


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 | | | |
| DTR30223319/3 | AAD0001241033 | Carshell Assembly TC | CB2210 | X | | | | | | X | PRA.CB2210.DTR3022331 9/3.V25 | YES |

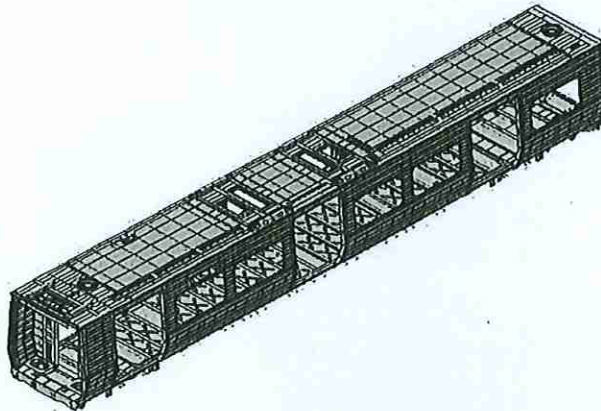
| REV | DATE | MODIFICATION CONTENT | RESPONSIBLE | NAME | DATE |
|----------|------------|---|-------------|------------------------|------------|
| 0 | 09/04/2018 | GIBELA NEW CREATION | APPROVER | Itumeleng Modiba | 09/04/2018 |
| | | | CHECKER | Nosizo Pindela | 09/04/2018 |
| | | | COMPILER | Thanyani Mathegu | 06/04/2018 |
| 1 | 2018/05/18 | Team leader and Quality Technician to sign final signature from PME Manager to Quality manager Change | 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 | Mohlampe Amogelang | |
| | | | REVISED BY | Mohlampe Amogelang | |
| 27 | 27/07/2023 | Added verification of loaded parts | APPROVER | Ngobeni Tyson | 27/07/2023 |
| | | | CHECKER | Mathapo Kelebone | |
| | | | REVISED BY | Mohlampe 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 |
| 214 | TC2 | WAGA 471497 | 24/02/24 | SI.CB2210.322.V28 | 16 |

| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB2210.322.V28 |
| | | Date- 07/11/2023 | |

Car: TC1 & TC2

NCR:

Work station: CB2210



I - Documentation and Instruments

I.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | OK | N/A | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|-----|----------|-------------|----|-----|--------------------------------|-----------------------------|
| | TC1 | M1 | M2 | M3 | M4 | TC2 | | | | | | |
| DTR30223319/3 | | | | | | X | | | ✓ | | N/A | <i>[Signature]</i> 24/02/24 |

I.2 - Instruments Control

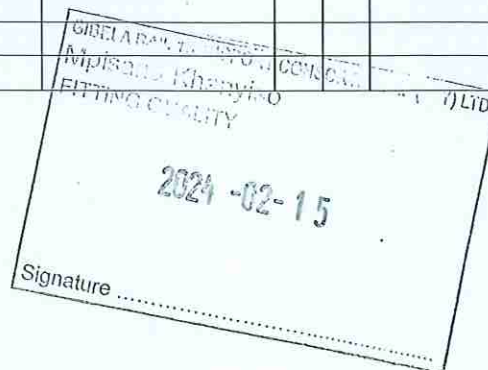
Monitoring and Measuring Instrument Control - Used for Special Process

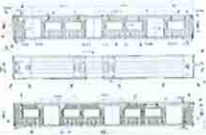
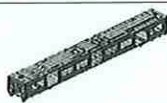
| Instruments | Validation | Calibration or Verification Validation Date | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-------------|------------|---|----|--------------------------------|-----------------------------|
| TUBULAR | 22713 | 04/10/23 | ✓ | <i>[Signature]</i> 24/02/24 | <i>[Signature]</i> 24/02/24 |
| 70 M TAPE | GIBTP 0084 | 23/03/31 | ✓ | <i>[Signature]</i> 24/02/24 | <i>[Signature]</i> 24/02/24 |
| LASER TAPE | 125425924 | 08/01/24 | ✓ | <i>[Signature]</i> 24/02/24 | <i>[Signature]</i> 24/02/24 |

I.3 Consumables


Welding Consumable Control - Used for Special Process

| Filler Material | Heat Number | Welding Process | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|-------------|-----------------|----|--------------------------------|-----------------------------|
| AUT ROD 308LSI | E221880 | MIG | ✓ | <i>[Signature]</i> 24/02/24 | <i>[Signature]</i> 24/02/24 |
| ER 309 LSI | 318394 | MIG | ✓ | <i>[Signature]</i> 24/02/24 | <i>[Signature]</i> 24/02/24 |



| GIBELQ | | DTR30223319/3 Carshell Assembly TC | | Rev. V28 Date- 07/11/2023 | | Project: PRASA SI.CB2210.322.V28 | | |
|--------|---|---|---|------------------------------|-----|-------------------------------------|--------------------------------|--------------------------|
| Item | Picture/Drawing | Description | Acceptance criteria / Record | OK | NOK | Rework | Signature/Date (Manufacturing) | Signature/Date (Quality) |
| 01 | N/A | Verification of correct parts loaded (Sidewalls,Endframes,Roof and Underframe) | DT00000284980 | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality. | DTD0000210675 | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 03 |  | Functionals dimensions approved according drawing or complementary document approved by Alstom engineering and registered in this document. | Approved according specified on pages below. | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 04 | REFER TO ANNEXURE A | Spot Welding inspected and approved according procedure | IND-SAL-WMS-016 e DTD00000210675 | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 05 | REFER TO ANNEXURE B | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 06 |  | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | ✓ | | | 10/19 24/02/24 | 24/02/24 |
| 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 DTD00000210658 | ✓ | | | 10/19 24/02/24 | 24/02/24 |

Signature.....
 2024-02-15
 Meliana Kharina
 FITTING QUALITY

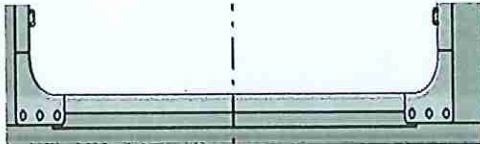
| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB2210.322.V28 |
| | | Date- 07/11/2023 | |
| Welder traceability | | | |

Roof ring welds



| | |
|---|---|
| <div>LHS</div> | |
| Boiler maker (Name & Sign): <u>WONGA M/O</u> | Welder (Name & Sign): <u>Wilson</u> 24/02/24 |
| <div>RHS</div> | |
| Boiler maker (Name & Sign): <u>LAWRENCE J/gpa</u> | Welder (Name & Sign): <u>Wilson</u> 24/02/24 ^{END 1} |

| | |
|---|---|
| <div>LHS</div> | |
| Boiler maker (Name & Sign): <u>WONGA M/O</u> | Welder (Name & Sign): <u>Wilson</u> 24/02/24 |
| <div>RHS</div> | |
| Boiler maker (Name & Sign): <u>LAWRENCE J/gpa</u> | Welder (Name & Sign): <u>Wilson</u> 24/02/24 ^{END 2} |



LHS

Boiler maker (Name & Sign): GERALD G.M

Welder (Name & Sign): KEITH K.M

RHS


Boiler maker (Name & Sign): George H. H. H.

Welder (Name & Sign): KEITH K.M

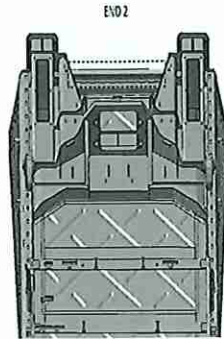
Mpinan / Chanylo
FITTING QUALITY

2024-02-15

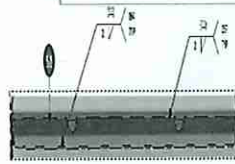
Signature

| | | | |
|---|------------------------------------|------------------------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 Date- 07/11/2023 | Project: PRASA SI.CB2210.322.V28 |
|---|------------------------------------|------------------------------------|-------------------------------------|

EUFR Reinforcement Plates



Underneath the CAR



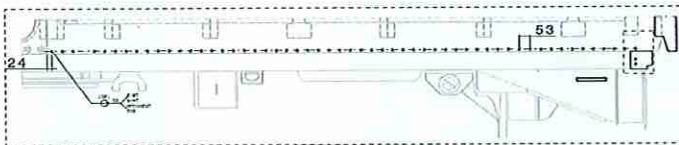
END 2

Boiler maker (Name & Sign):

Tim Kuder

Welder (Name & Sign):

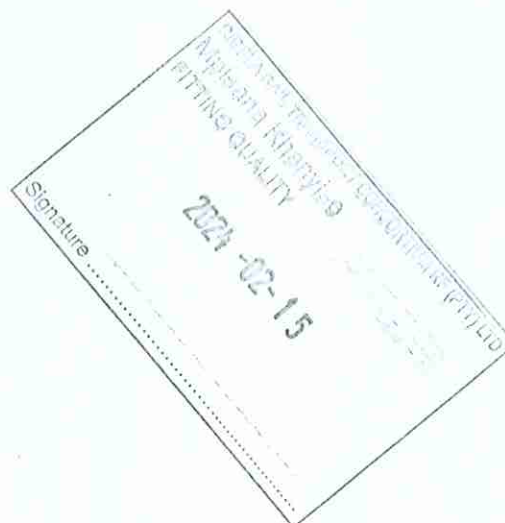
KEITH K. NORD




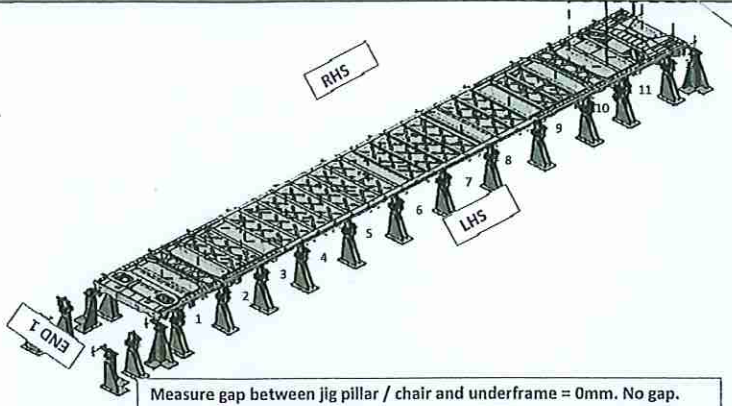
FEDOLI

Operator:

Roberto M. Shalva



| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB2210.322.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.

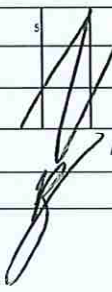

After Loading Underframe and Clamping.

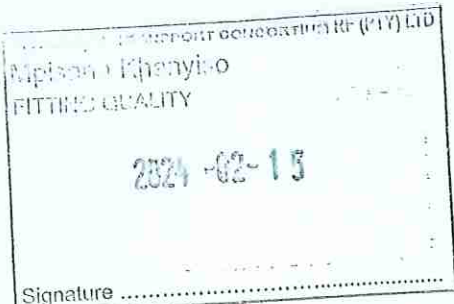
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------|---|---|---|---|---|---|---|---|---|----|----|----|
| Left Hand Side | | | | | | | | | | | | |
| Right Hand Side | | | | | | | | | | | | |

Signature Operations:  Date: 24/02/24

After Welding.

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

Signature Industrial Quality:  Date: 



Mipson Engineering (Pty) Ltd

FITTED QUALITY

2824-02-15

Signature



DTR30223319/3 Carshell Assembly TC

Rev.

V28

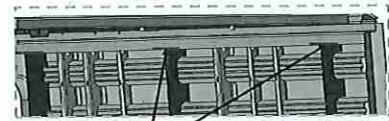
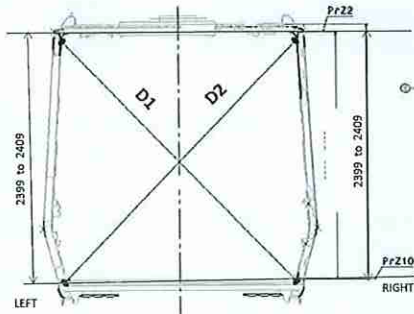
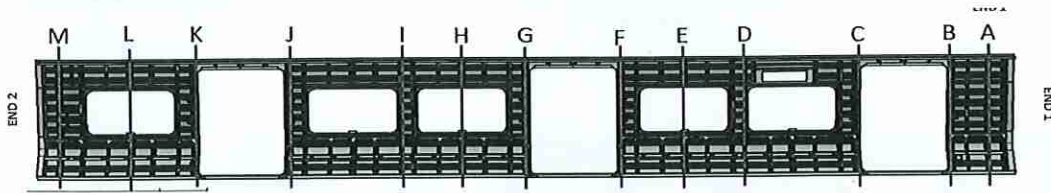
Date-

07/11/2023

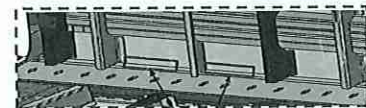
Project: PRASA

SI.CB2210.322.V28

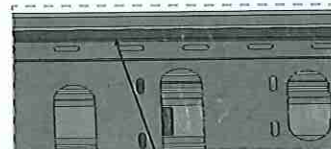
Specifications of Details for CBS measurement



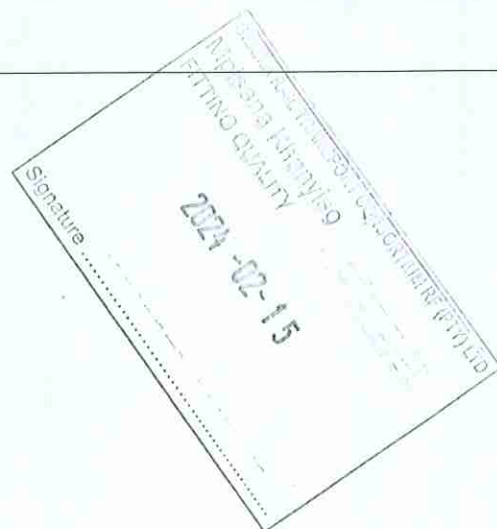
Measurement positions on roof rail and sidewall omega corner.




Measurement positions on sidewall and side sill corner.

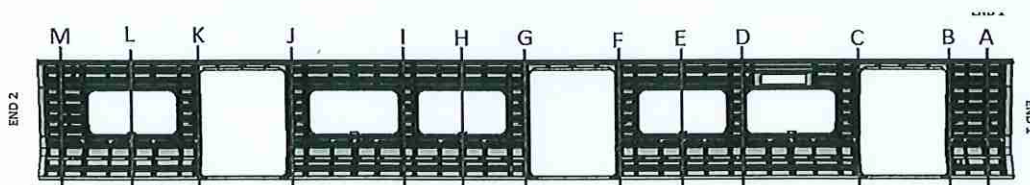


Reinforcement area measurement positions on roof reinforcement area.



| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB2210.322.V28 |
| | | Date- 07/11/2023 | |
| Specifications of Details for CBS measurement | | | |

BEFORE WELDING



PME: 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 | 2399 to 2409 (RHS) | LHS-RHS ≤ 2 |
|---|------------------|------------------|-------------------------|--------------|--------------------|------------------|
| A | 3270 | 3270 | 0 | 2405 | 2405 | 0 |
| B | 3269 | 3270 | 1 | 2407 | 2406 | 1 |
| C | 3269 | 3272 | 3 | 2405 | 2406 | 1 |
| D | 3266 | 3266 | 0 | 2404 | 2404 | 0 |
| E | 3265 | 3266 | 1 | 2405 | 2407 | 2 |
| F | 3269 | 3268 | 1 | 2406 | 2405 | 1 |
| G | 3268 | 3271 | 3 | 2404 | 2404 | 0 |
| H | 3264 | 3266 | 2 | 2406 | 2405 | 1 |
| I | 3266 | 3266 | 0 | 2405 | 2407 | 2 |
| J | 3270 | 3268 | 2 | 2406 | 2406 | 0 |
| K | 3269 | 3269 | 0 | 2406 | 2405 | 1 |
| L | 3268 | 3266 | 2 | 2405 | 2406 | 1 |
| M | 3269 | 3271 | 2 | 2408 | 2407 | 1 |

24/02/24

APPROVED FOR CONSTRUCTION (M) LTD
Mplama Phonybo
FITTING QUALITY
2024-02-15
Signature



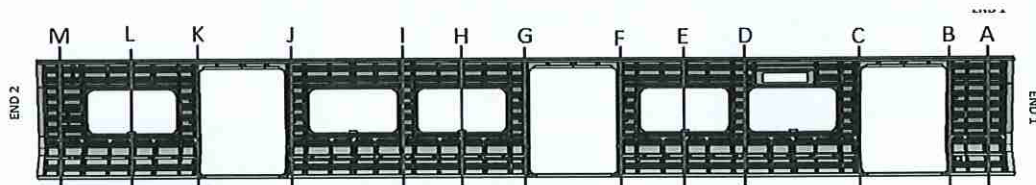
DTR30223319/3 Carshell Assembly TC

Rev.
V28
Date-
07/11/2023

Project: PRASA
SI.CB2210.322.V28

Specifications of Details for CBS measurement

AFTER WELDING




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

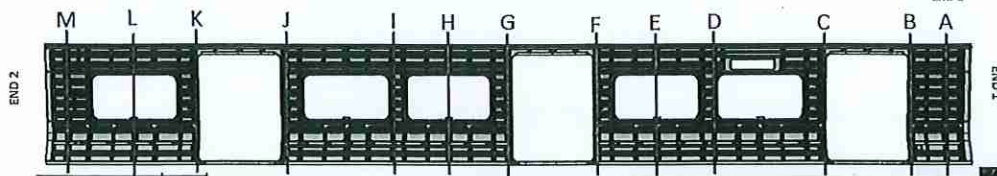
| | Record D1 values | Record D2 values | D1-D2 $\leq 5\text{mm}$ | 2399 to 2409 | 2399 to 2409 (RHS) | LHS-RHS ≤ 2 |
|---|------------------|------------------|-------------------------|--------------|--------------------|------------------|
| A | 3268 | 3267 | 1 | 2404 | 2405 | 1 |
| B | 3296 | 3295 | 1 | 2405 | 2407 | 2 |
| C | 3294 | 3294 | 0 | 2406 | 2406 | 0 |
| D | 3266 | 3266 | 0 | 2404 | 2405 | 1 |
| E | 3265 | 3266 | 1 | 2406 | 2404 | 2 |
| F | 3296 | 3294 | 2 | 2406 | 2405 | 1 |
| G | 3297 | 3296 | 1 | 2405 | 2407 | 2 |
| H | 3264 | 3265 | 1 | 2404 | 2405 | 1 |
| I | 3266 | 3266 | 0 | 2403 | 2404 | 1 |
| J | 3296 | 3294 | 2 | 2406 | 2406 | 0 |
| K | 3295 | 3295 | 0 | 2404 | 2405 | 1 |
| L | 3264 | 3267 | 3 | 2406 | 2405 | 1 |
| M | 3294 | 3295 | 1 | 2407 | 2407 | 0 |

Signature
2024-02-15

24/2/24

| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/3 Carshell Assembly TC | Rev. V28 | Project: PRASA SI.CB2210.322.V28 |
| | | Date- 07/11/2023 | |
| CBS measurement | | | |

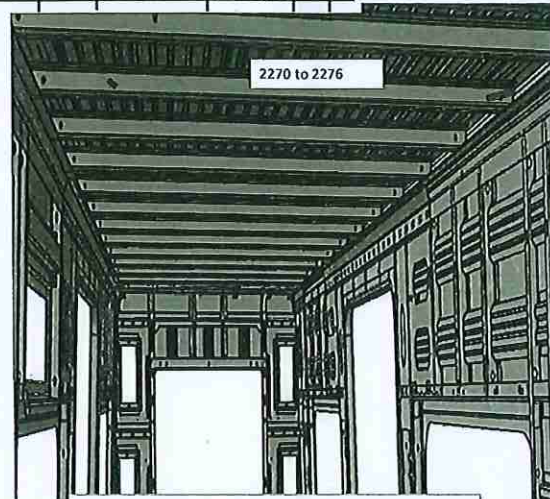
BEFORE WELDING



2270 to 2276

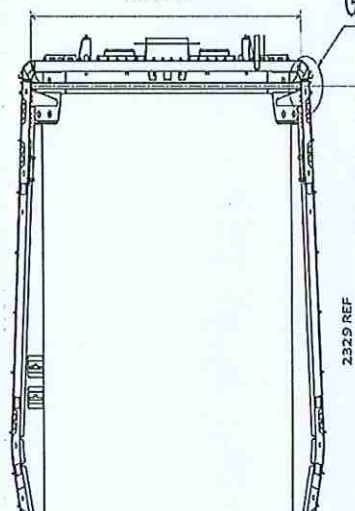
2268 to 2274

| | |
|---|------|
| A | 2275 |
| B | 2273 |
| C | 2271 |
| D | 2271 |
| E | 2275 |
| F | 2274 |
| G | 2273 |
| H | 2270 |
| I | 2270 |
| J | 2272 |
| K | 2270 |
| L | 2275 |
| M | 2274 |

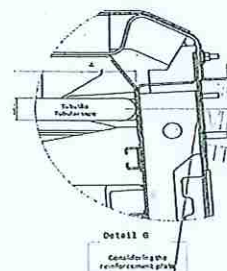


Do not consider reinforcement (Take measurements top area of zee profile)

2265 to 2271



2265 to 2271



Detail G
Consider the reinforcement plate

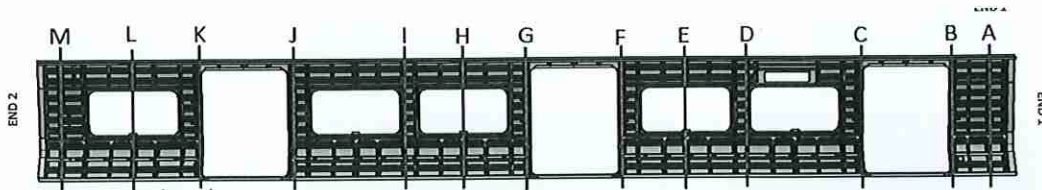
PRASA PORT CONSORTIUM
Mphahlele Khanyiso
SITING QUALITY

2024-02-15

Signature

24/02/24

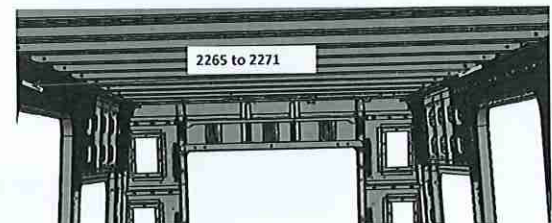
AFTER WELDING



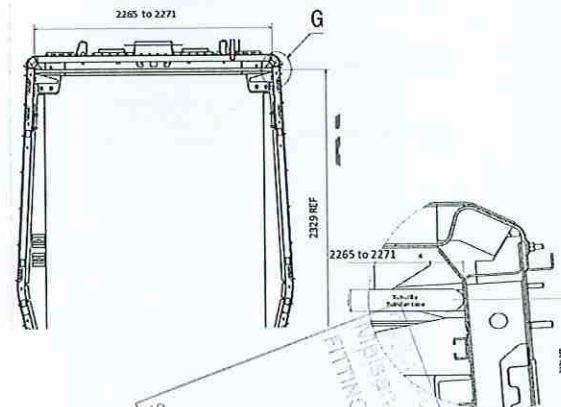
| | 2265 to 2271 | 2270 to 2276 |
|---|--------------|--------------|
| A | N/A | 2273 |
| B | 2268 | N/A |
| C | 2265 | N/A |
| D | N/A | 2270 |
| E | N/A | 2270 |
| F | 2269 | N/A |
| G | 2271 | N/A |
| H | N/A | 2275 |
| I | N/A | 2275 |
| J | 2269 | N/A |
| K | 2266 | N/A |
| L | N/A | 2273 |
| M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



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



Take measurement close to radius (considering reinforcement)




22/02/24

Signature
2024-02-15
FITTING QUALITY
2024-02-15



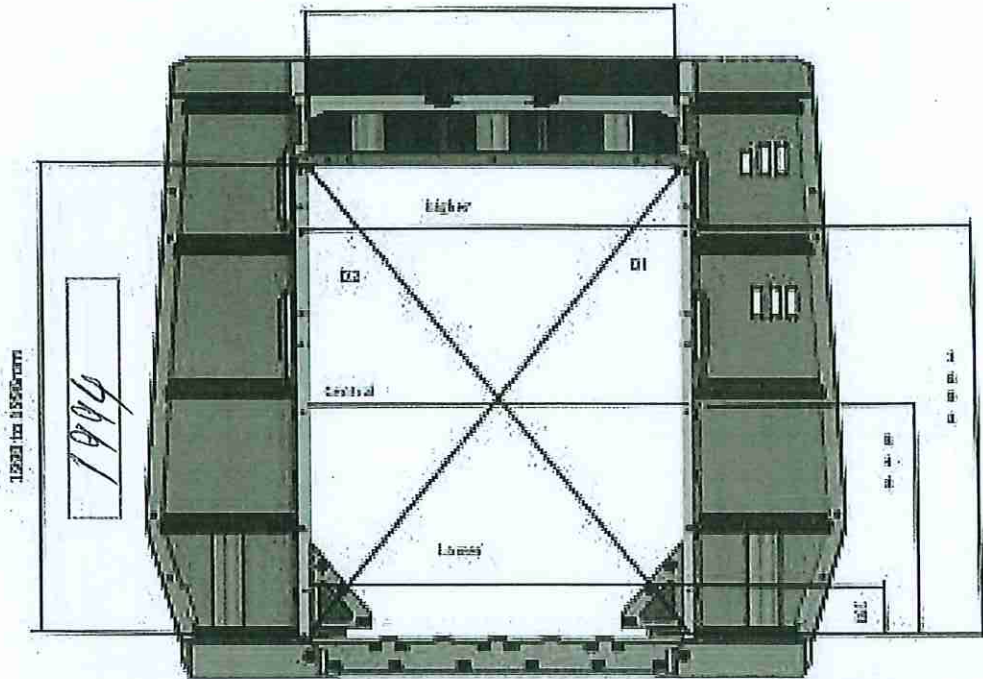
DTR30223319/3 Carshell Assembly TC

Rev.
V28
Date-
07/11/2023

Project: PRASA
SI.CB2210.322.V28

Specifications of Details for CBS measurement

Endframe 2



1220 to 1350mm

DIAGONAL DIFFERENCE D1-D2 ≤ 3mm

Higher Dimension

1381

D1

2413

Central Dimension

1381

D2

2414

Lower Dimension

1380

D1-D2

1

2413/2414

Alpisan's Quality Control Department
FITTING QUALITY
2024-02-15
Signature



DTR30223319/3 Carshell Assembly TC

Rev.

V28

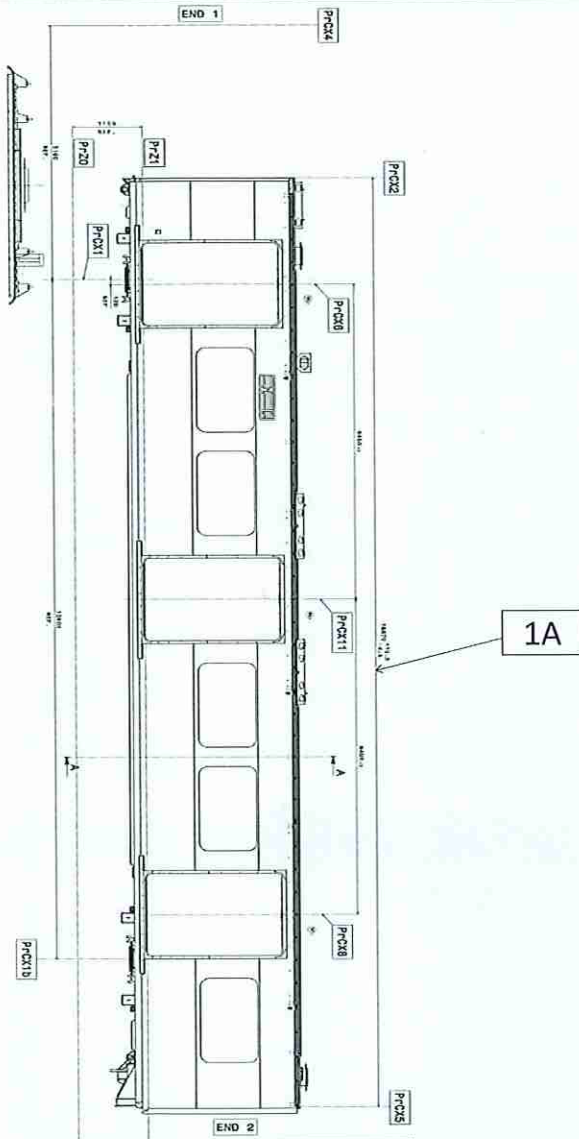
Project: PRASA

Date-

07/11/2023

SI.CB2210.322.V28

Specifications of Details for CBS measurement






| LEFT SIDE | | | |
|-----------|--------------------|---|-------------|
| | SPECIFICATION SIZE | | ACTUAL SIZE |
| 1A | 18870 | $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$ | 18872 |

| RIGHT SIDE | | | |
|------------|--------------------|---|-------------|
| | SPECIFICATION SIZE | | ACTUAL SIZE |
| 1A | 18870 | $\begin{matrix} +10.5 \\ -4.5 \end{matrix}$ | 18871 |

Dye penetrant test

Dye-penetration test to be performed by quality personnel





| | | | | | | |
|--|-------------|---|-------------|---------------------|--|-----------|
|  | | DTR30223319/3 Carshell Assembly TC | | Rev. V28 | Project: PRASA SI.CB2210.322.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! | 24/02/24 | lunwa Operations |   | |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.) | 24/02/24 | Ntokozo 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) | | | 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



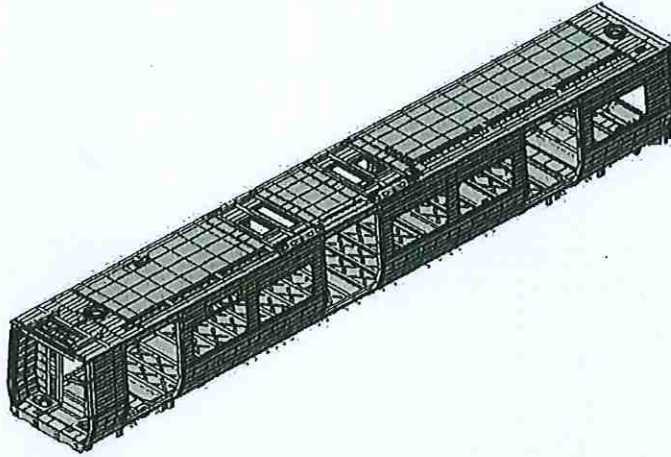
| GIBELA | | PRASA PROJECT | | | | | | | | | | | |
|--|-----------------|--|---------------------|------------------------|--------------------|------------|----|----|-----|------------------|---------|-------------------------------|-----|
|  | | | | | | | | | | | | | |
| APPLICABLE FOR TRAINSET 100+ 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? | | |
| | | | | TC1 | M1 | M2 | M3 | M4 | TC2 | | | | |
| <input type="checkbox"/> | DTR30220311.5/2 | AAO0001241033 | Carroll Assembly TC | CB2220 | X | | | | | | X | PRA CB2220 DTR3022 3319/2.V20 | YES |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| <input type="checkbox"/> | | | | | | | | | | | | | |
| REV | DATE | MODIFICATION CONTENT | | RESPONSIBLE | NAME | DATE | | | | | | | |
| 0 | 09/04/2018 | GIBELA NEW CREATION | | APPROVER | Itumeleng Modiba | 09/04/2018 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 09/04/2018 | | | | | | | |
| | | | | COMPILER | Thanyani Mathegu | 06/04/2018 | | | | | | | |
| 1 | 23/05/2018 | Team leader and Quality Technician to sign final signature from PME Manager to Quality manager | | APPROVER | Itumeleng Modiba | 23/05/2018 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 23/05/2018 | | | | | | | |
| | | | | REVISED BY | Ramohone Motama | 23/05/2018 | | | | | | | |
| 2 | 05/07/2018 | Certain dimensional checks added and others moved to CB1210 and CB1230 | | APPROVER | Itumeleng Modiba | 05/07/2018 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 05/07/2018 | | | | | | | |
| | | | | COMPILER | Ramohone Motama | 05/07/2018 | | | | | | | |
| 3 | 2018/06/12 | Certain dimensional checks added and others moved to CB1210 and CB1230 | | APPROVER | Itumeleng Modiba | 2018/06/12 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 2018/06/12 | | | | | | | |
| | | | | COMPILER | Ramohone Motama | 2018/06/12 | | | | | | | |
| 5 | 24/01/2019 | As per Baseline 10.2 | | APPROVER | Itumeleng Modiba | 24/01/2019 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 24/01/2019 | | | | | | | |
| | | | | COMPILER | Vanessa Ntuli | 24/01/2019 | | | | | | | |
| 6 | 13/03/2019 | Added D1 and D2 on Self - Inspection length measurements | | APPROVER | Itumeleng Modiba | 13/03/2019 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 13/03/2019 | | | | | | | |
| | | | | COMPILER | Nosiso Pindela | 13/03/2019 | | | | | | | |
| 7 | 20/05/2019 | Removed roof width | | APPROVER | Itumeleng Modiba | 20/05/2019 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 20/05/2019 | | | | | | | |
| | | | | REVISED BY | Nosiso Pindela | 20/05/2019 | | | | | | | |
| 10 | 22/08/2019 | New Baseline 10.2.5 | | APPROVER | Itumeleng Modiba | 22/08/2019 | | | | | | | |
| | | | | CHECKER | Nosiso Pindela | 22/08/2019 | | | | | | | |
| | | | | REVISED BY | Nosiso Pindela | 22/08/2019 | | | | | | | |
| 15 | 06/08/2020 | New Baseline 10.2.6 | | APPROVER | Timothy Maimela | 06/08/2020 | | | | | | | |
| | | | | CHECKER | Bongane Masina | 06/08/2020 | | | | | | | |
| | | | | REVISED BY | Bongane Masina | 06/08/2020 | | | | | | | |
| 20 | 19/04/2021 | New Baseline 10.2.6 | | APPROVER | Timothy Maimela | 19/04/2021 | | | | | | | |
| | | | | CHECKER | Bongane Masina | 19/04/2021 | | | | | | | |
| | | | | REVISED BY | Bongane Masina | 19/04/2021 | | | | | | | |
| 21 | 17/08/2021 | ADDED DIMENSIONS BEFORE WELDING | | APPROVER | Mbhombi Collins | 17/08/2021 | | | | | | | |
| | | | | CHECKER | Mulaudzi Mpho | 17/08/2021 | | | | | | | |
| | | | | REVISED BY | Mulaudzi Mpho | 17/08/2021 | | | | | | | |
| 25 | 20/02/2022 | New Baseline 10.2.6 | | APPROVER | Mbhombi Collins | 20/02/2022 | | | | | | | |
| | | | | CHECKER | Andani Muthelo | 20/02/2022 | | | | | | | |
| | | | | REVISED BY | Andani Muthelo | 20/02/2022 | | | | | | | |
| 26 | 14/06/2022 | Update minimum temperature requirement for sealant application | | APPROVER | Mbhombi Collins | 14/06/2022 | | | | | | | |
| | | | | CHECKER | Andani Muthelo | 14/06/2022 | | | | | | | |
| | | | | REVISED BY | Andani Muthelo | 14/06/2022 | | | | | | | |
| 27 | 19/10/2022 | Addition of traceability for sealant application and welding | | APPROVER | Mbhombi Collins | 19/10/2022 | | | | | | | |
| | | | | CHECKER | Ntokoza Zwane | 19/10/2022 | | | | | | | |
| | | | | REVISED BY | Amogelang Mohlampe | 19/10/2022 | | | | | | | |
| 28 | 14/04/2023 | Added sealant batch number & welding consumables traceability | | APPROVER | Vanessa Ntuli | 14/04/2023 | | | | | | | |
| | | | | CHECKER | Ntokoza Zwane | 14/04/2023 | | | | | | | |
| | | | | REVISED BY | Amogelang Mohlampe | 14/04/2023 | | | | | | | |
| TRAINSET | CAR | OPERATOR NAME & ALPS NUMBER | DATE | SELF INSPECTION NUMBER | PAGES | | | | | | | | |
| Z14 | TC2 | Lewi 483003 | 25/02/24 | SI.CB2220.323.V28 | 17 | | | | | | | | |

| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA SI.CB2220.323.V29 |
| | | Date- 28/10/2023 | |
| | | | |

| | | |
|------------------------|------|----------------------|
| Carro Car: TC1, TC2 | NCR: | Work station: CB2220 |
|------------------------|------|----------------------|



Safety Related



I - Documentation and Instruments

I.1 - Documentation Control

| Document | Type of car | | | | | | Revision | Observation | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|-----|----------|-------------|----|--------------------------------|--------------------------|
| | TC1 | M1 | M2 | M3 | M4 | TC2 | | | | | |
| DTR30223319/2 | | | | | | | 29 | 28/10/2023 | X | N/A | 25/02/24 25/02/23 |

I.2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

| Instruments | Validation | Calibration or Verification Validation Date | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|----------------|------------|--|----|--------------------------------|--------------------------|
| Tubular | 22113-1 | 29/11/2023-29/11/2024 | X | 25/02/24 | 25/02/23 |
| Measuring Tape | GIBELA0001 | 22/07/2023-22/07/2024 | X | 25/02/24 | 25/02/23 |

1.3 Consumables



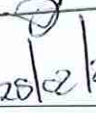
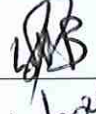
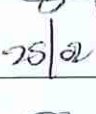
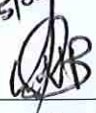
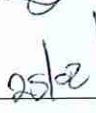


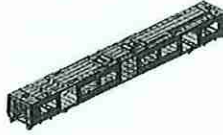
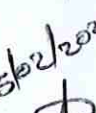

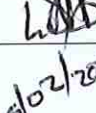
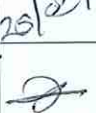
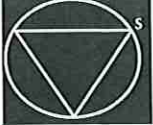
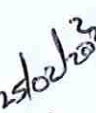
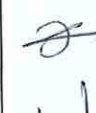
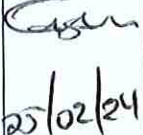
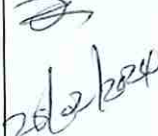
Welding Consumable Control - Used for Special Process








| Filler Material | Heat Number | Welding Process | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|-----------------|-------------|-----------------|----|--------------------------------|--------------------------|
| Welding 308LSI | E221880 | Mig | X | 25/02/24 | 25/02/23 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Signature

2024-02-15

MPISANA KHANYISO
FITTING QUALITY
GIBELA TRANSPORT CONSORTIUM RF (PTY) LTD

|  | | DTR30223319/2 Carshell Assembly TC | | Rev. 29 Date- 28/10/2023 | Project: PRASA SI.CB2220.323.V29 | | | | | | | | | |
|---|---|---|--|-----------------------------------|---|---------------------------------|---|---|--|---|--|--|---|---|
| II - Control Activities of Production | | | | | | | | | | | | | | |
| II.1 - Items to check | | | | | | | | | | | | | | |
| Item | Picture/Drawing | Description | Acceptance criteria / Record | OK | NOK | Rework | Signature/Date (Manufacturing) | Signature/Date (Quality) | | | | | | |
| 01 | N/A | Assembly according to Instruction Engineering n° PRA.CB2220.DTR30225487/2 Verification of fitment for all reinforcement brackets. | DTR30223319/2 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality. | DTD0000210675 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 03 | REFER TO ANNEXURE A | Spot Welding inspected and approved according procedure | IND-SAL-WMS-016 e DTD0000210675 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 04 | REFER TO ANNEXURE B | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 REFER TO GIB - TYPDEF - ARC - 0000 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 05 |  | Cleaning of all Stainless Steel Surface | According TO GIB-WEL - PROC-0002 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 06 | 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. | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 07 |  | 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 | ✓ | | | 25/02/2024  | 25/02/2024  | | | | | | |
| 08 | 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: <table border="1"> <tr> <td>Temperature Min - Max (I)</td> <td>Min-Max</td> <td>10°C - 35°C</td> </tr> <tr> <td>Relative humidity Min - Max (I)</td> <td>Min-Max</td> <td>25% - 60%</td> </tr> </table> | Temperature Min - Max (I) | Min-Max | 10°C - 35°C | Relative humidity Min - Max (I) | Min-Max | 25% - 60% | Sealant Batch No: <u>15R 1003</u> Exp Date: <u>1/03/24</u> Actuals Temperature: <u>20°C</u> Humidity: <u>60%</u> | ✓ | | | 25/02/2024  | 25/02/2024  |
| Temperature Min - Max (I) | Min-Max | 10°C - 35°C | | | | | | | | | | | | |
| Relative humidity Min - Max (I) | Min-Max | 25% - 60% | | | | | | | | | | | | |

|  | | DTR30223319/2 Carshell Assembly TC | | Rev. 29 | Project: PRASA | | | |
|---|----|--|--|--|---|----------|---|----------|
| | | | | Date- 28/10/2023 | SI.CB2220.323.V29 | | | |
| 09 | NA | Verification of sealant application in certain regions in the drawing. | AAD0001241033 |  |  | 25/02/24 |  | 25/02/24 |
| 10 | NA | Verification of sealant application on the roof and sidewall finishers | Sealant must be: -Applied straight and even (1.5mm) -Free of gaps,cracks,damage and debris (flashes, dirt, dust) Refer to Annexure B |  |  | 25/02/24 |  | 25/02/24 |





DTR30223319/2 Carshell Assembly TC

Rev.

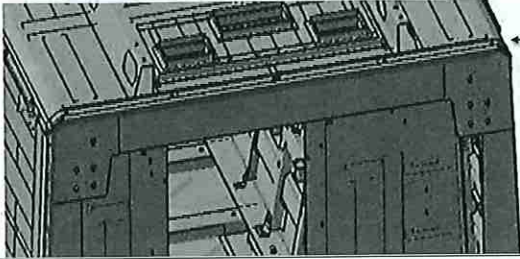
29

Project: PRASA

Date-

28/10/2023

SI.CB2220.323.V29



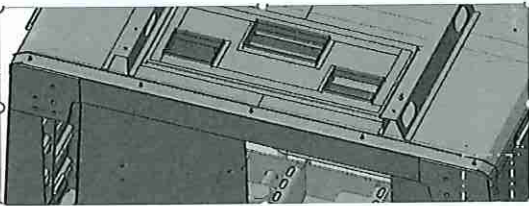
END 1
SEALANT

OPERATOR
(Name & sign):

Priscilla


OPERATOR
(Name & sign):

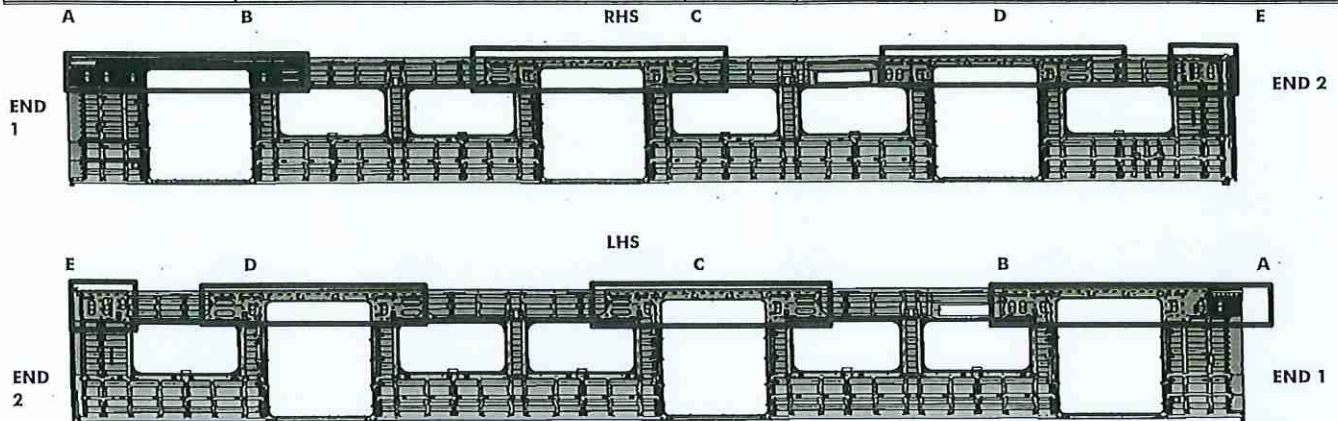
Priscilla



Signature
2024-02-15
MISSING KHANYISA
FITTING QUALITY
GIBELQ TRANSPORT CONSULTING (Pty) Ltd

Signature
2024-02-15
MISSING KHANYISA
FITTING QUALITY
GIBELQ TRANSPORT CONSULTING (Pty) Ltd

| | | | |
|---|------------------------------------|------------|-------------------------------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA SI.CB2220.323.V29 |
| | | Date- | |
| | | 28/10/2023 | |




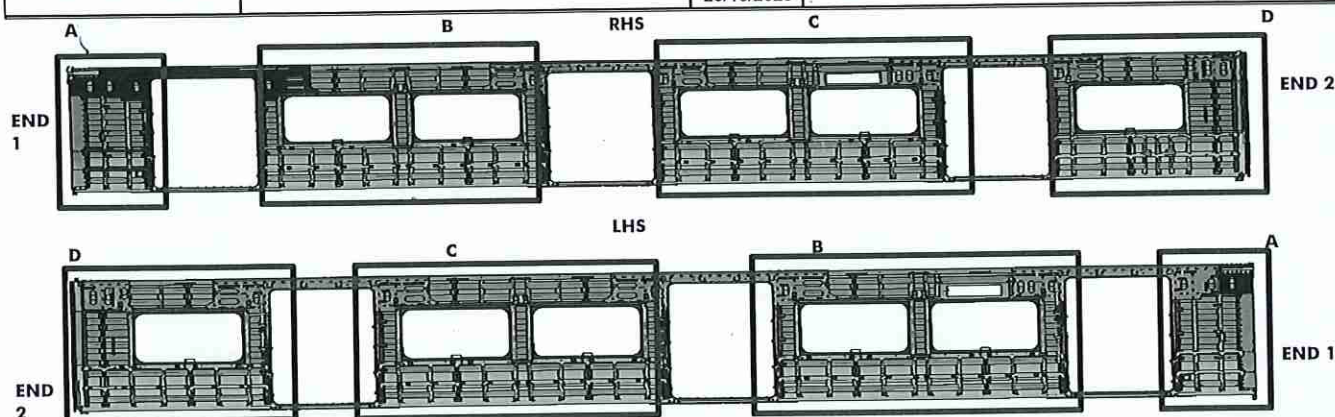
REINFORCEMENT WELDING

| AREA | LHS | RHS |
|------|--|------------------------|
| A | Operator (Name&sign): <u>LINDO</u> | <u>LINDO</u> |
| B | Operator (Name&sign): <u>MASHUDH MASHUDH</u> | <u>S. MASHUDH</u> |
| C | Operator (Name&sign): <u>MASHUDH MASHUDH</u> | <u>MASHUDH MASHUDH</u> |
| D | Operator (Name&sign): <u>SILVIA</u> | <u>THULANI</u> |
| E | Operator (Name&sign): <u>SILVIA</u> | <u>THULANI</u> |

Signature

2024-02-15

| | | | |
|---|------------------------------------|---------------------|-------------------------------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA SI.CB2220.323.V29 |
| | | Date- 28/10/2023 | |
| | | | |



BRACKETING

INSTALLATION

C-RAILS: Operator: _____

Operator: ASANDA

DOOR MECHANISMS: Operator: LINDO

Operator: _____

TAPPING PADS Operator: MMAISUELO

Operator: _____

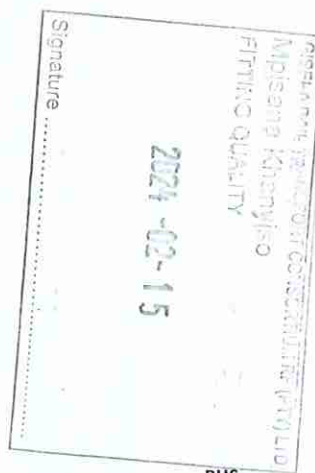
INSTALLATION & VERIFICATION

SEAT & LUGGAGE BRACKETS: Operator: MMAISUELO

Operator: [Signature]

SEAT BRACKETS VERIFICATION: Operator: [Signature]

Operator: _____



WELDING

AREA **LHS**

A (Seat brackets) : Operator (Name&sign): LINDO

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

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

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

C (Seat brackets) : Operator (Name&sign): MMAISUELO

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

D (Seat brackets) Operator (Name&sign): MMAISUELO

(C-rails, Luggage and earth bushes) : Operator (Name&sign): MMAISUELO

RHS

LINDO

[Signature]

[Signature]


[Signature]

MMAISUELO

MMAISUELO

MMAISUELO

MMAISUELO

| | | | |
|---|------------------------------------|------------|-------------------------------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA SI.CB2220.323.V29 |
| | | Date- | |
| | | 28/10/2023 | |

ENDS

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

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

| |
|--|
| GIBELA RAIL TRANSPORT CONSORTIUM (PTY) LTD Mphahlele Khanyiso FITTING QUALITY 2024-02-15 Signature |
|--|



DTR30223319/2 Carshell Assembly TC

Rev.
29

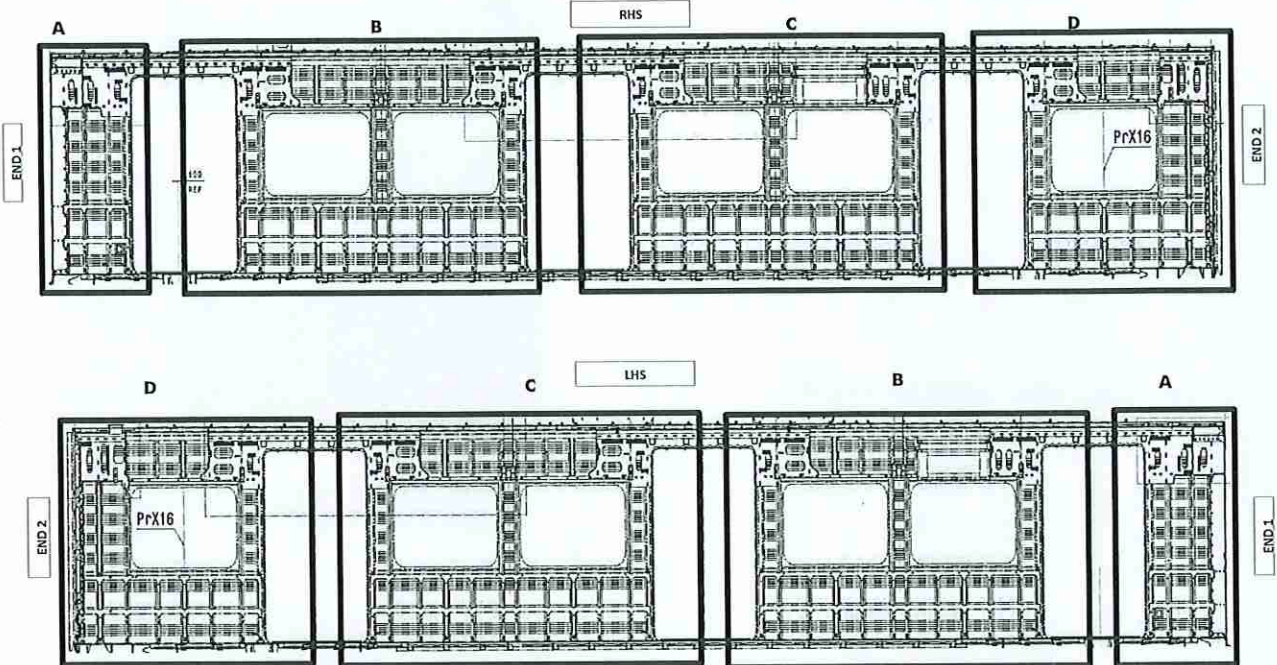
Date-

28/10/2023

Project: PRASA

SI.CB2220.323.V29

TC BRACKET INSTALLATION



QUANTITIES (TC)

RHS

| | SECTION | QUANTITY | OK | NOK |
|---------------|---------|----------|----|-----|
| C-RAILS | A | 4 | ✓ | |
| | B | 4 | ✓ | |
| | C | 8 | ✓ | |
| | D | 12 | ✓ | |
| SEAT BRACKETS | A | 0 | ✓ | |
| | B | 21 | ✓ | |
| | C | 21 | ✓ | |
| | D | 13 | ✓ | |
| EARTH BUSH | A | 1 | ✓ | |
| | B | 4 | ✓ | |
| | C | 5 | ✓ | |
| | D | 4 | ✓ | |

ROOF ENDS:

CRAILS 2 OFF END 2
EARTH BUSH 4 OFF END 2

VERIFICATION BY:

LHS

| | SECTION | QUANTITY | OK | NOK |
|---------------|---------|----------|----|-----|
| C-RAILS | A | 4 | ✓ | |
| | B | 8 | ✓ | |
| | C | 4 | ✓ | |
| | D | 6 | ✓ | |
| SEAT BRACKETS | A | 0 | ✓ | |
| | B | 21 | ✓ | |
| | C | 21 | ✓ | |
| | D | 13 | ✓ | |
| EARTH BUSH | A | 1 | ✓ | |
| | B | 4 | ✓ | |
| | C | 4 | ✓ | |
| | D | 2 | ✓ | |

ROOF ENDS:

CRAILS 2 OFF END 2
EARTH BUSH 4 OFF END 2

VERIFICATION BY:

Signature

2024-02-15

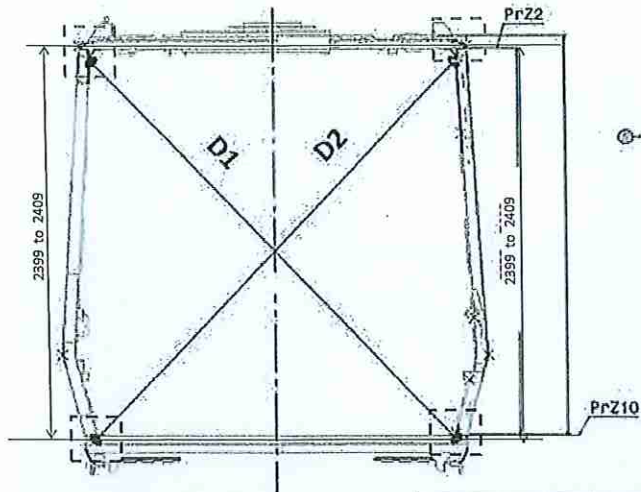
GIBELA
Nelson Mandela
FITTING QUALITY



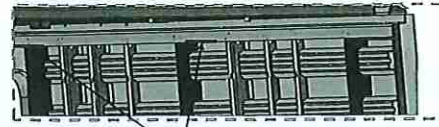
DTR30223319/2 Carshell Assembly TC

Rev.
29
Date-
28/10/2023

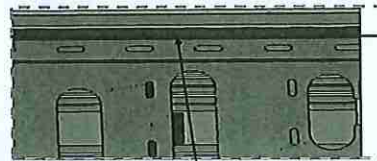
Project: PRASA
SI.CB2220.323.V29



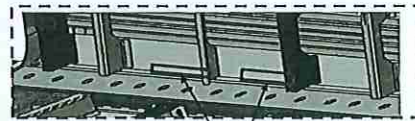
Take measurement close to radius



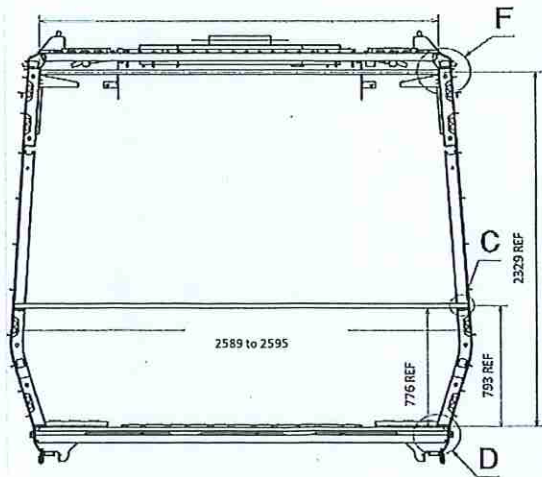
Measurement positions on roof rail and sidewall omega corner.



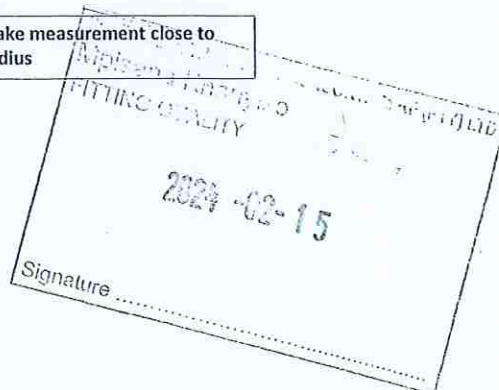
Reinforcement area measurement positions on roof reinforcement area.



Measurement positions on sidewall and side sill corner.



Take measurement close to radius





DTR30223319/2 Carshell Assembly TC

Rev.

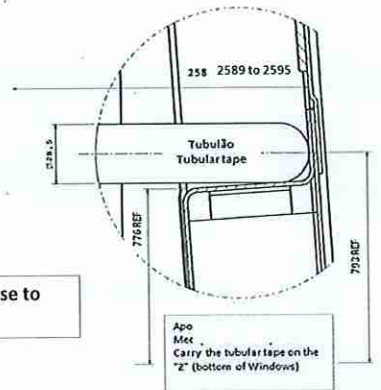
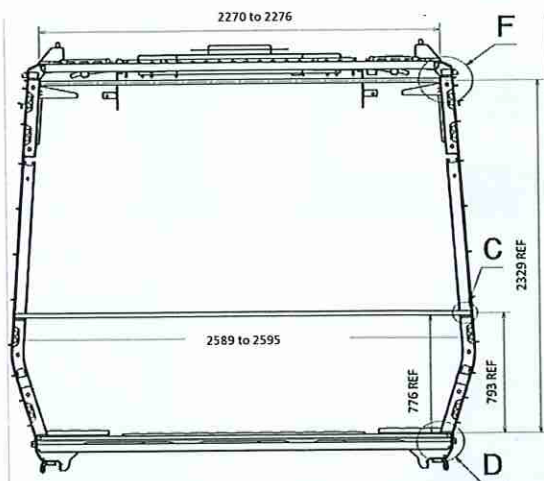
29

Project: PRASA

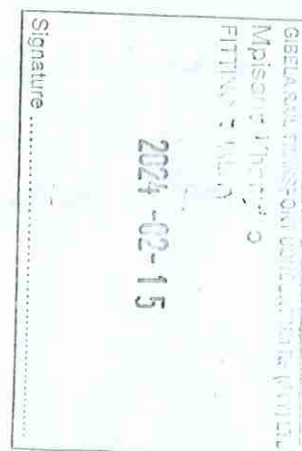
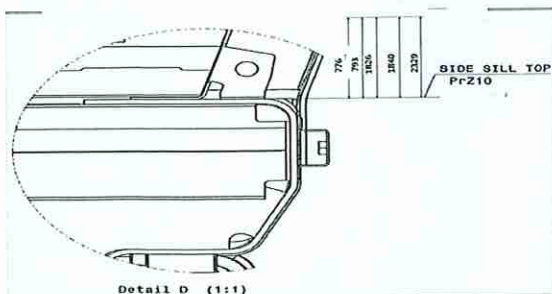
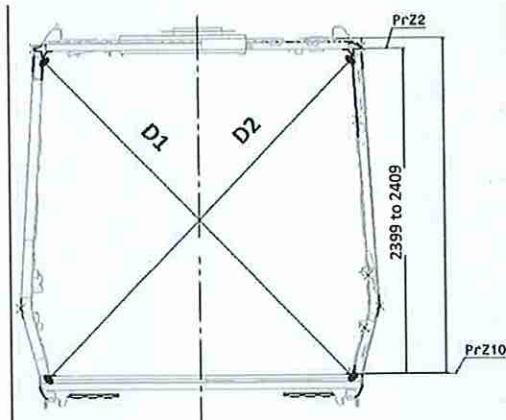
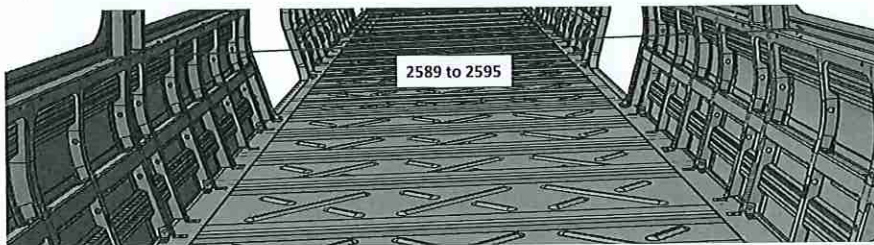
Date-

28/10/2023

SI.CB2220.323.V29



Detail C





DTR30223319/2 Carshell Assembly TC

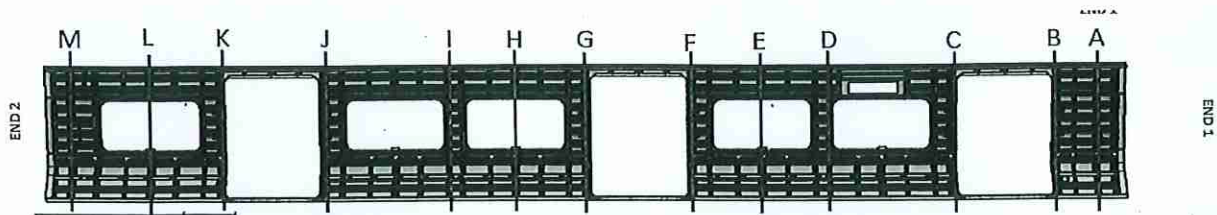
Rev.
29

Project: PRASA

Date-

28/10/2023

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**BEFORE WELDING**

| | Record D1 values | Record D2 values | D1-D2 ≤ 5mm | 2589 to 2595 |
|---|------------------|------------------|-------------|--------------|
| A | 3290 | 3291 | 1 | - |
| B | 3294 | 3298 | 4 | - |
| C | 3298 | 3299 | 1 | - |
| D | 3266 | 3268 | 2 | - |
| E | 3267 | 3268 | 1 | - |
| F | 3297 | 3297 | 0 | - |
| G | 3297 | 3295 | 2 | - |
| H | 3267 | 3267 | 0 | - |
| I | 3267 | 3268 | 1 | - |
| J | 3299 | 3295 | 4 | - |
| K | 3300 | 3295 | 5 | - |
| L | 3270 | 3266 | 4 | - |
| M | 3299 | 3298 | 1 | - |

GENERAL TRANSPORT CONSORTIUM RF (PTY),
Iphanga Khanyiso
FITTING QUALITY
2024-02-15
Signature



DTR30223319/2 Carshell Assembly TC

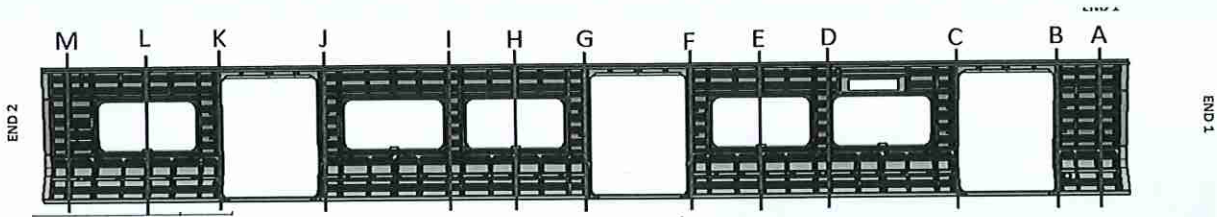
Rev.
29

Project: PRASA

Date-

SI.CB2220.323.V29

28/10/2023


AFTER WELDING

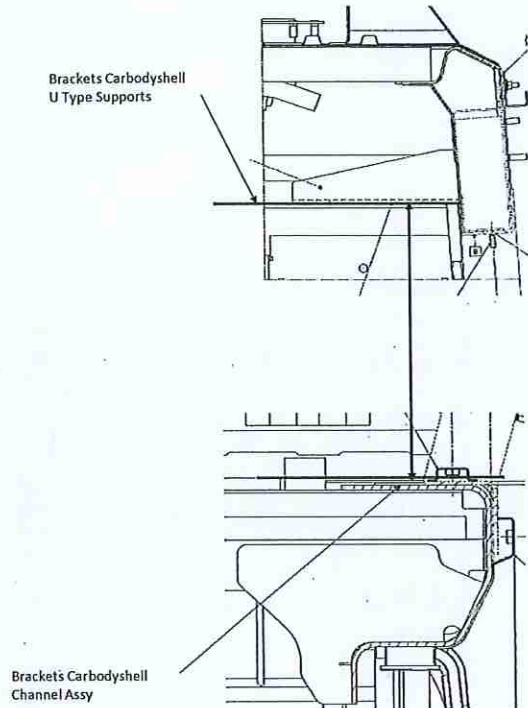
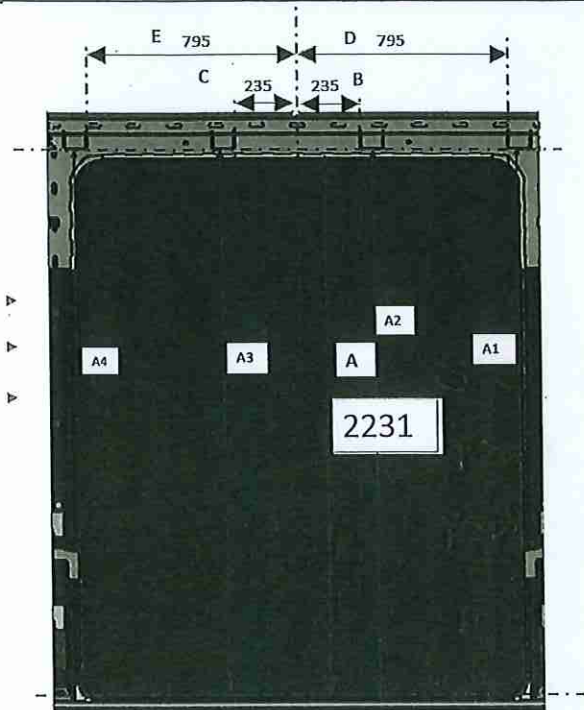
| | Record D1 values | Record D2 values | D1-D2 ≤ 5mm | 2589 to 2595 |
|---|------------------|------------------|-------------|--------------|
| A | 3291 | 3296 | 5 | 2593 |
| B | 3289 | 3293 | 4 | 2589 |
| C | 3292 | 3291 | 5 | 2589 |
| D | 3265 | 3270 | 5 | 2591 |
| E | 3263 | 3267 | 4 | 2590 |
| F | 3291 | 3292 | 5 | 2589 |
| G | 3292 | 3297 | 2 | 2589 |
| H | 3267 | 3270 | 3 | 2591 |
| I | 3267 | 3270 | 3 | 2594 |
| J | 3299 | 3295 | 4 | 2589 |
| K | 3298 | 3300 | 2 | 2592 |
| L | 3266 | 3270 | 4 | 2592 |
| M | 3300 | 3297 | 3 | 2595 |

Signature

2024-02-15

APPROVED BY: [Signature]
Miguel Ángel Llanos
FITTING COMPANY

| | | | |
|---|------------------------------------|------------|---|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA SI.CB2220.323.V29 |
| | | Date- | |
| | | 28/10/2023 | |
| Specifications of Details for CBS measurement | | | |



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

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

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

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

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

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

Signature



DTR30223319/2 Carshell Assembly TC

Rev.

29

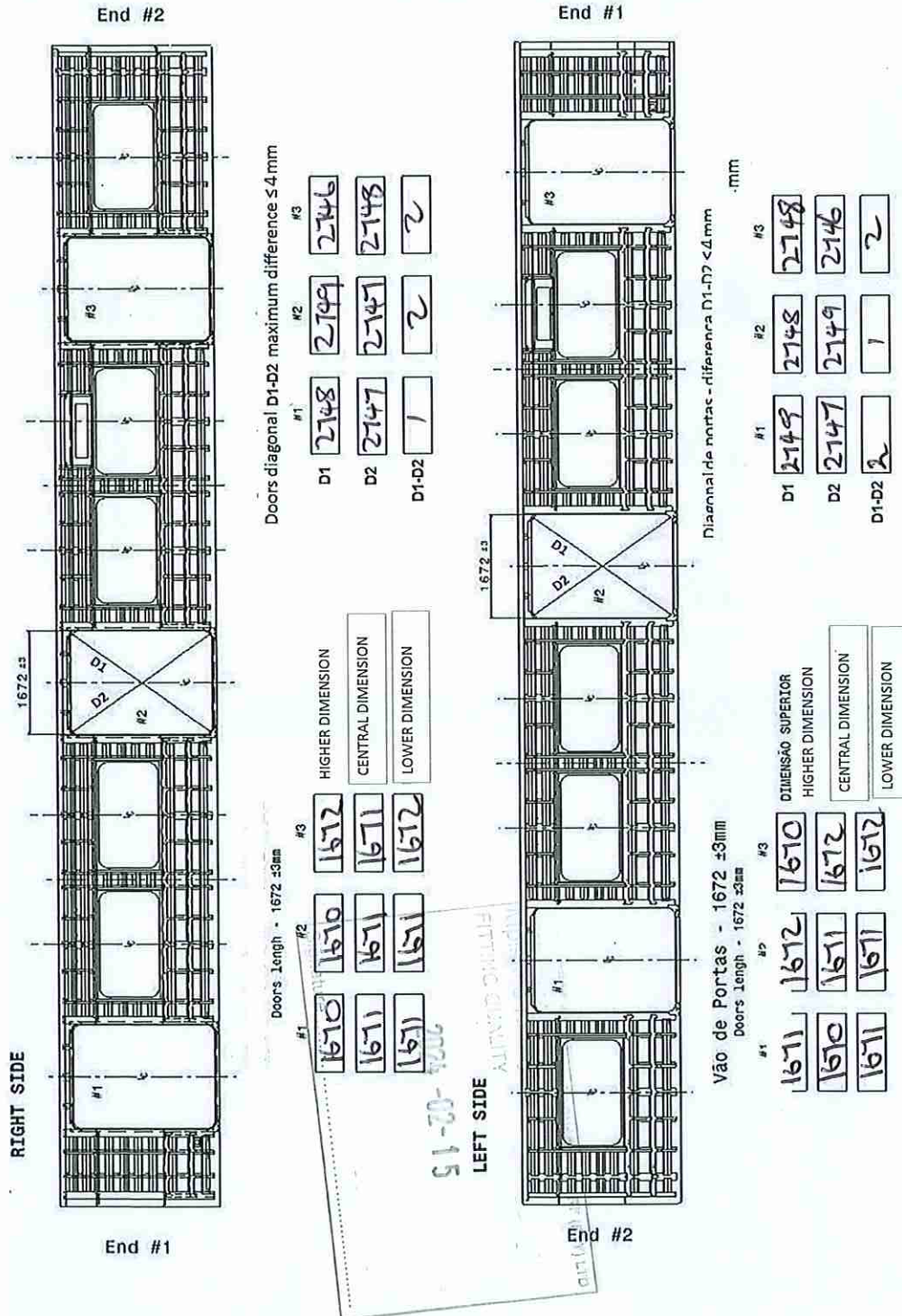
Project: PRASA


Date-

28/10/2023

SI.CB2220.323.V29

Specifications of Details for CBS measurement



| | | | |
|---|------------------------------------|------------|----------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA |
| | | Date- | |
| | | 28/10/2023 | |

Specifications of Details for CBS measurement

Dye penetrant test

Dye-penetration test to be performed by quality personnel



| Item | Description of the issue | OK | Signature/Date (Manufacturing) | Signature/Date (Quality) |
|------|--------------------------|----|-----------------------------------|--------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

II.2 - Check List REX


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

Mpisana Khanyiso




FITTING QUALITY

2024-02-15

Signature

| | | | | |
|---|------------------------------------|------------|----------------|-------------------|
|  | DTR30223319/2 Carshell Assembly TC | Rev. 29 | Project: PRASA | |
| | | Date- | | SI.CB2220.323.V29 |
| | | 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! | 25/02/2024 | Levi Operations |  |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.) | 26/02/2024 | Andoni Industrial Quality |  |
| | 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) | 25/02/2024 | Andoni Industrial Quality |  |

In case of "NO GO", describe blocking problems

Missing c-rails

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

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

Signature

Operations

2024-02-15

Mipisana Iheranyiso

FITTING QUALITY

Quality

GIBELA

PRASA PROJECT

APPLICABLE FOR TRAINSET 100+ ONLY AS PER BASELINE 10.3.1

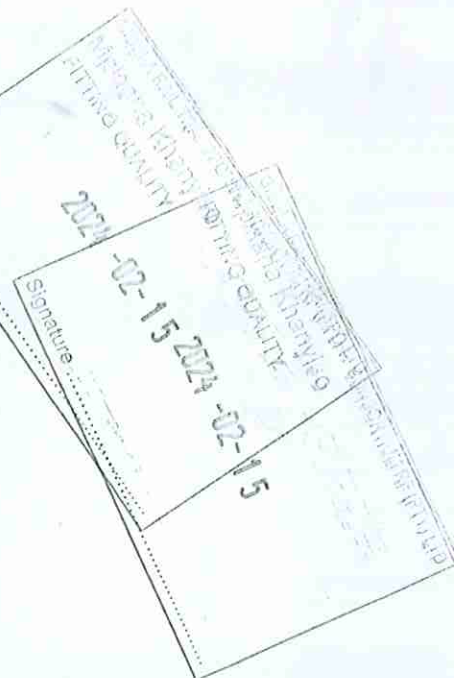
SELF INSPECTION SHEET

CONFIDENTIAL INFORMATION

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

APPLICATION REFERENCE

| MOUNTING | DRAWING | DESCRIPTION | STATION | CAR TYPE | | | | | | WORK INSTRUCTION | SAFETY ? |
|---------------|---------------|--|---------|----------|----|------------------------|----|-------------|--------------------|-----------------------------------|----------|
| | | | | TC1 | M4 | M1 | M2 | M3 | TC2 | | |
| DT00000223319 | AA00001238963 | DT00000223319 Carshell Assembly TC | CB2230 | X | | | | | X | PRA.CB2230.DT0000012 23319.V20 | YES |
| REV | DATE | MODIFICATION CONTENT | | | | | | RESPONSIBLE | NAME | DATE | |
| 0 | 06/04/2018 | GIBELA NEW CREATION | | | | | | APPROVER | Itumeleng Modiba | 09/04/2018 | |
| | | | | | | | | CHECKER | Nosizo Pindela | 09/04/2018 | |
| | | | | | | | | COMPILER | Thanyani Mathegu | 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 Mbhombhni | 20/02/2022 | |
| | | | | | | | | CHECKER | Andani Muthelo | 20/02/2022 | |
| | | | | | | | | COMPILER | Andani Muthelo | 20/02/2022 | |
| 26 | 14/06/2022 | Update minimum temperature requirement for sealant application | | | | | | APPROVER | Collins Mbhombhni | 14/06/2022 | |
| | | | | | | | | CHECKER | Andani Muthelo | | |
| | | | | | | | | COMPILER | Andani Muthelo | | |
| 27 | 27/07/2022 | Threshold measurements addition | | | | | | APPROVER | Collins Mbhombhni | 26/07/2022 | |
| | | | | | | | | CHECKER | Andani Muthelo | | |
| | | | | | | | | COMPILER | Andani Muthelo | | |
| 28 | 19/10/2022 | Addition of traceability for sealant application | | | | | | APPROVER | Collins Mbhombhni | 19/10/2022 | |
| | | | | | | | | CHECKER | Ntokozo Zwane | | |
| | | | | | | | | COMPILER | Amogelang Mohlampe | | |
| 29 | 14/04/2023 | Added sealant batch number & welding consumables traceability | | | | | | APPROVER | Vanessa Ntuli | 14/04/2023 | |
| | | | | | | | | CHECKER | Ntokozo Zwane | | |
| | | | | | | | | COMPILER | Amogelang Mohlampe | | |
| 30 | 06/11/2023 | Added threshold traceability for boiler makers and welders | | | | | | APPROVER | Tyson Ngobeni | 05/11/2023 | |
| | | | | | | | | CHECKER | Andani Muthelo | | |
| | | | | | | | | COMPILER | Ntokozo Zwane | | |
| TRAINSET | CAR | OPERATOR NAME & ALPS NUMBER | | DATE | | SELF INSPECTION NUMBER | | | PAGES | | |
| 214 | TC2 | Kgotsa 4082 | | 26/02/24 | | SI.CB2230.324.V29 | | | 12 | | |





DT00000223319 Carshell Assembly TC

Rev.
30Date-
06/11/2023

Project: PRASA

SI.CB2230.324.V29

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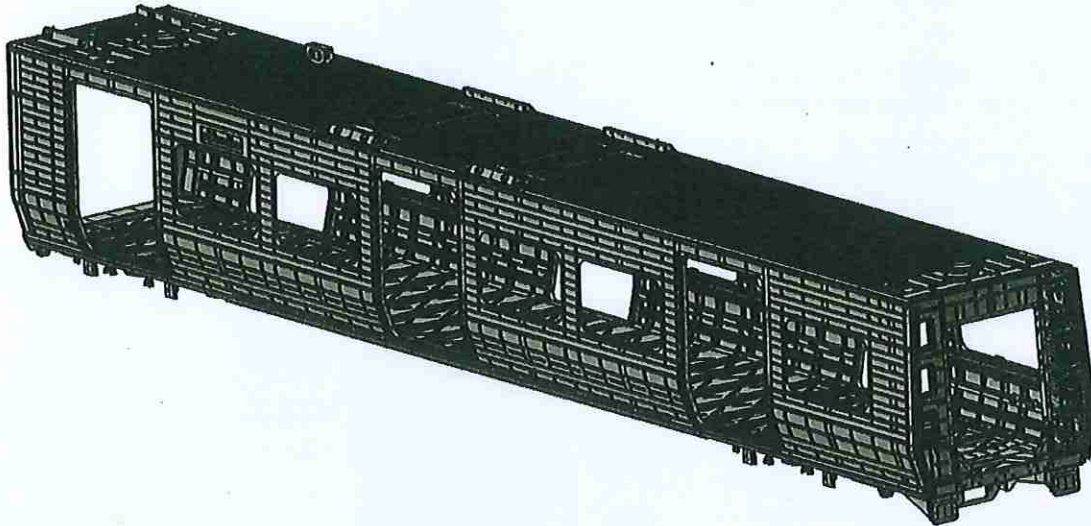
NCR:

Work station:

CB2230



Safety Related



I - Documentation and Instruments

1 - Documentation Control

| Document | Type of car | | | | | | Revision | Obsevation | OK | NOK | Remarks | Signature/Date (Operations) | Signature/Date (Quality) |
|---------------|-------------|----|----|----|----|-----|----------|------------|----|-----|---------|--------------------------------|-----------------------------|
| | TC1 | M1 | M2 | M3 | M4 | TC2 | | | | | | | |
| DT00000223319 | | | | | | X | 30 | | X | | N/A | 26/02/24 | 26/02/24 |

2 - Instruments Control

Monitoring and Measuring Instrument Control - Used for Special Process

| Instruments | Validation | Calibration or Verification Validation Date | OK | NOK | Signature/Date (Operations) | Signature/Date (Quality) |
|--------------------|------------|--|----|-----|-----------------------------|--------------------------|
| Measuring Tape | GIBTH0346 | 2024/04/05 | X | | 26/02/24 | 26/02/24 |
| Combination Square | GIBCS0140 | 26/06/2024 | X | | 26/02/24 | 26/02/24 |
| Intubular | 227/3 | 29/11/2024 | X | | 26/02/24 | 26/02/24 |

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 LSI | 231067 | MIG | X | | 26/02/24 | 26/02/24 |
| 308 LSI | 310442 | TIG | X | | 26/02/24 | 26/02/24 |
| | | | | | | |
| | | | | | | |
| | | | | | | |



DT00000223319 Carshell Assembly TC

Rev.

30

Project: PRASA

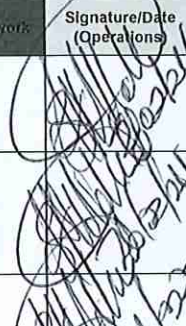
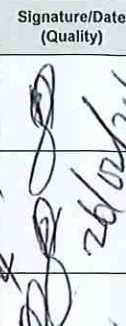
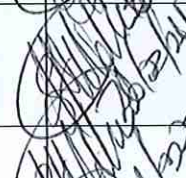
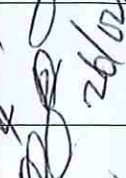
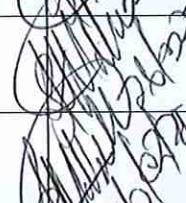
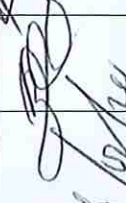
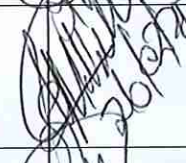
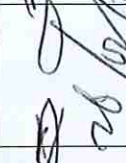

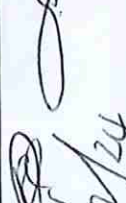
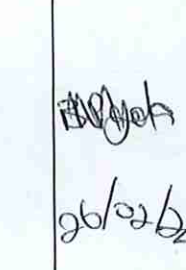

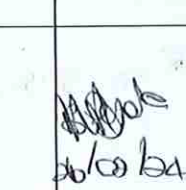

Date-

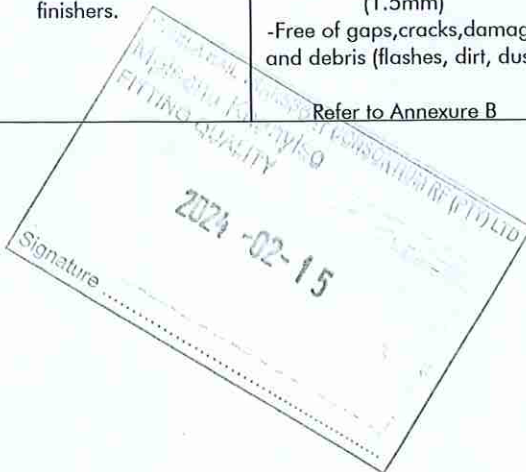
06/11/2023

SI.CB2230.324.V29

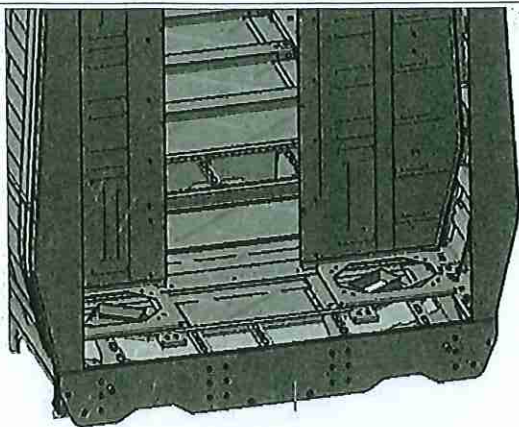
II - Control Activities of Production

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 | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |
| 02 | N/A | Carshell free of significant flaws which compromise the appearance or functionality. | DTD0000210675 | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |
| 03 | REFER TO ANNEXURE A | Arc Welding inspected and approved according procedure. | IND-SAL-WMS-016 DTD0000210675 | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |
| 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. | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |
| 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 | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |
| 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: <table><tr><td>Temperature Min - Max (1)</td><td>Min-Max</td><td>10°C - 35°C</td></tr><tr><td>Relative humidity Min - Max (1)</td><td>Min-Max</td><td>25% - 80%</td></tr></table> | Temperature Min - Max (1) | Min-Max | 10°C - 35°C | Relative humidity Min - Max (1) | Min-Max | 25% - 80% | Sealant Batch No: FA23324 249 Exp Date: <u>03</u> / <u>03</u> / <u>24</u> Actuals Temperature: <u>22°C</u> Humidity: <u>49%</u> | ✓ | | |  26/02/24 |  26/02/24 |
| Temperature Min - Max (1) | Min-Max | 10°C - 35°C | | | | | | | | | | | | |
| Relative humidity Min - Max (1) | Min-Max | 25% - 80% | | | | | | | | | | | | |
| 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) Refer to Annexure B | ✓ | | |  26/02/24 |  26/02/24 | | | | | | |



VIEW A



**END 1
SEALANT**

OPERATOR
(Name & sign):

Bunkle [Signature]

OPERATOR
(Name & sign):

Lerato [Signature]

**END 2 SEALANT
(VIEW C)**

OPERATOR
(Name & sign):

Leray [Signature]

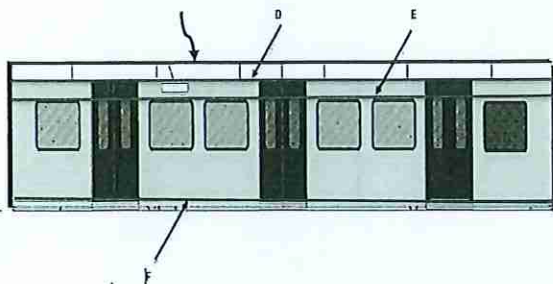
OPERATOR
(Name & sign):

Leray [Signature]

OPERATOR
(Name & sign):

Leray [Signature]

G



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

Operator(Name & sign) :

LHS :

D,E,G,M,I

RHS

Operator (Name & sign) :

Bunkle [Signature]

[Signature]

Operator (Name & sign) :

Lerato [Signature]

[Signature]

Operator (Name & sign) :

Operator (Name & sign) :

Operator (Name & sign) :

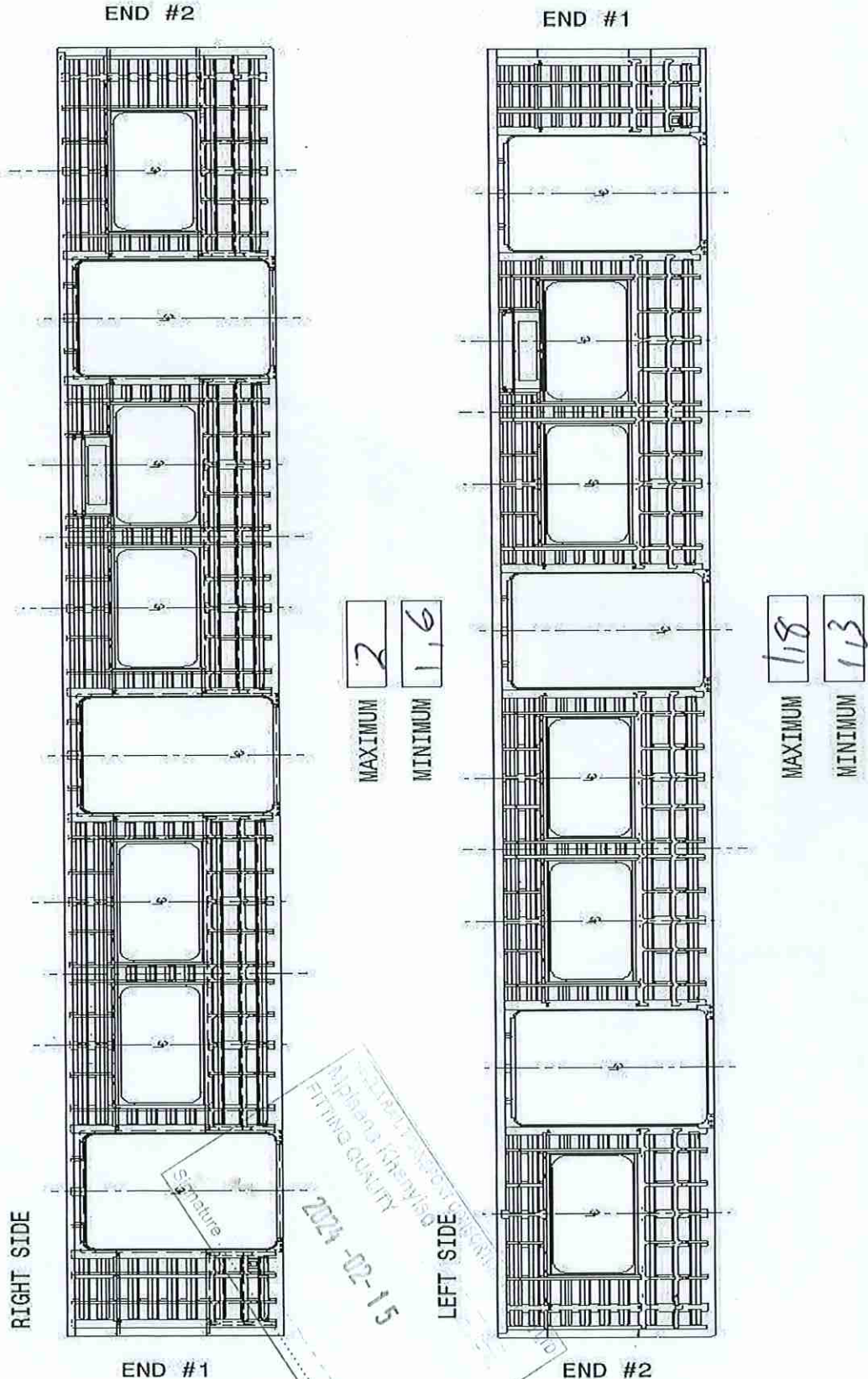
MPISANO [Signature]
FITTING QUALITY

2024-02-15

Signature

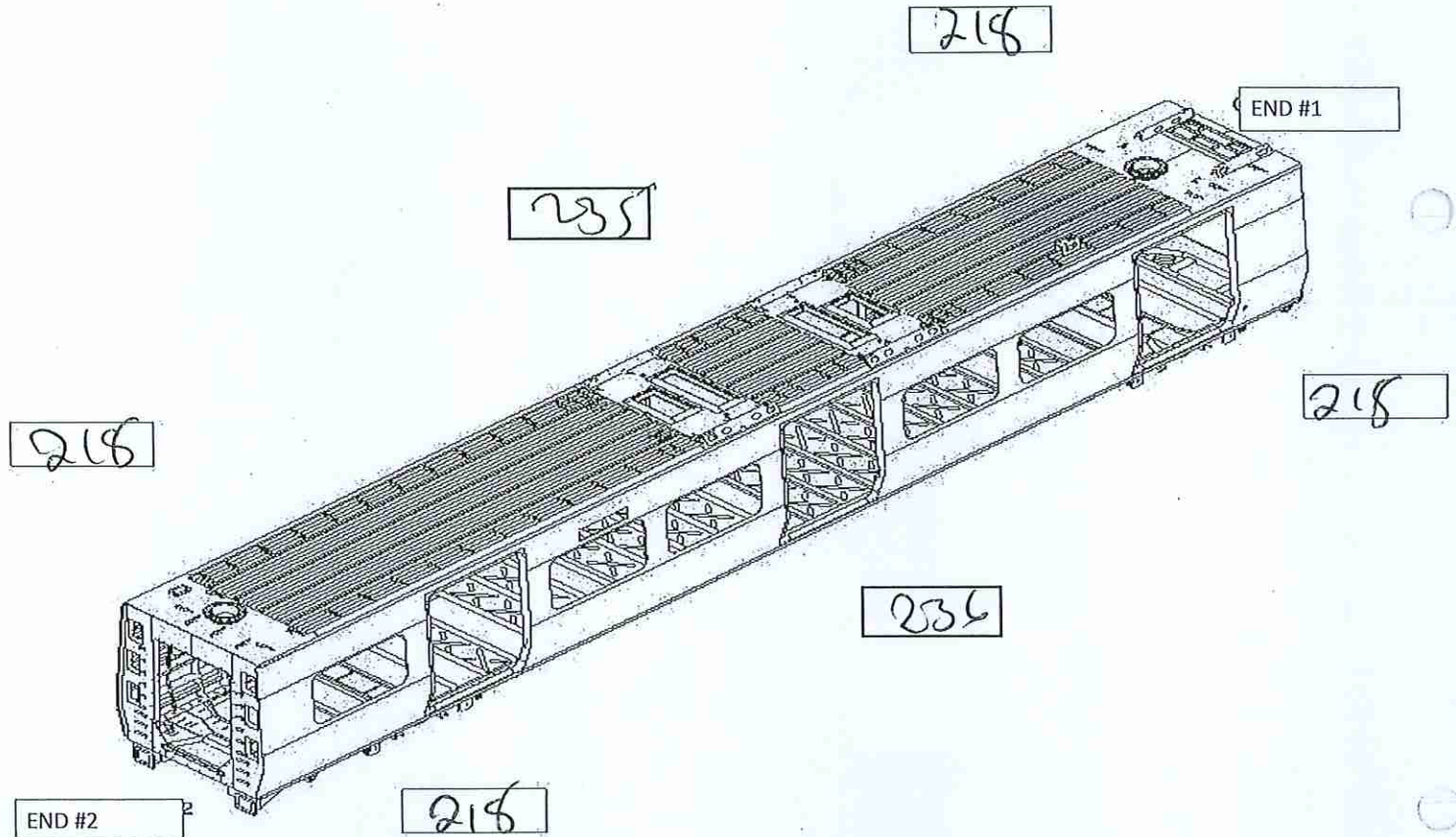
Specifications of Details for CBS measurement CB2230

Flatness 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.



Specifications of Details for CBS measurement CB2230

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



MEASURED CAMBER VALUES

RIGHT

18

LEFT

17

GIBELA RAIL INFRASTRUCTURE CONSULTANTS (Pty) Ltd
Mphahlele Khanyile
FITTING QUALITY
2024-02-15
Signature



DT00000223319 Carshell Assembly TC

Rev.
30

Date-

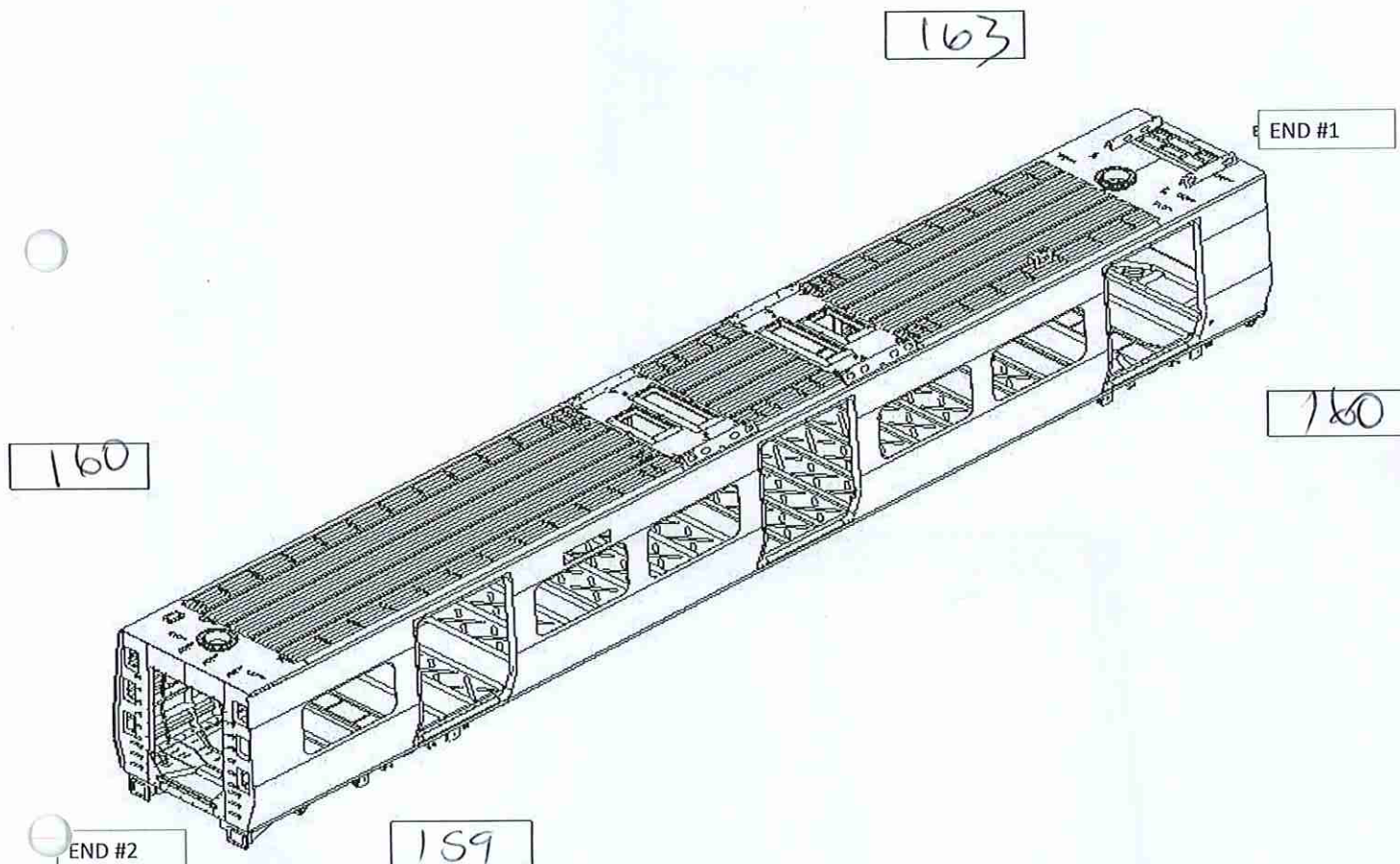
06/11/2023

Project: PRASA

SI.CB2230.324.V29

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

1

LONGITUDINAL

3

MEASURED TWIST VALUES END 2

LATERAL

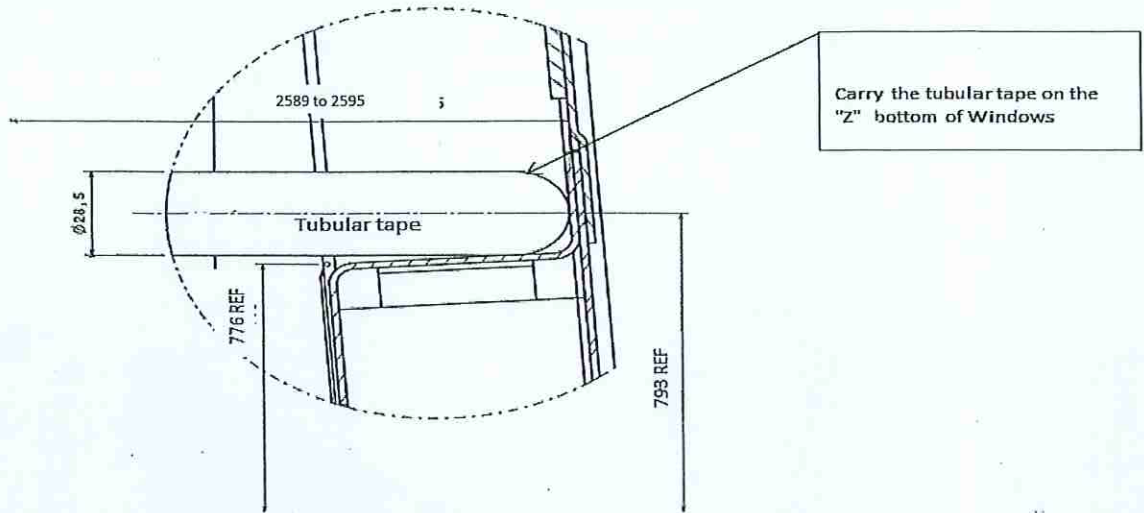
3

LONGITUDINAL

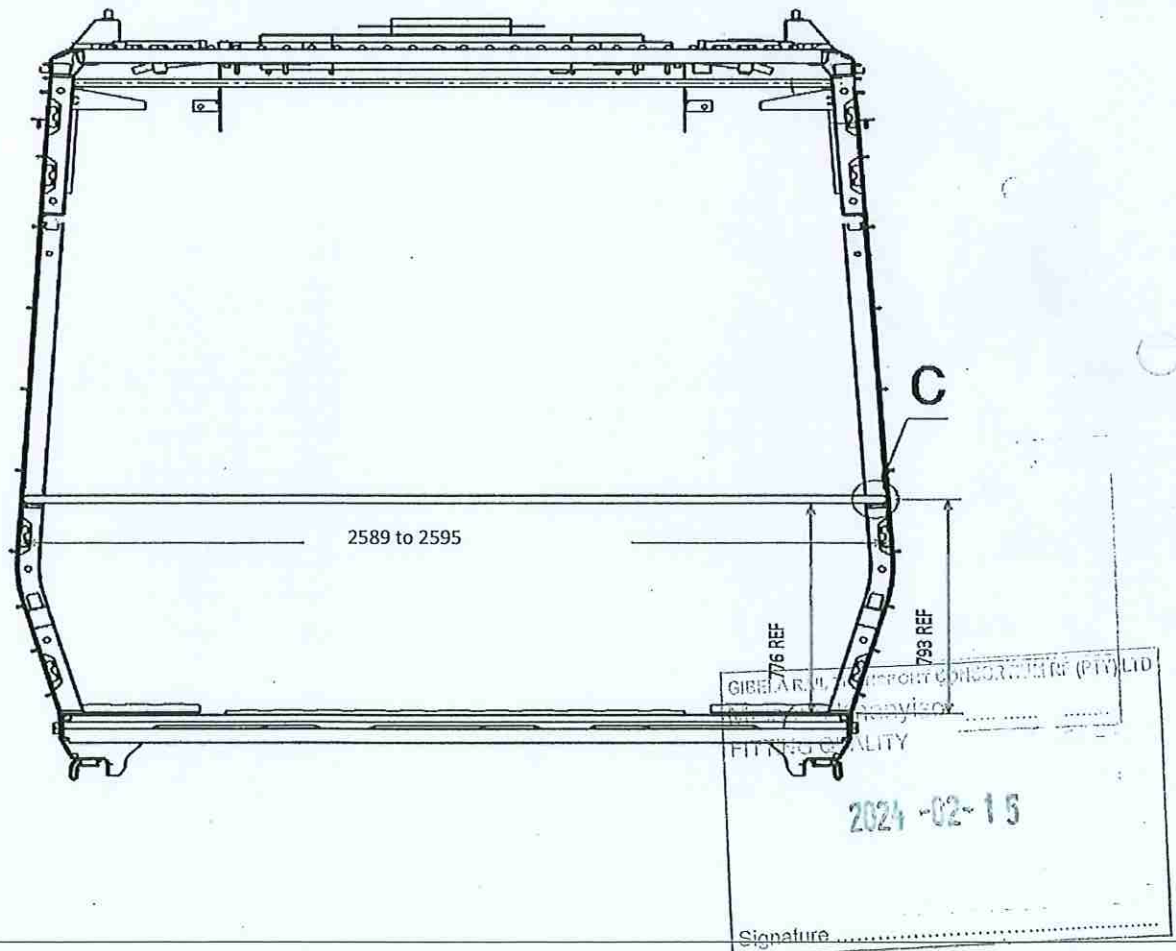
1

Signature
2024-02-15
Fitting Quality
Africa Transport Consortium (PT) Ltd

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



Detail C





DT00000223319 Carshell Assembly TC

Rev.
30

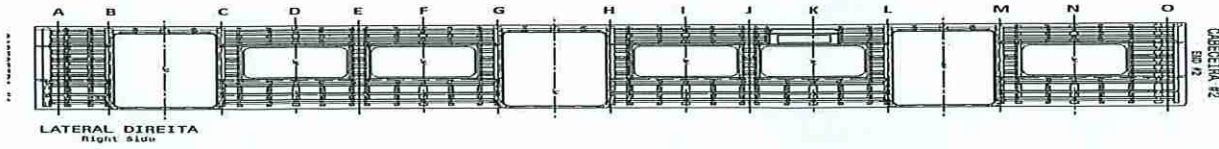
Date-

06/11/2023

Project: PRASA

SI.CB2230.324.V29

Specifications of Details for CBS measurement



2589 to 2595mm

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



Threshold verification

Nominal value :38

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

BOILER MAKER:

Muthapelo

Dada

WELDER:

Muthapelo

Muthapelo



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30

Project: PRASA

Date-

SI.CB2230.324.V29

06/11/2023

Dye penetrant test

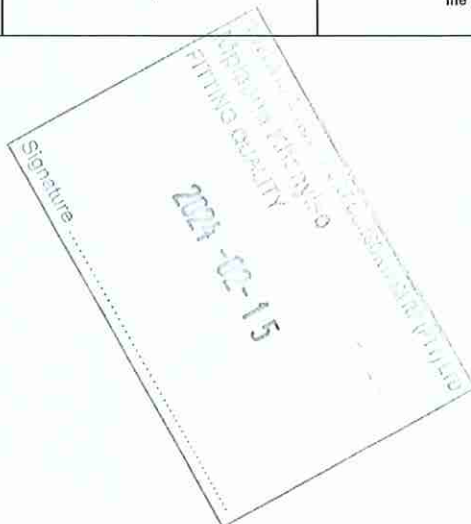
Dye-penetration test to be performed by quality personnel



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

II.2 - Check List REX**Check List Items**

| Item | 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 | | | | | |





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Rev.
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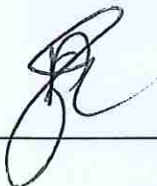

Date-

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 |
|--|-------|---|----------|---------|---|
| HOLD POINT | GO | If activities are not complete, the missing activities must not impact the next stage! | 26/02/24 | Kgotso |  |
| | | Every auto inspection performed conforms to specification or in case of discrepancy the same is approved by the competent party.) | 26/02/24 | Ntokeza |  |
| | NO GO | 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 | Action | Responsible | Due date | Status |
|------|-------------|--------|-------------|----------|--------|
| | | | | | |
| | | | | | |
| | | | | | |

Operations

Quality

