

GIBELA

PRASA PROJECT

APPLICABLE FROM TRAINSET 190+ AS PER BASELINE 10.4

SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION


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

APPLICATION REFERENCE

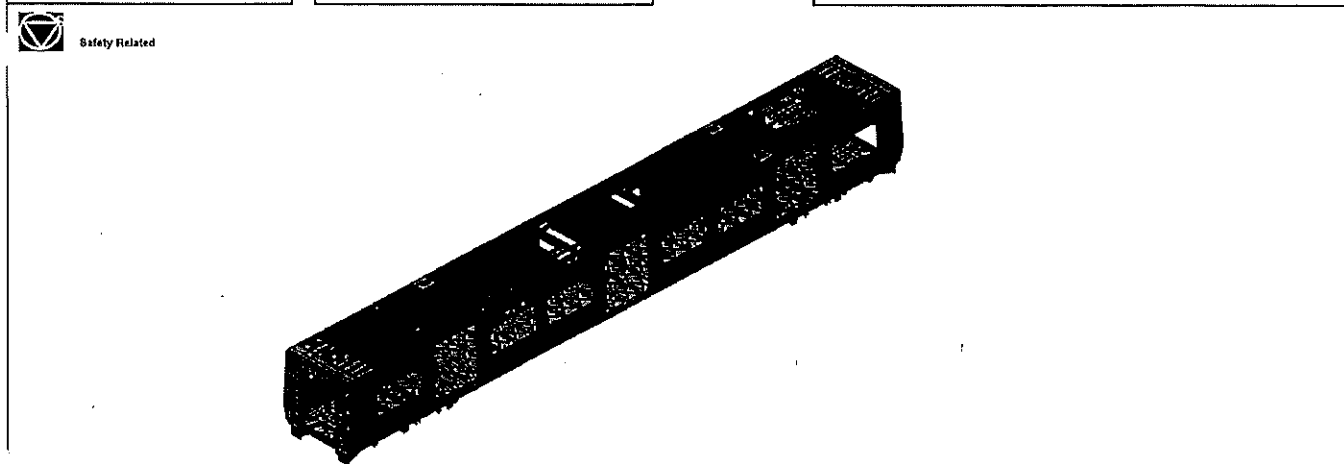
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY?
				TC1	MA	M1	M2	M3	TC2		
<input checked="" type="checkbox"/>	DTR30225487/3	AAD0001278566	CARBODYSHELL M3,M4 ASSEMBLY	CB2210		X			(X)	PRA.CB2210.DTR30225487/3.V30	YES
<input type="checkbox"/>											

REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	10/01/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	10/01/2018
			CHECKER	Nosizo Pindela	10/01/2018
			COMPILER	Thanyani Mathegu	10/01/2018
1	2018/05/18	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	2018/05/18
			CHECKER	Nosizo Pindela	2018/05/18
			REVISED BY	Ramokone Motama	2018/05/18
2	2018/07/04	Certain dimensional checks moved to CB1220 and CB1230	APPROVER	Itumeleng Modiba	2018/07/04
			CHECKER	Nosizo Pindela	2018/07/04
			REVISED BY	Ramokone Motama	2018/07/04
3	2018/12/12	Added dimensional check points to CB2210	APPROVER	Itumeleng Modiba	2018/12/12
			CHECKER	Nosizo Pindela	2018/12/12
			REVISED BY	Ramokone Motama	2018/12/12
5	22/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	22/01/2019
			CHECKER	Nosizo Pindela	22/01/2019
			REVISED BY	Vanessa Ntuli	22/01/2019
6	13/03/2019	Added D1 and D2 on Self - Inspection	APPROVER	Itumeleng Modiba	13/03/2019
			CHECKER	Nosizo Pindela	13/03/2019
			REVISED BY	Nosizo Pindela	13/03/2019
10	21/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	21/08/2019
			CHECKER	Nosizo Pindela	21/08/2019
			REVISED BY	Nosizo Pindela	21/08/2019
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020
			CHECKER	Bongane Masina	06/08/2020
			REVISED BY	Bongane Masina	06/08/2020
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	19/04/2021
			REVISED BY	Bongane Masina	19/04/2021
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhombi collins	17/08/2021
			CHECKER	Mpho Mulaudzi	17/08/2021
			REVISED BY	Mpho Mulaudzi	17/08/2021
25	19/02/2022	New Baseline change 10.3.1	APPROVER	Mbhombi collins	19/02/2022
			CHECKER	Andani Muthelo	19/02/2022
			REVISED BY	Andani Muthelo	19/02/2022
26	14/04/2023	Addition of welding consumable traceability	APPROVER	Ntuli Vanessa	14/04/2023
			CHECKER	Mohlampe Amogelang	14/04/2023
			REVISED BY	Mohlampe Amogelang	14/04/2023
30	20/07/2023	New Baseline change 10.4	APPROVER	Ngobeni Tyson	28/07/2023
			CHECKER	Mohlampe Amogelang	28/07/2023
			REVISED BY	Mohlampe Amogelang	28/07/2023
31	07/11/2023	Added traceability for welding sections	APPROVER	Ngobeni Tyson	07/11/2023
			CHECKER	Mohlampe Amogelang	07/11/2023
			REVISED BY	Ntokozo Zwane	07/11/2023

TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES
216	M03	LAWRENCE 482999	07/03/24	SI.CB2210.254.V30	17

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

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

I.1 - Documentation Control

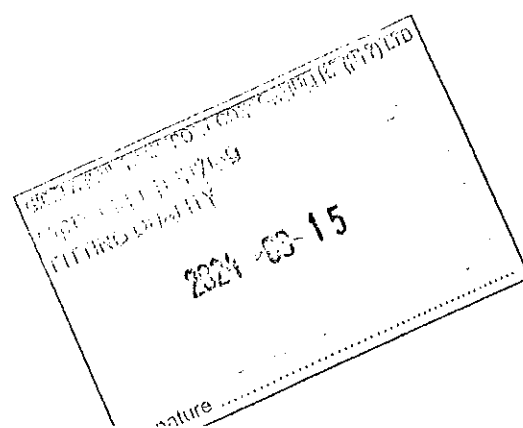
Material	Lot	QTY	Unit	Rev.	Observed	Signature/Date (Manufacturing)	Signature/Date (Quality)
DTR30225487/3			✓	V30	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24



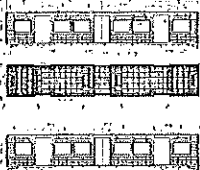
I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process							
Instrument	Lot	QTY	Unit	Rev.	Observed	Signature/Date (Manufacturing)	Signature/Date (Quality)
LAZER TAPE	125425921			01/03/2024	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24
30M TAPE	GIBTP0049			24/11/2023	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24
TUBULAR	22316			07/02/2024	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24


1.3 Consumables

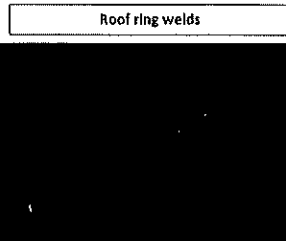
Welding Consumable Control - Used for Special Process							
Consumable	Lot	QTY	Unit	Rev.	Observed	Signature/Date (Manufacturing)	Signature/Date (Quality)
ER 308 LSI	314018-74091			MIG	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24
ER 308 L	299687-70322			TIG	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24
ER 309 LSI	316283-73951			MIG	✓	<i>[Signature]</i> 07/10/23	<i>[Signature]</i> 07/10/24



		CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3		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	Not OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Corshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓		Jalgeu 07/03/24	Jalgeu 07/03/24
02	REFER TO ANNEXURE A	Spot welding inspected and approved according to procedure	IND-SAL-WMS-016 e DTD0000210675	✓		Jalgeu 07/03/24	Jalgeu 07/03/24
03	REFER TO ANNEXURE B	Arc welding inspected and approved according to procedure	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0900	✓		Jalgeu 07/03/24	Jalgeu 07/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		Jalgeu 07/03/24	Jalgeu 07/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document	Approved according specified on pages below.	✓		Jalgeu 07/03/24	Jalgeu 07/03/24
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.	✓		Jalgeu 07/03/24	Jalgeu 07/03/24

Signature.....
 2024-03-15
 IND-SAL-WMS-018
 IND-SAL-WMS-019

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



LHS

Boiler maker (Name & Sign): Tim Lader Welder (Name & Sign): GIFT My

RHS

Boiler maker (Name & Sign): Tim Lader Welder (Name & Sign): GIFT My

END 1

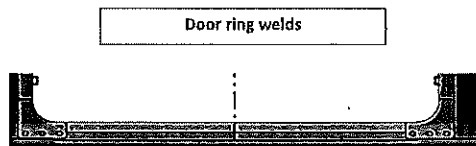
LHS

Boiler maker (Name & Sign): Tim Lader Welder (Name & Sign): GIFT My

RHS

Boiler maker (Name & Sign): Tim Lader Welder (Name & Sign): GIFT My

END 2



LHS

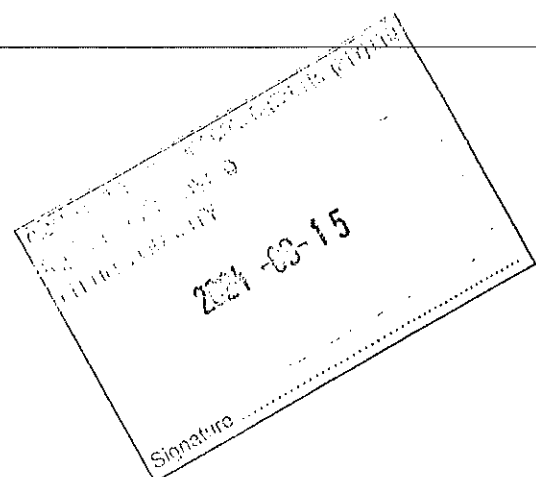
Boiler maker (Name & Sign): LUNGA

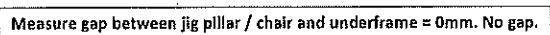
Welder (Name & Sign): MTHOKOZI

RHS

Boiler maker (Name & Sign): TUNELO

Welder (Name & Sign): KEITU K.



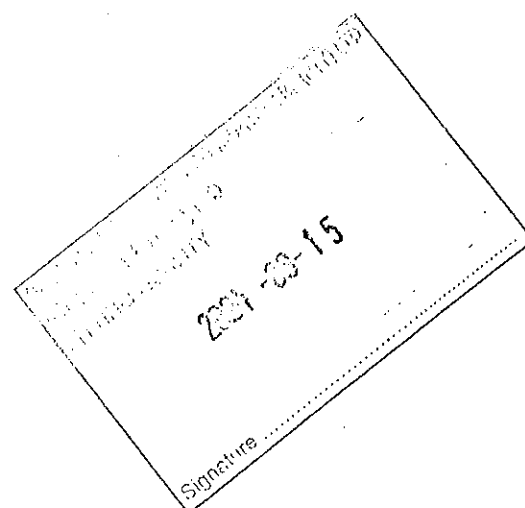


Fill in the gap found on each jig pillars / chair and underframe should be 0mm.

Signature Operations: Willgere Date: 07/03/24

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

Signature Industrial Quality: _____ Date: 07/03/24



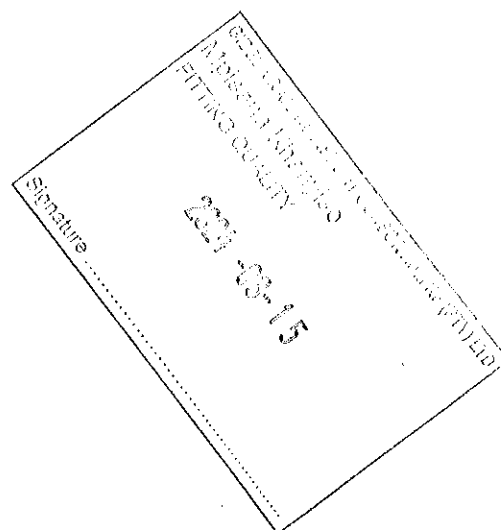
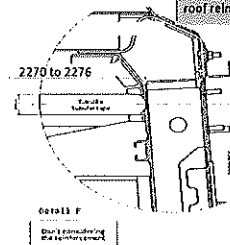
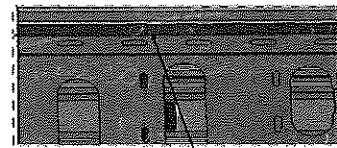
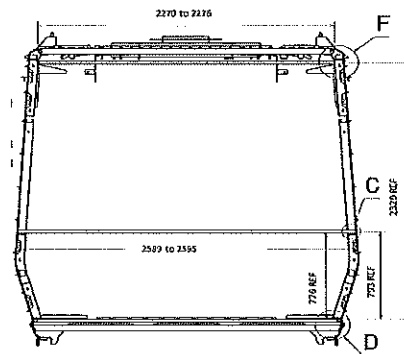
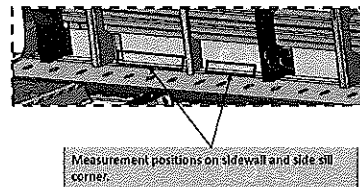
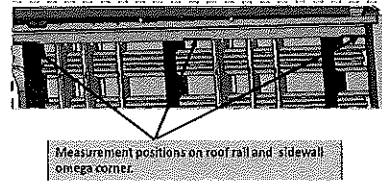
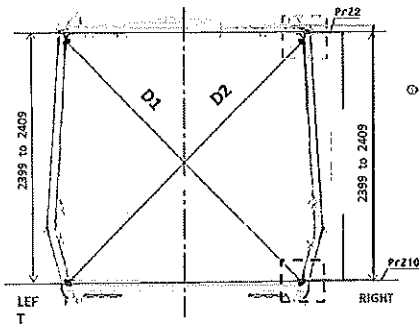
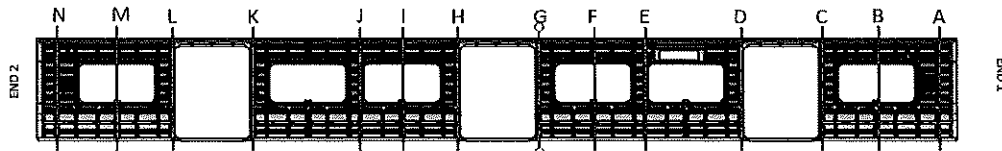


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.
31
Date
07/11/2023

Project: PRASA
SI.CB2210.254.V30

Specifications of Details for CBS measurement





CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.

31

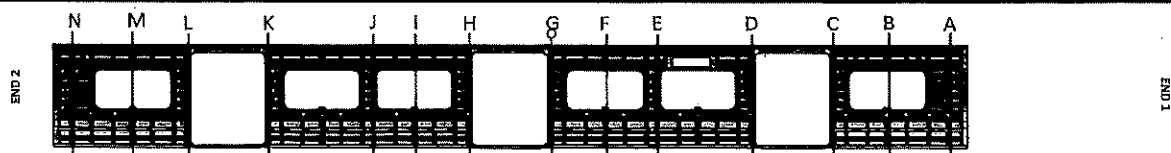
Project: PRASA

SI.CB2210.254.V30

Date

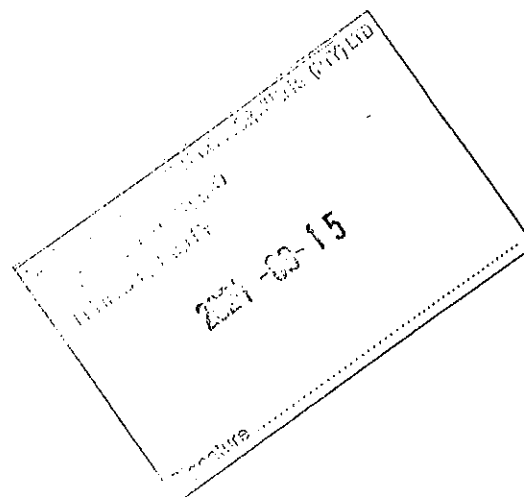
07/11/2023

Specifications of Details for CBS measurement

PME Column LHS - RHS should be $\leq 2\text{MM}$ on each point.

BEFORE WELDING

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



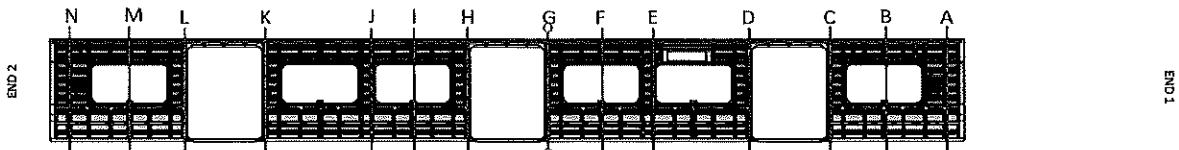


CARBODYSHELL M3,M4 ASSEMBLY DTR30225487/3

Rev.
31
Date
07/11/2023

Project: PRASA
SI.CB2210.254.V30

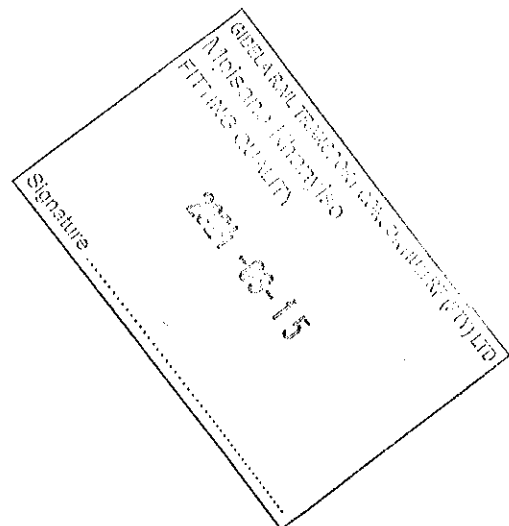
Specifications of Details for CBS measurement



PME Column LHS - RHS should be $\leq 2\text{MM}$ on each point.

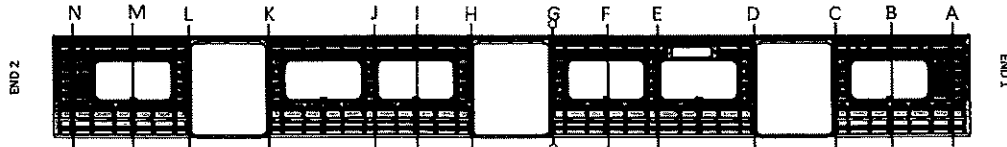
AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 $\leq 5\text{mm}$	2399 to 2409	2399 to 2409 (RHS)	LHS-RHS ≤ 2
A	3299	3298	1	2405	2404	1
B	3267	3267	0	2405	2405	0
C	3296	3294	2	2408	2404	2
D	3295	3296	1	2404	2405	1
E	3265	3266	1	2405	2405	0
F	3267	3267	0	2404	2405	1
G	3296	3294	2	2405	2405	0
H	3295	3294	1	2406	2404	2
I	3268	3267	1	2404	2404	0
J	3266	3267	1	2404	2405	1
K	3294	3294	0	2405	2405	0
L	3294	3294	0	2404	2404	0
M	3267	3267	0	2404	2405	1
N	3294	3293	1	2405	2405	0

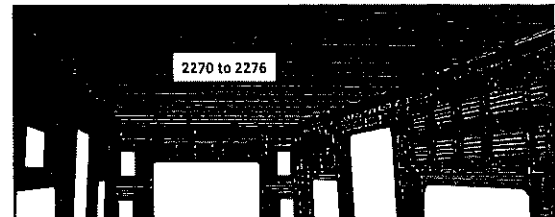


CBS measurement

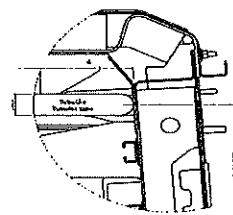
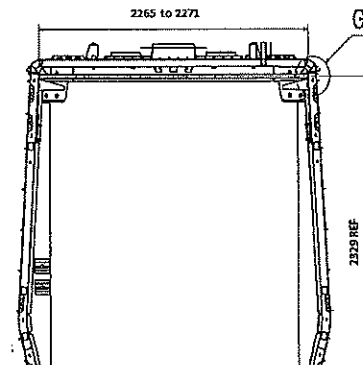
BEFORE WELDING



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



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




2265 to 2271

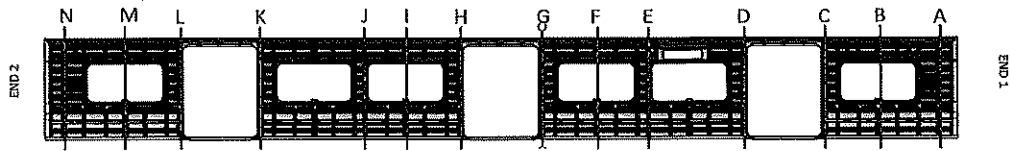
Detail G
Consider long line
for reference points

Signature _____

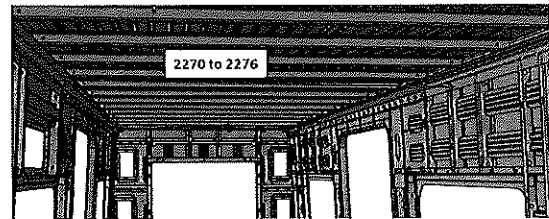
2023-03-15

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

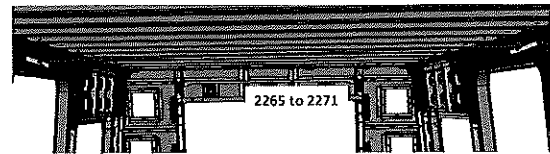
AFTER WELDING



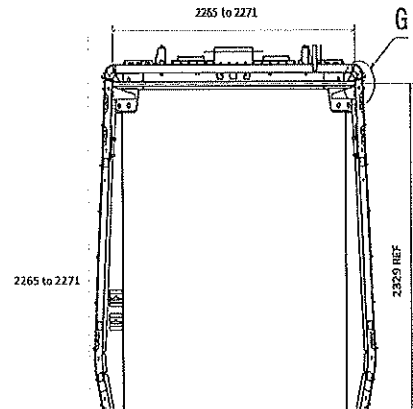
	2265 to 2271	2270 to 2276
A	2268	
B		2271
C	2266	
D	2271	
E		2273
F		2270
G	2266	
H	2271	
I		2272
J		2276
K	2269	
L	2267	
M		2272
N	2271	



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



Take measurement close to radius (considering reinforcement)



2265 to 2271

2329 REF

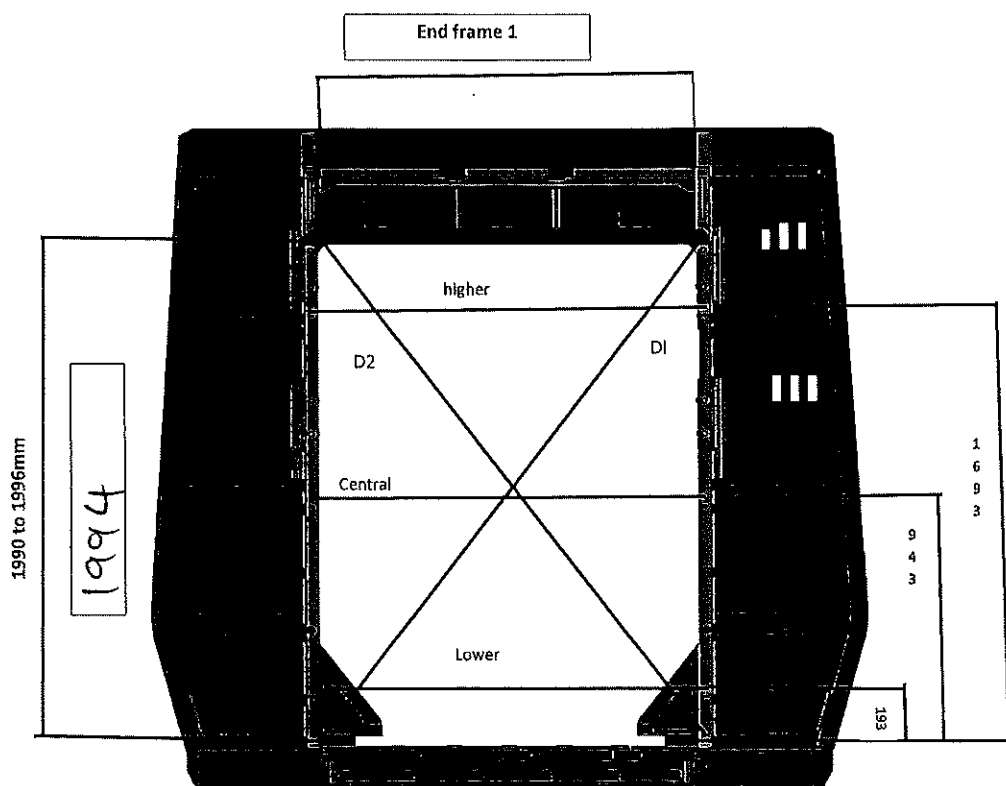
2265 to 2271

Detail G

Consider the reinforcement plate

RECEIVED BY THE CUSTOMER
APPROVED BY THE CUSTOMER
FITTING QUALITY
2023-08-15
Signature

Specifications of Details for CBS measurement



1380 to 1382 mm

DIAGONAL DIFFERENCE $D1-D2 \leq 3\text{mm}$

Higher Dimension

138

D1

2414

Central Dimension

1380

D2

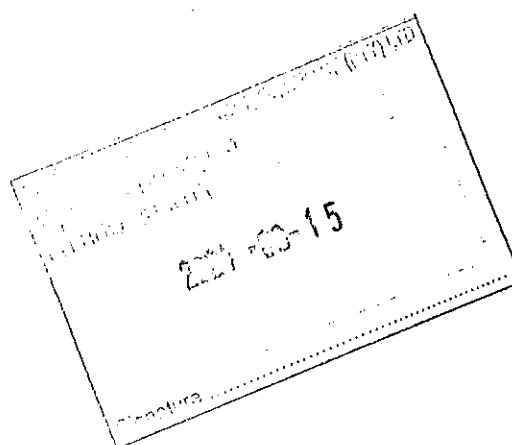
2415

Lower Dimension

1380

D1-D2

1





CARBODYSHELL M3,M4 ASSEMBLY DTR30226487/3

Rev.

31

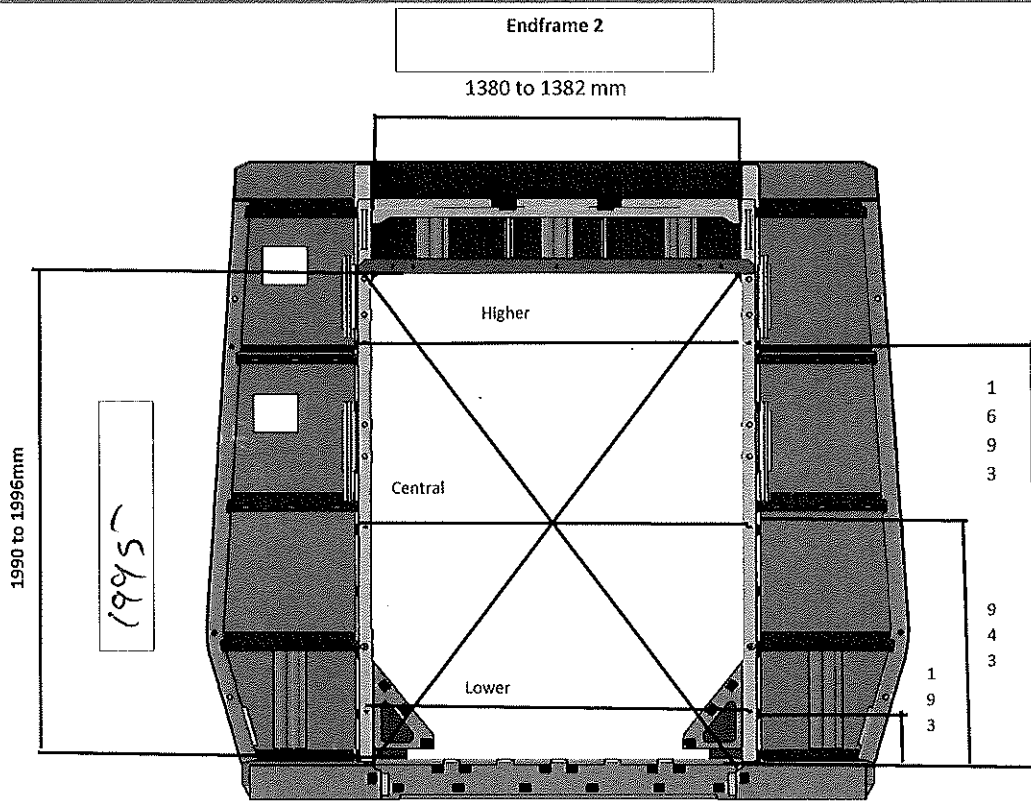
Project: PRASA

SI,CB2210.254.V30

Date

07/11/2023

Specifications of Details for CBS measurement



1380 to 1382 mm

DIAGONAL DIFFERENCE $D1-D2 \leq 3mm$

Higher Dimension

1380

D1

2415

Central Dimension

1380

D2

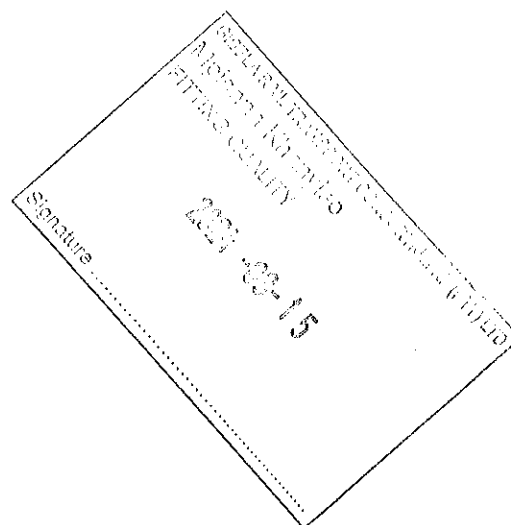
2415

Lower Dimension


1380

D1-D2



0



2021-08-15

	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 complete, the missing activities must not impact the next stage)	07/03/24	LAURENCE	
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	07/03/24	AMO	
		There are activities pending that impact/stop the activities of the next process Obs: (To describe problems below)			
		There are non-conformities impact the quality of the product and there is no corrective action defined yet)			

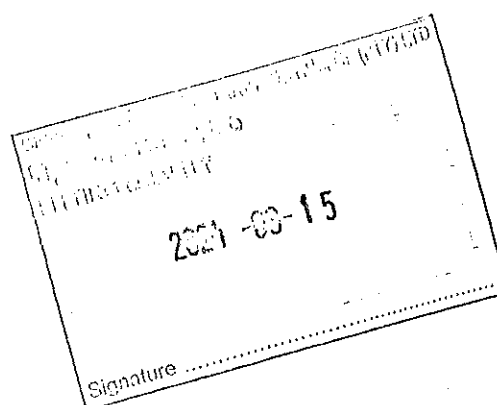
In case of "NO GO", describe blocking problems

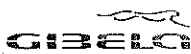
In case of "NO GO", the operations manager must define below action plan to ensure "GO":

Item	Description	Responsible	Due date	Status

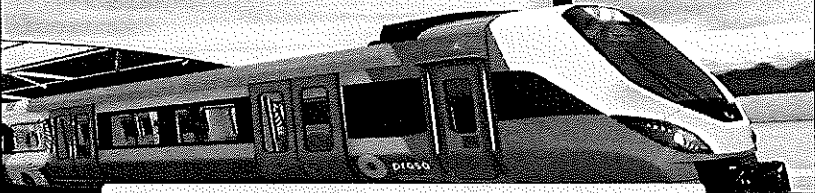
Operations

Quality






PRASA PROJECT



APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1



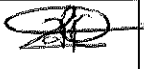







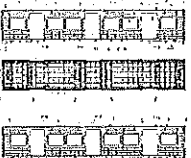








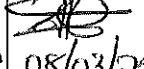



SELF INSPECTION SHEET


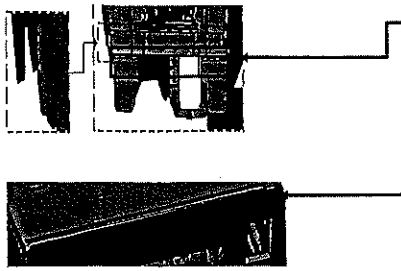
CONFIDENTIAL INFORMATION
This document and the information contemplated therein have to be considered as Confidential information pursuant to the provisions of Clause 25 of the MSA, and treated as such.

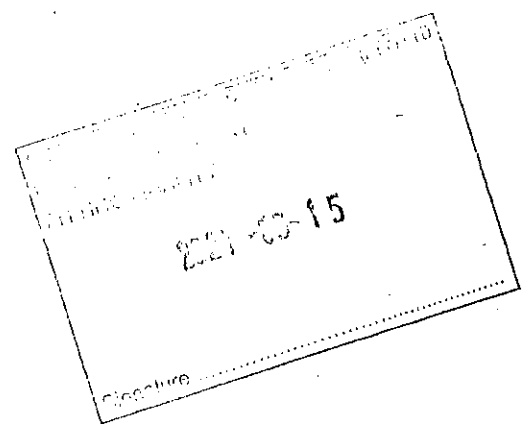
APPLICATION REFERENCE												
MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY ? 	
				TC1	MA	MS	ME	MS	TC2			
<input type="checkbox"/>	DTR3022548/2	AAD0001778566	CARBODY SHELL H3, M3, M4 ASSEMBLY	CB2220		X	X		X		PRA.CB2220.DTR3022548 7/2.V21	YES
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												
<input type="checkbox"/>												


REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE
0	01/02/2018	GIBELA NEW CREATION	APPROVER	Itumeleng Modiba	01/02/2018
			CHECKER	Nosizo Pindela	01/02/2018
			COMPILER	Thanyani Mathegu	01/02/2018
1	18/05/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	18/05/2018
			CHECKER	Nosizo Pindela	18/05/2018
			REVISED BY	Ramokone Motama	18/05/2018
2	2018/07/05	Certain dimensional checks added and others moved to CB1210	APPROVER	Itumeleng Modiba	2018/07/05
			CHECKER	Nosizo Pindela	2018/07/05
			REVISED BY	Ramokone Motama	2018/07/05
3	2018/06/12	Width tolerance as per DT0000336600	APPROVER	Itumeleng Modiba	2018/06/12
			CHECKER	Nosizo Pindela	2018/06/12
			REVISED BY	Nosizo Pindela	2018/06/12
5	24/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	24/01/2019
			CHECKER	Nosizo Pindela	24/01/2019
			REVISED BY	Vanessa Ntuli	24/01/2019
6	13/03/2019	Added D1 and D2 on Self - Inspection length measurements Remove	APPROVER	Itumeleng Modiba	13/03/2019
			CHECKER	Nosizo Pindela	13/03/2019
			REVISED BY	Nosizo Pindela	13/03/2019
10	22/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	22/08/2019
			CHECKER	Nosizo Pindela	22/08/2019
			REVISED BY	Nosizo Pindela	22/08/2019
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020
			CHECKER	Bongane Masina	06/08/2020
			REVISED BY	Bongane Masina	06/08/2020
20	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021
			CHECKER	Bongane Masina	19/04/2021
			REVISED BY	Bongane Masina	19/04/2021
21	17/08/2021	ADDED DIMENSIONS BEFORE WELDING	APPROVER	Mbhembi Collins	17/08/2021
			CHECKER	Mpho Mulaudi	17/08/2021
			REVISED BY	Mpho Mulaudi	17/08/2021
25	20/02/2022	New Baseline change 10.3.1	APPROVER	Collins Mbombi	19/02/2022
			CHECKER	Andani Muthelo	19/02/2022
			REVISED BY	Andani Muthelo	19/02/2022
26	14/06/2022	Update minimum temperature requirement for sealant application	APPROVER	Collins Mbombi	14/06/2022
			CHECKER	Andani Muthelo	14/06/2022
			REVISED BY	Andani Muthelo	14/06/2022
27	19/10/2022	Addition of traceability for sealant application & welding	APPROVER	Collins Mbombi	19/10/2022
			CHECKER	Ntokozo Zwane	19/10/2022
			REVISED BY	Amogelang Mohlampe	19/10/2022
28	14/04/2023	Added sealant batch number & welding consumables traceability	APPROVER	Vanessa Ntuli	14/04/2023
			CHECKER	Ntokozo Zwane	14/04/2023
			REVISED BY	Amogelang Mohlampe	14/04/2023
29	28/10/2023	Addition of bracket quantity	APPROVER	Ngobeni Tyson	28/10/2023
			CHECKER	Ntokozo Zwane	28/10/2023
			REVISED BY	Amogelang Mohlampe	28/10/2023

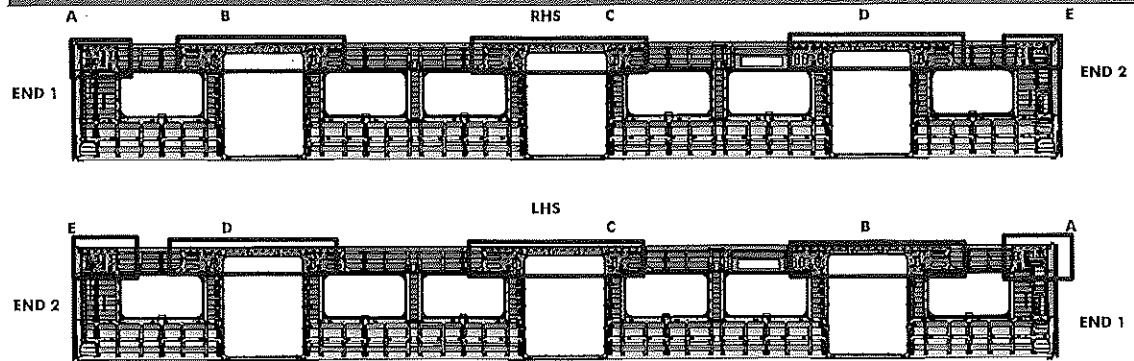
TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES
216	M3	Moshudu 440041	08/03/24	SI.CB2220.250.V29	13

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA			
		29				
		Date	SI.CB2220.250.V29			
		28/10/2023				
II - Self Inspection - Items to Check						
II.1 - Items to check						
Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB2220.DTR30225487/2 Verification of fitment for all reinforcement brackets.	PRA.CB2220.DTR30225487/2	✓	 08/08/24	 08/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓	 08/08/24	 08/03/24
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓	 08/08/24	 02/03/2024
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓	 08/08/24	 08/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓	 08/08/24	 08/03/24
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-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.	✓	 08/08/24	 08/03/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max (h) Min-Max 10°C - 35°C Relative humidity Min - Max (h) Min-Max 25% - 60%	Sealant Batch No: <u>LSK 1003</u> Exp Date: <u>1/05/24</u> Actuals Temperature: <u>25°C</u> Humidity: <u>50%</u>	✓	 08/08/24	 08/03/24
08	NA	Verification of sealant application in certain regions in the drawing.	AAD0001278566	✓	 08/08/24	 08/03/24
09		Verification of safety welds	Approved according to DTD0000210658 reference and Self inspection	✓	 08/08/24	 08/03/24

	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			
<p align="center">SEALANT APPLICATION</p> <div style="display: flex; align-items: center;">  <div style="border: 1px solid black; padding: 5px; margin-left: 20px;"> <p>AREA 1 & 2 END 1</p> <p>Operator (Name & sign): <i>Priscilla</i></p> <p>Operator (Name & sign): <i>Priscilla</i></p> </div> </div>			

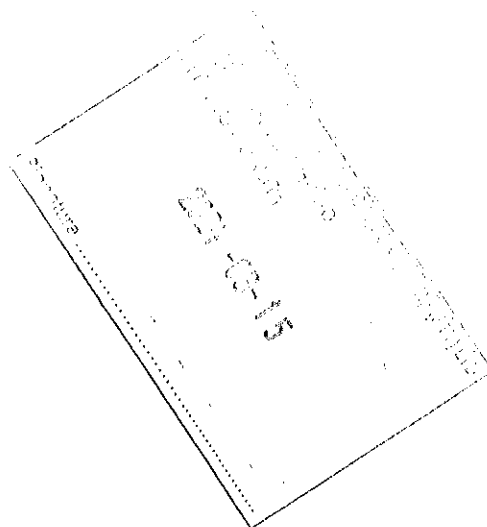



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	
II - Self Inspection - Items to Check			



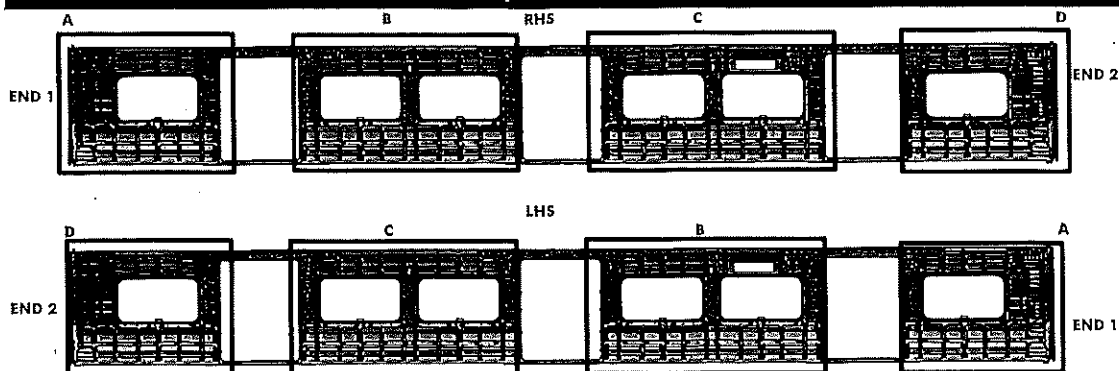
REINFORCEMENT WELDING

AREA	LHS	RHS
A	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
B	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
C	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
D	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>
E	Operator (Name&sign): <u>[Signature]</u>	<u>[Signature]</u>



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

II - Self Inspection - Items to Check




BRACKETING

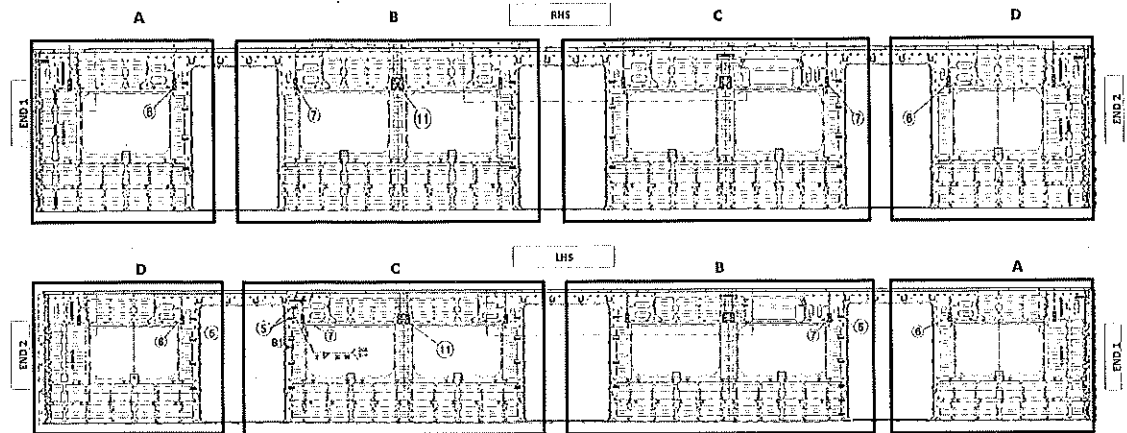
C-RAILS:		Operator:	ASARI OA	
DOOR MECHANISMS:		Operator:	PASCILLA	
TAPPING PADS		Operator:	MGH1	x
		Operator:	END2	LINDO
INSTALLATION & VERIFICATION				
SEAT & LUGGAGE BRACKETS:		Operator:		x
		Operator:		
SEAT BRACKETS VERIFICATION:		Operator:	Mbokocharisi	x
		Operator:		
WELDING				
AREA	LHS			
A (Seat brackets)	: Operator (Name&sign):	S. H. H. H.		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	S. H. H. H.		
B (Seat brackets)	: Operator (Name&sign):	S. H. H. H.		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	S. H. H. H.		
C (Seat brackets)	: Operator (Name&sign):	S. H. H. H.		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	S. H. H. H.		
D (Seat brackets)	: Operator (Name&sign):	S. H. H. H.		
(C-rails, Luggage and earth bushes)	: Operator (Name&sign):	S. H. H. H.		
ENDS				
END 1 TAPPING PADS WELDING:		Operator (Name&sign):	MGH1	x
END 1 TAPPING PADS WELDING:		Operator (Name&sign):	LINDO	

Signature

2023-10-15

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

M1/M3/M4 BRACKET INSTALLATION



QUANTITIES (M3/M4)

RHS				
	SECTION	QUANTITY	OK	NOK
C-RAILS	A	7	✓	
	B	4	✓	
	C	6	✓	
	D	6	✓	
SEAT BRACKETS	A	13	✓	
	B	21	✓	
	C	21	✓	
	D	13	✓	
EARTH BUSH	A	3	✓	
	B	4	✓	
	C	4	✓	
	D	3	✓	

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

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

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

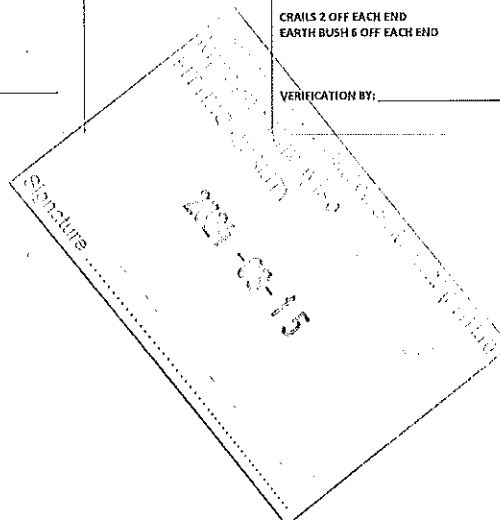
QUANTITIES (M1)

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

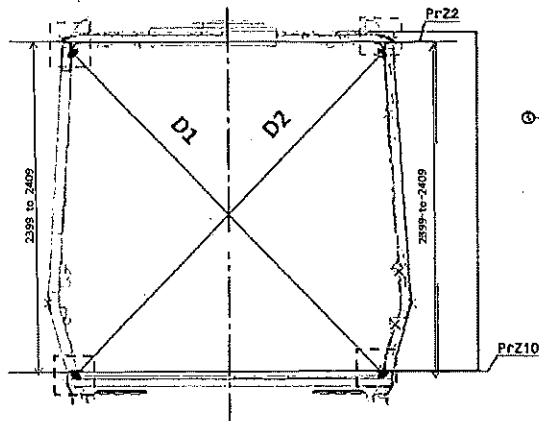
ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END
 VERIFICATION BY: _____

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	8		
	D	2		

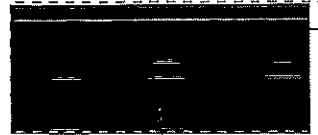
ROOF ENDS:
 C-RAILS 2 OFF EACH END
 EARTH BUSH 6 OFF EACH END
 VERIFICATION BY: _____



Specifications of Details for CBS measurement



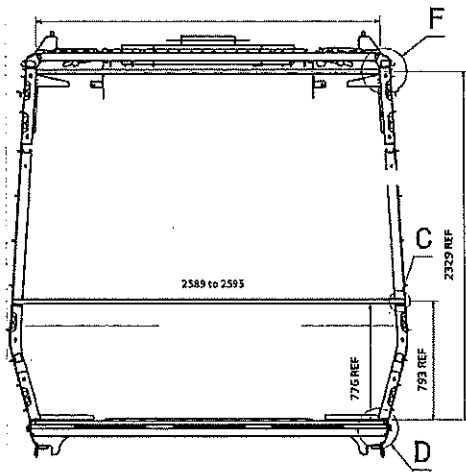
Measurement position at top and side wall measurement



Measurement position at top and side wall measurement

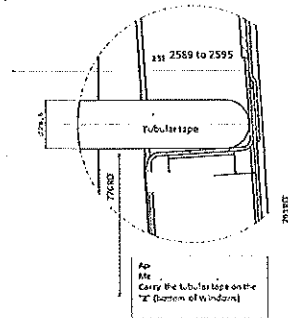
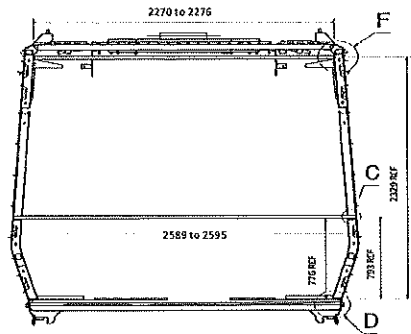


Measurement position at top and side wall measurement

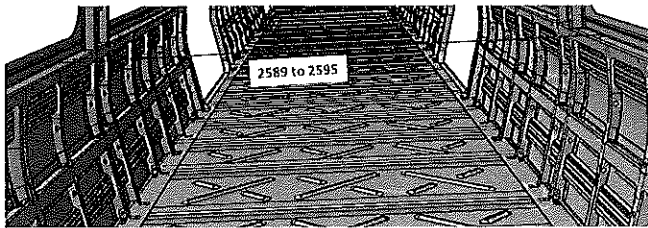


2024-03-15
Signature

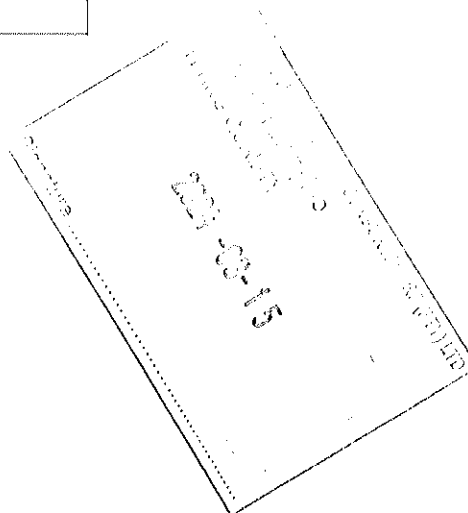
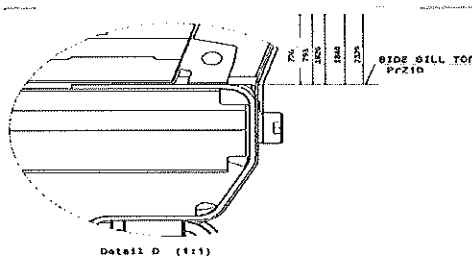
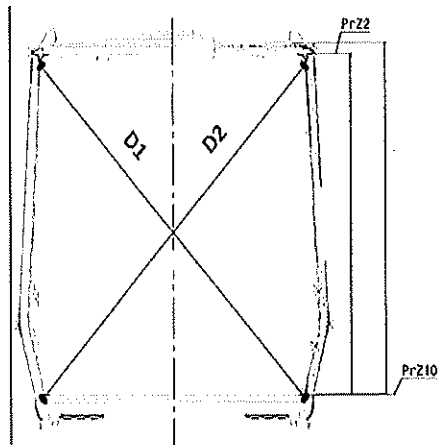
CBS measurement




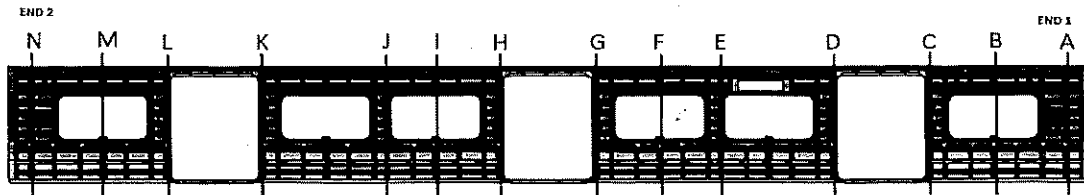
Detail C



Take measurement close to radius

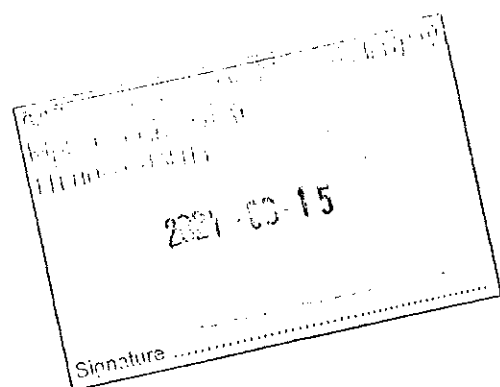



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA
		28	
		Date	
		28/10/2023	SI.CB2220.250.V29
CBS measurement			



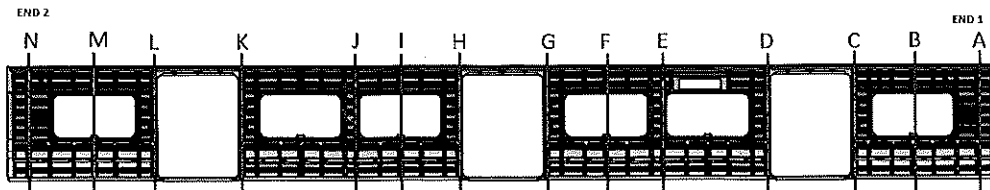
BEFORE WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3295	3300	0	-
B	3265	3270	5	-
C	3293	3298	5	-
D	3295	3300	5	-
E	3265	3266	1	-
F	3265	3265	1	-
G	3296	3295	1	-
H	3294	3296	2	-
I	3264	3265	1	-
J	3265	3269	4	-
K	3299	3296	3	-
L	3300	3295	5	-
M	3269	3265	4	-
N	3300	3295	5	-



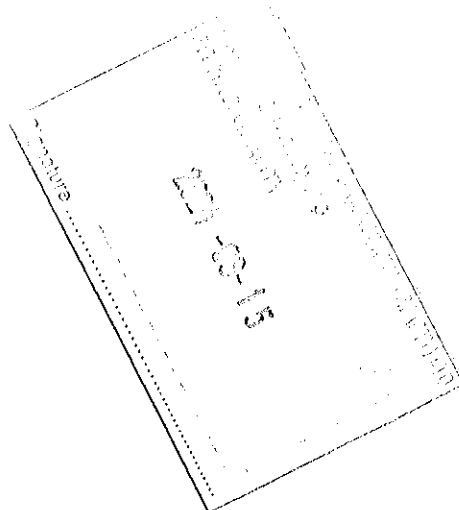
	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30225487/2	Rev.	Project: PRASA SI.CB2220.250.V29
		29	
		Date	
		28/10/2023	


CBS measurement



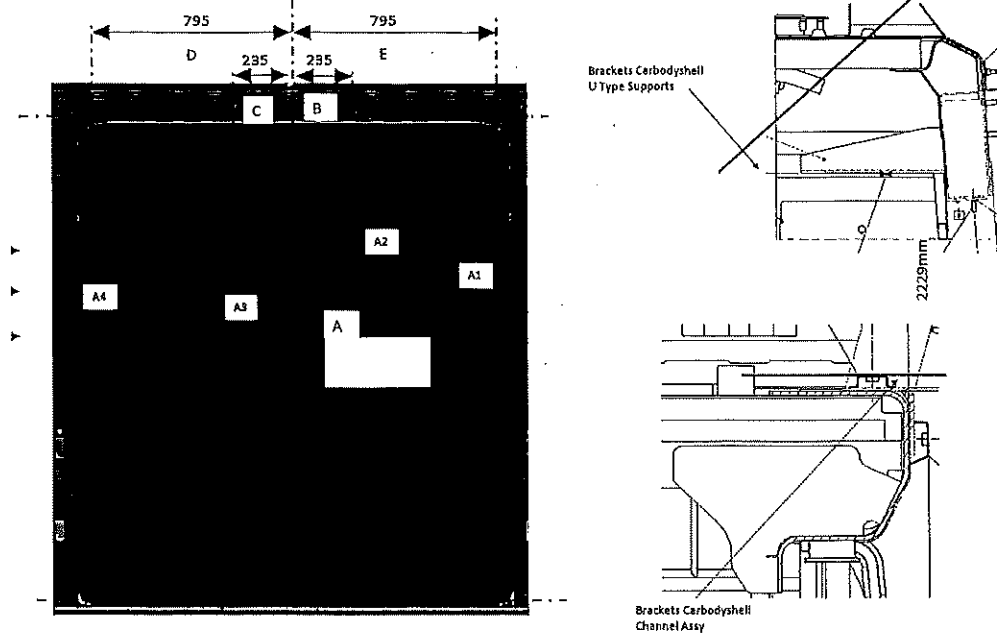
AFTER WELDING

	Record D1 values	Record D2 values	D1-D2 ≤ 5mm	2589 to 2595
A	3297	3300	3	2594
B	3268	3265	3	2592
C	3297	3294	3	2591
D	3296	3295	3	2592
E	3268	3265	3	2592
F	3265	3266	1	2593
G	3297	3296	1	2593
H	3293	3296	3	2593
I	3266	3268	2	2594
J	3269	3267	2	2593
K	3297	3299	2	2593
L	3299	3295	4	2593
M	3266	3268	2	2594
N	3296	3299	3	2594



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

Specifications of Details for CBS measurement CB1220



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

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

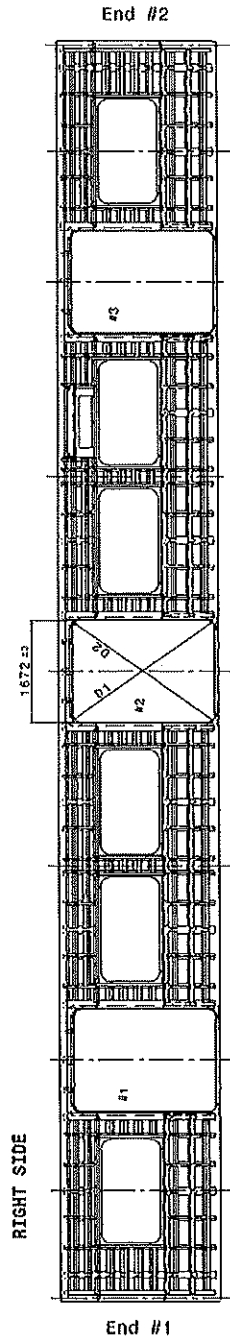
DOOR 2 - RHS	
VALUE	ACTUAL
A1 2230 to 2232	2231
A2 2230 to 2232	2231
A3 2230 to 2232	2232
A4 2230 to 2232	2231
B 234 to 236	235
C 234 to 236	235
D 794 to 796	795
E 794 to 796	796

DOOR 1 - RHS	
VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2231
B 234 to 236	235
C 234 to 236	235
D 794 to 796	796
E 794 to 796	795

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

DOOR 3 - RHS	
VALUE	ACTUAL
A1 2230 to 2232	2232
A2 2230 to 2232	2232
A3 2230 to 2232	2232
A4 2230 to 2232	2232
B 234 to 236	235
C 234 to 236	235
D 794 to 796	796
E 794 to 796	795

Specifications of Details for CBS measurement CB1220

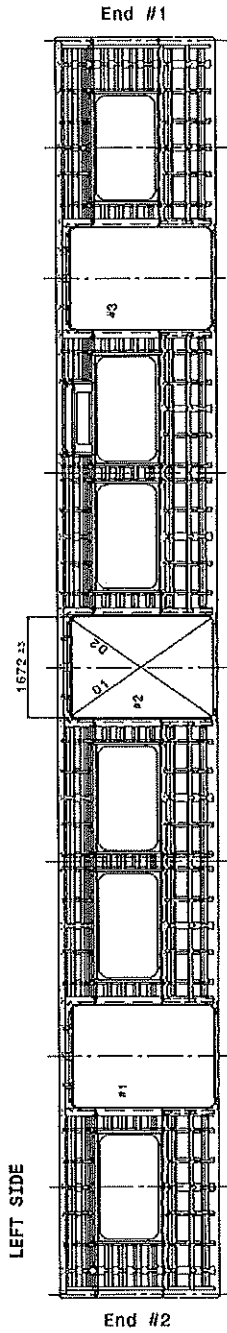


Doors diagonal D1-D2 maximum difference ≤4mm

	#1	#2	#3
D1	2749	2749	2765
D2	2750	2750	2767
D1-D2	1	1	1

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

Doors length - 1672 ±3mm



Doors diagonal D1-D2 maximum difference ≤4mm

	#1	#2	#3
D1	2751	2748	2749
D2	2748	2751	2747
D1-D2	3	3	2




	#1	#2	#3
HIGHER DIMENSION	1672	1670	1672
CENTRAL DIMENSION	1672	1671	1671
LOWER DIMENSION	1673	1671	1670

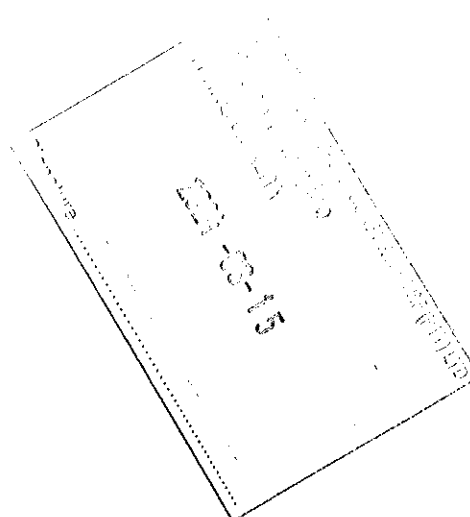
Doors width - 1672 ±3mm

[illegible]

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



	CARBODYSHELL M1,M3,M4 ASSEMBLY DTR30226487/2	Rev.	Project: PRA5A SI.CB2220.250.V29			
		29				
		Date				
		28/10/2023				
Self-Inspection - Final Result						
Is the car good to advance to the next workstation/process? (Approval of Operations Manager and Industrial Quality)		DATE	NAME	SIGNATURE		
HOLD POINT	GO	(if activities are not complete, the missing activities must not impact the next stage!)	08/03/2024	Machoud Operations		
		Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	08/03/2024	Amo Industrial Quality		
		There are activities pending that impact/stop the activities of the next process Obs: (To describe problems below)			Operations	
		There are non-conformities impact the quality of the product and there is no corrective action defined yet)			Industrial Quality	
In case of "NO GO", describe blocking problems						
In case of "NO GO", the operations manager must define below action plan to ensure "GO":						
Item	Description	Responsible	Due date	Status		
Operations		Quality				



GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

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

APPLICATION REFERENCE

MOUNTING	DRAWING	DESCRIPTION	STATION	CAR TYPE						WORK INSTRUCTION	SAFETY 1	
				TC1	M4	M3	M2	M1	TC2			
<input type="checkbox"/>	DT00000225407	AAD0001278566	CARBODYSHELL M1,M3,M4 ASSEMBLY	CB2230		X	X		X		PRA.CB2230.DT000002 25407.V20	YES
<input type="checkbox"/>												
<input type="checkbox"/>												
REV	DATE	MODIFICATION CONTENT	RESPONSIBLE	NAME	DATE							
	2018/08/02	GIBELA NEW CREATION	APPROVER	Philippe Marques	2018/08/02							
			CHECKER	Nosizo Pindela	2018/08/02							
			COMPILER	Nosizo Pindela	2018/08/02							
1	30/5/2018	Team leader and Quality Technician to sign Change final signature from PME Manager to Quality manager	APPROVER	Itumeleng Modiba	30/5/2018							
			CHECKER	Nosizo Pindela	30/5/2018							
			REVISED BY	Nosizo Pindela	30/5/2018							
2	2018/05/07	Certain dimensional checks moved to CB1220	APPROVER	Itumeleng Modiba	2018/05/07							
			CHECKER	Nosizo Pindela	2018/05/07							
			REVISED BY	Ramokone Motama	2018/05/07							
5	24/01/2019	As per Baseline 10.2	APPROVER	Itumeleng Modiba	24/01/2019							
			CHECKER	Nosizo Pindela	24/01/2019							
			REVISED BY	Vanessa Ntuli	24/01/2019							
6	13/03/2019	Added Twist and Door Bracket Measurements Remove Door Measurements	APPROVER	Itumeleng Modiba	13/03/2019							
			CHECKER	Nosizo Pindela	13/03/2019							
			REVISED BY	Nosizo Pindela	13/03/2019							
10	23/08/2019	New Baseline 10.2.5	APPROVER	Itumeleng Modiba	23/08/2019							
			CHECKER	Nosizo Pindela	23/08/2019							
			REVISED BY	Nosizo Pindela	23/08/2019							
15	06/08/2020	New Baseline 10.2.6	APPROVER	Timothy Maimela	06/08/2020							
			CHECKER	Bongane Masina	06/08/2020							
			REVISED BY	Bongane Masina	06/08/2020							
	19/04/2021	New Baseline change 10.3	APPROVER	Timothy Maimela	19/04/2021							
			CHECKER	Bongane Masina	19/04/2021							
			REVISED BY	Bongane Masina	19/04/2021							
25	20/02/2022	New Baseline change 10.3.1	APPROVER	Collins Mbombhni	20/02/2022							
			CHECKER	Andani Muthelo	20/02/2022							
			REVISED BY	Andani Muthelo	20/02/2022							
26	14/06/2022	Update minimum temperature requirement for sealant application	APPROVER	Collins Mbombhni	14/06/2022							
			CHECKER	Andani Muthelo	14/06/2022							
			REVISED BY	Andani Muthelo	14/06/2022							
27	26/07/2022	Threshold measurements addition	APPROVER	Collins Mbombhni	26/07/2022							
			CHECKER	Andani Muthelo	26/07/2022							
			REVISED BY	Andani Muthelo	26/07/2022							
28	17/10/2022	Added traceability of sealant application	APPROVER	Collins Mbombhni	17/10/2022							
			CHECKER	Ntokoza Zwane	17/10/2022							
			REVISED BY	Amogelang Mohlampe	17/10/2022							
29	14/04/2023	Added sealant batch number & welding consumables traceability	APPROVER	Vanessa Ntuli	14/04/2023							
			CHECKER	Ntokoza Zwane	14/04/2023							
			REVISED BY	Amogelang Mohlampe	14/04/2023							
30	06/11/2023	Added threshold traceability for boiler makers and welders	APPROVER	Ngobeni Tyson	06/11/2023							
			CHECKER	Andani Muthelo	06/11/2023							
			REVISED BY	Ntokoza Zwane	06/11/2023							
TRAINSET	CAR	OPERATOR NAME & ALPS NO	DATE	SELF INSPECTION NUMBER	PAGES							
216	M03	Leroy 420459	08/03/2024	SI.CB2230.256.V29	12							

Signature.....

2024-03-08



CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.

30

Date

06/11/2023

Project: PRASA

SI.CB2230.256.V29

Car:

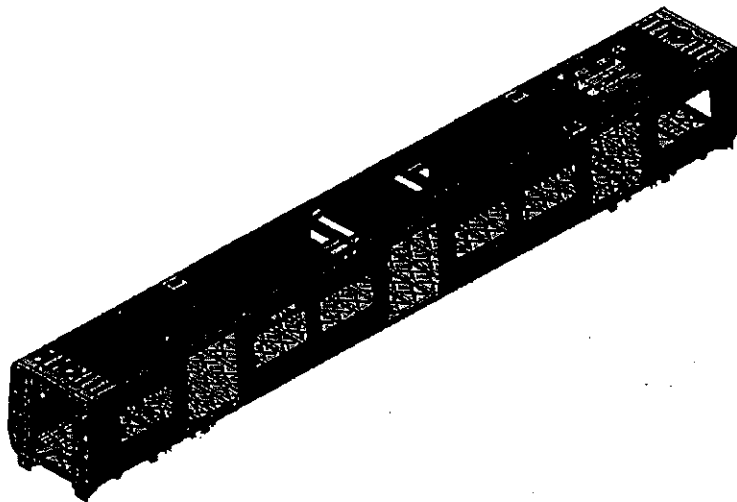
NCR:

Work station:

CB2230



Safety Related



I - Documentation and Instruments Control

1.1 - Documentation Control

Document	Type/Code					Revision	Observation	N/A	Signature/Date (Operations)	Signature/Date (Quality)
	U1	U2	U3	U4	U5					
PRA.CB2230.DT00000225487			X						N/A	08/03/24 J. Hoshida

1.2 - Instruments Control

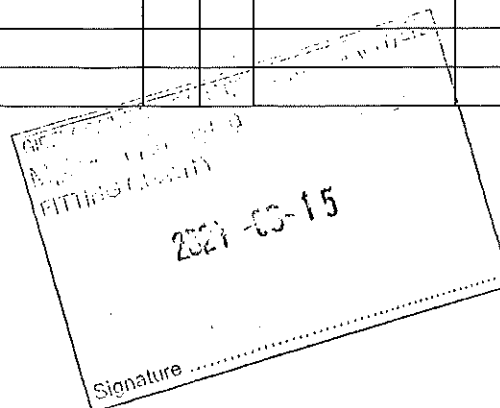
Monitoring and Measuring Instrument Control - Used for Special Process


Instruments	Serial number	Calibration or Verification Validation Date	OK	Signature/Date (Operations)	Signature/Date (Quality)
Tubular	12602	2024/02/19	✓	08/03/24 J. Hoshida	11/03/24 J. Hoshida
Combination Square	GIBCS0073	2023/01/14	✓	08/03/24 J. Hoshida	11/03/24 J. Hoshida
Measuring Tape	GIBTA0398	2023/04/05	✓	08/03/24 J. Hoshida	11/03/24 J. Hoshida

1.3 Consumables

Welding Consumable Control - Used for Special Process






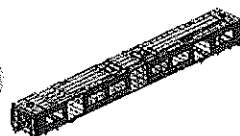


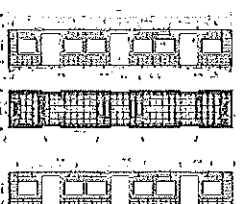


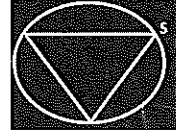








Welding Material	Roll Number	Welding Process	OK	Signature/Date (Manufacturing)	Signature/Date (Quality)
OK Autrod 308LSi	E231067	MIG	✓	08/03/24 J. Hoshida	11/03/24 J. Hoshida



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

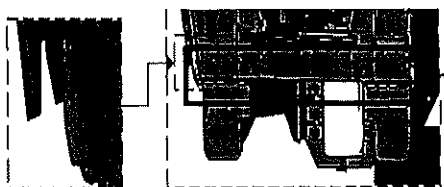
II - Self Inspection - Items to Check

II.1 - Items to check

Item	Picture/Drawing	Description	Acceptance criteria / Record	OK	Not OK	Signature/Date (Operations)	Signature/Date (Quality)
01	N/A	Assembly according to Instruction Engineering n° PRA.CB1230.DT00000225487 Verification of fitment for all brackets.	PRA.CB1230.DT00000225487	✓		 08/03/24	 11/03/24
02	N/A	Carshell free of significant flaws which compromise the appearance or functionality	DTD0000210675	✓		 08/03/24	
03	REFER TO ANNEXURE A	Arc Welding inspected and approved according procedure.	IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000	✓		 08/03/24	 11/03/24
04		Cleaning of all Stainless Steel Surface	According TO GIB-WEL - PROC-0002	✓		 08/03/24	 11/03/24
05		Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document.	Approved according specified on pages below.	✓		 08/03/24	 08/03/24
06		Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS 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.	✓		 08/03/24	 08/03/24
07	N/A	Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: <div> Temperature Min - Max (I) Min-Max 10°C - 35°C Relative humidity Min - Max (I) Min-Max 25% - 65% </div>	Sealant Batch No: <u>ISR 70-03</u> Exp Date: <u>10/03/24</u> Actuals Temperature: <u>19°C</u> Humidity: <u>42%</u>	✓		 08/03/24	 08/03/24
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	✓		 08/03/24	 11/03/24
09	N/A	Verification of sealant application in certain regions in the drawing	AAD0001278566	✓		 08/03/24	 11/03/24

II - Self Inspection - Items to Check

AREA 1



END 2 SEALANT

OPERATOR
(Name & sign):

Levy

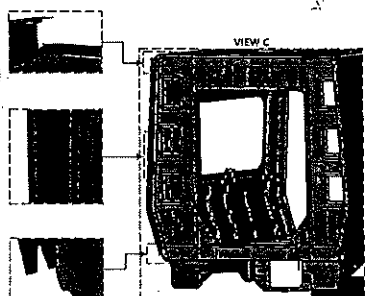
OPERATOR
(Name & sign):

Levy

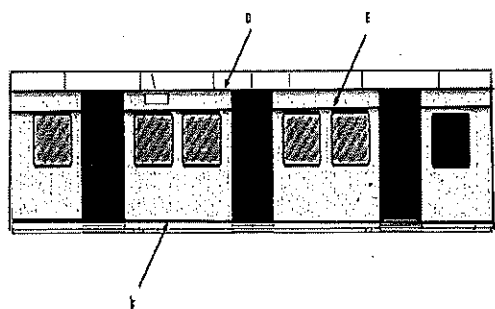
OPERATOR
(Name & sign):

Levy

AREA 2 (VIEW C)



H



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

Operator (Name & sign):

LHS
F, E, H, I Top

RHS

(E)

Operator (Name & sign):

Sihle

Tshenolo

Operator (Name & sign):

G. D.

D, E, G, H

Operator (Name & sign):

LERATO

LERATO

Operator (Name & sign):

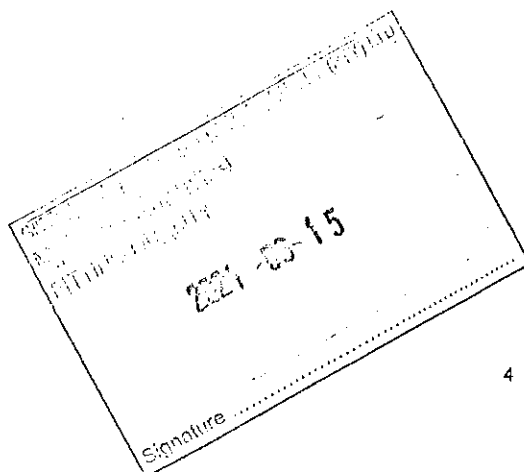
Boitumelo

Boitumelo

Operator (Name & sign):

Boitumelo

Boitumelo





CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

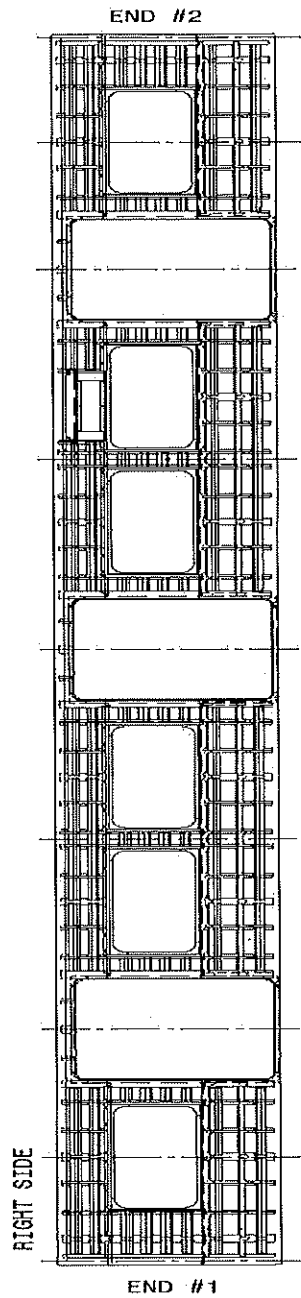
Rev.
30
Date
06/11/2023

Project: PRASA

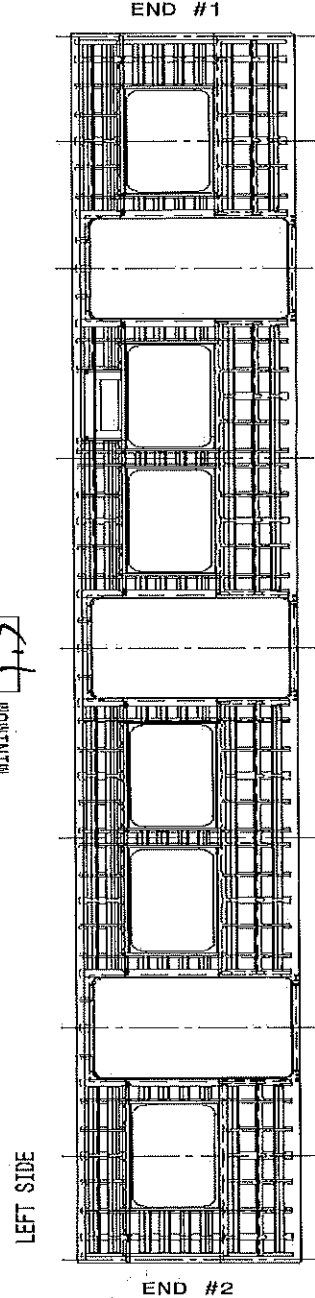
SI.CB2230.256.V29

Specifications of Details for GBS measurement CB1230

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



MAXIMUM 1.7
MINIMUM 1.3



MAXIMUM 1.7
MINIMUM 1.4

2023-06-15



CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

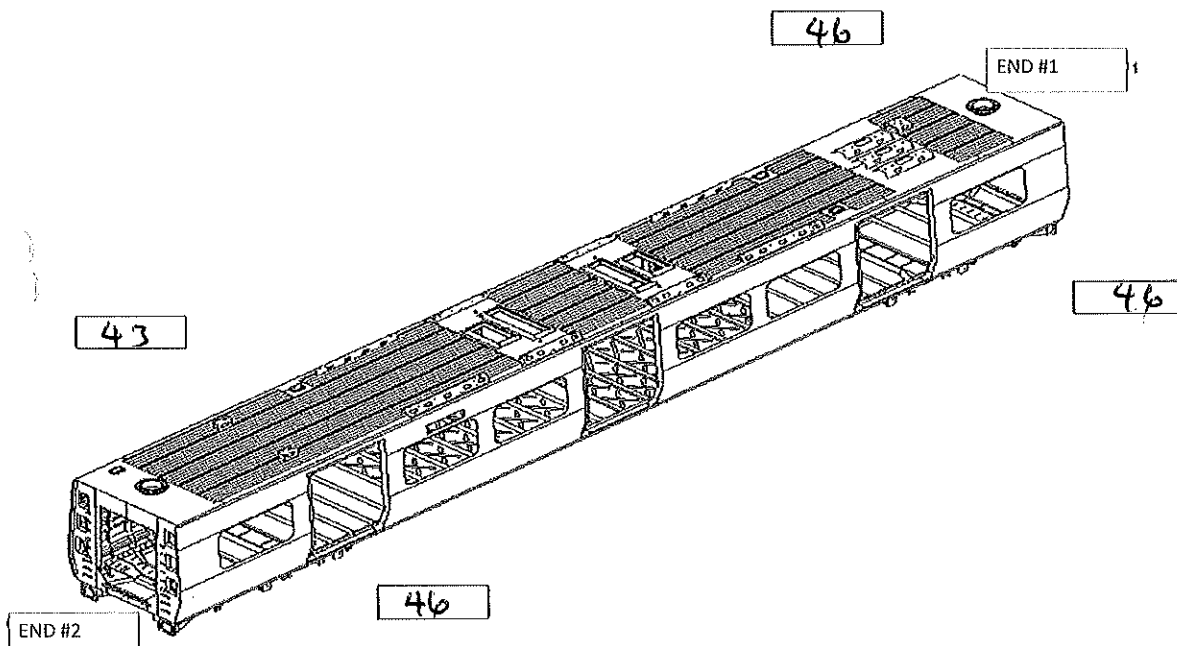
Rev.
30
Date
06/11/2023

Project: PRASA

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.



TWIST FOUND ON END 1

TRANVERSE

0

LONGITUDINAL

0

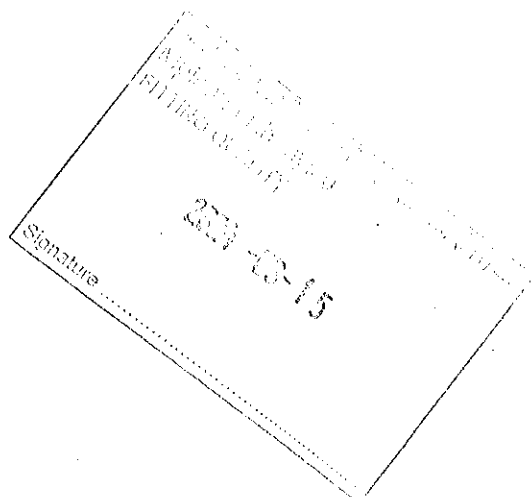
TWIST FOUND ON END 2

TRANVERSE

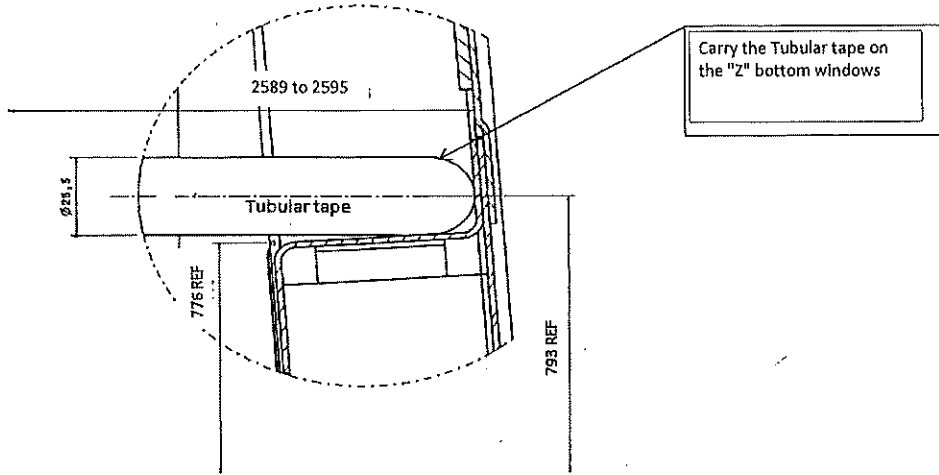
3

LONGITUDINAL

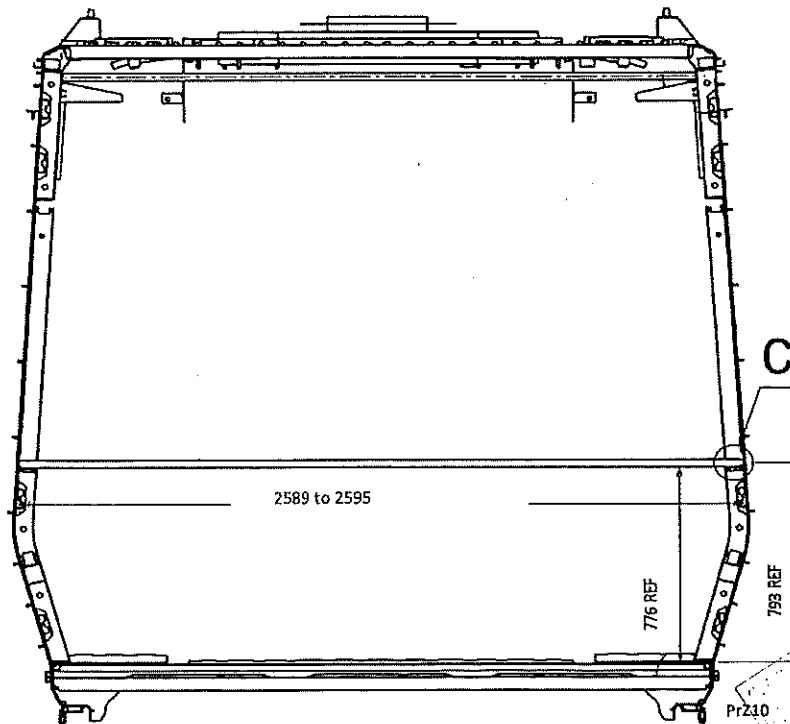
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Specifications of Details for CBS measurement CB1230



Detail C



C

2589 to 2595

776 REF

793 REF

Pr210

Signature

2023-05-15



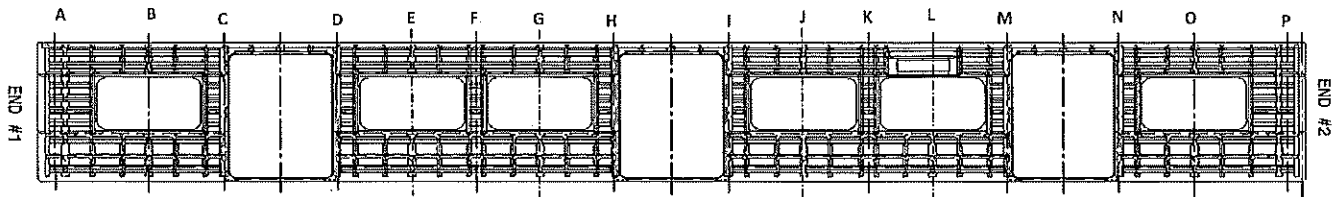
CARBODYSHELL M1,M3,M4 ASSEMBLY
DT00000225487

Rev.
30
Date
06/11/2023

Project: PRASA

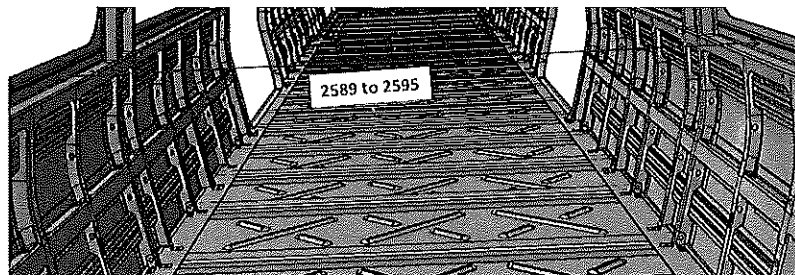
SI.CB2230.256.V29

Specifications of Details for CBS measurement CB1230



2589 to 2595mm

A	25 95
B	25 92
C	25 91
D	25 89
E	25 90
F	25 89
G	25 91
H	25 90
I	25 89
J	25 89
K	25 89
L	25 90
M	25 90
N	25 89
O	25 89
P	25 90



Threshold verification

Nominal value :38

Door 1		Door 2		Door 3	
L	R	L	R	L	R
38	38	38	39	38	37
Door 4		Door 5		Door 6	
L	R	L	R	L	R
38	37	39	39	38	38

BOILER MAKER:

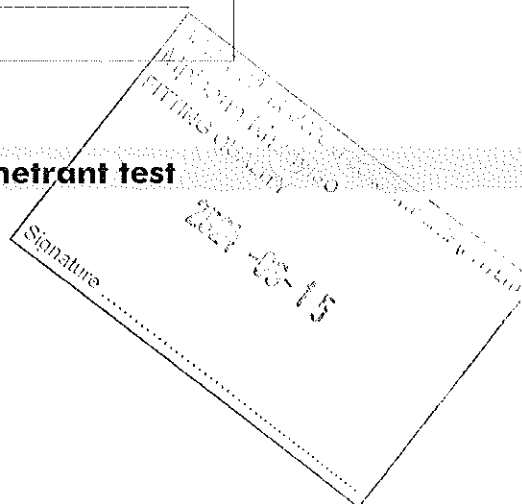
kgoliso

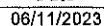
WELDER:


Emmanuel

Dye penetrant test


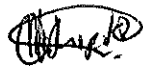
Dye-penetration test to be performed by quality personnel





	CARBODYSHELL M1,M3,M4 ASSEMBLY DT00000226487	Rev. 30	Project: PRASA SI.CB2230.256.V29
		Date	
		06/11/2023	

Self Inspection - Final Result

Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality)				DATE	NAME	SIGNATURE
HOLD POINT		GO	(If activities are not complete, the missing activities must not impact the next stage)	08/03/24	Leroy Operations	
			Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.)	11/03/24	Richmond 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

