

GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

SELF INSPECTION SHEET

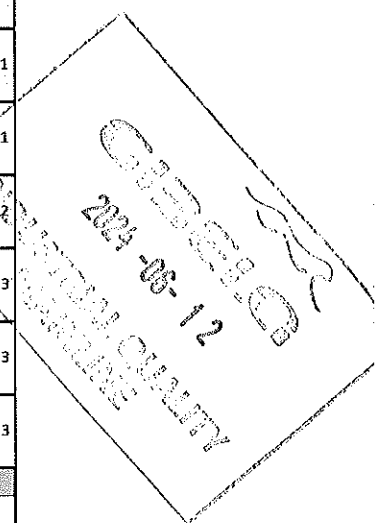
CONFIDENTIAL INFORMATION


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 ? |
|--|---------------|----------------------|---------|----------|----|----|----|----|-----|----------------------------------|----------|
| <input type="checkbox"/> DTR30223319/3 | AAD0001241033 | Carshell Assembly TC | CB1210 | TC1 | M4 | M1 | M2 | M3 | TC2 | PRA.CB1210.DTR3022331 9/3.V25 | YES |
| <input type="checkbox"/> | | | | | | | | | | | |

| REV | DATE | MODIFICATION CONTENT | RESPONSIBLE | NAME | DATE |
|----------|------------|---|-------------|------------------------|------------|
| 0 | 09/04/2018 | GIBELA NEW CREATION | APPROVER | Itumeleng Modiba | 09/04/2018 |
| | | | CHECKER | Nosizo Pindela | 09/04/2018 |
| | | | COMPILER | Thanyani Mathegu | 06/04/2018 |
| 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 | 2018/06/18 | MODIFICATION CONTENT | APPROVER | Itumeleng Modiba | 2018/06/18 |
| | | | CHECKER | Nosizo Pindela | 2018/06/18 |
| | | | REVISED BY | Ramokone Motama | 2018/06/18 |
| 3 | 2018/12/12 | Additional checkpoints | 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 | 2019/11/03 | Record D1 and D2 on Self - Inspection | APPROVER | Itumeleng Modiba | 2019/11/03 |
| | | | CHECKER | Nosizo Pindela | 2019/11/03 |
| | | | REVISED BY | Nosizo Pindela | 2019/11/03 |
| 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 | 19/04/2020 | 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 | Mohlame Amogelang | |
| | | | REVISED BY | Mohlame Amogelang | |
| 27 | 27/07/2023 | Added verification of loaded parts | APPROVER | Ngobeni Tyson | 27/07/2023 |
| | | | CHECKER | Mathapo Kelebone | |
| | | | REVISED BY | Mohlame Amogelang | |
| 28 | 07/11/2023 | Addition of welding traceability | APPROVER | Ngobeni Tyson | 07/11/2023 |
| | | | CHECKER | Andani Muthelo | |
| | | | REVISED BY | Ntokozi Zwane | |
| TRAINSET | CAR | OPERATOR NAME & ALPS NUMBER | DATE | SELF INSPECTION NUMBER | PAGES |
| 232 | TC1 | Teleng [Signature] | 10/06/24 | SI.CB1210.322.V28 | 16 |

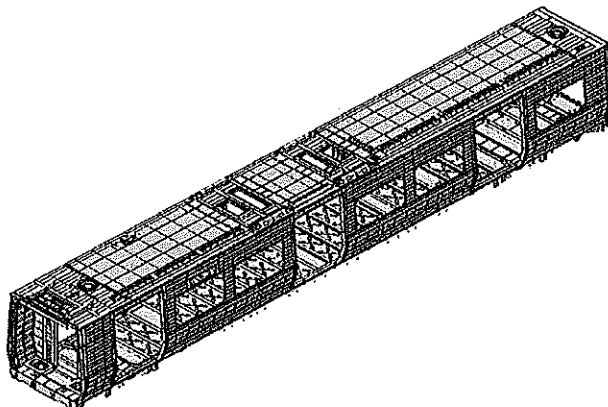


| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB1210.322.V28 |
| | | Date- 07/11/2023 | |

| | | |
|----------------|------|----------------------|
| Car: TC1 & TC2 | NCR: | Work station: CB1210 |
|----------------|------|----------------------|



Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | OK | NO | N/A | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|----|----------|-------------|----|----|-----|--------------------------------|--------------------------|
| | TC | MT | MS | ST | ST | ST | | | | | | | |
| DTR30223319/3 | X | | | | | | | | | | N/A | <i>[Signature]</i> | |

I.2 - Instruments Control

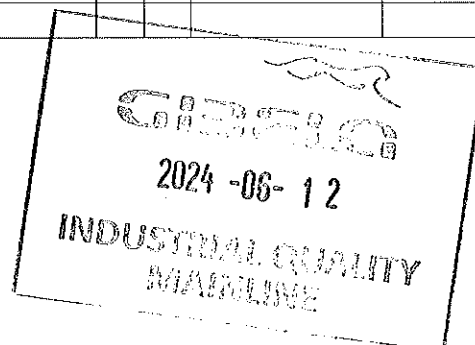
Monitoring and Measuring Instrument Control - Used for Special Process


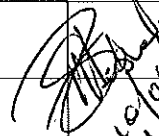



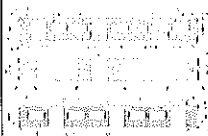






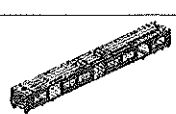
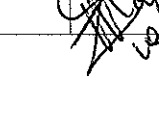



| Instruments | Validation | Calibration or Verification Validation Date | OK | NO | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-------------|------------|--|----|----|--------------------------------|--------------------------|
| Tubular | 32 423-2 | 18/03/28 | ✓ | | <i>[Signature]</i> | |
| 3mm tape | C487P0102 | 18/11/24 | ✓ | | <i>[Signature]</i> | |
| Laser tape | 1284 28924 | 08/01/25 | ✓ | | <i>[Signature]</i> | |
| | | | | | | |

I.3 Consumables

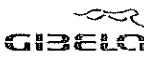
Welding Consumable Control - Used for Special Process

| Filler Material | Heat Number | Welding Process | OK | NO | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|--------------|-----------------|----|----|--------------------------------|--------------------------|
| ER308 LS | 314018-74097 | Mig | ✓ | | <i>[Signature]</i> | |
| al 308 | 299687-70322 | Tig | ✓ | | <i>[Signature]</i> | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



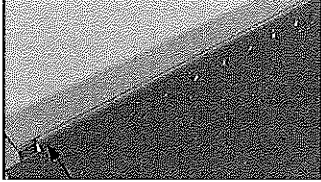
|  | | DTR30223319/3 Carshell Assembly TC | | Rev. V28 Date- 07/11/2023 | | Project: PRASA SI.CB1210.322.V28 | |
|---|---|---|--|------------------------------|--------|---|---|
| Item | Picture/Drawing | Description | Acceptance criteria / Record | OK | Not OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| 01 | N/A | Verification of correct parts loaded (Sidewalls, Endframes, Roof and Underframe) | DT00000284980 | ✓ | |  10/06/24 |  10/06/24 |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality. | DTD0000210675 | ✓ | |  10/06/24 |  10/06/24 |
| 03 |  | Functional dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document. | Approved according specified on pages below. | ✓ | |  10/06/24 |  10/06/24 |
| 04 | REFER TO ANNEXURE A | Spot Welding inspected and approved according procedure | IND-SAL-WMS-016 e DTD0000210675 | ✓ | |  10/06/24 |  10/06/24 |
| 05 | REFER TO ANNEXURE B | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | ✓ | |  10/06/24 |  10/06/24 |
| 06 |  | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | ✓ | |  10/06/24 |  10/06/24 |
| 07 | 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. | As the welding procedure IND-SAL-WMS-018 and DTD0000210658 | ✓ | |  10/06/24 |  10/06/24 |

2024-06-12
 2024-06-12
 2024-06-12

| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB1210.322.V28 |
| | | Date: 07/11/2023 | |

Welder traceability

Roof ring welds

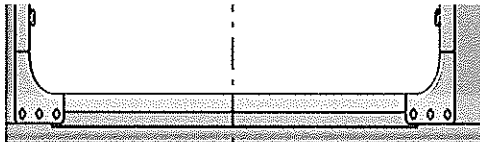


| | |
|--|--------------------------------------|
| LHS | |
| Boiler maker (Name & Sign): <u>LUNGA</u> | Welder (Name & Sign): <u>Thabang</u> |
| RHS | |
| Boiler maker (Name & Sign): <u>Pontsho</u> | Welder (Name & Sign): <u>Thabang</u> |

END 1

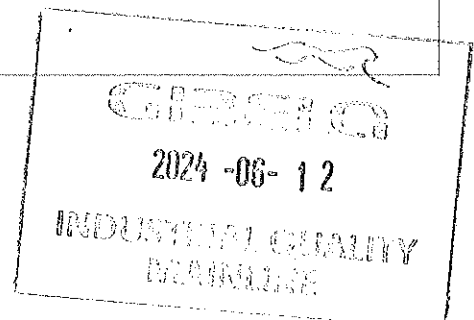
| | |
|--|--------------------------------------|
| LHS | |
| Boiler maker (Name & Sign): <u>LUNGA</u> | Welder (Name & Sign): <u>Thabang</u> |
| RHS | |
| Boiler maker (Name & Sign): <u>Pontsho</u> | Welder (Name & Sign): <u>Thabang</u> |


END 2



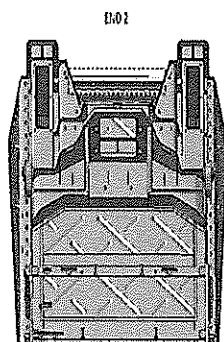
| |
|--|
| LHS |
| Boiler maker (Name & Sign): <u>LUNGA</u> |
| Welder (Name & Sign): <u>Mthokozisi</u> |

| |
|--|
| RHS |
| Boiler maker (Name & Sign): <u>LUNGA</u> |
| Welder (Name & Sign): <u>Mthokozisi</u> |

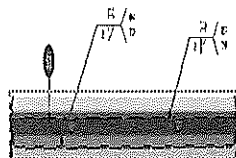


| | | | |
|---|------------------------------------|---------------------|-------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA |
| | | Date- 07/11/2023 | SI.CB1210.322.V28 |

EUF Reinforcement Plates



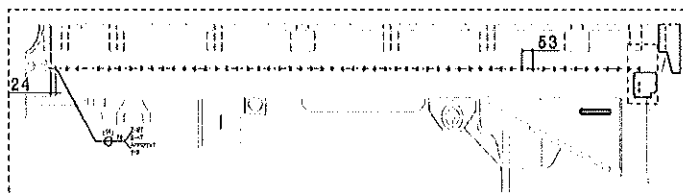
Underneath the CAR



END 2

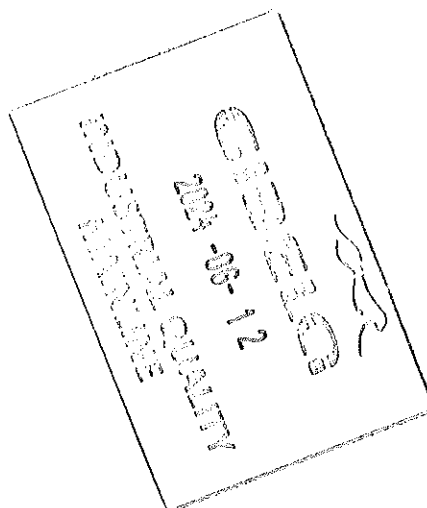
Boiler maker (Name & Sign): Lawrence M. M. M.


Welder (Name & Sign): Siphokazi B.

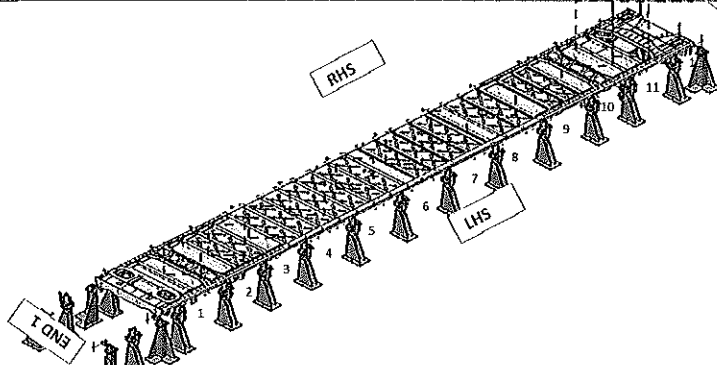


FEDOLI

Operator: L. M. M.



| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA Sl.CB1210.322.V28 |
| | | Date- 07/11/2023 | |
| Specifications of Details for CBS measurement | | | |




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

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


After Loading Underframe and Clamping.

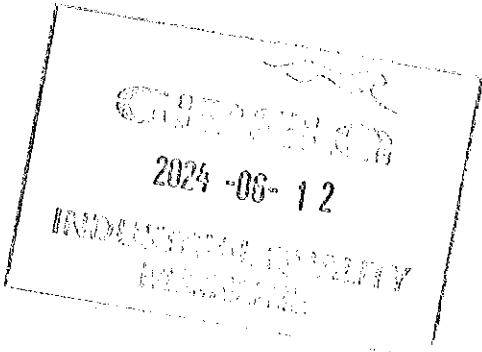
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------|---|---|---|---|----|---|---|---|---|----|----|----|
| Left Hand Side | | | | | NA | | | | | | | |
| Right Hand Side | | | | | | | | | | | | |

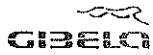
Signature Operations:  Date: 10/06/24

After Weiding.

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

Signature Industrial Quality:  Date: 10/06/24



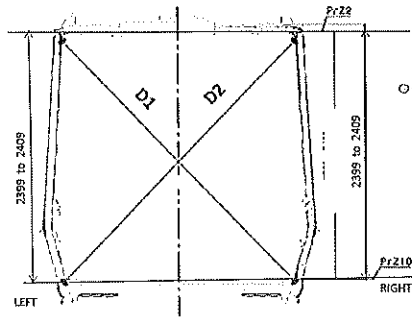
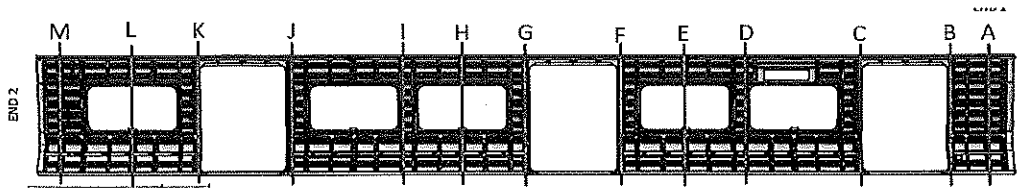


DTR30223319/3 Carshell Assembly TC

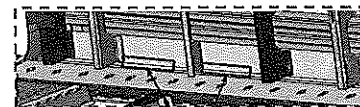
Rev.
V28
Date-
07/11/2023

Project: PRASA
SI.CB1210.322.V28

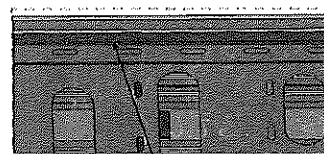
Specifications of Details for CBS measurement



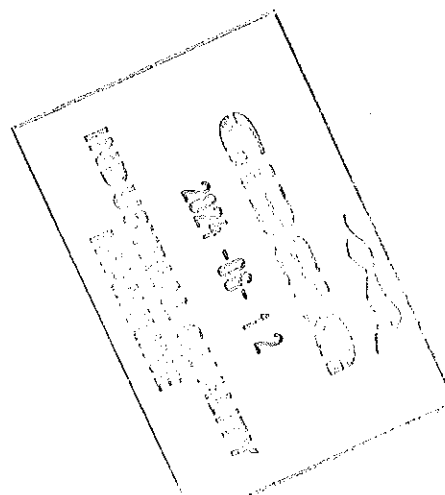
Measurement positions on roof rail and sidewall omega corner.



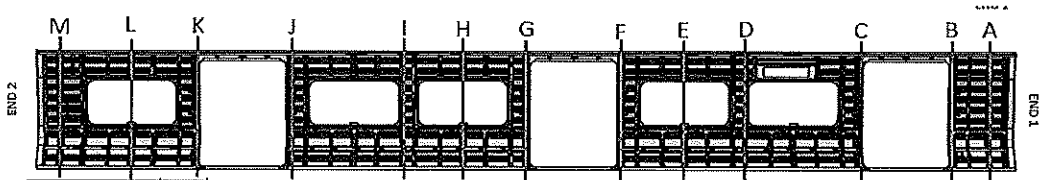
Measurement positions on sidewall and side sill corner.



Reinforcement area measurement positions on roof reinforcement area.

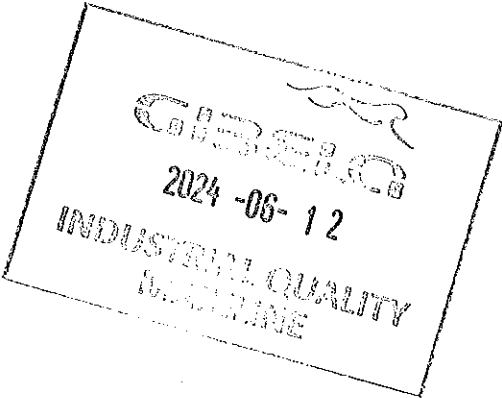


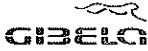
BEFORE WELDING



PME: The difference in Height values measured on the LHS and RHS should be ≤2MM on each point.

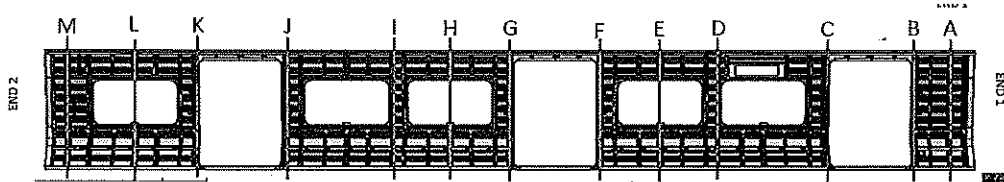
| | Record D1 values | Record D2 values | D1-D2 ≤ 5mm | 2399 to 2409 | 2399 to 2409 (RHS) | LHS-RHS ≤ 2 |
|---|------------------|------------------|-------------|--------------|--------------------|-------------|
| A | 3266 | 3265 | 1 | 2405 | 2405 | 0 |
| B | 3264 | 3266 | 2 | 2406 | 2405 | 1 |
| C | 3266 | 3265 | 1 | 2406 | 2405 | 1 |
| D | 3264 | 3265 | 1 | 2406 | 2404 | 2 |
| E | 3267 | 3266 | 1 | 2403 | 2405 | 2 |
| F | 3266 | 3266 | 0 | 2406 | 2405 | 1 |
| G | 3268 | 3266 | 2 | 2406 | 2406 | 0 |
| H | 3268 | 3266 | 1 | 2407 | 2406 | 1 |
| I | 3266 | 3267 | 1 | 2405 | 2406 | 2 |
| J | 3265 | 3267 | 2 | 2403 | 2404 | 1 |
| K | 3264 | 3267 | 3 | 2404 | 2404 | 0 |
| L | 3264 | 3265 | 1 | 2404 | 2406 | 2 |
| M | 3268 | 3268 | | 2406 | 2408 | 2 |



| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB1210.322.V28 |
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CBS measurement

BEFORE WELDING



2270 to 2276

2268 a 2274

A 2270

B 2274

C 2273

D 2276

E 2275

F 2271

G 2269

H 2274

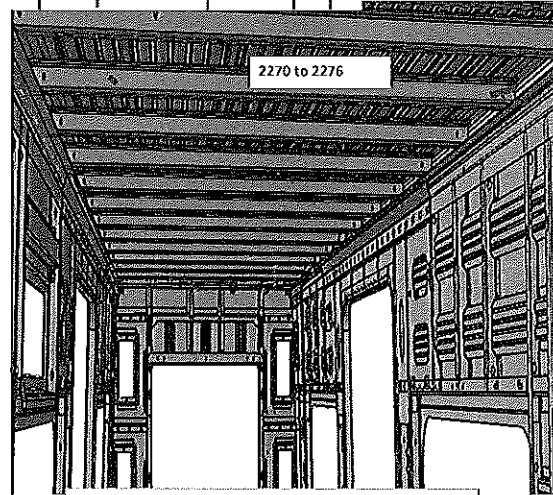
I 2276

J 2271

K 2268

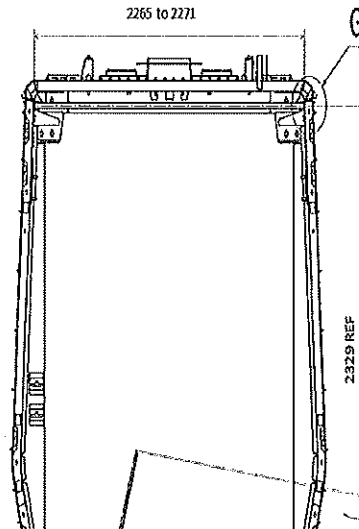
L 2275

M 2272

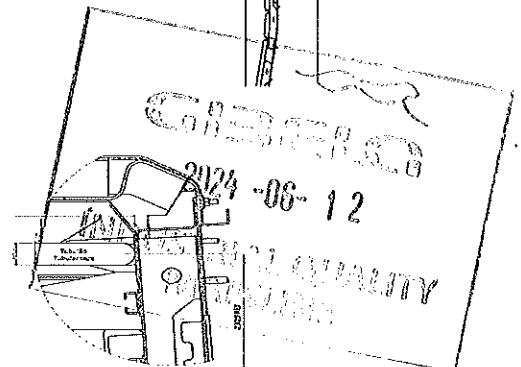


Do not consider reinforcement (Take measurements top area of zee profile

2265 to 2271




2265 to 2271

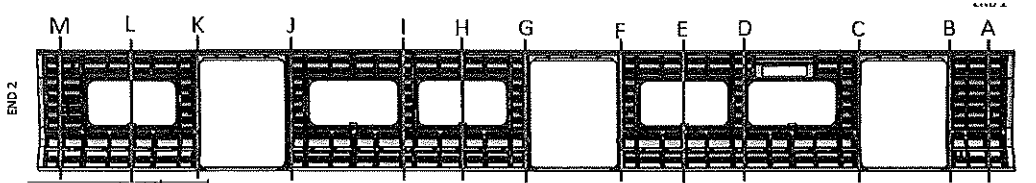


Detail G

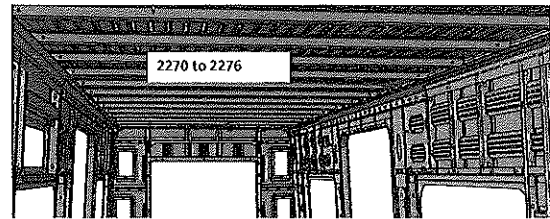
Consider the reinforcement plate

| | | | |
|---|------------------------------------|------------------------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 Date- 07/11/2023 | Project: PRASA SI.CB1210.322.V28 |
| Specifications of Details for GBS measurement | | | |

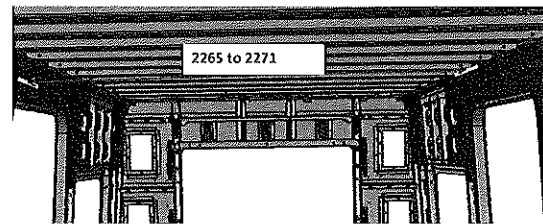
AFTER WELDING



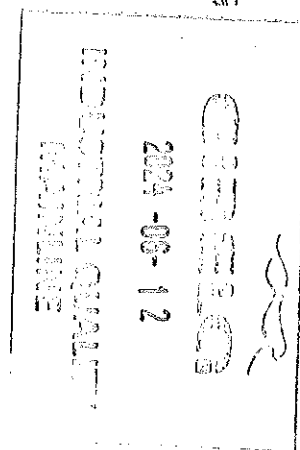
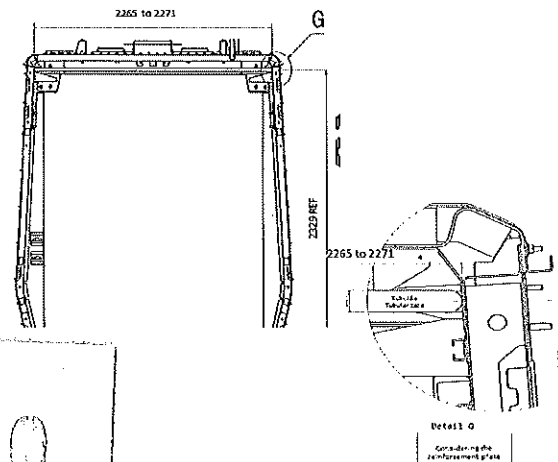
| | 2265 to 2271 | 2270 to 2276 |
|---|--------------|--------------------------------------|
| A | N/A | 2276 |
| B | 2266 | N/A |
| C | 2269 | N/A |
| D | N/A | 2274 |
| E | N/A | 2276 |
| F | 2268 | N/A |
| G | 2270 | N/A |
| H | N/A | 2273 |
| I | N/A | 2275 |
| J | 2271 | N/A |
| K | 2269 | N/A 2275 <i>Base line</i> |
| L | N/A | 2273 |
| M | 2267 | N/A |



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

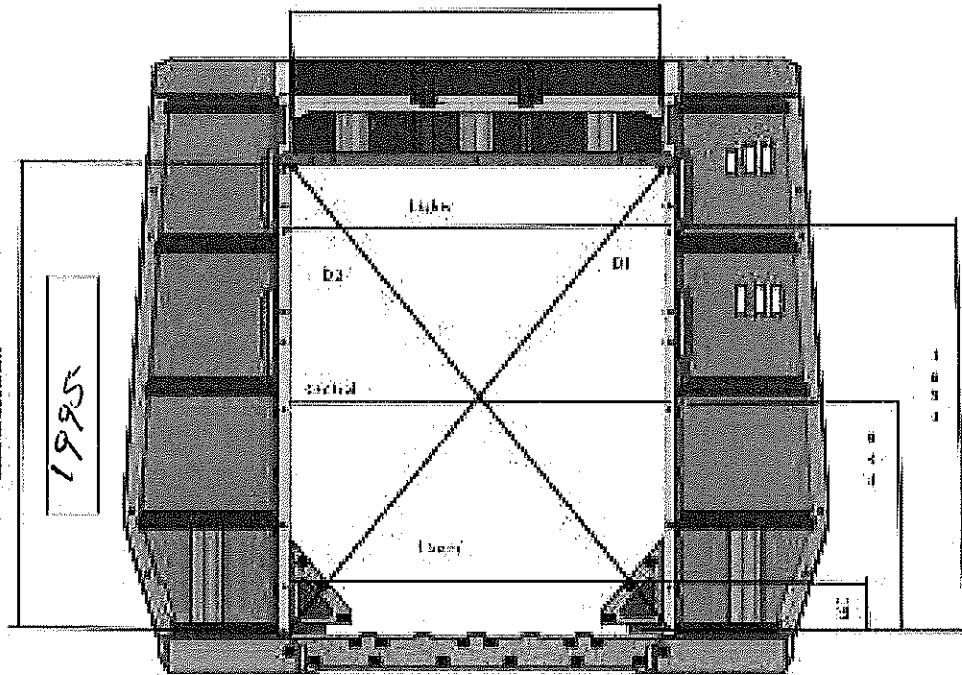


Take measurement close to radius (considering reinforcement)



Specifications of Details (for CBS measurement)

Endframe 2



Upper Distance

DIAGONAL DIFFERENCE: D1-D2 ≤ 3mm

Upper Distance

1381

D1

2414

Central Distance

1381

D2

2414

Lower Distance

1381

D1-D2

0

GIBEL

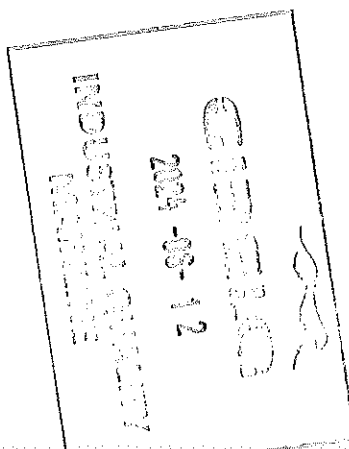
2024-06-12

INDUSTRIAL QUALITY
EQUIPMENT

| | | | | LEFT SIDE | |
|----|-------|---|--------|-------------|--|
| | | SPECIFICATION SIZE | | ACTUAL SIZE | |
| 1A | 18870 | <div style="border: 1px solid black; padding: 2px; display: inline-block;"> ± 10.5 -4.5 </div> | K8 1.8 | | |

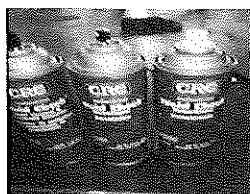
| | | RIGHT SIDE | |
|----|-------|----------------------|-------------|
| | | SPECIFICATION SIZE | ACTUAL SIZE |
| 1A | 16870 | $\frac{+10.5}{-4.5}$ | 1886.7 |

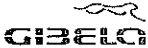
1A

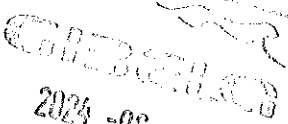





Dye penetrant test

Dye-penetration test to be performed by quality personnel



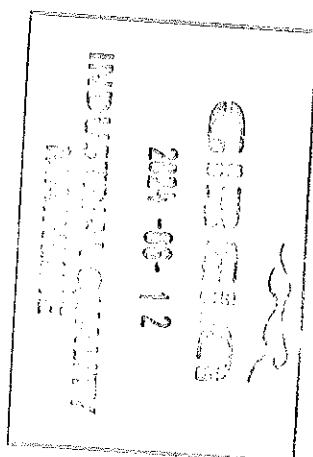
| | | | | | | | |
|---|--------------------------|------------------------------------|--|---------------------|-------------------|-----------------------------------|-----------------------------|
|  | | DTR30223319/3 Carshell Assembly TC | | Rev. V28 | Project: PRASA | | |
| | | | | Date- 07/11/2023 | SI.CB1210.322.V28 | | |
| Item | Description of the Issue | | | | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| | | | | | | | |
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| II.2 - Check List REX | | | | | | | |
| Check List Items | | | | | | | |
| Item | Picture/Drawing | Description | Criteria /Record | OK | NO | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| 01 | N/A | To complete REX | Refer to REX. New defects must be added on the REX | | | | |


2024-03-12
INDUSTRIAL QUALITY
EIRP/REX

| | | | | | | |
|--|-------------|--|-------------|------------------------------------|---|-----------|
|  | | DTR30223319/3 Carshell Assembly TC | | Rev. V28 Date- 07/11/2023 | Project: PRASA SI.CB1210.322.V28 | |
| Self Inspection - Final Result | | | | | | |
| Is the car good to advance to the next workstation/process? (Approval of Operations and Industrial Quality) | | | | DATE | NAME | SIGNATURE |
| HOLD POINT | GO | If activities are not complete, the missing activities must not impact the next stage! | 10/06/24 | Kelobore |  | |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party. | 10/06/24 | Kelobore |  | |
| | NO GO | There are activities pendings that impact/stop the activities of the next process. Obs: (To describe problems below) | | | | |
| | | There are non-conformities impact the quality of the product and there is no corrective action defined yet! | | | | |
| In case of "NO GO", describe blocking problems | | | | | | |
| In case of "NO GO", the operations manager must define below action plan to ensure "GO": | | | | | | |
| Item | Description | Action | Responsible | Due date | Status | |
| | | | | | | |
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| | | | | | | |

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 M&A, and treated as such.

| APPLICATION REFERENCE | | | | | | | | | | | |
|-----------------------|--------------|---|----------|------------------------|--------------------|------------|----|-------|-----|------------------------------|----------|
| MOUNTING | DRAWING | DESCRIPTION | STATION | CAR TYPE | | | | | | WORK INSTRUCTION | SAFETY ? |
| | | | | TCE | MA | MA | MA | MA | TCE | | |
| DT00000223319 | AAD000128963 | DT00000223319 Carshell Assembly IC | CB2230 | X | | | | | | PRA.CB2230.DT00000223319.V20 | YES |
| REV | DATE | MODIFICATION CONTENT | | | | | | | | | |
| 0 | 06/04/2018 | GIBELA NEW CREATION | | | | | | | | | |
| | | | | APPROVER | Itumeleng Modiba | 09/04/2018 | | | | | |
| | | | | CHECKER | Nosizo Pindela | 09/04/2018 | | | | | |
| | | | | COMPILER | Thanyani Mathagu | 06/04/2018 | | | | | |
| 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 | 05/07/2018 | Certain dimensional checks moved to CB1220 | | APPROVER | Itumeleng Modiba | 05/07/2018 | | | | | |
| | | | | CHECKER | Nosizo Pindela | 05/07/2018 | | | | | |
| | | | | COMPILER | Ramokone Motama | 05/07/2018 | | | | | |
| 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 | | | | | |
| | | | | COMPILER | Nosizo Pindela | 13/03/2019 | | | | | |
| 7 | 17/09/2019 | Added Cab Fire Barrier Flatness Measurements | | APPROVER | Itumeleng Modiba | 17/09/2019 | | | | | |
| | | | | CHECKER | Nosizo Pindela | 17/09/2019 | | | | | |
| | | | | COMPILER | Nosizo Pindela | 17/09/2019 | | | | | |
| 10 | 20/09/2019 | New Baseline 10.2.5 | | APPROVER | Itumeleng Modiba | 20/09/2019 | | | | | |
| | | | | CHECKER | Nosizo Pindela | 20/09/2019 | | | | | |
| | | | | COMPILER | Nosizo Pindela | 20/09/2019 | | | | | |
| 15 | 28/01/2021 | New Baseline 10.2.6 | | APPROVER | Timothy Maimela | 28/01/2021 | | | | | |
| | | | | CHECKER | Bongane Masina | 28/01/2021 | | | | | |
| | | | | COMPILER | Bongane Masina | 28/01/2021 | | | | | |
| 20 | 19/04/2021 | New Baseline change 10.3 | | APPROVER | Timothy Maimela | 19/04/2021 | | | | | |
| | | | | CHECKER | Bongane Masina | 19/04/2021 | | | | | |
| | | | | COMPILER | Bongane Masina | 19/04/2021 | | | | | |
| 25 | 20/04/2022 | New Baseline change 10.3.1 | | APPROVER | Collins Mhombhili | 20/04/2022 | | | | | |
| | | | | CHECKER | Andani Muthelo | 20/04/2022 | | | | | |
| | | | | COMPILER | Andani Muthelo | 20/04/2022 | | | | | |
| 26 | 14/06/2022 | Update minimum temperature requirement for sealant application | | APPROVER | Collins Mhombhili | 14/06/2022 | | | | | |
| | | | | CHECKER | Andani Muthelo | 14/06/2022 | | | | | |
| | | | | COMPILER | Andani Muthelo | 14/06/2022 | | | | | |
| 27 | 27/07/2022 | Threshold measurements addition | | APPROVER | Collins Mhombhili | 27/07/2022 | | | | | |
| | | | | CHECKER | Andani Muthelo | 27/07/2022 | | | | | |
| | | | | COMPILER | Andani Muthelo | 27/07/2022 | | | | | |
| 28 | 19/10/2022 | Addition of traceability for sealant application | | APPROVER | Collins Mhombhili | 19/10/2022 | | | | | |
| | | | | CHECKER | Ntokozi Zwane | 19/10/2022 | | | | | |
| | | | | COMPILER | Amogelang Mholampe | 19/10/2022 | | | | | |
| 29 | 14/04/2023 | Added sealant batch number & welding consumables traceability | | APPROVER | Vanessa Ntuli | 14/04/2023 | | | | | |
| | | | | CHECKER | Ntokozi Zwane | 14/04/2023 | | | | | |
| | | | | COMPILER | Amogelang Mholampe | 14/04/2023 | | | | | |
| 30 | 06/11/2023 | Added threshold traceability for boiler makers and welders | | APPROVER | Tyson Ngobeni | 06/11/2023 | | | | | |
| | | | | CHECKER | Andani Muthelo | 06/11/2023 | | | | | |
| | | | | COMPILER | Ntokozi Zwane | 06/11/2023 | | | | | |
| TRAINSET | CAR | OPERATOR NAME & ALPS NUMBER | DATE | SELF INSPECTION NUMBER | | | | PAGES | | | |
| 232 | E1 | Mthokozisi 426954 | 12/06/24 | SI.CB2230.324.V29 | | | | 12 | | | |


2024-06-12
INDUSTRIAL QUALITY
MANLINE



DT00000223319 Carshell Assembly TC

Rev.
30

Project: PRASA

Date-

SI.CB2230.324.V29

06/11/2023

Carro

Car: TC1

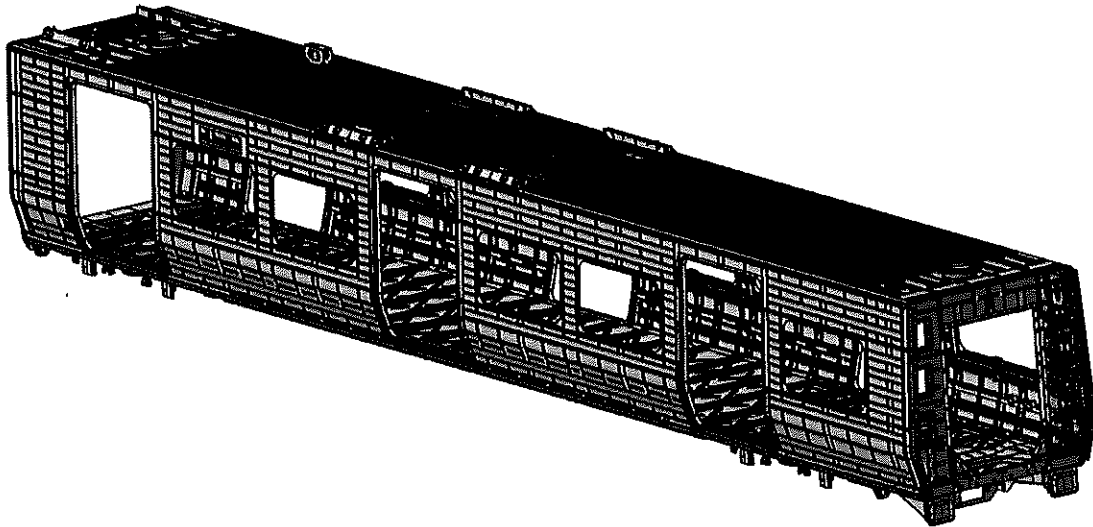
NCR:

Work station:

CB2230



Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | OK | NOK | Rework | Signature/Date (Operations) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|-----|----------|-------------|----|-----|--------|--------------------------------|-----------------------------|
| | TC1 | M1 | M2 | M3 | M4 | TC2 | | | | | | | |
| DT00000223319 | | | | | | X | 30 | 12/06/2024 | ✓ | | N/A | <i>[Signature]</i> | <i>[Signature]</i> |

I.2 - Instruments Control

12/06/24

Monitoring and Measuring Instrument Control - Used for Special Process

| Instruments | Validation | Calibration or Verification Validation Date | OK | NOK | Signature/Date (Operations) | Signature/Date (Quality) |
|--------------------|------------|--|----|-----|--------------------------------|-----------------------------|
| Tubular | 32823-3 | 15/03/2025 | ✓ | | <i>[Signature]</i> | <i>[Signature]</i> |
| Tape measure | GIBTA0431 | 2025/04/17 | ✓ | | <i>[Signature]</i> | <i>[Signature]</i> |
| Combination Square | GIBCO084 | 19/10/2024 | ✓ | | <i>[Signature]</i> | 12/06/24 |

1.3 Consumables

Welding Consumable Control - Used for Special Process

| Filler Material | Heat Number | Welding Process | OK | NOK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|-------------|-----------------|----|-----|-----------------------------------|-----------------------------|
| 308 | 3737229 | 308 MIG | ✓ | | <i>[Signature]</i> | <i>[Signature]</i> |
| | | | | | | |
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DT00000223319 Carshell Assembly TC

Rev.
30

Project: PRASA

Date-

06/11/2023

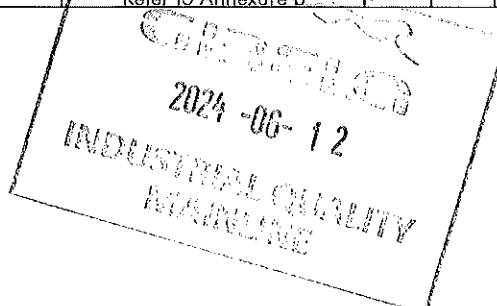
SI.CB2230.324.V29

II - Control Activities of Production

II.1 - Items to check

| Item | Picture/Drawing | Description | Acceptance criteria / Record | OK | NOK | Rework | Signature/Date (Operations) | Signature/Date (Quality) |
|------|---------------------|--|---|----|-----|--------|--------------------------------|-----------------------------|
| 01 | N/A | Assembly according to Instruction Engineering n° DT00000223319 | DT00000223319 | ✓ | | | 12/06/24 | 12/06/24 |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality. | DTD0000210675 | ✓ | | | 12/06/24 | 12/06/24 |
| 03 | REFER TO ANNEXURE A | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 DTD0000210675 | ✓ | | | 12/06/24 | 12/06/24 |
| 04 | N/A | Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document. | Approved according specified on pages below. | ✓ | | | 12/06/24 | 12/06/24 |
| 05 | 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 | ✓ | | | 12/06/24 | 12/06/24 |
| 06 | N/A | Before application of sealant record the expiry date and make sure that the room temperature and humidity are within specified values as per Works Instructions Specified: Temperature Min - Max (1) Min-Max 10°C - 35°C Relative humidity Min - Max (1) Min-Max 25% - 80% | Sealant Batch No: <u>16270-03</u> Exp Date: <u>09/09/24</u> Actuals Temperature: <u>15.5°C</u> Humidity: <u>58%</u> | OK | | | 12/06/24 | 12/06/24 |
| 07 | N/A | Verification of sealant application in regions of roof and sideframe finishers. | Sealant must be: -Applied straight and even (1.5mm) -Free of gaps, cracks, damage and debris (flashes, dirt, dust) | OK | | | 12/06/24 | 12/06/24 |

Refer to Annexure B.





DT00000223319 Carshell Assembly TC

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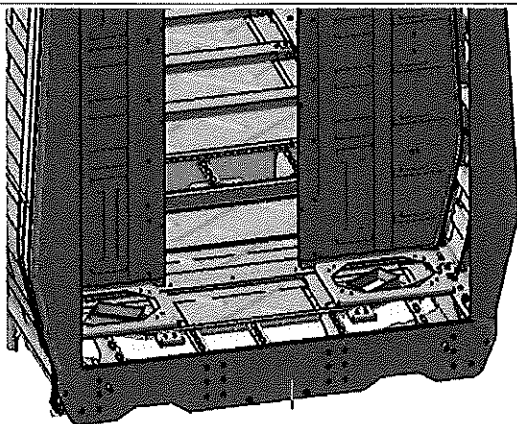
Project: PRASA

Date-

SI.CB2230.324.V29

06/11/2023

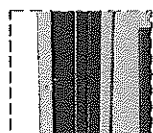
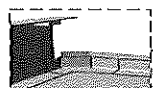
VIEW A

**END 1
SEALANT**OPERATOR
(Name & sign):

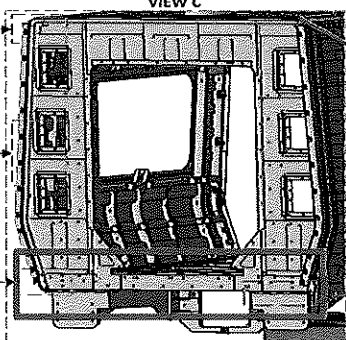
Sihle

OPERATOR
(Name & sign):

Tshenolo



VIEW C

**END 2 SEALANT
(VIEW C)**OPERATOR
(Name & sign):

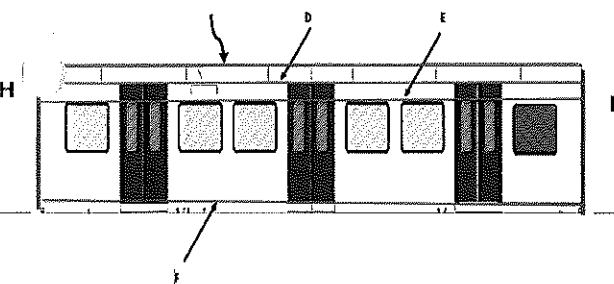
Zanele

OPERATOR
(Name & sign):

Zanele

OPERATOR
(Name & sign):

G



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

Operator(Name & sign):

LHS

D,E,G,H,I

RHS

D,E,G,H,I

Operator (Name & sign):

Sihle

Sihle

Operator (Name & sign):

Tshenolo

Tshenolo

Operator (Name & sign):

Tshenolo

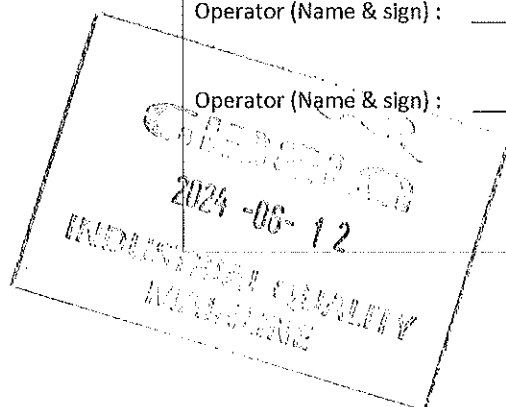
Tshenolo

Operator (Name & sign):

Tshenolo

Tshenolo

Operator (Name & sign):





DT00000223319 Carshell Assembly TC

Rev.
30

Date-

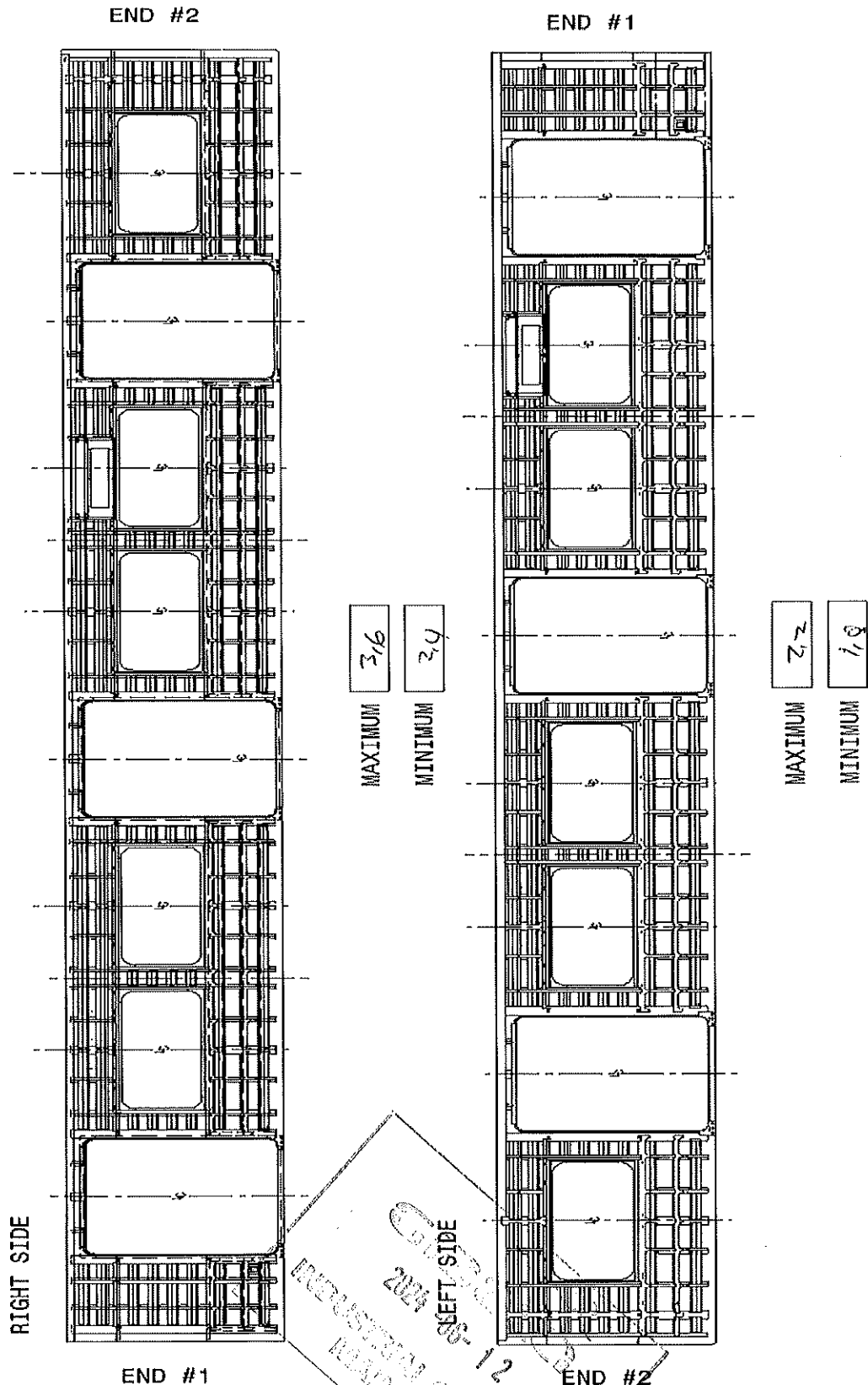
06/11/2023

Project: PRASA

SI.CB2230.324.V29

Specifications of Details for CBS measurement CB2230

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.





DT00000223319 Carshell Assembly TC

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30

Date-

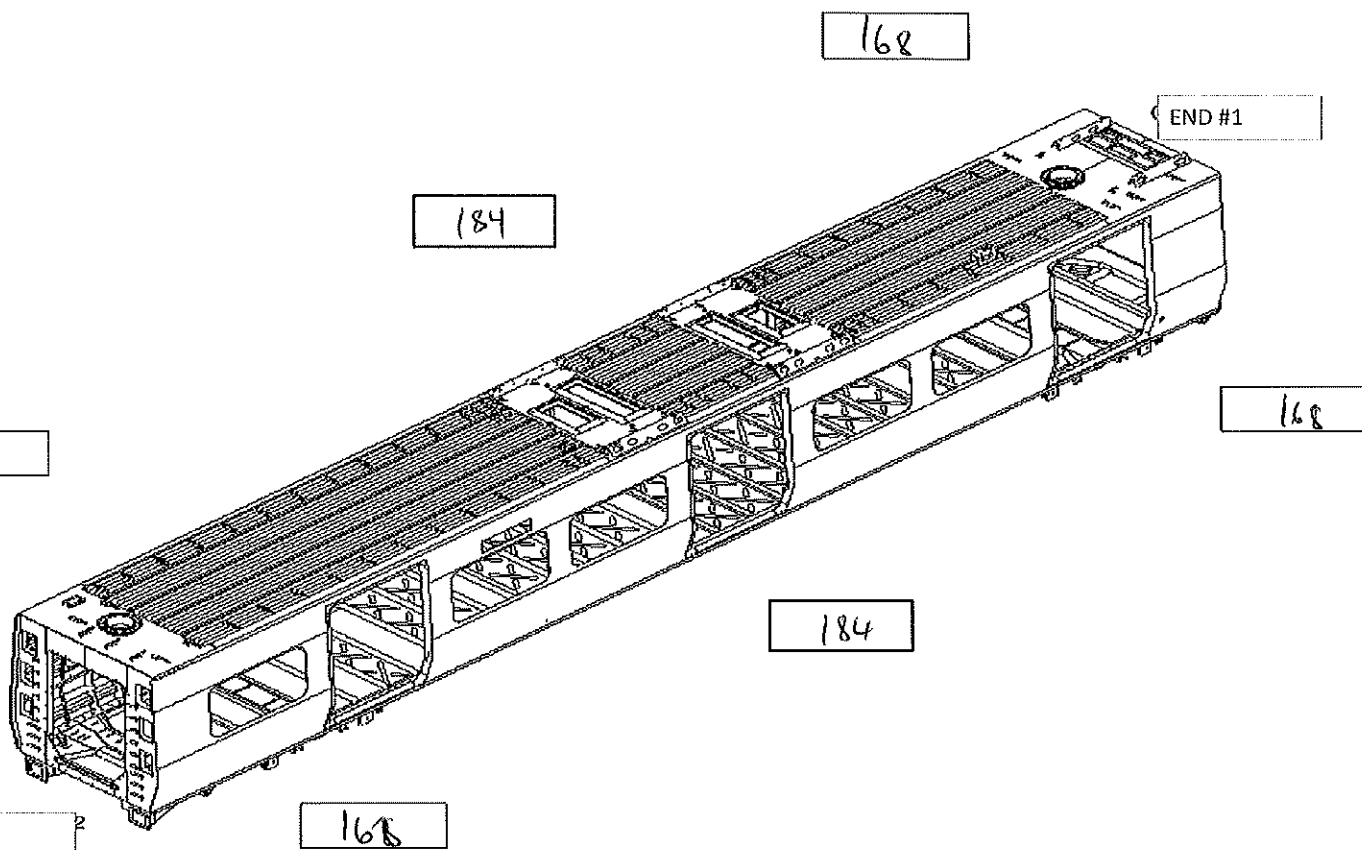
06/11/2023

Project: PRASA

SI.CB2230.324.V29

Specifications of Details for CBS measurement CB2230

Specified Camber for car out of jig is 16mm (-0mm + 2mm)



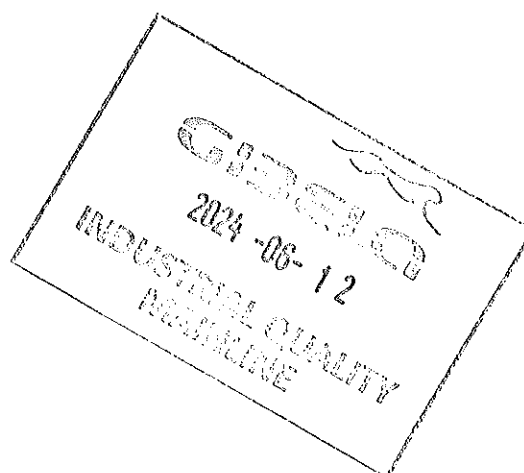
MEASURED CAMBER VALUES

RIGHT

16

LEFT

16





DT00000223319 Carshell Assembly TC

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Project: PRASA

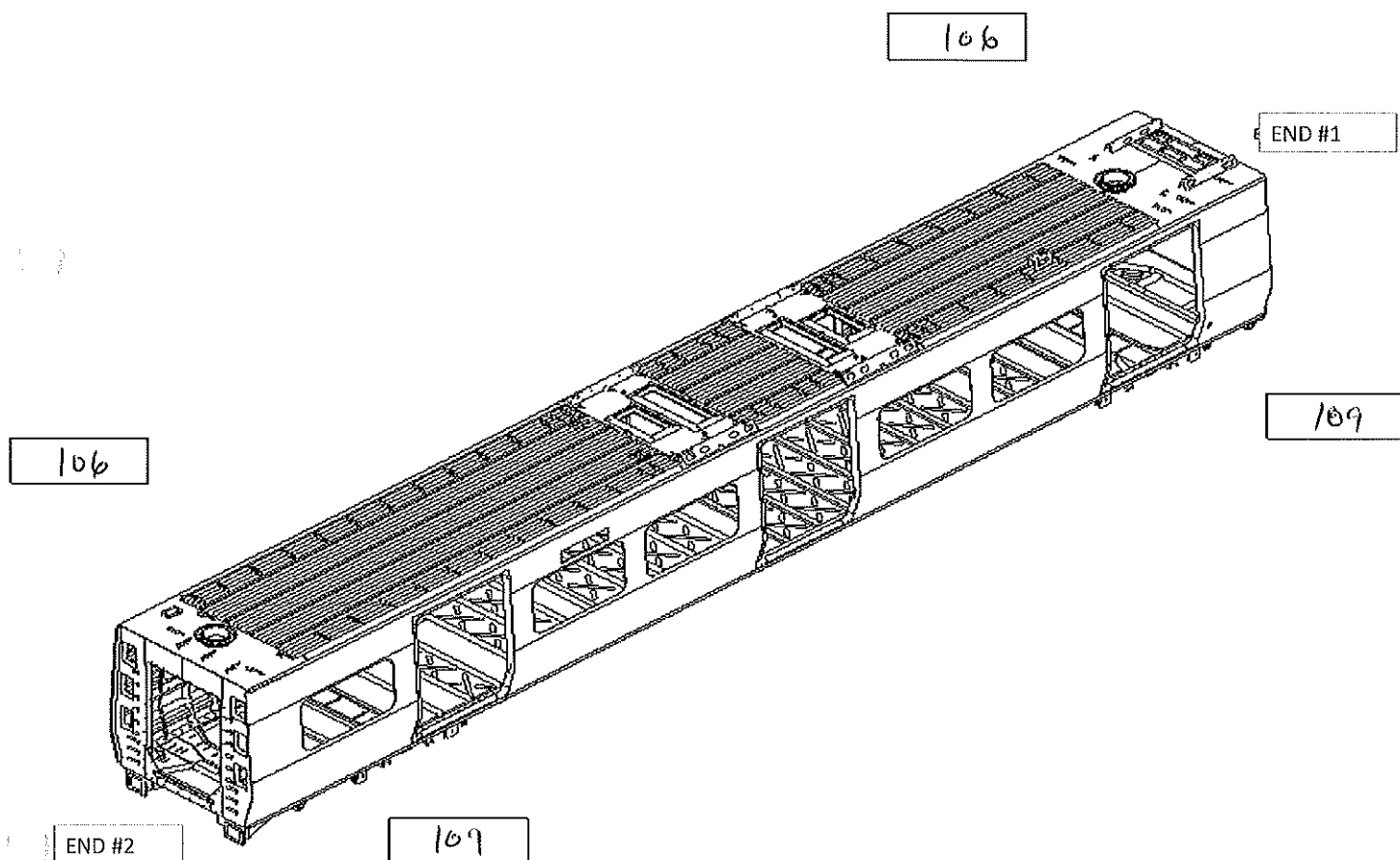
Date-

SI.CB2230.324.V29

06/11/2023

Specifications of Details for CBS measurement CB2230

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.



MEASURED TWIST VALUES END 1

LATERAL

3

LONGITUDINAL

0

MEASURED TWIST VALUES END 2

LATERAL

3

LONGITUDINAL

0



DT00000223319 Carshell Assembly TC

Rev.
30

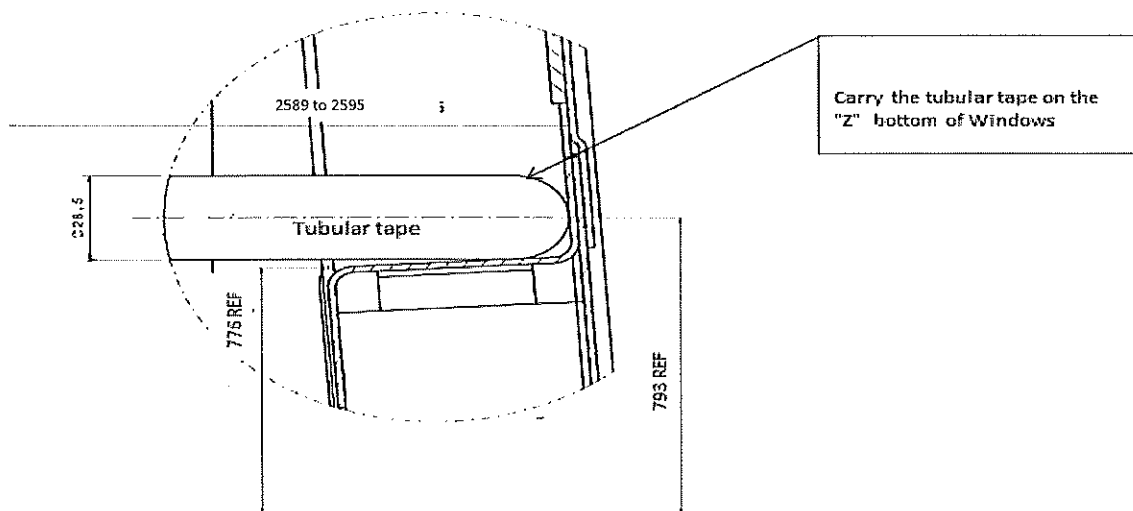
Project: PRASA

Date-

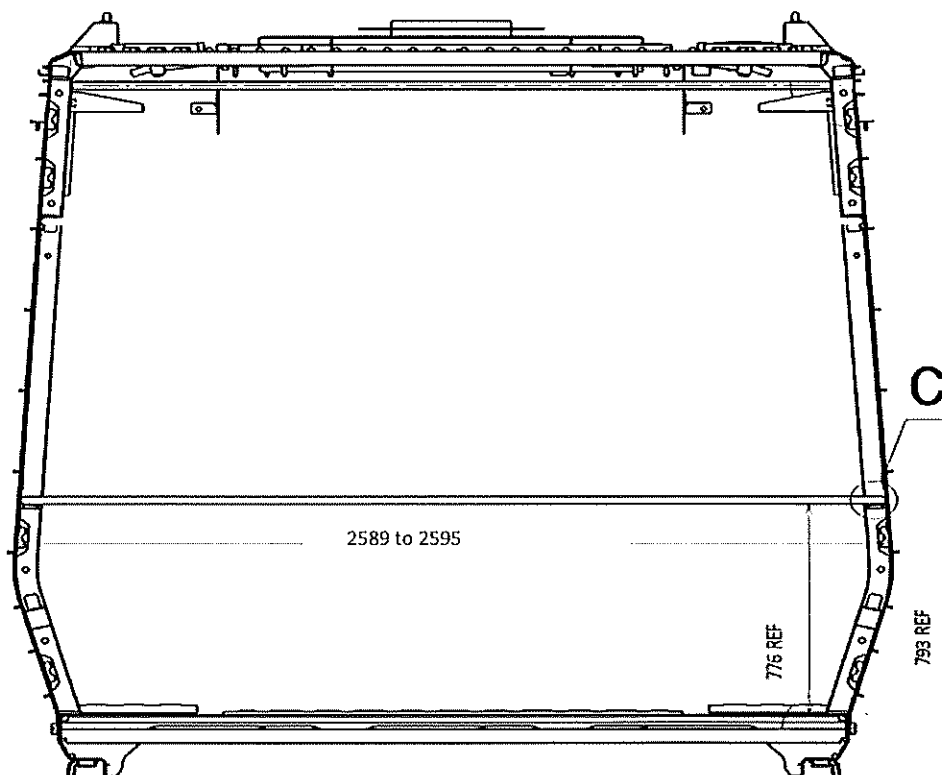
SI.CB2230.324.V29

06/11/2023

Details for measuring on the CB1230 stage, after completion of activities



Detail C





DT00000223319 Carshell Assembly TC

Rev.
30

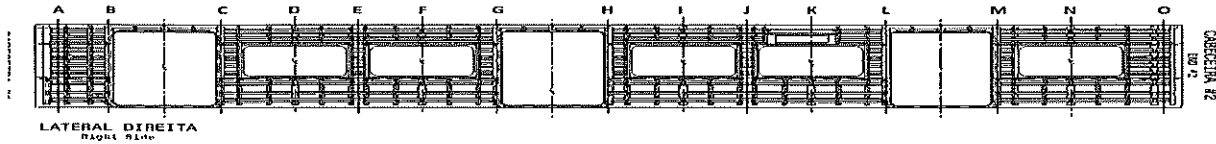
Project: PRASA

Date-

SI.CB2230.324.V29

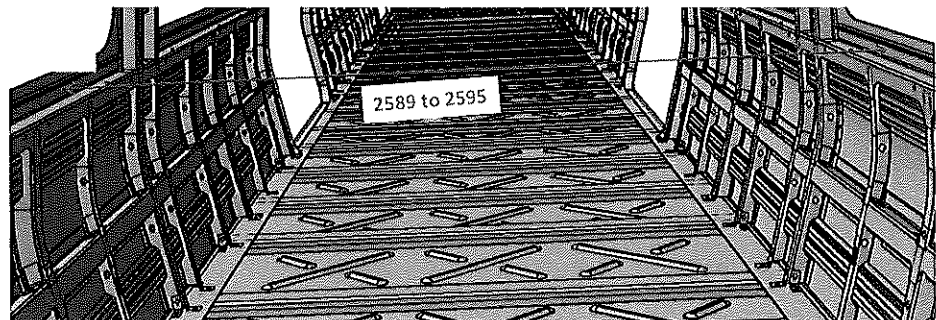
06/11/2023

Specifications of Details for CBS measurement



2589 to 2595mm

| | |
|---|------|
| A | 2594 |
| B | 2594 |
| C | 2595 |
| D | 2595 |
| E | 2595 |
| F | 2594 |
| G | 2593 |
| H | 2595 |
| I | 2595 |
| J | 2596 |
| K | 2592 |
| L | 2592 |
| M | 2592 |
| N | 2594 |
| O | 2593 |



Threshold verification

Nominal value :38

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

BOILER MAKER:

Nohlanbla (Signature)

WELDER:

Mithokozisi (Signature)



DT00000223319 Carshell Assembly TC

Rev.
30

Date-

06/11/2023

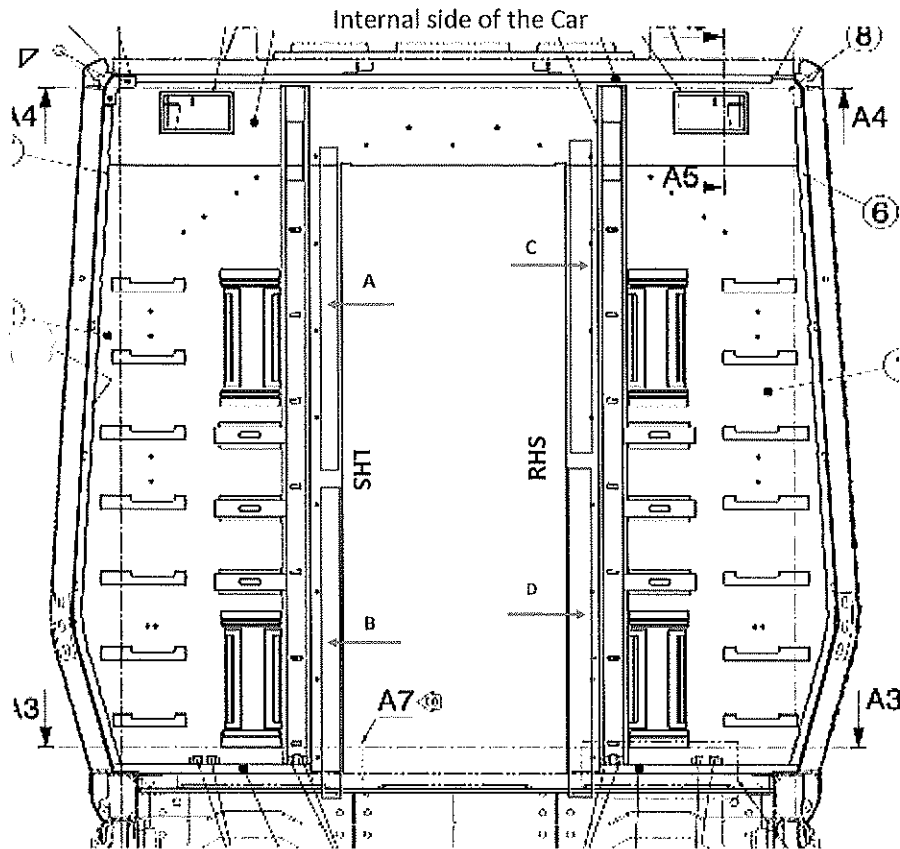
Project: PRASA

SI.CB2230.324.V29

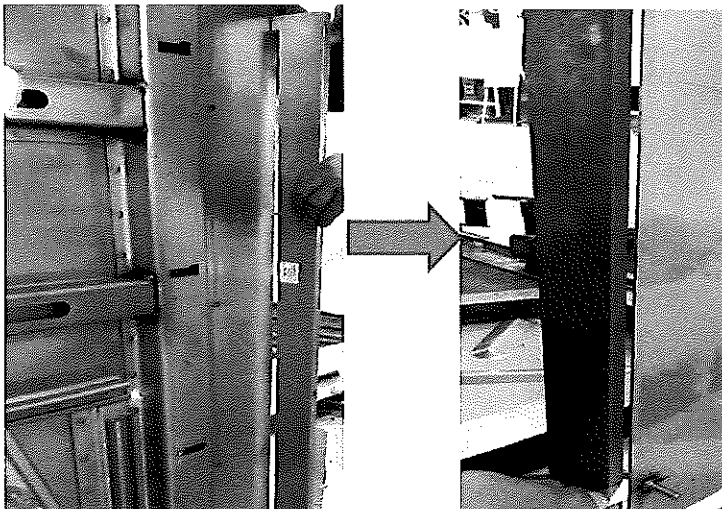
Specifications of Details for CBS measurement

Measure the flatness on the Cab Fire Barrier after installation and welding. Measure positions A, B, C and D using 1000mm flatness ruler and taper gauge.

Specified Maximum Flatness deviation on Cab Fire Barrier = 2mm



| Measured Values | | | |
|-----------------|---------|---------|-----------|
| | Minimum | Maximum | Deviation |
| A | 9 | 10,1 | 1,1 |
| B | 10 | 11,2 | 1,2 |
| C | 8,5 | 10 | 1,4 |
| D | 10 | 12 | 1 |





DT00000223319 Carshell Assembly TC

Rev.
30

Date-

06/11/2023

Project: PRASA

SI.CB2230.324.V29

Dye penetrant test

Dye-penetration test to be performed by quality personnel



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

II.2 - Check List REX

Check List Items

| I | Picture/Drawing | Description | Criteria /Record | OK | NOK | Rework | Signature/Date (Team Leader) | Signature/Date (Quality Technician) |
|----|-----------------|-----------------|--|----|-----|--------|---------------------------------|--|
| 01 | N/A | To complete REX | Refer to REX. New defects must be added on the REX | | | | | |



DT00000223319 Carshell Assembly TC

Rev. .
30

Date-

06/11/2023

Project: PRASA

SI.CB2230.324.V29

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

OLD POINT

GO

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

12/06/24

M. Tchokozisi

Operations

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

12/06/24

Richmond

Industrial Quality

NO GO

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 | Action | Responsible | Due date | Status |
|------|-------------|--------|-------------|----------|--------|
| | | | | | |
| | | | | | |
| | | | | | |

Operations

Quality

