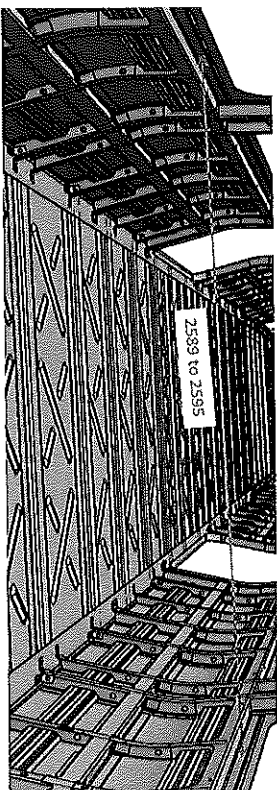


Specifications of Details for CBS measurement CB1230



2589 to 2595mm

A	2591
B	2593
C	2594
D	2589
E	2594
F	2595
G	2594
H	2590
I	2594
J	2590
K	2594
L	2587
M	2589
N	2593
O	2594
P	2589



Threshold verification

Nominal value :38

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

BOILER MAKER: MM BM

WELDER: ZANETI

Dye penetration test to be performed by quality personnel

Dye penetrant test





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Specifications of Details for CBS measurement

[illegible]

II.2 - Check List REX

Check List Items

Item	Picture/Drawing	Description	Criteria/Record	OK	NG	Remarks	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	To complete REX	Refer to REX. Now difolds must be added on the REX					



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Self Inspection - Final Result

Is the car good to advance to the next workstation/process?
(Approval of Operations and Industrial Quality)

DATE

NAME

SIGNATURE

08/04/24

Enriquez

Enriquez

08/04/24

Operations
Industrial Quality

Industrial Quality

(If activities are not complete, the missing activities must not impact the next stage!)

Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)

There are activities pending that impact the activities of the next process Ops: (To describe problems below)

There are non-conformities impact the quality of the product and there is no corrective action defined yet)

HOLD POINT

GO

NO GO


In case of "NO GO", describe blocking problems

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

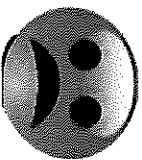
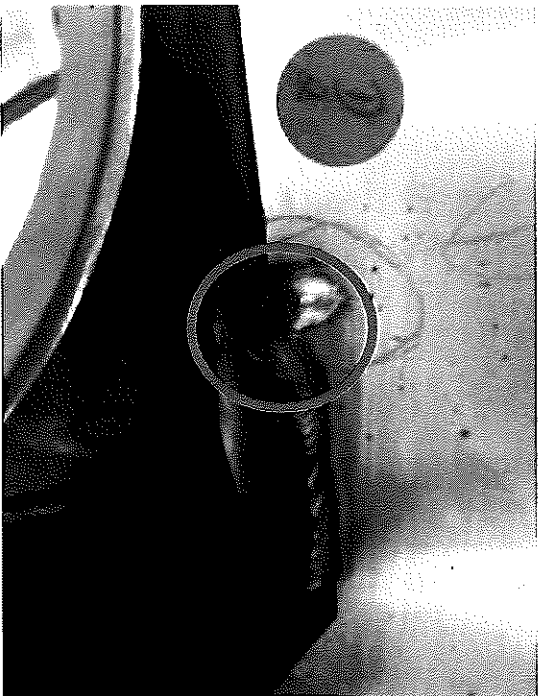
Item	Description	Responsible	Due date	Status

Operations

Quality

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ANNEXURE A: Arc Welding Quality Acceptance Standard



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		Date	
		06/11/2023	

ANNEXURE B: Sealant

