

INDIAN RAILWAYS



सत्यमेव जयते

CHECK SHEETS

FOR

BOGIE BRAKE VAN TYPE – BVZI (DESIGN-C)

(FITTED WITH BOGIE MOUNTED AIR BRAKE SYSTEM)
BROAD GAUGE

(1676 MM)

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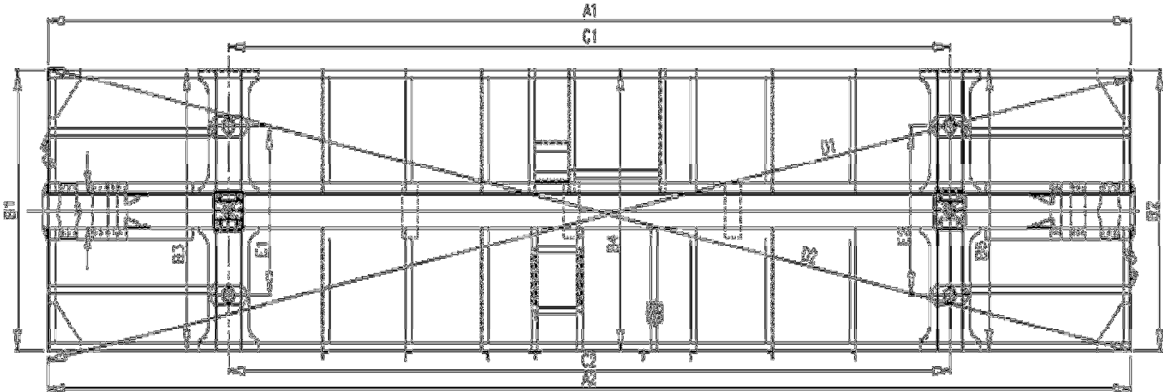
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Note:

These check sheets do not detail all the dimensions or technical requirements of respective wagon assemblies/components.

These check sheets are issued only for General Guidance & assistance of inspecting officials. Notwithstanding the above, the inspecting officials are advised to refer to relevant drawings and/or relevant specifications to confirm conformity to the specified dimensions and technical details.

UNDER FRAME



UNDERFRAME NO.

DATE:

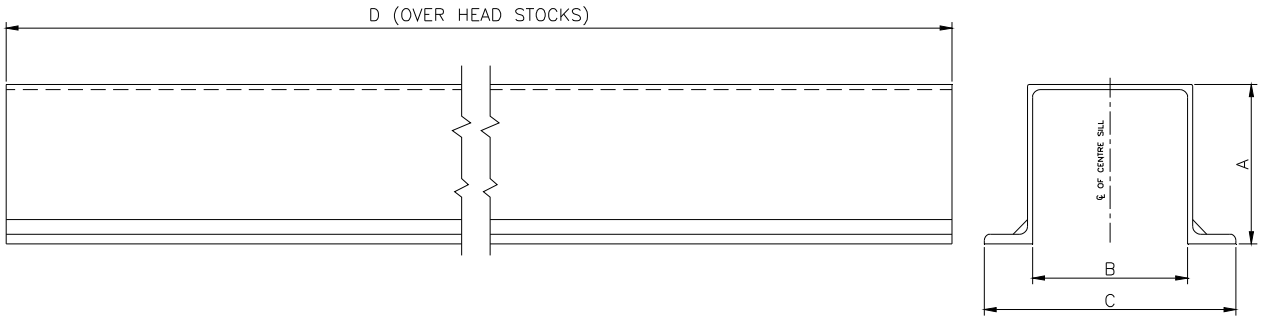
S.N.	STAGE	REMARKS
1	Fitment of component	
2	Welding	
3	Dressing	
4	Manual cleaning	
5	Fitment of Pipe layout & Brake Comp.	

6	DIMENSION	As follows				
		LOCATION	Nominal Dimension	Allowable Deviation	Actual Dimension	Remarks
i	Length over Headstock	A1	13540	+7 -3		
		A2				
ii	Width over Solebar	B1	2670	+3/-3		
		B2				
		B3				
		B4				
		B5				
iii	Center distance between Bolster	C1	9026	+5 -2		
		C2				
iv	Diagonal distance over Headstock	D1-D2	-----	<5		
v	Distance between side Bearer centre	E1	1600	±2		
		E2				
vi	Draft Gear pocket	X	625.5	+0/-1.6		
		Y	327	+1.5/0		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

CENTRE SILL



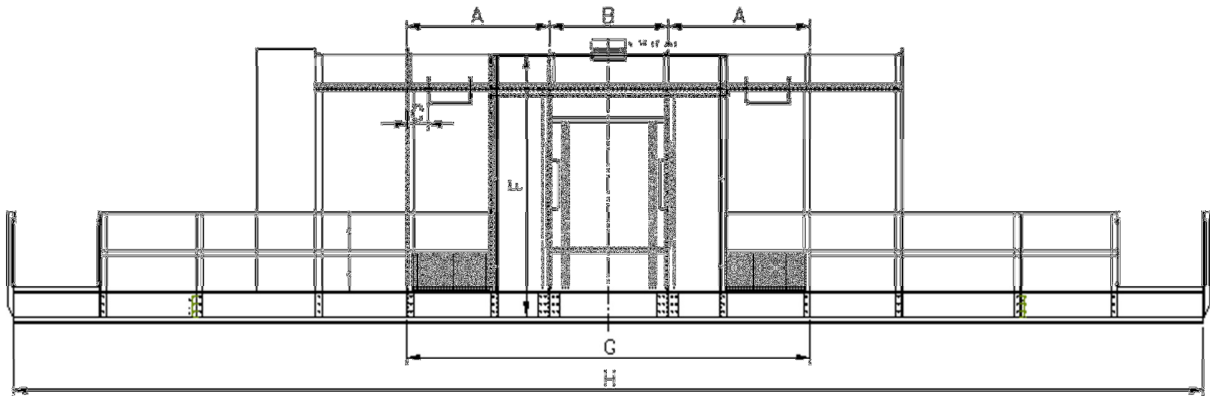
Centre sill No.

Date:

S.N.	STAGE	REMARKS			
1	Fitment of all component				
2	Welding				
3	Dressing				
Dimensions		As follows			
		NOMINAL DIMENSION	ALLOWABLE DEVIATION	ACTUAL DIMENSION	REMARKS
i.	A	327	±1.5		
ii.	B	327	+1.5 -0		
iii.	C	530	±5		
iv	D	13540	+7 -3		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

BODY SIDE

BODY SIDE NO.

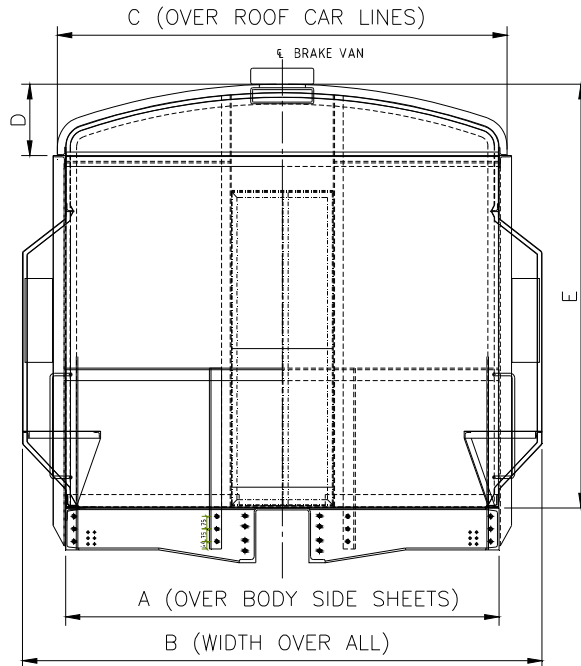
DATE.

S. NO.	STAGE	REMARKS			
1	Fitment of all component				
2	Welding				
3	Dressing				
Dimensions		As follows			
		NOMINAL DIMENSION	ALLOWABLE DEVIATION	ACTUAL DIMENSION	REMARKS
i.	A	1621	+3 -3		
ii.	B	1350	+3 -3		
iii.	C	225	+3 -3		
iv)	F	2526	+3 -3		
v)	G	4592	+3 -3		
vi)	H	13540	+7 -3		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

BODY END ARRANGEMENT



BODY END NO

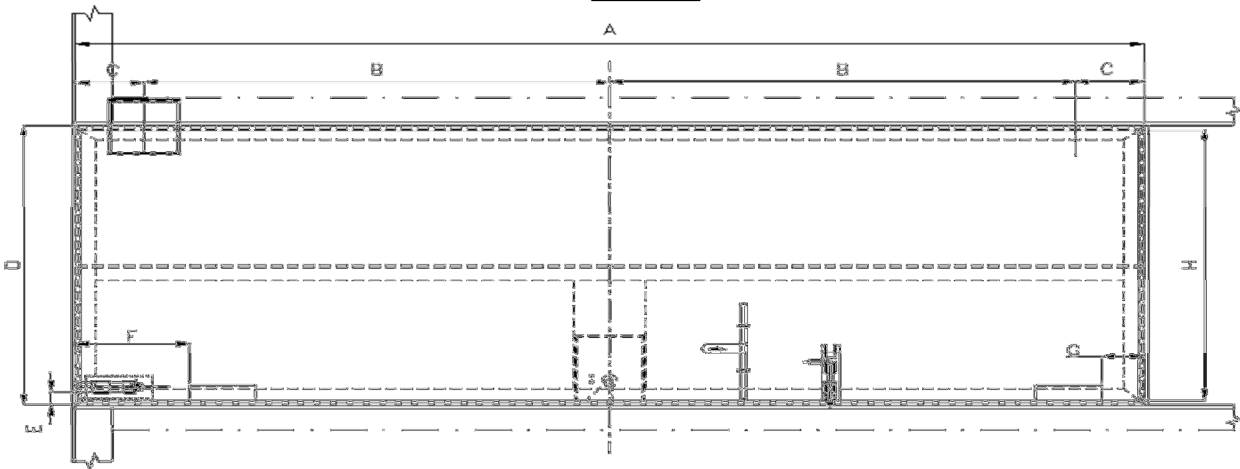
DATE--

S.N.	STAGE	REMARKS			
1.	Fitment of all component				
2.	Welding				
3.	Dressing				
Dimensions		As follows			
		NOMINAL DIMENSION	ALLOWABLE DEVIATION	ACTUAL DIMENSION	REMARKS
i)	A	2670	± 3		
ii)	B	3200	± 3		
iii)	C	2770	±3		
iv)	D	426	± 3		
v)	E	2526	± 3		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

DOOR

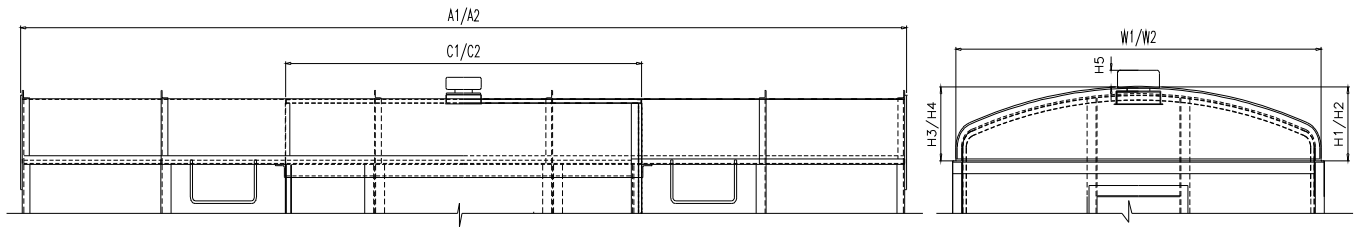


SWING DOOR NO.

SL. NO.	STAGE	REMARKS			
1	Fitment of all component				
2	Welding				
3	Dressing				
Dimensions		As follows			
		NOMINAL DIMENSION	ALLOWABLE DEVIATION	ACTUAL DIMENSION	REMARKS
i.	A	1875	+5 -0		
ii.	B	817.5	+5 -0		
iii.	C	120	+5 -0		
iv)	D	628	+5 -0		
v)	E	30			
vi)	F	200			
vii)	G	75			
viii)	H	608 X 1.6			

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

ROOF

ROOF (Guard's Room)

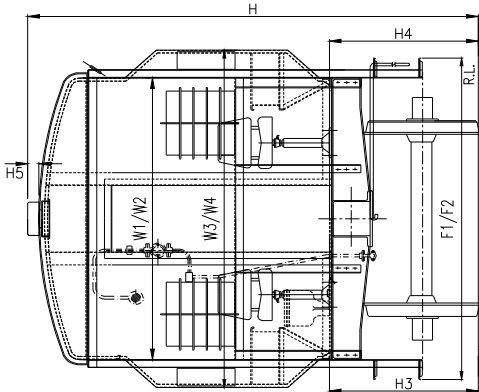
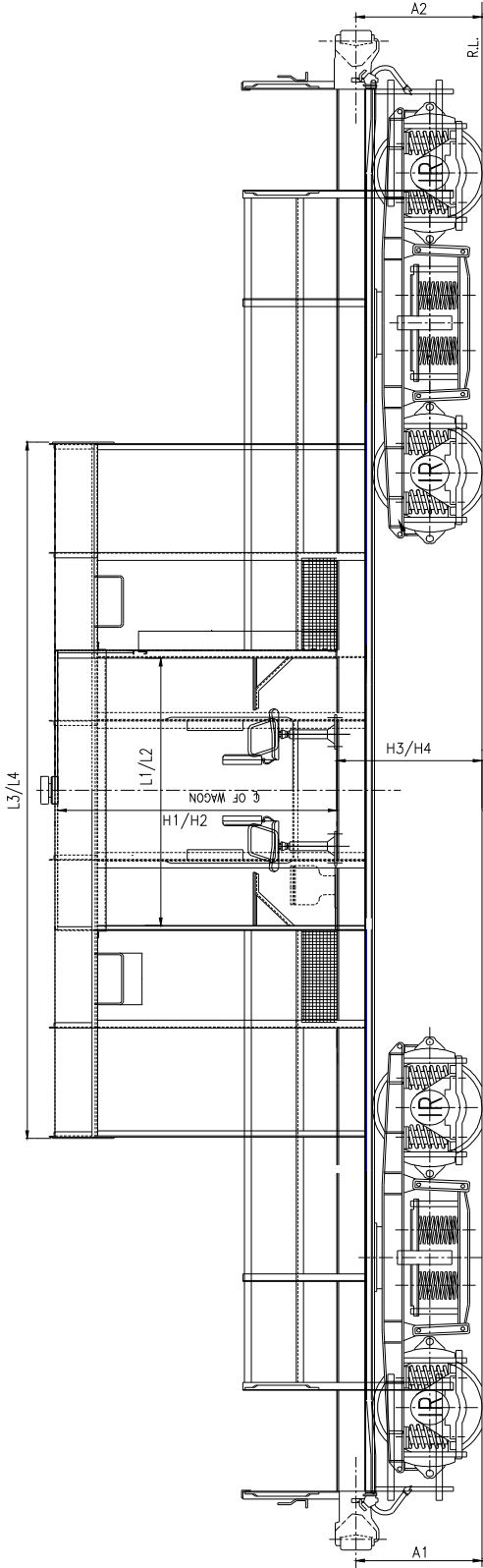
Date.

S.N.	STAGE	REMARKS
1	Fitment of all component	
2	Welding	
3	Dressing	
4	Water Tightness (No Leakage)	
5	Clearing before painting	

DIMENSIONS		As follows				
	LOCATION		Nominal Dimension	Allowable Deviation	Actual Dimension	Remarks
i)	Overall Length	A1	6683.2	+7		
		A2		-2		
	Overall Length of cabin	C1	2700	+7		
		C2		-2		
ii)	Overall Width	W1	2670	± 3		
		W2				
iii)	Overall Height	H1	426	± 3		
		H2				
		H3				
		H4				
iv)	Height of ventilator from Roof top	H5	94	± 2		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	



FINAL ASSEMBLY**WAGON NO:****UNDERFRAME No.****CENTRE SILL No.**

S.n.	STAGE	REMARKS			
1	Fitment of all Sub-assemblies				
2	Welding				
3	Dressing				
4	Operation of Doors				
5	Operation of Windows				
6	Fitment of all items in Guard's compartment				
7	Operation of Coupler				
8	Under gear Examination				
9	Brake Test	i)	Air Brake Test		
10	Water Tightness (No Leakage)				
11	Painting in each Coat > 40 micron(DFT)				
12	DIMENSIONS	As follows			
	LOCATION (REF : SHEET 9 of 13)	Nominal Dimension	Allowable Deviation	Actual Dimension	Remarks
i)	Coupler Height from Rail level	A1	1105	+0	
		A2		-5	
ii)	Inside Length of Guard's room	L 1	2641.8	+7	
		L 2		-3	
iii)	Length over roof end cover plate	L3	6683.2	+7	
		L4		-3	
iv)	Inside Width of Guard's room	W1	2611.8	+3	
		W2		-3	
vi)	Width over all	W3	3200	+3	
		W4		-3	
vii)	Inside Height of Guard's room (From floor Level to Top)	H1	2447.8	+3	
		H2		-3	
viii)	Height of floor top from Rail Level	H3	1274	+0	
		H4		-5	
ix)	Height of Ventilator from roof	H5	94	±2	
x)	Height of Wagon from Rail level	H	3894	±3	
xi)	Width over foot board	F1	3049	±3	
		F2			
xii)	Gap between door angle & Body angle		< 3		
xiii)	Camber		NIL		
xiv)	Each end Vertical distance between yoke support plate & bogie end frame.		> 50		

All dimensions are in mm

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

FINAL WAGON**INSPECTION CHECK SHEET FOR BVZI GOODS BRAKE VAN**

1.	Wagon No.		2.	Date of offer	
3.	Underframe No.		4.	Name of the Wagon Manufacturer:	
5.	Contract/P.O. placed by		6.	Contract/P.O. No. and date and D.P. (Upto)	
7.	Running Gear				
a)	Bearing Make			Serial Nos.	
b)	Wheel Make			Serial Nos.	
c)	Axle Make			Serial Nos.	
d)	Bogie Make & Sr. Nos.		e)	Air Brake Make	
f)	DV Make & Sr. no.		g)	Date of air brake testing	
h)	Date of *SWTR unit calibration		i)	Date of water tightening test	
8.	Coupler Make & Sr. Nos.		9.	Draft Gear Make & Sr. Nos.	
10.	Tare Weight		11.	Shot blasting/manually cleaned	
12.	Paint Make				
13.	D.M. Issue date		14.	TXR fit memo issue date	

15. RAD availedled _____

16. Defects Observed _____

* Single wagon test rake

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

Other Attributes:-

Wagon No.:		U/F No.:	Date:	
S.N.	ATTRIBUTES	ACCEPTANCE LIMIT	WORKS INSPN.	RDSO INSPN.
1.	Check paint- for thickness & finish	One coat of primer to minimum DFT 40 microns and two coat of finish paint to minimum DFT 80 microns. Paint surface to be free from blistering & peeling		
2.	Lettering & marking- for legibility, size, location & punch mark.	As per Drg No. WD-04050-S-01		
3.	COUPLER			
3.1	Height from Rail Level	1105 +0, - 5		
3.2	Operation of knuckle with operating handle	Full knuckle throw lock to lock		
3.3	Articulation of coupler body	Free movement		
4.	HAND BRAKE(Inside guard Cabin)			
4.1	Apply hand brake (by one person only and strike all wheels with a Hammer)	There should not be ringing sound		
4.2	Release the hand brake and apply crow bar on one end of brake block to take up all slack	All brake blocks must be released. Gap between the brake block and wheel tread not to be less than 23.6 mm (5.9 x 4)		
5.	AIR BRAKE			
5.1	Apply air brake and then release the same. Apply crow bar on one end of brake block to take up all slack	Gap between the brake block and wheel tread as measured should be 23.6 + 1, - 0		
6.	AIR BRAKE EQUIPMENT			
	Full service application			
6.1	Leakage from the system	0.1 Kg/cm ² in 1 minute		
6.2	B.C filling time (pressure rise 0 to 3.6 Kg/cm ²)	18 to 30 sec.		
6.3	Maximum B.C. pressure in Kg/cm ²	Empty 3.8 ± 0.1 Kg/ cm ²		
6.4	Decrease in B.P. pressure required for full service application	1.3 to 1.6 Kg/ cm ²		

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	

S.N.	ATTRIBUTES	ACCEPTANCE LIMIT	WORKS INSPN.	RDSO INSPN.
7.	RELEASE AFTER FULL SERVICE APPLICATION			
7.1	Draining time- B.C pressure to fall from 3.8 to 0.4 Kg/cm ²	45 to 60 seconds		
8.	Piston stroke in mm	45 ± 10		
9.	EMERGENCY APPLICATION			
9.1	Emergency application- BC filling time 0 to 3.6 Kg/cm ²	18 to 30 seconds		
9.2	Maximum B.C pressure in Kg/cm ²	3.8 ± 0.1 Kg/cm ²		
9.3	Leakage from B.C.	0.1 Kg/cm ² (max.) in 5 minute		
10.	SENSITIVITY OF BRAKES			
10.1	Isolate brake pipe from main line check the response of brakes when brake pipe pressure is reduced at the most equal to 0.6 Kg/cm ² in 6 seconds	Brake should apply within 6 seconds		
11.	INSENSITIVITY OF BRAKES			
11.1	Isolate brake pipe from main line. Check the response of brakes when brake pipe pressure is reduced at least equal to 0.6 Kg/cm ² in 60 seconds	Brake should not apply		
12.	QUICK RELEASE AND ISOLATION			
12.1	Apply emergency brake (i.e. BP = 0 Kg/cm ²) check the brake cylinder pressure after giving a brief pull to release hook.	Brake cylinder and control reservoir should also exhaust automatically.		
12.2	Bring isolating valve of distributor to off position.	Auxiliary reservoir should also exhaust.		

Works Inspector		RDSO Inspector	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	
Date:		Date:	