


PRASA PROJECT


APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION


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

APPLICATION REFERENCE

| MOUNTING | DRAWING | DESCRIPTION | STATION | CAR TYPE | | | | | | WORK INSTRUCTION | SAFETY ?  |
|--------------------------|---------------|---------------|--------------------------|----------|----|----|----|----|-----|----------------------------------|--|
| | | | | TC1 | M4 | M1 | M2 | M3 | TC2 | | |
| <input type="checkbox"/> | DTR31374497/3 | AAB0001413329 | CARBODYSHELL M2 ASSEMBLY | CB1210 | | | | X | | PRA.CB1210.DTR313744 97/3.V25 | 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 CB1210 | APPROVER | Itumeleng Modiba | 12/12/2018 |
| | | | CHECKER | Nosizo Pindela | 12/12/2018 |
| | | | REVISED BY | Ramokone Motama | 12/12/2018 |
| 5 | 22/01/2019 | As per Baseline 10.2 | APPROVER | Itumeleng Modiba | 22/01/2019 |
| | | | CHECKER | Nosizo Pindela | 22/01/2019 |
| | | | REVISED BY | Vanessa Ntuli | 22/01/2019 |
| 6 | 13/03/2019 | Added D1 and D2 on Self - Inspection | APPROVER | Itumeleng Modiba | 13/03/2019 |
| | | | CHECKER | Nosizo Pindela | 13/03/2019 |
| | | | REVISED BY | Nosizo Pindela | 13/03/2019 |
| 10 | 21/08/2019 | New Baseline 10.2.5 | APPROVER | Itumeleng Modiba | 21/08/2019 |
| | | | CHECKER | Nosizo Pindela | 21/08/2019 |
| | | | REVISED BY | Nosizo Pindela | 21/08/2019 |
| 15 | 06/08/2020 | New Baseline 10.2.6 | APPROVER | Timothy Maimela | 06/08/2020 |
| | | | CHECKER | Bongane Masina | |
| | | | REVISED BY | Bongane Masina | |
| 20 | 19/04/2021 | New Baseline change 10.3 | APPROVER | Timothy Maimela | 19/04/2021 |
| | | | CHECKER | Bongane Masina | |
| | | | REVISED BY | Bongane Masina | |
| 21 | 17/08/2021 | ADDED DIMENSIONS BEFORE WELDING | APPROVER | Mbhombi collins | 17/08/2021 |
| | | | CHECKER | Mpho Mulaudzi | |
| | | | REVISED BY | Mpho Mulaudzi | |
| 25 | 21/02/2022 | New Baseline change 10.3.1 | APPROVER | Mbhombi collins | 21/02/2022 |
| | | | CHECKER | Andani Muthelo | |
| | | | REVISED BY | Andani Muthelo | |
| 26 | 14/04/2023 | Addition of welding consumable traceability | APPROVER | Ntuli Vanessa | 14/04/2023 |
| | | | CHECKER | Mohlampe Amogelang | |
| | | | REVISED BY | Mohlampe Amogelang | |
| 27 | 27/07/2023 | Added verification of loaded parts | APPROVER | Ngobeni Tyson | 27/07/2023 |
| | | | CHECKER | Zwane Ntokozo | |
| | | | REVISED BY | Mohlampe Amogelang | |
| 28 | 07/11/2023 | Addition of welder traceability | APPROVER | Ngobeni Tyson | 07/11/2023 |
| | | | CHECKER | Andani Muthelo | |
| | | | REVISED BY | Ntokozo Zwane | |

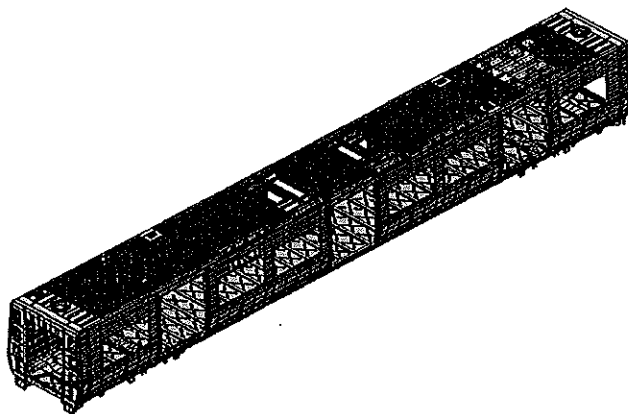
| TRAINSET | CAR | OPERATOR NAME& ALPS NO | DATE | SELF INSPECTION NUMBER | PAGES |
|----------|-----|------------------------|----------|------------------------|-------|
| 15209 Ma | | P. MATATI 409964 | 02/03/24 | SI.CB1210.247.V28 | 17 |

| | | | |
|---|--|--------------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | Rev. 28 | Project: PRASA SI.CB1210.247.V28 |
| | | Date 07/11/2023 | |

| | | |
|---------|------|----------------------|
| Car: M2 | NCR: | Work station: CB1210 |
|---------|------|----------------------|



Safety Related



I - Documentation and Instruments Control

I.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|---------------|-------------|---|---|---|---|---|----------|-------------|----|--|--------------------------------|--------------------------|
| | D | M | S | S | A | O | | | | | | |
| DTR31374497/3 | | | X | | | | V28 | | ✓ | | N/A | <i>[Signature]</i> |

I.2 - Instruments Control






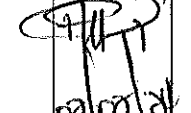



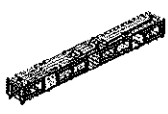
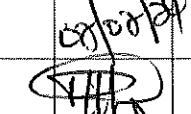
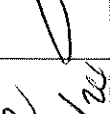
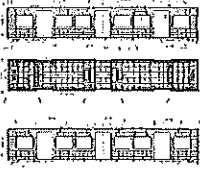




Monitoring and Measuring Instrument Control - Used for Special Process


| Instruments | Serial number | Calibration or Verification Validation Date | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-------------|---------------|---|----|--|--------------------------------|--------------------------|
| TUBULAR | 22316 | 07/02/23 | ✓ | | <i>[Signature]</i> | <i>[Signature]</i> |
| CASER TAPE | 125405921 | 01/03/24 | ✓ | | <i>[Signature]</i> | |
| SDM TAPE | 6018TP0084 | 31/05/24 | ✓ | | <i>[Signature]</i> | |

I.3 - Consumables

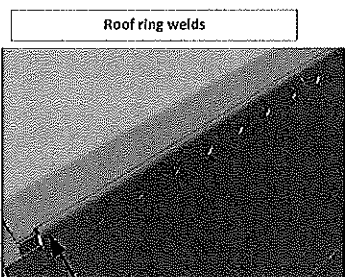
Welding Consumable Control - Used for Special Process

| Filler Material | Heat Number | Welding Process | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|--------------|-----------------|----|--|--------------------------------|--------------------------|
| ER 308 LS1 | 314018-74097 | MIG | ✓ | | <i>[Signature]</i> | <i>[Signature]</i> |
| ER 308 L | 299687-76300 | TIG | ✓ | | <i>[Signature]</i> | |
| | | | | | | |

|  | | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | | Rev. 28 Date 07/11/2023 | Project: PRASA SI.CB1210.247.V28 | | |
|---|---|---|---|----------------------------------|-------------------------------------|---|---|
| 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 | Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe) | AA00001375051 | ✓ | |  08/08/23 |  08/08/23 |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality | DTD0000210675 | ✓ | |  08/08/23 |  08/08/23 |
| 03 | REFER TO ANNEXURE A | Spot welding inspected and approved according to procedure | IND-SAL-WMS-016 e DTD0000210675 | ✓ | |  08/08/23 |  08/08/23 |
| 04 | REFER TO ANNEXURE B | Arc welding inspected and approved according to procedure | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | ✓ | |  08/08/23 |  08/08/23 |
| 05 |  | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | ✓ | |  08/08/23 |  08/08/23 |
| 06 |  | Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document | Approved according specified on pages below. | ✓ | |  08/08/23 |  08/08/23 |
| | 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. | ✓ | |  08/08/23 |  08/08/23 |

| | | | |
|---|--|--------------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | Rev. 28 | Project: PRASA SI.CB1210.247.V28 |
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Welder traceability

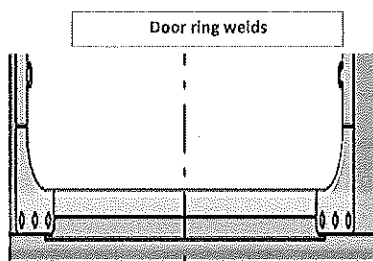


| | |
|--|---|
| <div style="text-align: center; margin-bottom: 5px;"><u>LHS</u></div> Boiler maker (Name & Sign): <u>LUNGA M</u> | <div style="text-align: center; margin-bottom: 5px;"><u>RHS</u></div> Boiler maker (Name & Sign): <u>LAWRENCE</u> |
| Welder (Name & Sign): <u>MTIMOKOZISI</u> | Welder (Name & Sign): <u>KEITU K. Nod</u> |

END 1

| | |
|--|---|
| <div style="text-align: center; margin-bottom: 5px;"><u>LHS</u></div> Boiler maker (Name & Sign): <u>LUNGA M</u> | <div style="text-align: center; margin-bottom: 5px;"><u>RHS</u></div> Boiler maker (Name & Sign): <u>LAWRENCE</u> |
| Welder (Name & Sign): <u>MTIMOKOZISI</u> | Welder (Name & Sign): <u>KEITU K. Nod</u> |

END 2



LHS


Boiler maker (Name & Sign): MTIMOKOZISI

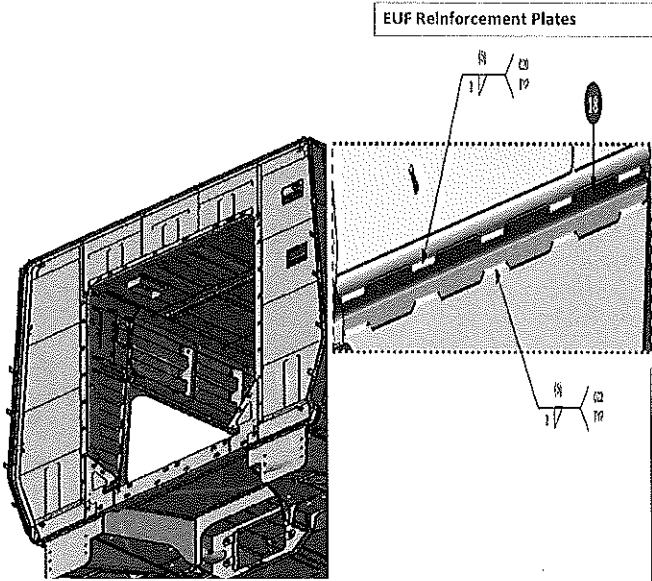
Welder (Name & Sign): MTIMOKOZISI

RHS

Boiler maker (Name & Sign): MTIMOKOZISI

Welder (Name & Sign): MTIMOKOZISI

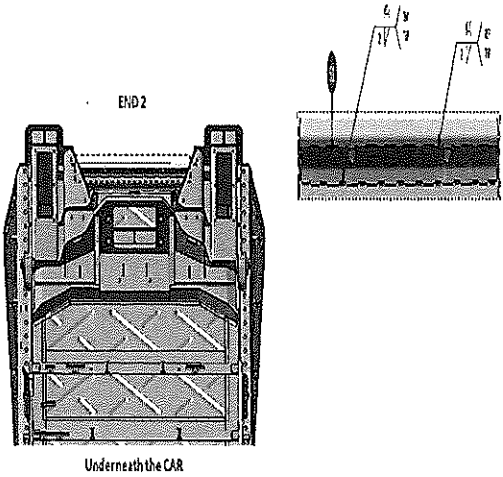
| | | | |
|---|--|--------------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | Rev. 28 | Project: PRASA SI.CB1210.247.V28 |
| | | Date 07/11/2023 | |



END 1

Boiler maker (Name & Sign): Timothy Reddy

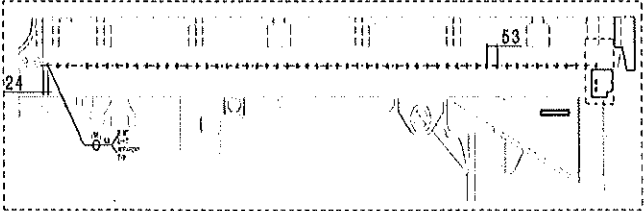
Welder (Name & Sign): Ketu K. Reddy



END 2


Boiler maker (Name & Sign): Gerald Mokozi

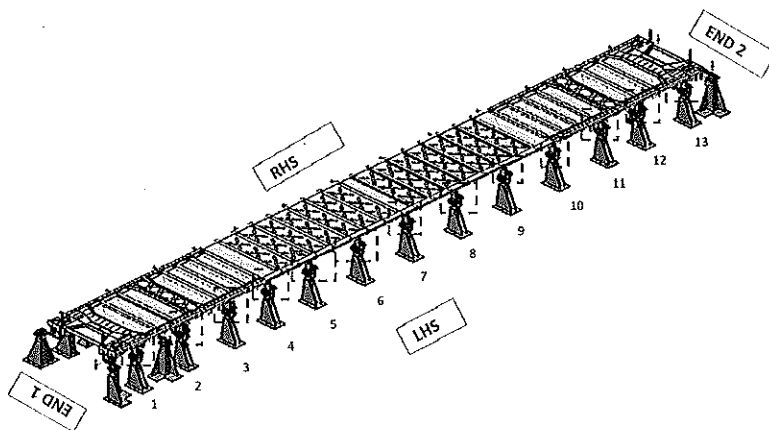
Welder (Name & Sign): Mthokozisi Mokozi



FEDOLI

OPERATOR: Siphokazi

| | | | |
|---|--|---|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | Rev. 28 | Project: PRASA SI.CB1210.247.V28 |
| | | Date 07/11/2023 | |
| | | Specifications of Details for CBS measurement | |



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

After loading and clamping

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

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

Signature Operations: 

Date: 02/02/24

After Welding.

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

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

Signature Industrial Quality: 

Date: 02/02/24

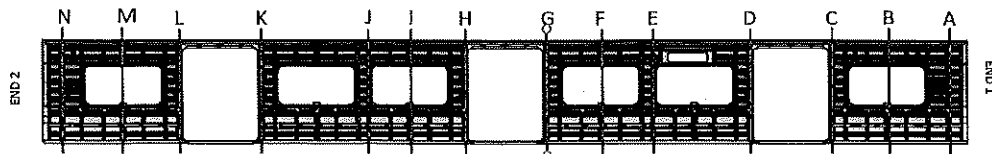


CARBODYSHELL M2 ASSEMBLY DTR31374497/3

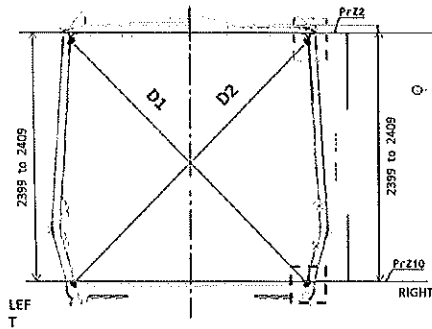
Rev.
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Date
07/11/2023

Project: PRASA
SI.CB1210.247.V28

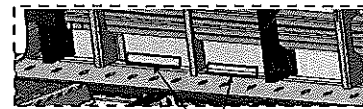
Specifications of Details for CBS measurement



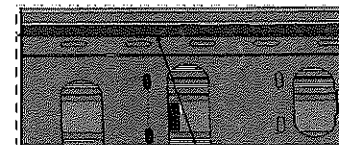
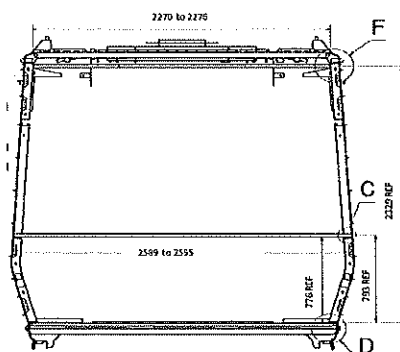
9



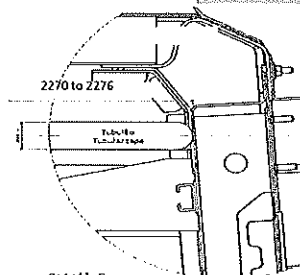
Measurement positions on roof rail and sidewall omega corner.



Measurement positions on sidewall and side sill corner.



Reinforcement area measurement positions on roof reinforcement area.



Detail F

Don't considering the reinforcement



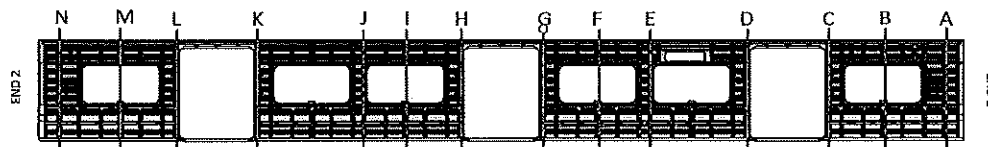
CARBODYSHELL M2 ASSEMBLY DTR31374497/3

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28
Date
07/11/2023

Project: PRASA
SI.CB1210.247.V28

Specifications of Details for CBS measurement

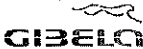
BEFORE WELDING



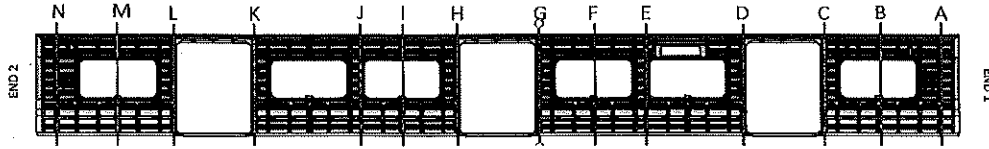
Note: The difference in Height values measured on the LHS and RHS should be $\leq 2\text{MM}$ on each point.

| | Record D1 values | Record D2 values | D1-D2 $\leq 5\text{mm}$ | 2399 to 2409 (LHS) | 2399 to 2409 (RHS) | LHS-RHS ≤ 2 |
|---|------------------|------------------|-------------------------|--------------------|--------------------|------------------|
| A | 3069 | 3066 | 1 | 2404 | 2404 | 0 |
| B | 3071 | 3070 | 1 | 2406 | 2405 | 1 |
| C | 3071 | 3071 | 0 | 2406 | 2406 | 0 |
| D | 3068 | 3066 | 2 | 2405 | 2404 | 1 |
| E | 3069 | 3069 | 0 | 2404 | 2405 | 1 |
| F | 3069 | 3065 | 2 | 2404 | 2406 | 2 |
| G | 3069 | 3068 | 1 | 2404 | 2404 | 0 |
| H | 3069 | 3070 | 1 | 2405 | 2403 | 2 |
| I | 3071 | 3072 | 1 | 2403 | 2404 | 1 |
| J | 3071 | 3071 | 0 | 2405 | 2404 | 1 |
| K | 3069 | 3069 | 2 | 2406 | 2405 | 1 |
| L | 3068 | 3066 | 2 | 2404 | 2404 | 0 |
| M | 3069 | 3069 | 2 | 2405 | 2404 | 1 |
| N | 3069 | 3069 | 0 | 2406 | 2404 | 2 |

409964
02/02/24


| | | | |
|---|--|---|-------------------------------------|
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| | | Date 07/11/2023 | |
| | | Specifications of Details for CBS measurement | |

AFTER WELDING



Note: The difference in Height values measured on the LHS and RHS should be $\leq 2\text{MM}$ on each point.

| | Record D1 values | Record D2 values | D1-D2 $\leq 5\text{mm}$ | 2399 to 2409 (LHS) | 2399 to 2409 (RHS) | LHS-RHS ≤ 2 |
|---|------------------|------------------|-------------------------|--------------------|--------------------|------------------|
| A | 3078 | 3095 | 0 | 2404 | 2405 | 1 |
| B | 3066 | 3067 | 1 | 2406 | 2404 | 2 |
| C | 3078 | 3077 | 1 | 2404 | 2404 | 0 |
| D | 3076 | 3076 | 0 | 2405 | 2406 | 1 |
| E | 3068 | 3067 | 1 | 2404 | 2404 | 0 |
| F | 3066 | 3066 | 0 | 2406 | 2404 | 2 |
| G | 3095 | 3098 | 3 | 2404 | 2405 | 1 |
| H | 3077 | 3098 | 1 | 2406 | 2405 | 1 |
| I | 3068 | 3069 | 1 | 2404 | 2404 | 0 |
| J | 3067 | 3067 | 0 | 2405 | 2406 | 1 |
| K | 3077 | 3098 | 1 | 2405 | 2406 | 1 |
| L | 3076 | 3077 | 1 | 2404 | 2405 | 1 |
| M | 3067 | 3067 | 0 | 2404 | 2406 | 2 |
| N | 3078 | 3096 | 1 | 2405 | 2405 | 0 |


4099/p
20/02/24



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

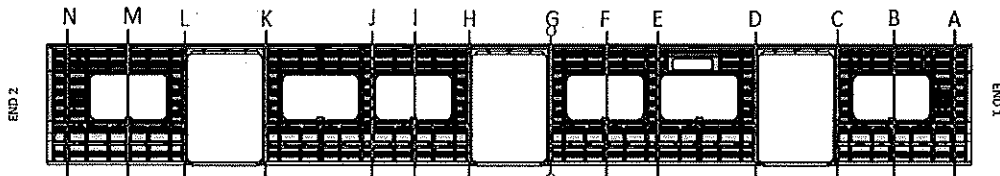
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07/11/2023

Project: PRA5A
SI.CB1210.247.V28

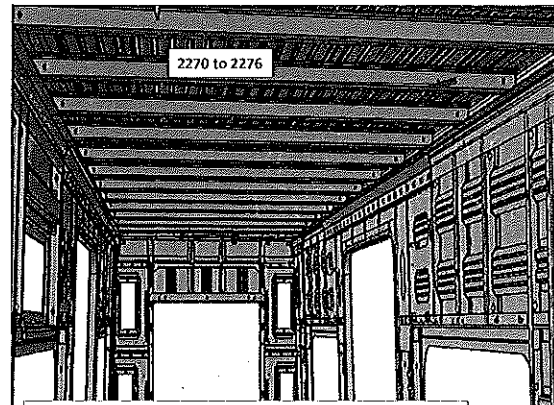
CBS measurement

BEFORE WELDING



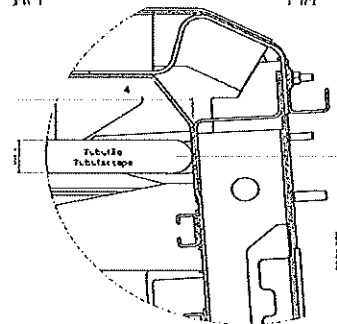
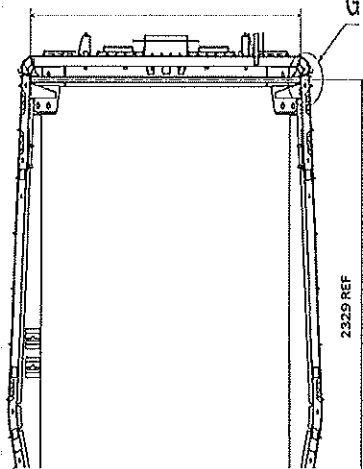
2270 to 2276

| | |
|---|------|
| A | 2271 |
| B | 2276 |
| C | 2274 |
| D | 2276 |
| E | 2277 |
| F | 2276 |
| G | 2274 |
| H | 2273 |
| I | 2276 |
| J | 2276 |
| K | 2275 |
| L | 2273 |
| M | 2275 |
| N | 2274 |



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

2265 to 2271



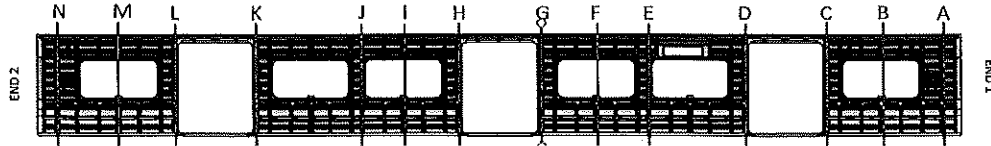
2265 to 2271

Detail G

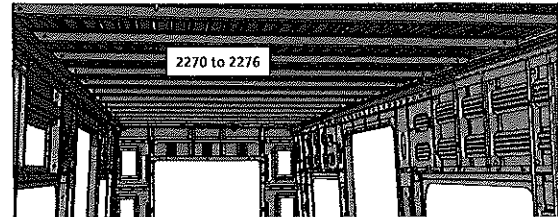
Considering the
reinforcement plate

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22/02/23

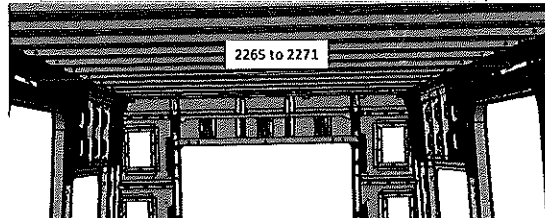
AFTER WELDING



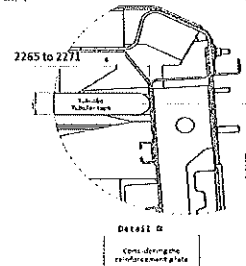
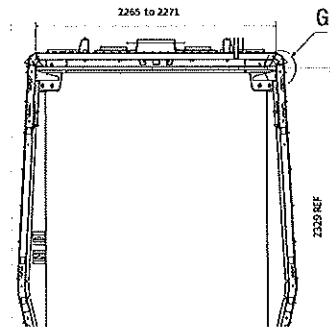
| | 2265 to 2271 | 2270 to 2276 |
|---|--------------|--------------|
| A | 2269 | N/A |
| B | N/A | 2275 |
| C | 2268 | N/A |
| D | 2267 | N/A |
| E | N/A | 2276 |
| F | N/A | 2274 |
| G | 2269 | N/A |
| H | 2265 | N/A |
| I | N/A | 2274 |
| J | N/A | 2276 |
| K | 2266 | N/A |
| L | 2267 | N/A |
| M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



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



Take measurement close to radius (considering reinforcement)



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221024



CARBODYSHELL M2 ASSEMBLY DTR31374497/3

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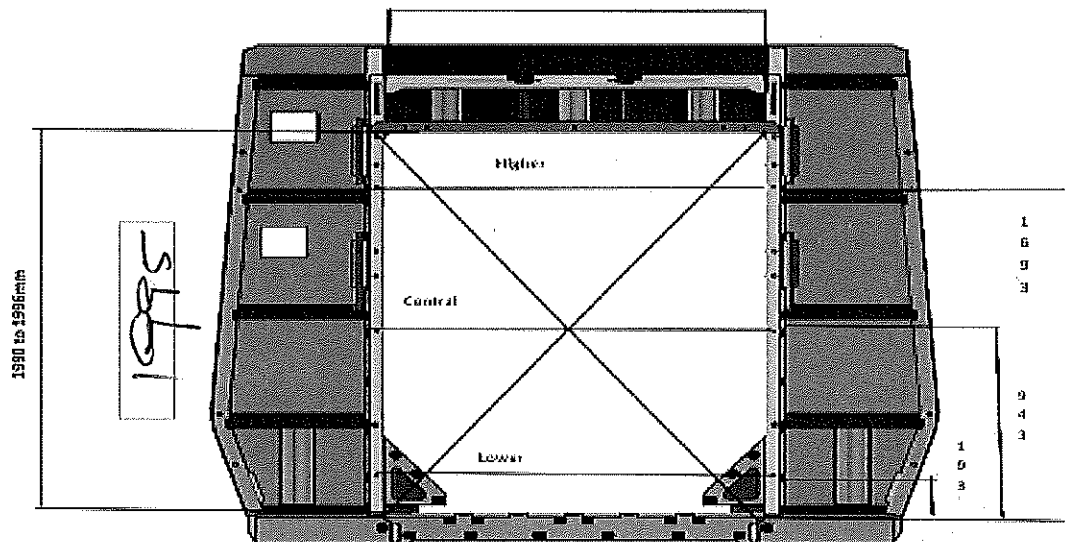
Date

07/11/2023

CBS measurement

End frame 1

1380 to 1382 mm



1380 to 1382 mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Higher Dimension

1381

D1

2414

Central Dimension

1381

D2

2416

Lower Dimension

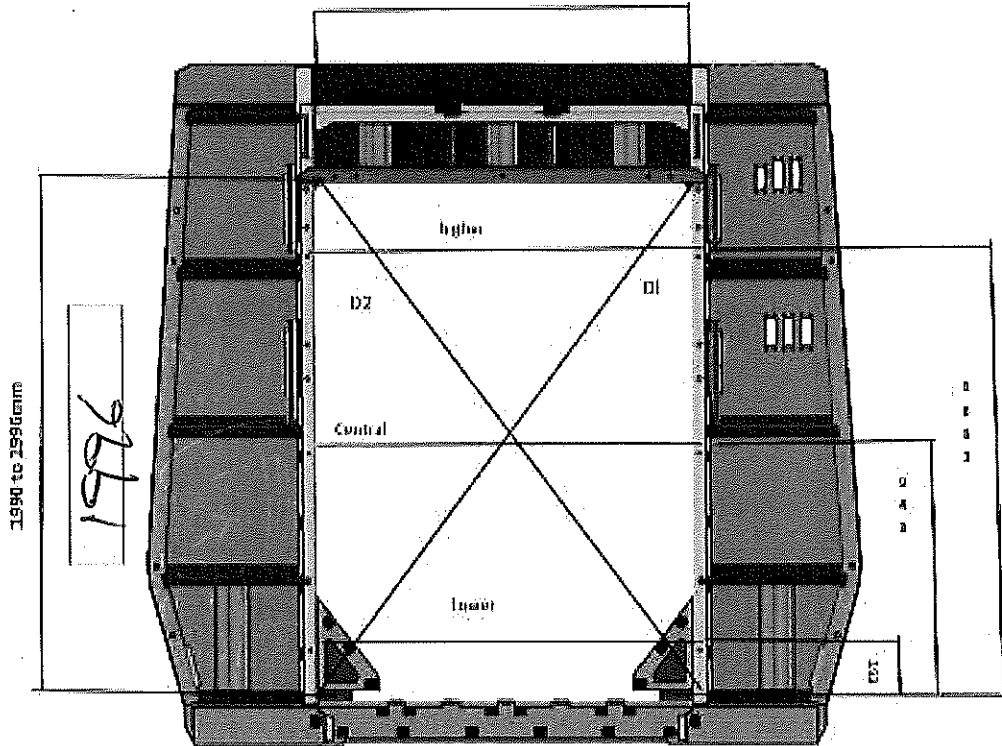
1380

D1-D2

0

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02/02/24

End frame 2



1380 to 1392 mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Higher Dimension

1380

D1

2416

Central Dimension

1381

D2

2416

Lower Dimension

1381

D1-D2

0

4099264
02/02/24

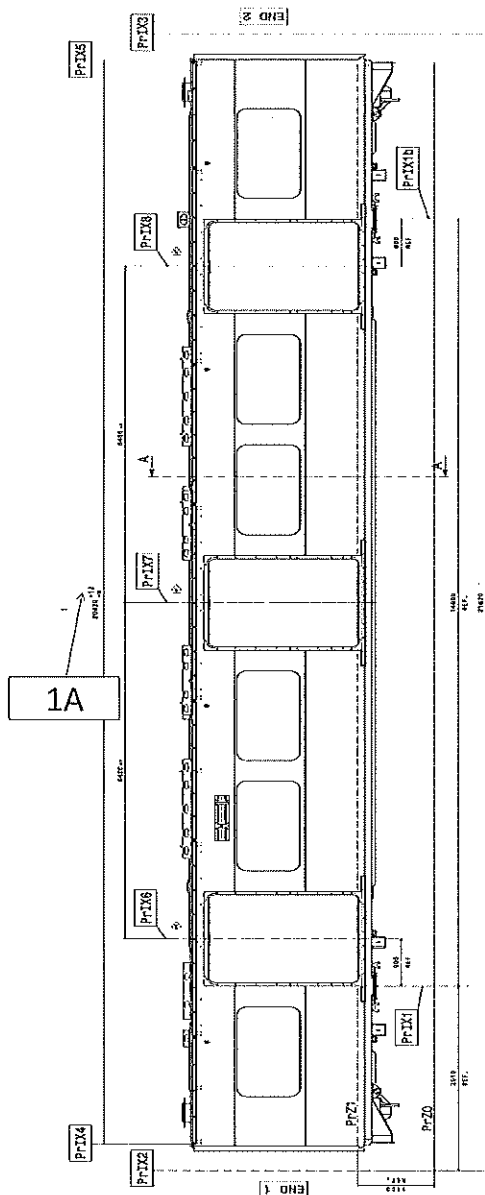


CARBODYSHELL M2 ASSEMBLY DTR31374497/3

Rev.
28
Date
07/11/2023


Project: PRASA
SI.CB1210.247.V28

Specifications of Details for CBS measurement



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

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


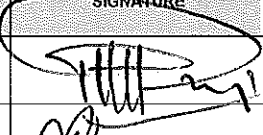
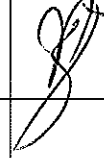

409964
02/02/2024

Dye penetrant test

Dye-penetration test to be performed by quality personnel

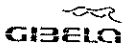



| Item | Picture/Drawing | Description | Criteria/Record | OK | Not OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|------|-----------------|-----------------|--|----|--------|--------------------------------|--------------------------|
| 01 | N/A | To complete REX | Refer to REX. New defects must be added on the REX | | | | |

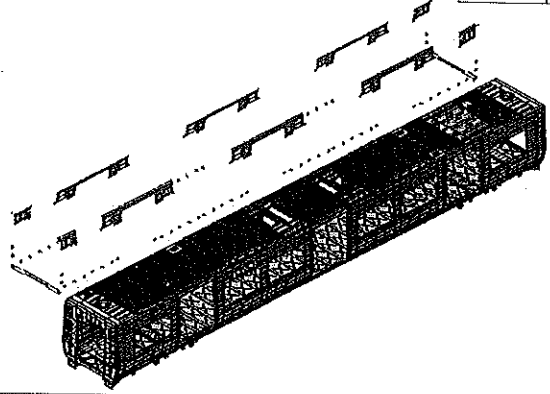
| | | | | | | |
|--|--|---|--------------------|-------------------------------------|--|--------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/3 | | Rev. 28 | Project: PRASA SI.CB1210.247.V28 | | |
| | | | Date 07/11/2023 | | | |
| Self Inspection - Final Result | | | | | | |
| Is the car good 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.) | 07/11/2023 | Pontso Operations |   | |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.) | 07/11/2023 | Motore 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

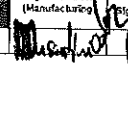
| | | | |
|---|---|--------------------|---|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. 29 | Project: PRASA SI.CB1220.276.V29 |
| | | Date 28/10/2023 | |
| Car: M2 | NCR: | Work station: | CB1220 |

 Safety Related

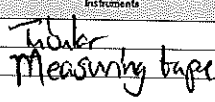
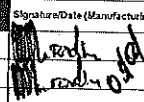
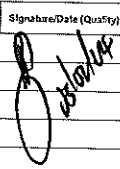


I - Documentation and Instruments Control

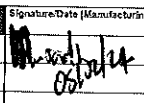
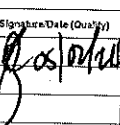
L1 - Documentation Control




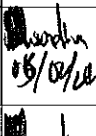
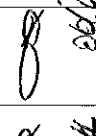
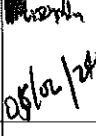

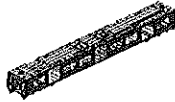
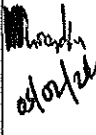

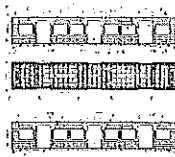
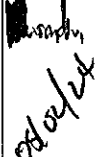

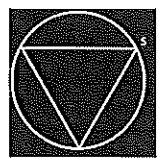
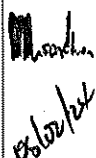

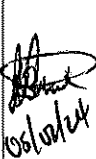

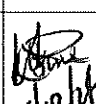

| Document | Type of car | | | | | Revision | Observation | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|----------|-------------|----|--|--------------------------------|---|
| | T01 | M1 | M2 | M3 | M4 | | | | | | |
| DTR31374497/2 | | | ✓ | | | | | ✓ | | N/A |  05/10/24 |

L2 - Instruments Control

| Monitoring and Measuring Instrument Control - Used for Special Process | | | | | | |
|---|---------------|--|----|--|---|---|
| Instrument | Serial number | Calibration or Verification Validation Date | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|  | 22316 | 2024/02/07 | ✓ | |  05/10/24 |  05/10/24 |
| | 618TA0316 | 2024/08/12 | ✓ | | | |

1.3 Consumables

| Welding Consumable Control - Used for Special Process | | | | | | |
|---|-------------|-----------------|----|--|---|---|
| Filler Material | Heat Number | Welding Process | OK | | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| 308 1.0mm | 221927 | MIG | ✓ | |  05/10/24 |  05/10/24 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. 28 | Project: PRASA SI.CB1220.276.V29 | | | |
|---|---|--|---|----|---|---|
| | | Date 28/10/2023 | | | | |
| | | | | | | |
| III - Self Inspection - Items to Check | | | | | | |
| III.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 CB1220. DTR31374497/2 Verification of filament for all reinforcement brackets | PRA CB1220. DTR31374497/2 | ✓ |  05/02/24 |  05/02/24 |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality | DTD0000210675 | ✓ |  05/02/24 |  05/02/24 |
| 03 | REFER TO ANNEXURE A | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | ✓ |  05/02/24 |  05/02/24 |
| 04 |  | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | ✓ |  05/02/24 |  05/02/24 |
| 05 |  | Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document | Approved according specified on pages below. | ✓ |  05/02/24 |  05/02/24 |
| 06 |  | Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658. | As the welding procedure IND-SAL-WMS-018 and DTD0000210658. | ✓ |  05/02/24 |  05/02/24 |
| 07 | N/A | Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max (°C) : Min-Max : 10°C - 35°C Relative Humidity Min - Max (%) : Min-Max : 25% - 60% | Sealant Batch No: Exp Date: <u>10/05/24</u> Actuals Temperature: <u>18°C</u> Humidity: <u>59%</u> | ✓ |  05/02/24 |  05/02/24 |
| 08 | NA | Verification of sealant application in certain regions in the drawing | AAD0001413329 | ✓ |  05/02/24 |  05/02/24 |



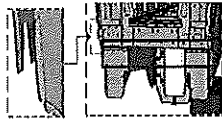
CARBODYSHELL M2 ASSEMBLY DTR31374497/2

Rev.
29
Date
28/10/2023

Project: PRASA

SI.CB1220.276.V29

SEALANT APPLICATION




AREA 1 & 2 END 1

Operator (Name & sign):

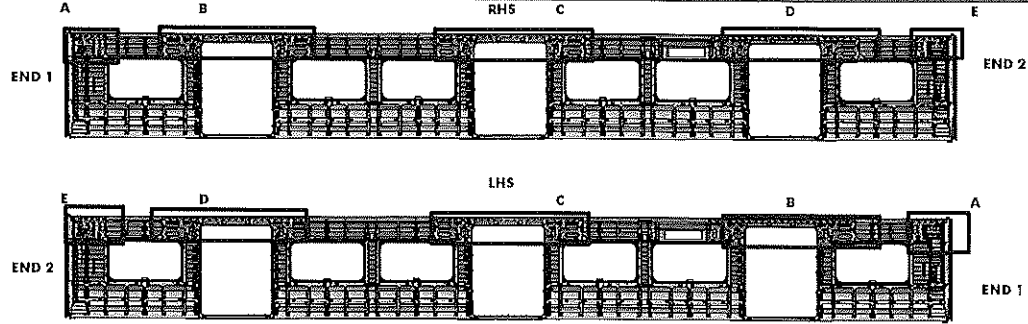
Levy
[Signature]

Operator (Name & sign):

Levy
[Signature]


| | | | |
|---|--|------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. | Project: PRASA SI.CB1220.276.V29 |
| | | 29 | |
| | | Date | |
| | | 28/10/2023 | |

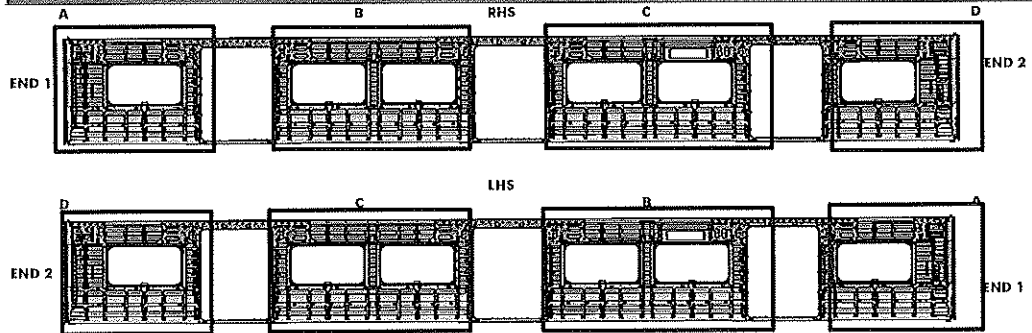
II - Self Inspection - Items to Check




REINFORCEMENT WELDING

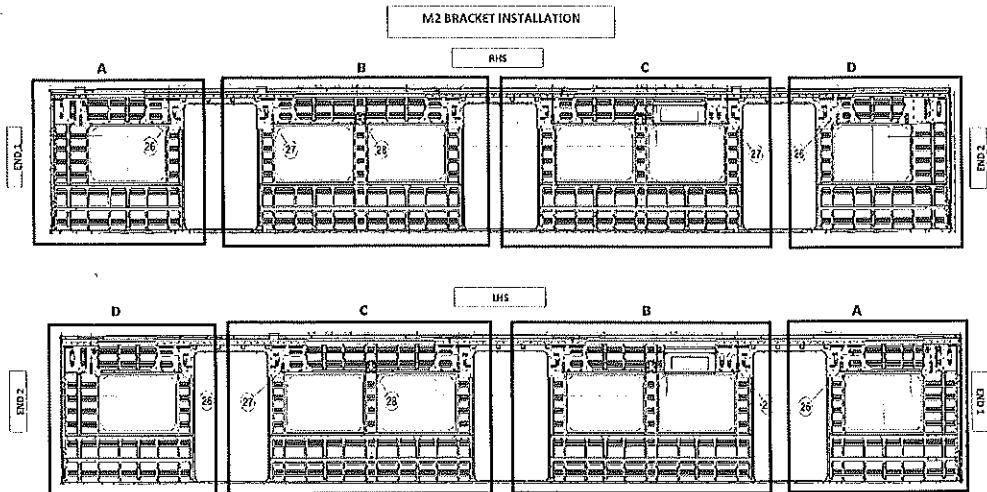
| AREA | LHS | RHS |
|------|---|--------------------|
| A | Operator (Name&sign): <i>Norvalynge Driel</i> | <i>[Signature]</i> |
| B | Operator (Name&sign): <i>Norvalynge Driel</i> | <i>[Signature]</i> |
| C | Operator (Name&sign): <i>[Signature]</i> | <i>[Signature]</i> |
| D | Operator (Name&sign): <i>Sibiga</i> | <i>THULANI</i> |
| E | Operator (Name&sign): <i>Sibiga</i> | <i>THULANI</i> |

| | | | |
|---|--|---------------------------------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. 29 | Project: PRASA SI.CB1220.276.V29 |
| | | Date 28/10/2023 | |
| | | II - Self Inspection - Items to Check | |



| BRACKETING | |
|-------------------------------------|---------------------------------------|
| INSTALLATION | |
| C-RAILS: | Operator: <u>Trusillo</u> |
| | Operator: _____ |
| DOOR MECHANISMS: | Operator: <u>Leni</u> |
| | Operator: _____ |
| TAPPING PADS | Operator: <u>Mtshozi</u> |
| | Operator: _____ |
| INSTALLATION & VERIFICATION | |
| SEAT & LUGGAGE BRACKETS: | Operator: <u>TC</u> |
| | Operator: _____ |
| SEAT BRACKETS VERIFICATION: | Operator: <u>Leni</u> |
| | Operator: _____ |
| WELDING | |
| AREA | LHS |
| A (Seat brackets) | : Operator (Name&sign): <u>Sibuya</u> |
| (C-rails, Luggage and earth bushes) | : Operator (Name&sign): <u>Jody</u> |
| B (Seat brackets) | : Operator (Name&sign): <u>Sibuya</u> |
| (C-rails, Luggage and earth bushes) | : Operator (Name&sign): <u>Jody</u> |
| C (Seat brackets) | : Operator (Name&sign): <u>Sibuya</u> |
| (C-rails, Luggage and earth bushes) | : Operator (Name&sign): <u>Jody</u> |
| D (Seat brackets) | : Operator (Name&sign): <u>Sibuya</u> |
| (C-rails, Luggage and earth bushes) | : Operator (Name&sign): <u>Jody</u> |
| ENDS | |
| END 1 TAPPING PADS WELDING: | Operator (Name&sign): <u>Jody</u> |
| END 2 TAPPING PADS WELDING: | Operator (Name&sign): <u>Mtshozi</u> |

| | | | |
|---|--|------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. | Project: PRASA SI.CB1220.276.V29 |
| | | 29 | |
| | | Date | |
| | | 28/10/2023 | |



QUANTITIES (M2)

RHS

| | SECTION | QUANTITY | OK | NOK |
|---------------|---------|----------|----|-----|
| C-RAILS | A | 8 | ✓ | |
| | B | 8 | ✓ | |
| | C | 8 | ✓ | |
| | D | 2 | ✓ | |
| 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

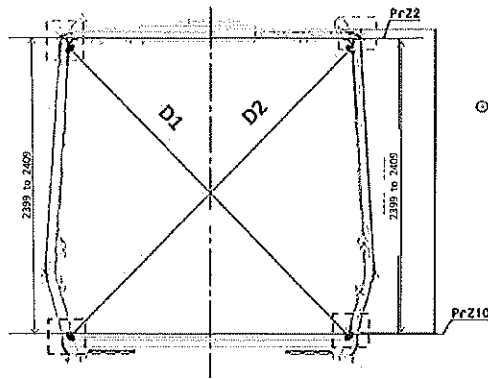
VERIFICATION BY: Mashadi

LHS

| | SECTION | QUANTITY | OK | NOK |
|---------------|---------|----------|----|-----|
| C-RAILS | A | 9 | ✓ | |
| | B | 11 | ✓ | |
| | C | 11 | ✓ | |
| | D | 12 | ✓ | |
| SEAT BRACKETS | A | 12 | ✓ | |
| | B | 21 | ✓ | |
| | C | 21 | ✓ | |
| | D | 13 | ✓ | |
| EARTH BUSH | A | 3 | ✓ | |
| | B | 7 | ✓ | |
| | C | 6 | ✓ | |
| | D | 2 | ✓ | |

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

VERIFICATION BY: Mashadi



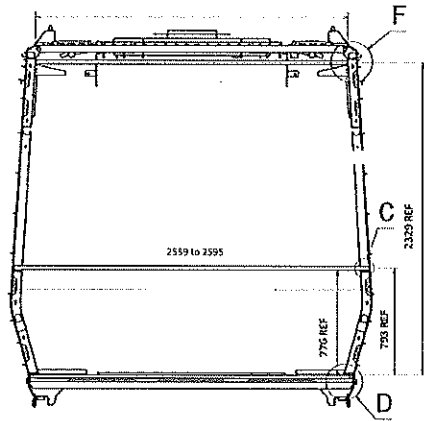
Measurement positions on roof rail and sidewall omega corner.



Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



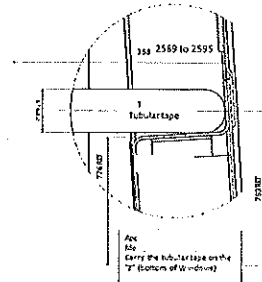
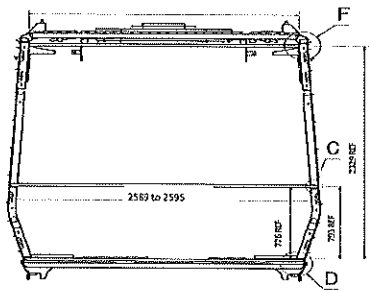


CARBODYSHELL M2 ASSEMBLY DTR31374497/2

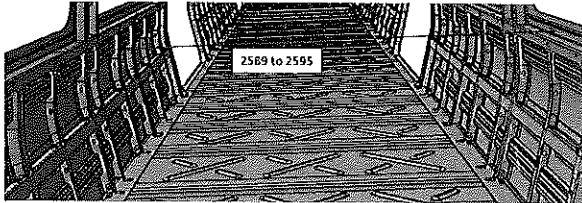
Rev.
29
Date
28/10/2023

Project: PRASA

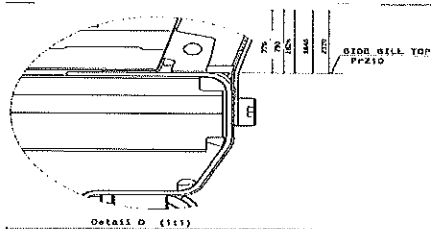
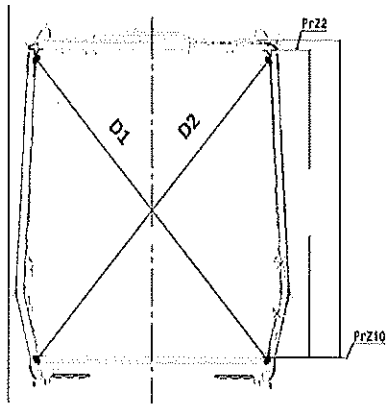
SI.CB1220.276.V29




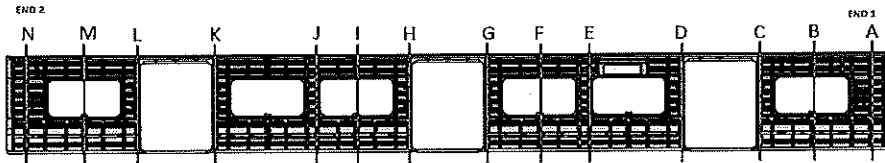
Detail C



Take measurement close to
radius




| | | | |
|---|--|--------------------|---|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. 29 | Project: PRA5A SI.CB1220.276.V29 |
| | | Date 28/10/2023 | |
| | CBS measurement | | |



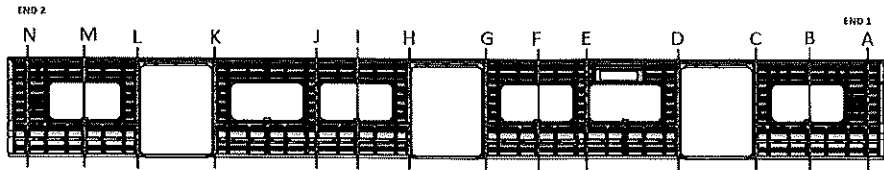
BEFORE WELDING

| | Record D1 values | Record D2 values | D1-D2 ≤ 5mm | 2589 to 2595 |
|---|------------------|------------------|-------------|--------------|
| A | 3297 | 3296 | 1 | |
| B | 3267 | 3267 | 0 | |
| C | 3295 | 3296 | 1 | |
| D | 3297 | 3297 | 0 | |
| E | 3265 | 3267 | 2 | |
| F | 3261 | 3265 | 2 | |
| G | 3297 | 3297 | 0 | |
| H | 3297 | 3295 | 2 | |
| I | 3261 | 3265 | 2 | |
| J | 3269 | 3266 | 3 | |
| K | 3297 | 3297 | 0 | |
| L | 3297 | 3297 | 0 | |
| M | 3265 | 3265 | 0 | |
| N | 3297 | 3295 | 2 | |

N/A

| | | | |
|---|--|------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. | Project: PRASA SI.CB1220.276.V29 |
| | | 29 | |
| | | Date | |
| | | 28/10/2023 | |

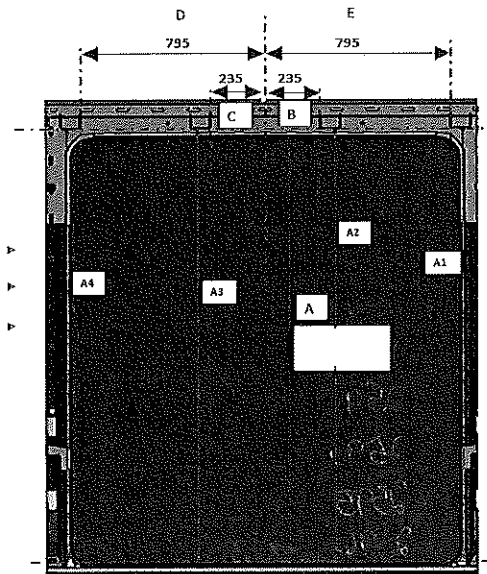
CBS measurement



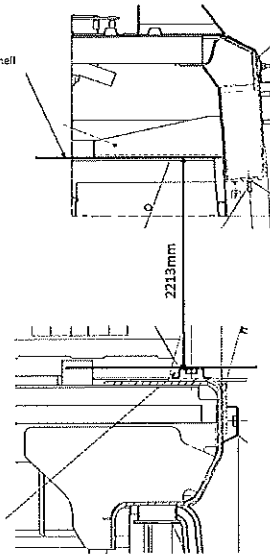
AFTER WELDING

| | Record D1 values | Record D2 values | D1-D2 ≤ 5mm | 2589 to 2595 |
|---|------------------|------------------|-------------|--------------|
| A | 3298 | 3297 | 1 | 2594 |
| B | 3267 | 3266 | 0 | 2589 |
| C | 3294 | 3297 | 3 | 2591 |
| D | 3294 | 3298 | 4 | 2590 |
| E | 3265 | 3267 | 5 | 2595 |
| F | 3268 | 3266 | 2 | 2594 |
| G | 3295 | 3298 | 3 | 2593 |
| H | 3297 | 3292 | 5 | 2595 |
| I | 3268 | 3266 | 2 | 2594 |
| J | 3266 | 3269 | 3 | 2593 |
| K | 3296 | 3299 | 3 | 2593 |
| L | 3297 | 3293 | 4 | 2594 |
| M | 3267 | 3265 | 2 | 2590 |
| N | 3298 | 3295 | 3 | 2593 |

Specifications of Details for CBS measurement CB1220



Brackets Carbodyshell
U Type Supports



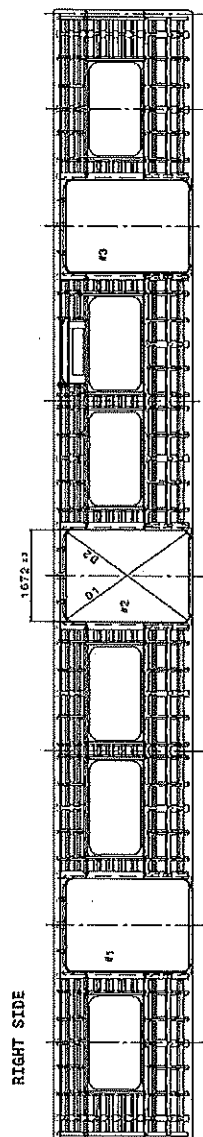
Brackets Carbodyshell
Channel Assy

| DOOR 1 - LHS | | | DOOR 2 - LHS | | | DOOR 3 - LHS | | |
|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|
| VALUE | ACTUAL | | VALUE | ACTUAL | | VALUE | ACTUAL | |
| A1 | 2230 to 2232 | 2233 | A1 | 2230 to 2232 | 2233 | A1 | 2230 to 2232 | 2232 |
| A2 | 2230 to 2232 | 2233 | A2 | 2230 to 2232 | 2232 | A2 | 2230 to 2232 | 2231 |
| A3 | 2230 to 2232 | 2232 | A3 | 2230 to 2232 | 2232 | A3 | 2230 to 2232 | 2231 |
| A4 | 2230 to 2232 | 2233 | A4 | 2230 to 2232 | 2232 | A4 | 2230 to 2232 | 2231 |
| B | 234 to 236 | 235 | B | 234 to 236 | 236 | B | 234 to 236 | 235 |
| C | 234 to 236 | 235 | C | 234 to 236 | 235 | C | 234 to 236 | 235 |
| D | 794 to 796 | 795 | D | 794 to 796 | 794 | D | 794 to 796 | 795 |
| E | 794 to 796 | 795 | E | 794 to 796 | 795 | E | 794 to 796 | 795 |

| DOOR 1 - RHS | | | DOOR 2 - RHS | | | DOOR 3 - RHS | | |
|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|
| VALUE | ACTUAL | | VALUE | ACTUAL | | VALUE | ACTUAL | |
| A1 | 2230 to 2232 | 2233 | A1 | 2230 to 2232 | 2232 | A1 | 2230 to 2232 | 2232 |
| A2 | 2230 to 2232 | 2232 | A2 | 2230 to 2232 | 2231 | A2 | 2230 to 2232 | 2232 |
| A3 | 2230 to 2232 | 2233 | A3 | 2230 to 2232 | 2231 | A3 | 2230 to 2232 | 2232 |
| A4 | 2230 to 2232 | 2233 | A4 | 2230 to 2232 | 2232 | A4 | 2230 to 2232 | 2232 |
| B | 234 to 236 | 235 | B | 234 to 236 | 235 | B | 234 to 236 | 234 |
| C | 234 to 236 | 235 | C | 234 to 236 | 236 | C | 234 to 236 | 234 |
| D | 794 to 796 | 795 | D | 794 to 796 | 795 | D | 794 to 796 | 796 |
| E | 794 to 796 | 795 | E | 794 to 796 | 796 | E | 794 to 796 | 796 |

Specifications of Details for CB5 measurement CB1220

End #2



RIGHT SIDE

End #1

Doors diagonal D1-D2 maximum difference ≤ 4mm

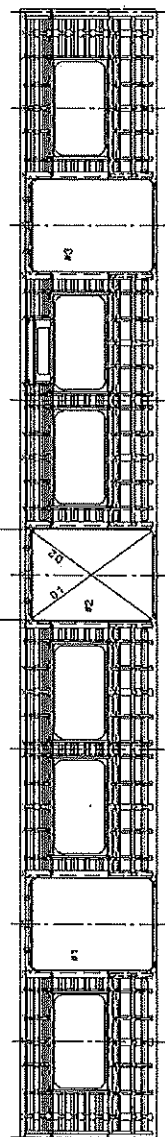
| | #1 | #2 | #3 |
|-------|------|------|------|
| D1 | 2749 | 2751 | 2751 |
| D2 | 2748 | 2749 | 2748 |
| D1-D2 | 1 | 2 | 1 |

Doors length - 1672 ±3mm

| | #1 | #2 | #3 |
|-------------------|------|------|------|
| HIGHER DIMENSION | 1673 | 1673 | 1672 |
| CENTRAL DIMENSION | 1672 | 1674 | 1672 |
| LOWER DIMENSION | 1672 | 1674 | 1673 |

LEFT SIDE

End #1





Vão de Portas - 1672 ±3mm

| | #1 | #2 | #3 |
|-------------------|------|------|------|
| DIENSÃO SUPERIOR | 1672 | 1672 | 1671 |
| HIGHER DIMENSION | 1673 | 1673 | 1669 |
| CENTRAL DIMENSION | 1673 | 1673 | 1669 |
| LOWER DIMENSION | 1673 | 1673 | 1669 |

4mm


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



| | | | | |
|---|--|------------|-------------------|--|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. | Project: PRASA | |
| | | 29 | | |
| | | Date | SI.CB1220.276.V29 | |
| | | 28/10/2023 | | |

| CBS measurement (Manufacturing) | | | | |
|--|--|--|--|--|
| Dye penetrant test | | | | |
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Dye penetration test to be performed by quality personnel </div>  | | | | |

| Item | Description of the Issue | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|------|--------------------------|----|--------------------------------|--------------------------|
| | | | | |
| | | | | |
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| IL2 - Check List REX | | | | | | |
|----------------------|-----------------|-----------------|--|----|--------------------------------|--------------------------|
| Check List Items | | | | | | |
| Item | Picture/Drawing | Description | Criteria/Record | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| 01 | N/A | To complete REX | Refer to REX. New defects must be added on the REX | | | |

| | | | | | |
|---|--|--|--|--------------------|-------------------------------------|
|  | | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | | Rev. 29 | Project: PRASA SI.CB1220.276.V29 |
| | | | | Date 28/10/2023 | |
| | | 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) | 05/02/24 | Mashudi |  |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party) | 05/02/24 | Ntokozo |  |
| | | 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":

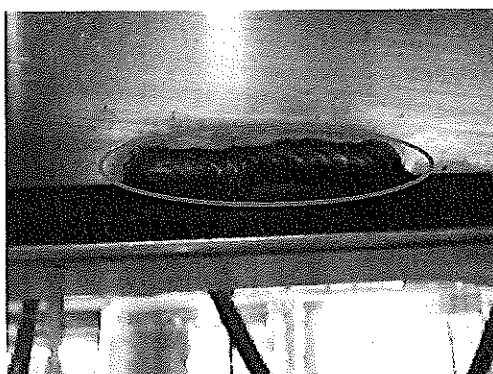
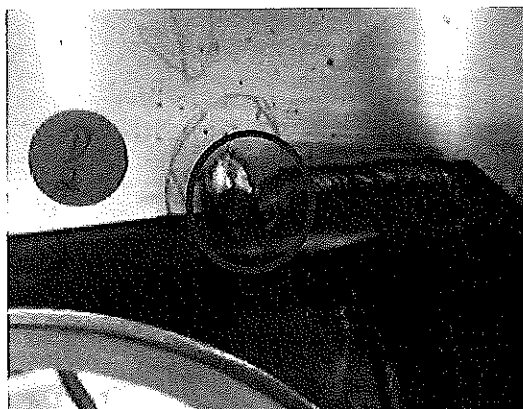
| Item | Description | Responsible | Due date | Status |
|------|-------------|-------------|----------|--------|
| | | | | |
| | | | | |
| | | | | |

Operations

Quality

| | | | |
|---|--|------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY DTR31374497/2 | Rev. 29 | Project: PRASA SI.CB1220.276.V29 |
| | | Date | |
| | | 28/10/2023 | |

ANNEXURE A: Arc Welding Quality Acceptance Standard



GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1


SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

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

APPLICATION REFERENCE

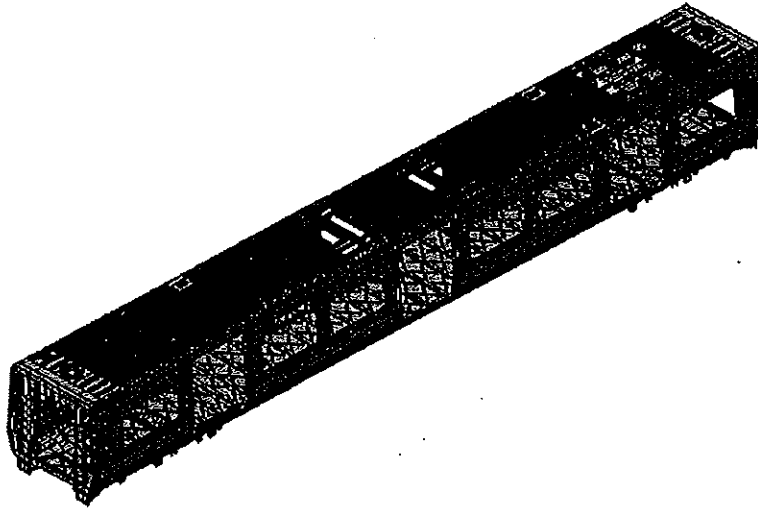
| MOUNTING | DRAWING | DESCRIPTION | STATION | CAR TYPE | | | | | | WORK INSTRUCTION | SAFETY ? |
|--------------------------|---------------|---|---------------------------|------------------------|------------|----|----|----|----|------------------------------|----------|
| | | | | 1C | 2C | 3C | 4C | 5C | 6C | | |
| <input type="checkbox"/> | AA00001374497 | AA00001374497 | CARBODYSHELL KIT ASSEMBLY | | | | | X | | PRA.CB1230.AA00001374497.V20 | YES |
| <input type="checkbox"/> | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | |
| REV | DATE | MODIFICATION CONTENT | RESPONSIBLE | NAME | DATE | | | | | | |
| 0 | 2018/08/02 | GIBELA NEW CREATION | APPROVER | Philip Marques | 2018/08/02 | | | | | | |
| | | | CHECKER | Nosizo Pindela | 2018/08/02 | | | | | | |
| | | | COMPILED | 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 Mtuli | 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 | Vanessa Mtuli | 13/03/2019 | | | | | | |
| 10 | 23/03/2019 | New Baseline 10.2.5 | APPROVER | Itumeleng Modiba | 23/03/2019 | | | | | | |
| | | | CHECKER | Nosizo Pindela | 23/03/2019 | | | | | | |
| | | | REVISED BY | Nosizo Pindela | 23/03/2019 | | | | | | |
| | 06/08/2020 | New Baseline 10.2.6 | APPROVER | Timothy Maimela | 06/08/2020 | | | | | | |
| | | | CHECKER | Bongane Masina | | | | | | | |
| | | | REVISED BY | Bongane Masina | | | | | | | |
| 20 | 19/04/2021 | New Baseline change 10.3 | APPROVER | Timothy Maimela | 19/04/2021 | | | | | | |
| | | | CHECKER | Bongane Masina | | | | | | | |
| | | | REVISED BY | Bongane Masina | | | | | | | |
| 25 | 20/02/2022 | New Baseline change 10.3.1 | APPROVER | Collins Mhombhli | 20/02/2022 | | | | | | |
| | | | CHECKER | Andani Muthelo | | | | | | | |
| | | | REVISED BY | Andani Muthelo | | | | | | | |
| 26 | 14/06/2022 | Update minimum temperature requirement for sealant application | APPROVER | Collins Mhombhli | 14/06/2022 | | | | | | |
| | | | CHECKER | Andani Muthelo | | | | | | | |
| | | | REVISED BY | Andani Muthelo | | | | | | | |
| 27 | 26/07/2022 | Threshold measurement addition | APPROVER | Collins Mhombhli | 27/07/2022 | | | | | | |
| | | | CHECKER | Andani Muthelo | | | | | | | |
| | | | REVISED BY | Andani Muthelo | | | | | | | |
| 28 | 17/10/2022 | Addition of traceability for sealant application | APPROVER | Collins Mhombhli | 17/10/2022 | | | | | | |
| | | | CHECKER | Ntokozo Zwane | | | | | | | |
| | | | REVISED BY | Amogelang Mohlampe | | | | | | | |
| 29 | 14/04/2023 | Added sealant batch number & welding consumables traceability | APPROVER | Vanessa Mtuli | 14/04/2023 | | | | | | |
| | | | CHECKER | Ntokozo Zwane | | | | | | | |
| | | | REVISED BY | Amogelang Mohlampe | | | | | | | |
| 30 | 06/11/2023 | Added traceability on thresholds for boiler makers and welders | APPROVER | Hgobeni Tyson | 06/11/2023 | | | | | | |
| | | | CHECKER | Andani Muthelo | | | | | | | |
| | | | REVISED BY | Ntokozo Zwane | | | | | | | |
| TRAINSET | CAR | OPERATOR NAME & NO | DATE | SELF INSPECTION NUMBER | PAGES | | | | | | |
| 209 | M02 | Nontwanihla 427623 | 06/02/24 | SI.CB1230.277.V29 | 11 | | | | | | |

| | | | |
|---|--|--------------------|---|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. 30 | Project: PRASA SI.CB1230.277.V29 |
| | | Date 08/11/2023 | |
| | | | |

| | | | |
|------|------|---------------|--------|
| Car: | NCR: | Work station: | CB1230 |
|------|------|---------------|--------|



Safety Related



I - Documentation and Instruments Control

1.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | I | NOK | In work | Signature/Date (Operations) | Signature/Date (Quality) |
|--------------------------|-------------|---|---|---|---|---|----------|-------------|---|-----|---------|-----------------------------|--------------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| PRA.CB1230.AA00001374497 | | | X | | | | 30 | | ✓ | | N/A | 08/11/2023 | 08/11/2023 |

1.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

| Instrument | Serial Number | Calibration or Verification Validation Date | I | NOK | Signature/Date (Operations) | Signature/Date (Quality) |
|--------------------|---------------|--|---|-----|-----------------------------|--------------------------|
| Tubular | 22-113 | 26-06-24 | ✓ | | | |
| Measuring tape | GE0894 | 05-04-24 | ✓ | | Nonmanhla 06/02/24 | 06/02/24 |
| Combination Square | GE08072 | 27-07-24 | ✓ | | | 06/02/24 |

1.3 Consumables

Welding Consumable Control - Used for Special Process

| Filler Material | Heat Number | Welding Process | I | NOK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|-------------|-----------------|---|-----|--------------------------------|--------------------------|
| ER 308 L 1 mm | 310180 | MIG | ✓ | | 08/11/2023 | 08/11/2023 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.
30
Date
06/11/2023


Project: PRASA

SI.CB1230.277.V29

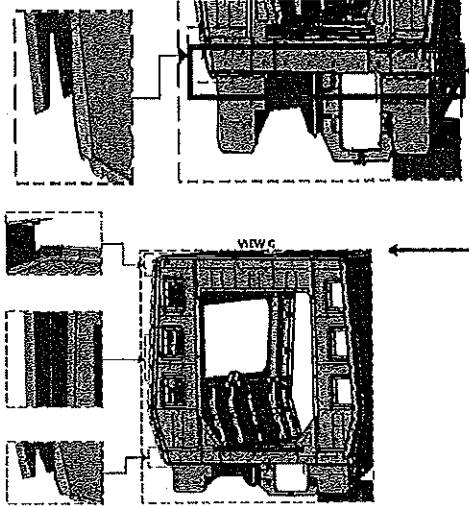
II - Self Inspection - Items to Check

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.AA00001374497 Verification of fitment for all brackets. | PRA.CB1230.AA00001374497 | OK | | | |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality | DTD0000210675 | OK | | | |
| 03 | REFER TO ANNEXURE A | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | OK | | | |
| 04 | | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | OK | | | |
| 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 | | | |
| 06 | | Perform visual inspection of welds in 100% of the project. Run by penetrant testing in electric arc welding (weld ring) as IND-SAL-WMS-018. Run by penetrant testing welds (weld ring) and fillet sampling as described in DTD0000210658. | As the welding procedure IND-SAL-WMS-018 and DTD0000210658. | OK | | | |
| 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 Relative humidity Min - Max (%) Min-Max 10°C - 35°C 25% - 80% | Sealant Batch No: <u>ISR 76-03</u> Exp Date: <u>09/24</u> Actuals Temperature: <u>29°C</u> Humidity: <u>27%</u> | OK | | | |
| 08 | N/A | Verification of sealant application in regions of roof and sideframe. | Sealant applied in regions of roof and sideframe. | OK | | | |

| | | | |
|---|--|------------|---|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. 30 | Project: PRASA SI.CB1230.277.V29 |
| | | Date | |
| | | 08/11/2023 | |

AREA 1



END 2 SEALANT

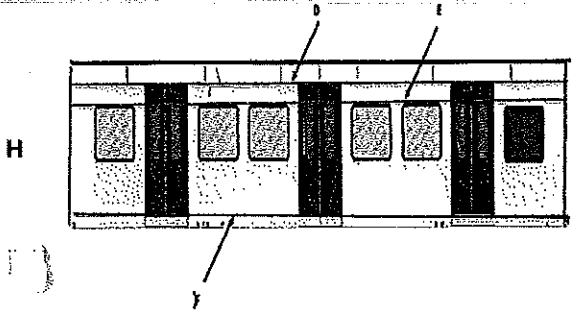
OPERATOR
(Name & sign):

Zande

OPERATOR
(Name & sign):

Zande

OPERATOR
(Name & sign):



| Area D,E,F,G,H,I | LHS | RHS |
|-------------------------|------------|------------|
| Operator (Name & sign): | DEFGHI | DEFGHI |
| Operator (Name & sign): | Bule #1010 | Bule #1010 |
| Operator (Name & sign): | Bule #1010 | Bule #1010 |
| Operator (Name & sign): | | Sile |
| Operator (Name & sign): | | OK |
| Operator (Name & sign): | | |



CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.

30

Date

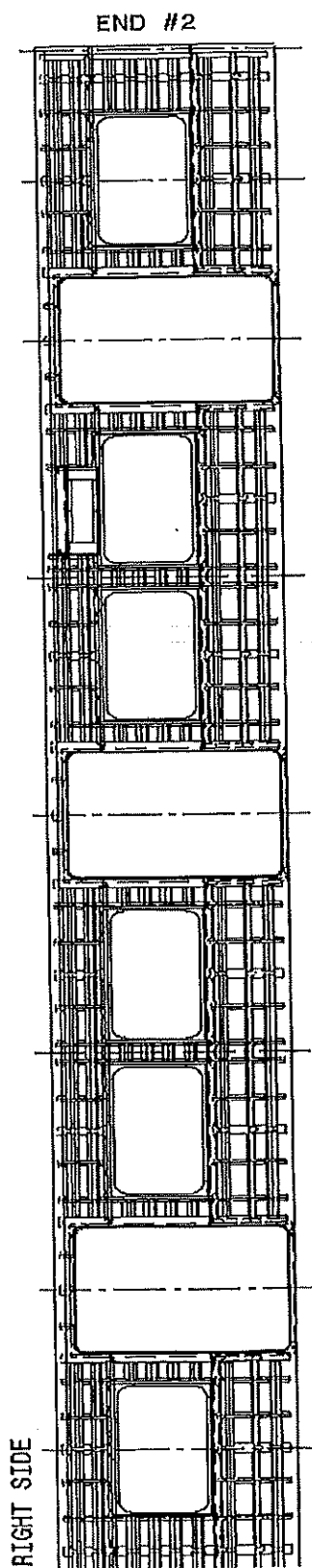
08/11/2023

Project: PRASA

SI.CB1230.277.V29

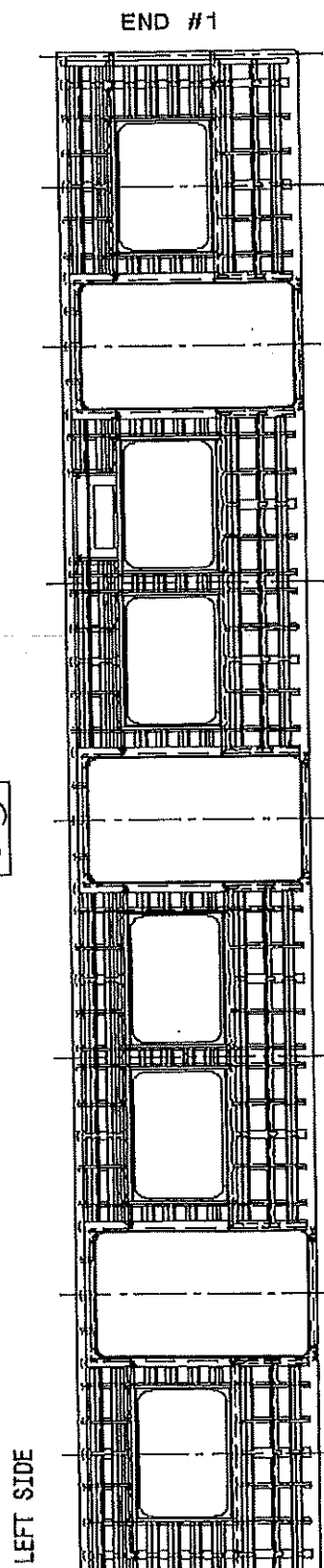
Specifications of Details for CBS measurement CB1230

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




MAXIMUM 1

MINIMUM 0.5

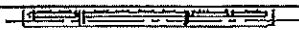


MAXIMUM 0.3

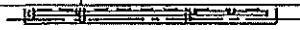
MINIMUM 0.2

| | | | |
|---|--|--------------------|----------------|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. 30 | Project: PRASA |
| | | Date 08/11/2023 | |


LL



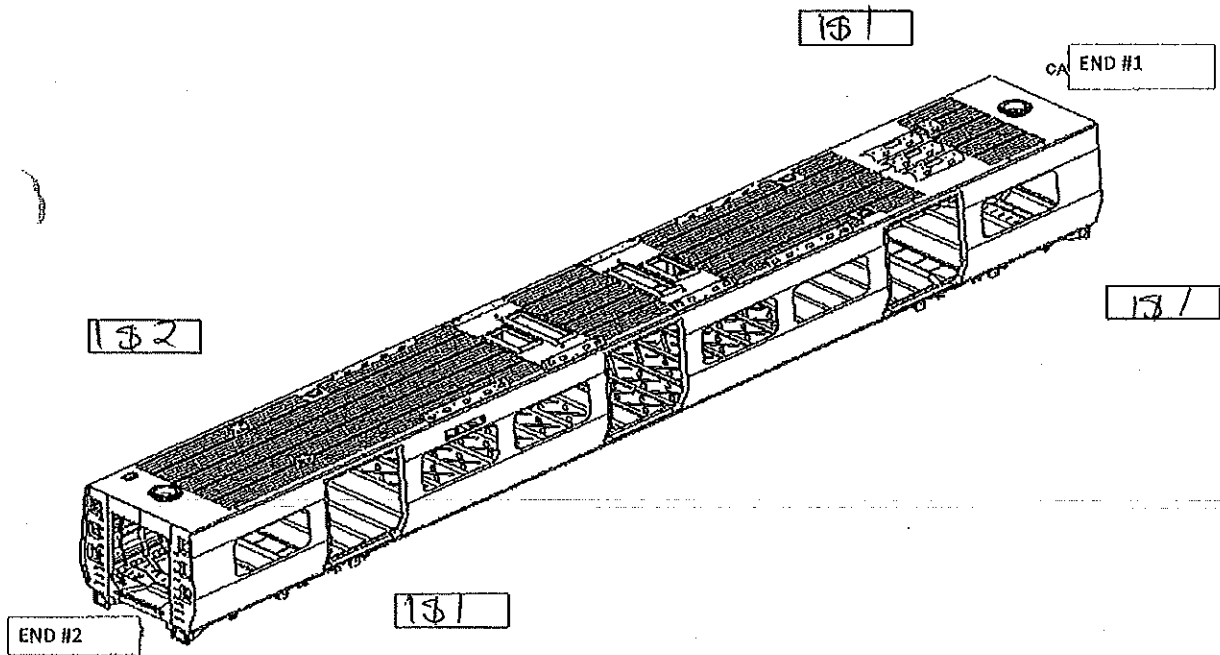
END #1



END #2

| | | | |
|---|--|------------|-------------------------------------|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. | Project: PRASA SI.CB1230.277.V29 |
| | | 30 | |
| | | Date | |
| | | 08/11/2023 | |
| 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 | 1 |
| LONGITUDINAL | 1 |



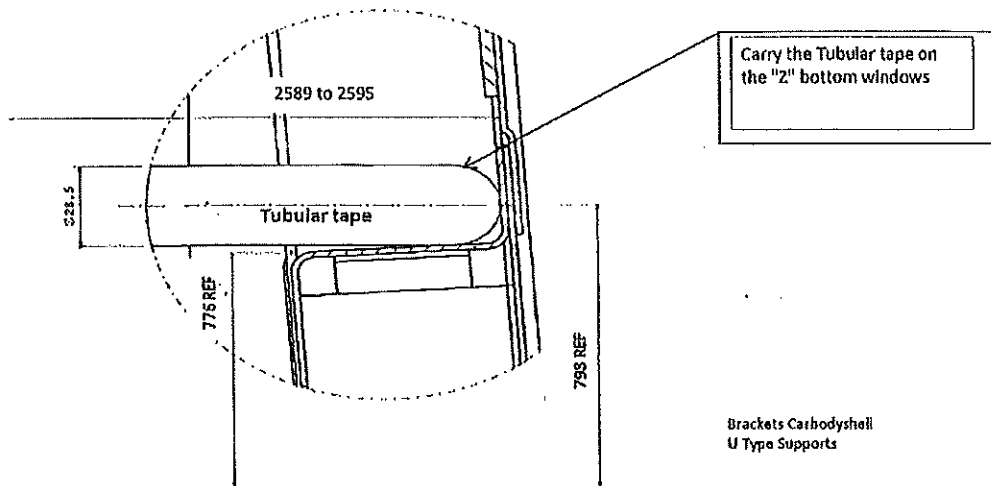
CARBODYSHELL M2 ASSEMBLY AA00001374497

Rev.
30
Date
08/11/2023

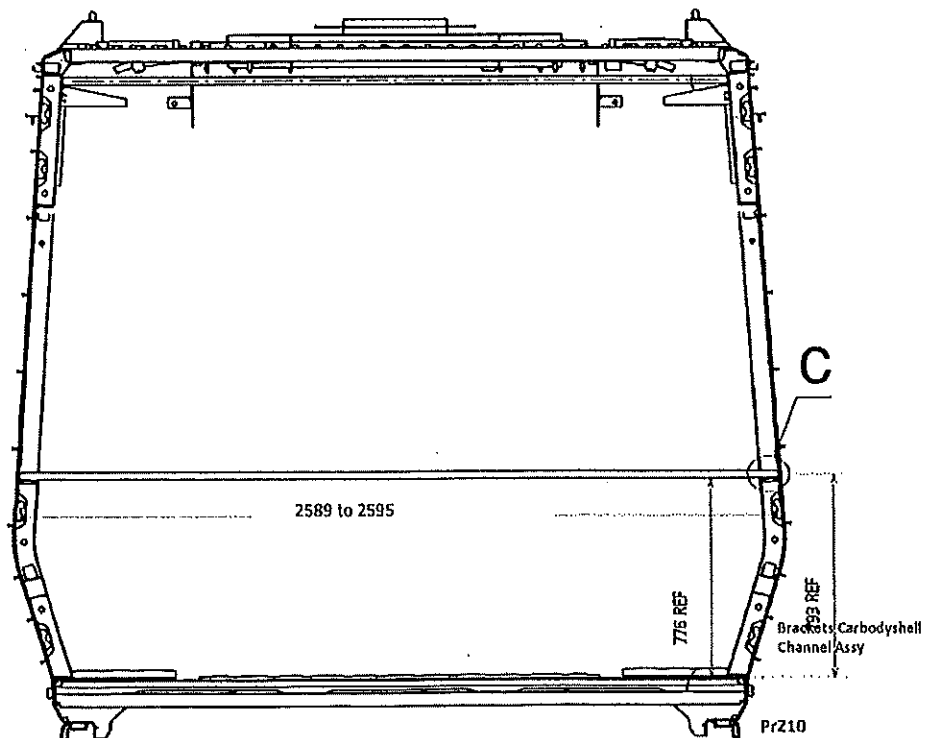
Project: PRASA

SI.CB1230.277.V29

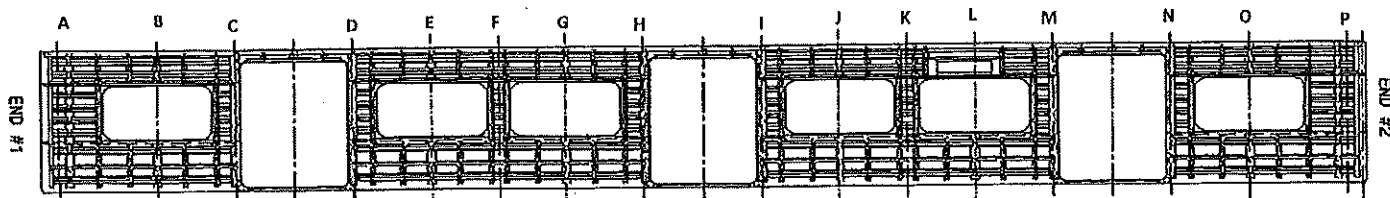
Specifications of Details for CBS measurement CB1230



Detail C



Specifications of Details for CBS measurement CB1230



2589 to 2595mm

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




| Threshold verification | | | | Nominal value :38 | |
|------------------------|----|--------|----|-------------------|----|
| Door 1 | | Door 2 | | Door 3 | |
| L | R | L | R | L | R |
| 38 | 38 | 39 | 28 | 39 | 38 |
| Door 4 | | Door 5 | | Door 6 | |
| L | R | L | R | L | R |
| 29 | 39 | 38 | 39 | 28 | 38 |


BOILER MAKER:

Khosi

WELDER:

Zanele

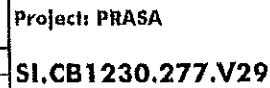
| | | | |
|---|--|--------------------|--|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. 30 | Project: PRASA SI.CB1230.277.V29 |
| | | Date 06/11/2023 | |
| <div style="border: 1px solid black; height: 20px; width: 50%; margin-left: 80px;"></div> | | | |

| | | | |
|---|--|--------------------|--|
|  | CARBODYSHELL M2 ASSEMBLY AA00001374497 | Rev. 30 | Project: PRASA SI.CB1230.277.V29 |
| | | Date 08/11/2023 | |




Dye penetrant test

Dye-penetration test to be performed by quality personnel



[illegible]

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

| | | | | | | |
|--|-------------|---|-------------|----------------------------------|---|-------------------|
|  | | CARBODYSHELL M2 ASSEMBLY AA00001374497 | | Rev. 30 | Project: PRASA | |
| | | | | Date 06/11/2023 | | SI.CB1230.277.V29 |
| 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 | | (If activities are not complete, the missing activities must not impact the next stage) | 06/02/2024 | Nonhlanhla Operations |  | |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.) | 06/02/2024 | Nonhlanhla 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