



भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
रेलवे बोर्ड RAILWAY BOARD



No.2012/M(N)/951/25 (e.o. 3323637)

Dated: 10.11.2022

The Principal Chief Mechanical Engineers
All Indian Railways

Sub: Loading of Steel consignment with stanchion in upright position.

Ref: (i) This office letter of even no. dated 29.04.2022 (Copy enclosed).

(ii) RDSO's letter no. MW/BRNA dated 14.01.2022 (Copy enclosed).

Vide Railway Board's letter u/r (i), it had been requested to undertake a special one month drive to ensure compliance of instructions issued by RDSO vide letter u/r (ii), regarding consignment securing arrangement after loading of steel consignment on BRN & its variant wagons. The report of the drive submitted by Railways have been examined and it is noted that the stanchion position in majority of the cases is not in upright position. Reports highlighted that there are several instances wherein the side stanchions are found either deficient or in damaged conditions.

In view of the above, it is advised to take necessary corrective action to ensure compliance of instructions issued by RDSO vide letter u/r (ii) above.

DA: As above.

Vivek
10/11/22

(Vivek Mohan)
Dir. Mech. Engg. (Freight)
Railway Board
Telephone No. 011-23047448
Email: dmef@rb.railnet.gov.in



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No.2012/M(N)/951/25

Dated: 29.04.2022

The Principal Chief Mechanical Engineers
All Indian Railways

Sub: Loading of Steel consignment with stanchion in upright position.

Ref: RDSO's letter no. MW/BRNA dated 14.01.2022 (Copy enclosed).

RDSO vide letter u/r above has issued instructions regarding consignment securing arrangement after loading of steel consignments on BRN & it's variant wagons. However, cases of loose securing arrangement or even dropping of loaded consignments from wagons are still occurring, which is a serious matter.

Hence, It is advised to arrange to undertake a special one month drive to ensure compliance of directions in the subject matter.

The result obtained in the drive may be advised to this office latest by 15.06.2022.

DA: As above.

Vivek
29/04/22

(Vivek Mohan)
Dir. Mech. Engg. (Freight)
Railway Board
Telephone No. 011-23047448
Email: dmef@rb.railnet.gov.in

Copy to: EDS(Wagon)/RDSO/Lucknow- for kind information please.

Room No.309-C, Rail Bhavan, Raisina Road, New Delhi-110001

फैक्स / Fax : 91-0522-2452494
तार : 'रेलमानक' लखनऊ
Telegram : 'RAILMANAK' Lucknow
Tele/Fax: 0522- 2465776



सत्यमेव जयते

भारत सरकार —रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ — 226011
Government of India - Ministry of Railways
Research Designs & Standards Organisation
Lucknow — 226011



MW/BRNA

Dated: 14/01/2022

महाप्रबन्धक (यांत्रिक),

1. मध्य रेलवे, छत्रपति शिवाजी महाराज टर्मिनस, मुम्बई— 400 001
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता— 700 001
3. उत्तर रेलवे, बडौदा हाऊस, नईदिल्ली— 110 001
4. पूर्वोत्तर रेलवे, गोरखपुर— 273 001
5. पूर्वोत्तर फ्रन्टियर रेलवे, मालीगाँव, गुवाहाटी— 781 011
6. दक्षिण रेलवे, एनेक्सी, पार्कटाऊन, चेन्नई— 600 003
7. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद— 500 071
8. दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकाता— 700 043
9. पश्चिम रेलवे, चर्चगेट, मुम्बई— 400 020
10. उत्तर मध्य रेलवे, सूबेदारगंज, प्रयागराज — 211 011
11. उत्तर पश्चिम रेलवे, जयपुर— 302 006
12. पूर्व मध्य रेलवे, हाजीपुर— 844 101
13. पूर्व तट रेलवे, रेलवे कॉम्प्लेक्स, भुवनेश्वर— 751 023
14. दक्षिण पश्चिम रेलवे, हुबली— 580 023
15. पश्चिम मध्य रेलवे, जबलपुर— 482 001
16. दक्षिण पूर्व मध्य रेलवे, बिलासपुर— 495 004

Sub: Loading of Steel consignment with stanchion in upright position.

After loading of steel consignments on the BRN & its variant wagons, the Side Stanchion (LH & RH) shall be kept in upright position. The concerned drawing of wagons and consignment securing arrangement drawings have been amended accordingly. Which are listed below:

S.No.	Old Drawing No.	Superseded with	Description
1.	WD-84013-S-02 ALT. 07	WD-84013-S-02 ALT. 08	General Arrangement Note added
2.	WD-92004-S-03 Alt. 10	WD-92004-S-03 Alt. 11	General Arrangement Note added
3.	WD-09053-S-03 Alt.05	WD-09053-S-03 Alt.06	General Arrangement Note added
4.	WD-94019-S-01 Alt.01	WD-94019-S-01 Alt.02	Loading of HR/CR Coils on BRN, BRNA & BRNAHS (Coil Axis Vertical)
5.	WD-94038-S-02 Alt.01	WD-94038-S-02 Alt.02	Loading and securing of HR/CR Coils in unitized packs for BRN, BRNA & BRNAHS
6.	WD-15060-S-01 Alt Nil	WD-15060-S-01 Alt 01	Loading and securing of HR/CR Coils in unitised packs for BRN22.9.
7.	WD-15060-S-02 Alt Nil	WD-15060-S-02 Alt 01	Loading of HR/CR Coils on BRN22.9. (Coil Axis Vertical)
8.	WD-16042-S-01 Alt.01	WD-16042-S-01 Alt.02	Loading and securing of HR/CR Coils in non unitized packs on BRN & its variants.
9.	WD-21095-S-01 Alt.01 WD-15057-S-01	WD-21095-S-01 Alt. 02	Loading and securing of Steel Slabs (9-13 metre) on BRN & its variants.
10.	WD-15057-S-03	WD-21112-S-01 Alt. Nil	Loading and securing arrangement of steel Billets(12m) on BRN & its variants.
11.	WD-15057-S-05	WD-21112-S-02 Alt. Nil	Loading and securing arrangement of steel Billets(6m) on BRN & its variants.
12.	WD-15057-S-09	WD-21112-S-03 Alt. Nil	Loading and securing arrangement of HR Sheets/Plates on BRN & its variants.

This is for kind information and necessary action please.

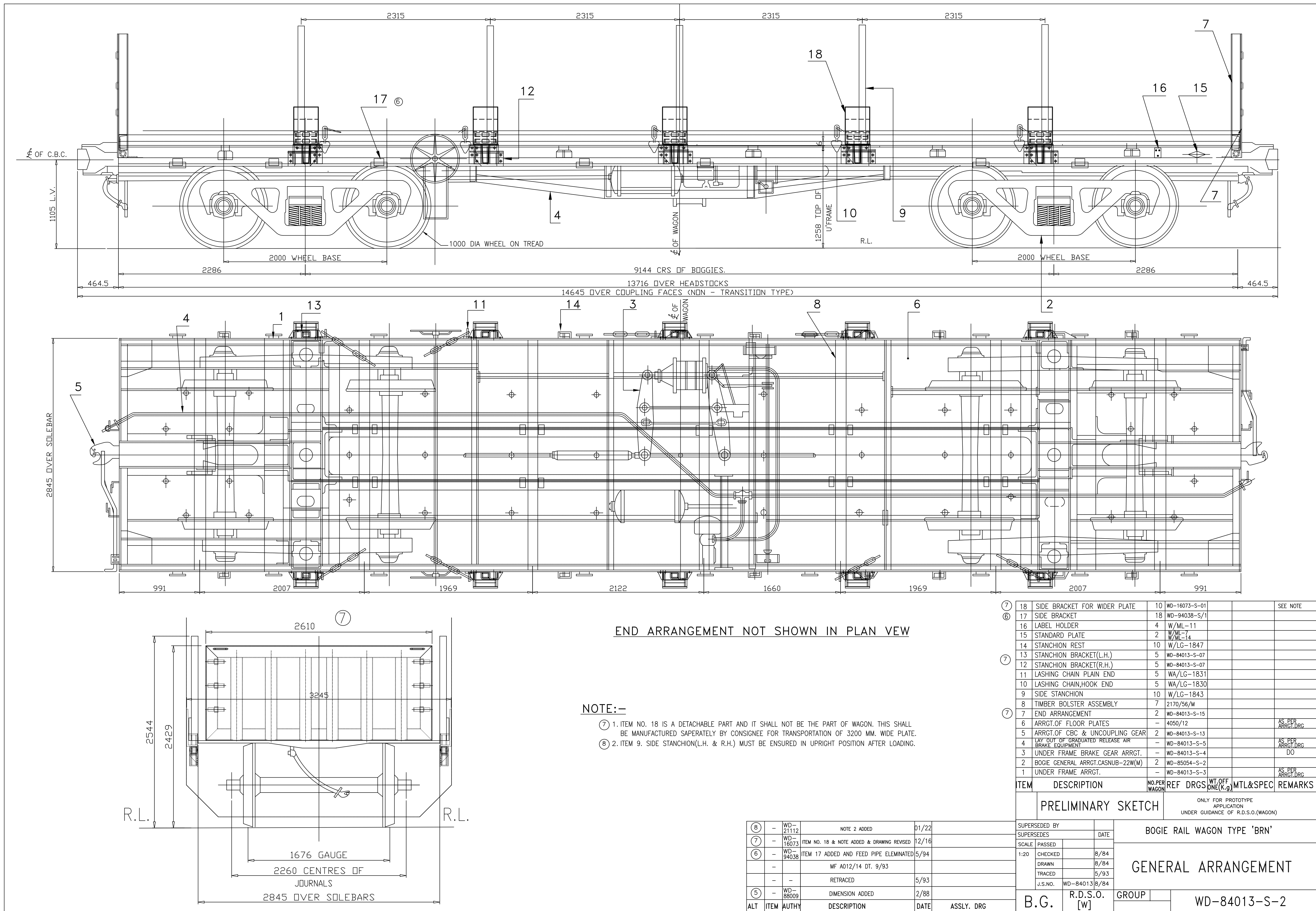
Encl: as above

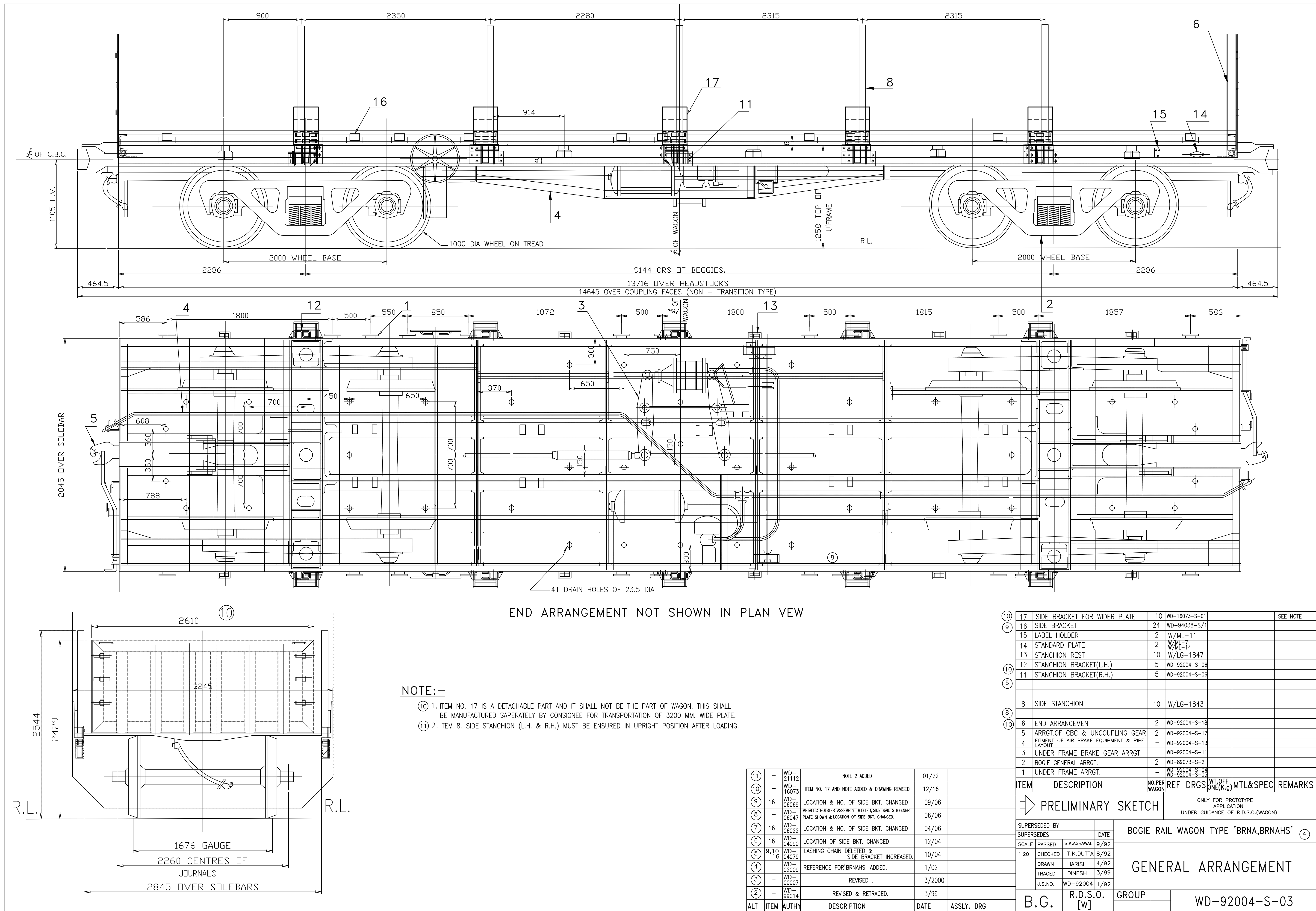
Digitally Signed by Sanjay Kumar
(Sanjay Kumar)

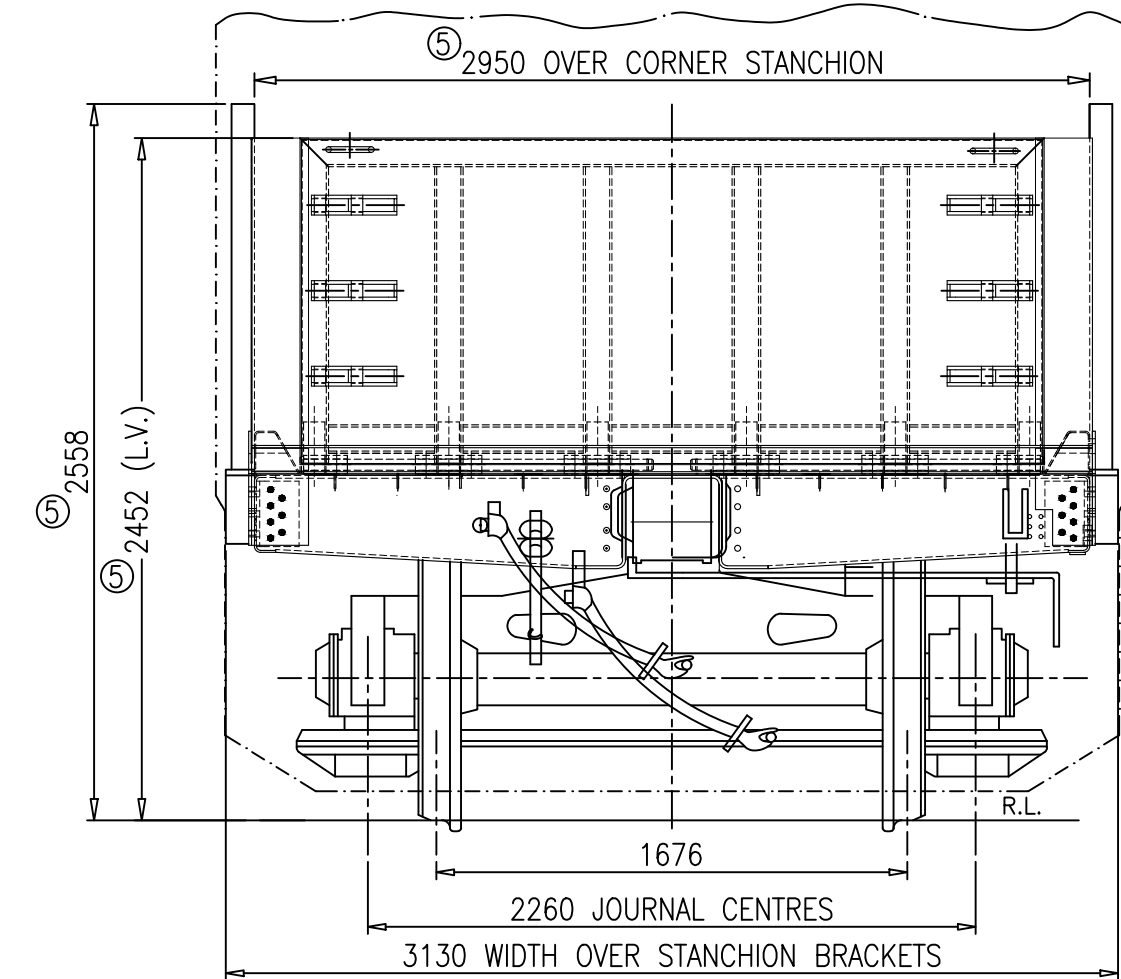
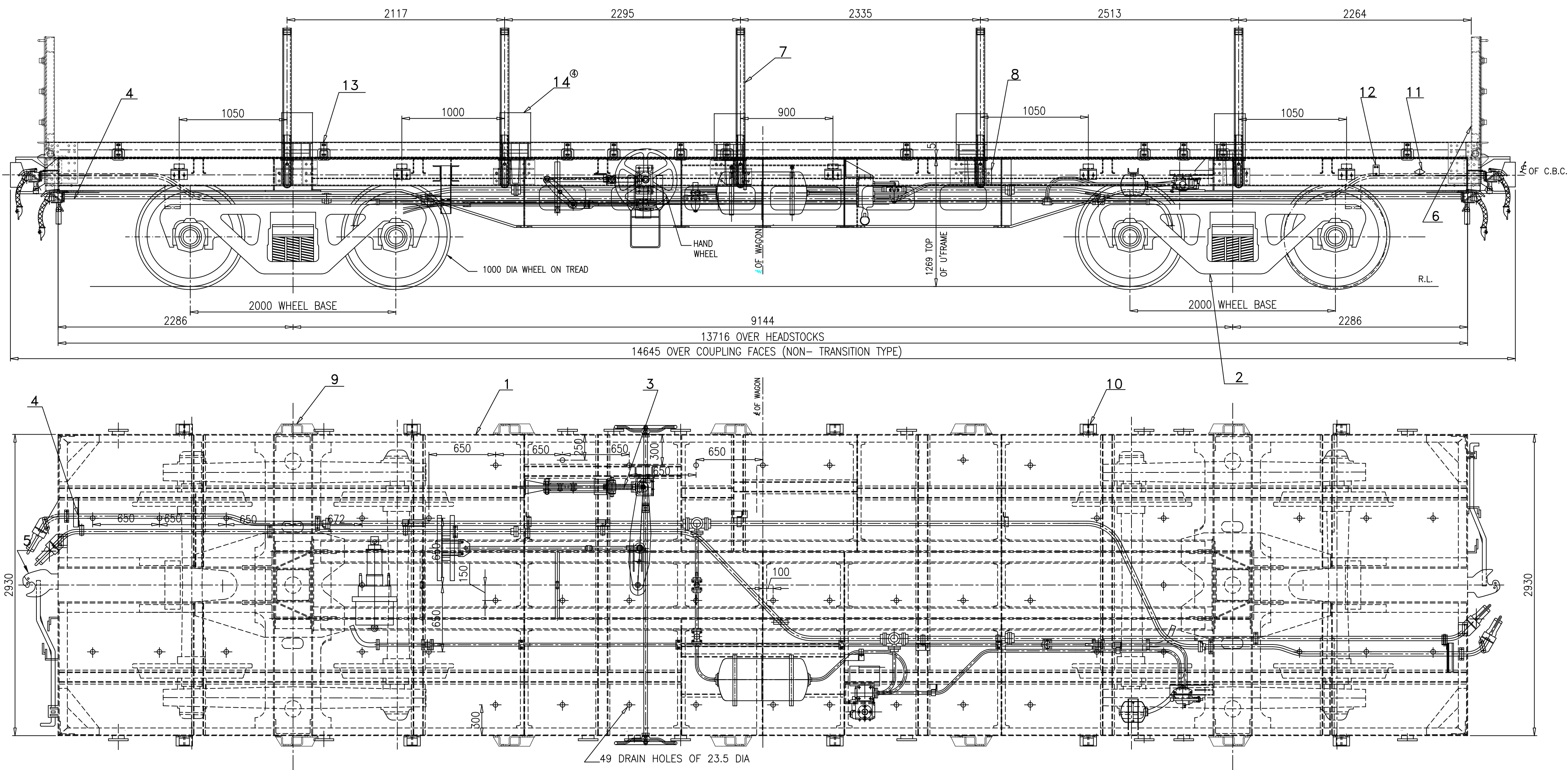
Date: 17-01-2022

Reason: Approved

Copy to: EDME (Frt.), Railway Board, Ministry of Railways, New Delhi-110 001-for information please.







⑤ FIXED END ARRANGEMENT NOT SHOWN IN PLAN VIEW

NOTE:-

- ⑥ 1. ITEM NO. 14 IS A DETACHABLE PART AND IT SHALL NOT BE THE PART OF WAGON. THIS SHALL BE MANUFACTURED SEPARATELY BY CONSIGNEE FOR TRANSPORTATION OF 3200 MM WIDE PLATE.
- ⑥ 2. WAGON IS FITTED WITH-
 - (a) HIGH TENSILE CENTRE BUFFER COUPLER TO RDSO STR NO. WD-70-BD-10 (LATEST REVISION & AMENDMENT)
 - (b) HIGH CAPACITY DRAFT GEAR TO RDSO STR NO. 49-BD-08 (LATEST REVISION & AMENDMENT)
 - (c) AIR BRAKE EQUIPMENTS TO RDSO SPECIFICATION NO. 02-ABR-02 (LATEST REVISION & AMENDMENT)
 - (d) AIR BRAKE PIPE AND PIPE JOINT TO RDSO SPECIFICATION NO. 04-ABR-2002 (LATEST REVISION & AMENDMENT)
 - (e) BMBS EQUIPMENT FITTED WITH CASNUB TYPE BOGIE TO RDSO SPECIFICATION NO. WD-23-BMBS-2008 (LATEST REVISION & AMENDMENT)
 - (f) CASNUB 22 HS BOGIE TO RDSO SPECIFICATION NO. WD-17-CASNUB-22HS-BOGIE-92 (LATEST REVISION & AMENDMENT)
- ⑥ 3. ITEM 7. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

④	14	SIDE BRACKET FOR WIDER PLATE	10	WD-16073-S-01		-	SEE NOTE-1
②	13	SIDE BRACKET WITH LINK	22	WD-09053-S-15		-	
②	12	'PERSHAD' LABEL HOLDER	2	W/ML-11		-	
②	11	STANDARD PLATE	2	W/ML-7		-	
⑤⑦	10	SIDE STANCHION REST	10	WD-09053-S-07		-	
⑦	9	SIDE STANCHION BRACKET(L.H.)	5	WD-09053-S-06		-	
⑦	8	SIDE STANCHION BRACKET(R.H.)	5	WD-09053-S-06		-	
⑤⑦	7	SIDE STANCHION	10	WD-09053-S-07		-	
	6	END ARRANGEMENT	2	WD-09053-S-13		-	
	5	CBC & UNCOUPLING GEAR ARRGT.	2	WD-81010-S-03		-	
	4	FITMENT OF AIR BRAKE EQUIPMENT & PIPELAYOUT	-	WD-09053-S-11		-	
	3	UNDER FRAME BRAKE GEAR ARRGT.	-	WD-09053-S-08		-	
③	2	BOGIE GENERAL ARRGT.	2	WD-04078-S-01		-	
	1	UNDER FRAME ARRGT.	-	WD-09053-S-04		-	

ITEM	DESCRIPTION	NO. PER WAGON	REF	DRGS	WT. OFF ONE (K.g)	MTL & SPEC	REMARKS
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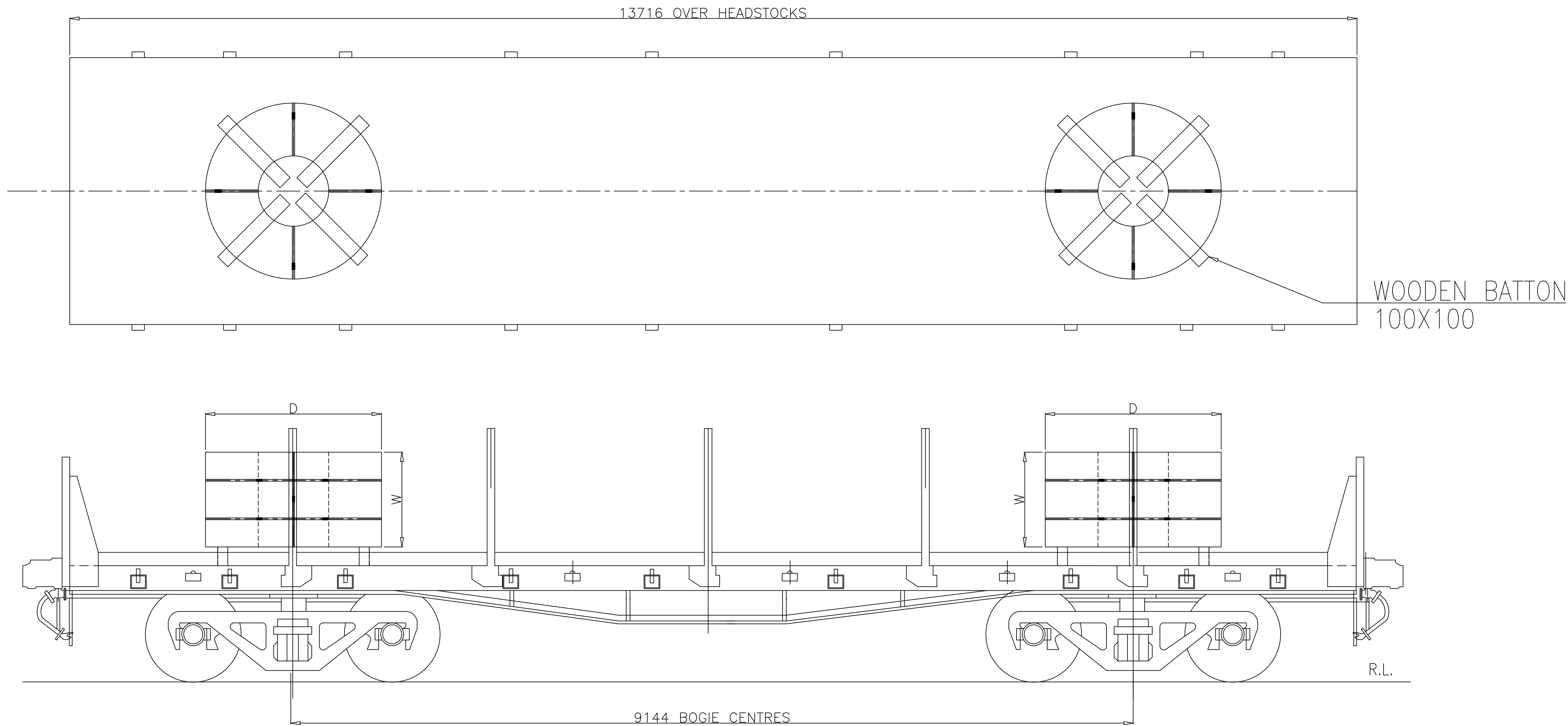
PRELIMINARY SKETCH		ONLY FOR PROTOTYPE APPLICATION UNDER GUIDANCE OF R.D.S.O.(WAGON)					
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SUPERSEDED BY		बीआरएन22.9 प्रकार का बोरी रेल वेगन बीएसबीएस के साथ					
SCALE		BOGIE RAIL WAGON TYPE 'BRN22.9' WITH BMBS					

1:20		GENERAL ARRANGEMENT					
DRAWN		Sd/D.KUMAR 08/09					
TRACED		J.S.NO. WD-09053 7/09					

B.G.		R.D.S.O. [W]		GROUP		WD-09053-S-03	
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⑥	-	WD-21112	NOTE-3 ADDED	01/22	-
⑤	7,10	WD-18040	NOTE-2 ADDED. ITEM NO. OF REF. DRG SHOWN. TWIN PIPE LAYOUT SHOWN.	05/18	-
④	8, 9, 6, 14	WD-16073	ITEM NO 14 AND NOTE ADDED. DRAWING REVISED.	12/16	-
③	2	WD-12021	DRAWING REVISED	05/12	-
②		WD-11034	MATERIAL CHANGED IT. NO. 11,12	04/11	-
①	7-10	WD-11015	MATERIAL CHANGED IT. NO. 8,9	02/11	-
ALT	ITEM	AUTHY	DESCRIPTION	DATE	ASSLY. DRG



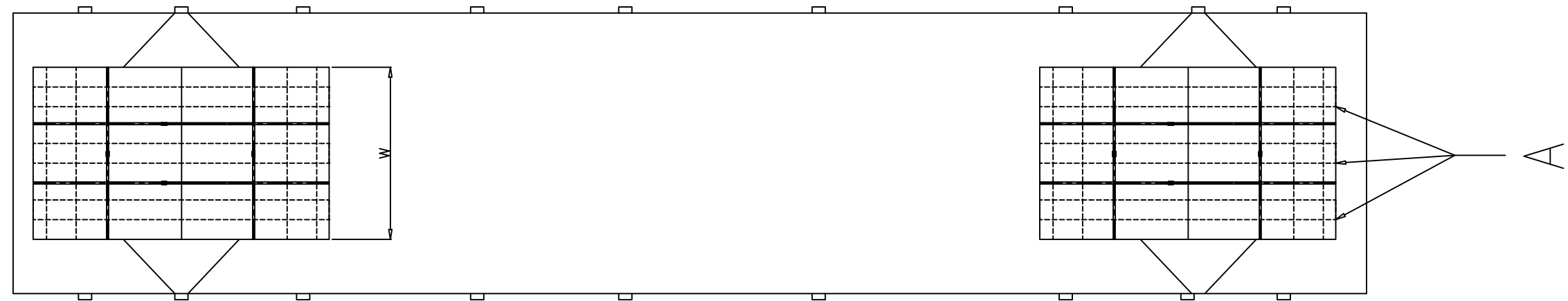
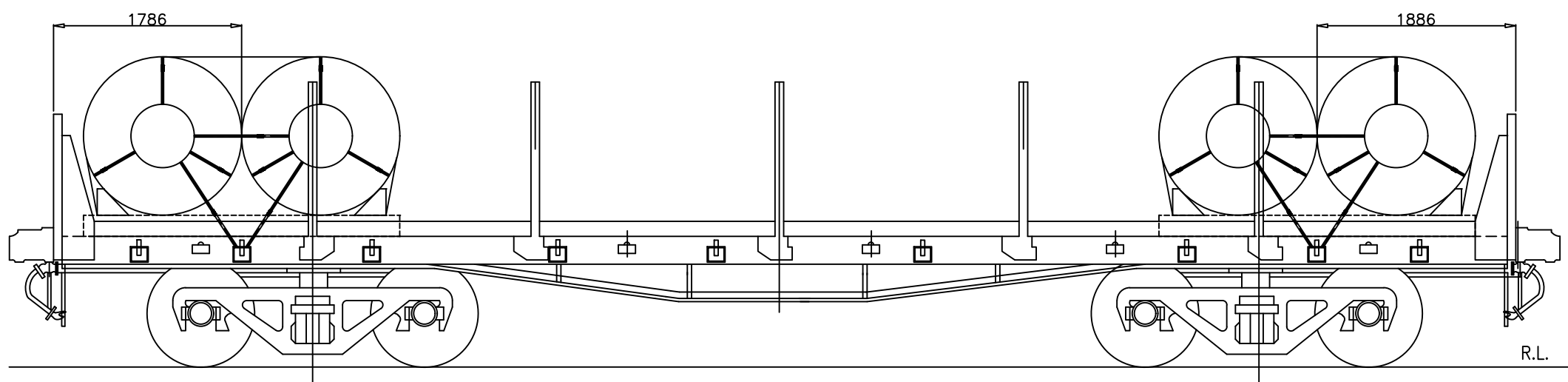
NOTE: LOADING OF COILS SHOULD BE SUCH THAT :-

- 1. THE LOAD ON ANY BOGIE SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
- 2. THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
- ② 3. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

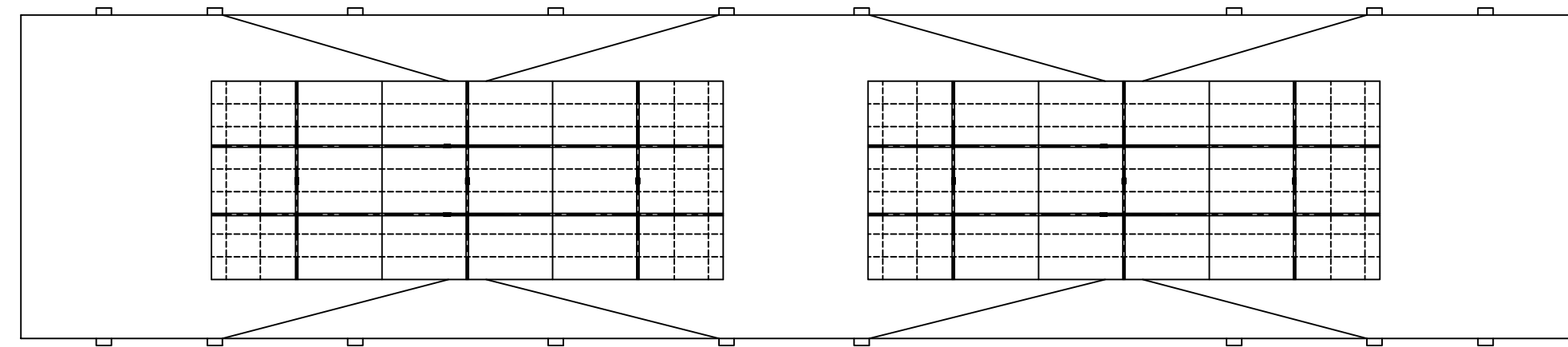
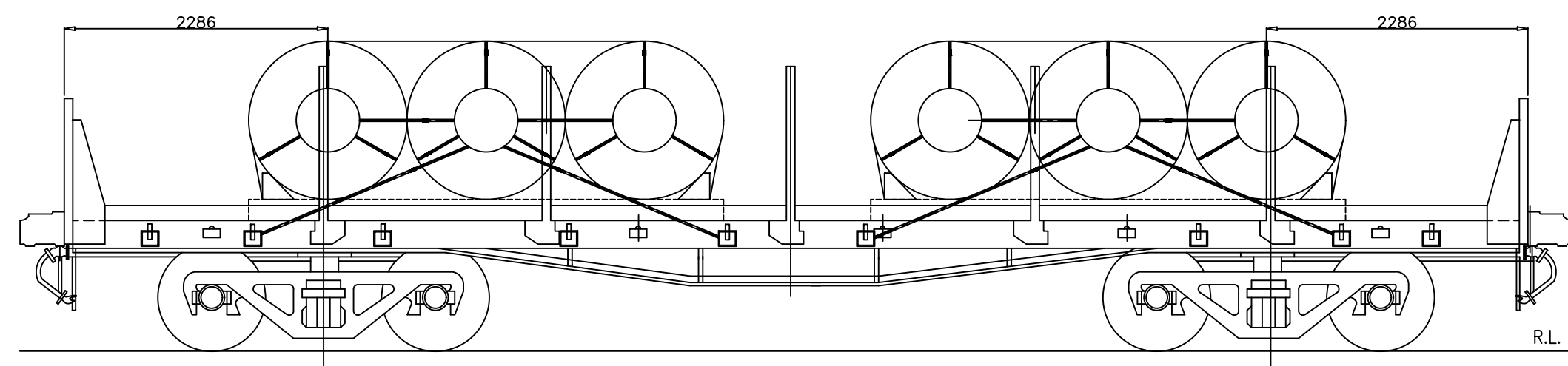
INDIVIDUAL WEIGHT = 15 TO 27 T
METHOD OF LOADING – COIL AXIS VERTICAL
TYPE OF WAGON – BRH/BRN
RESTRICTION $W \leq 1.5D$

②.	-	WD-21112	NOTE-3 ADDED	01/22	-
①.	-	WD-15048	DRAWING REVISED	10/15	-
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

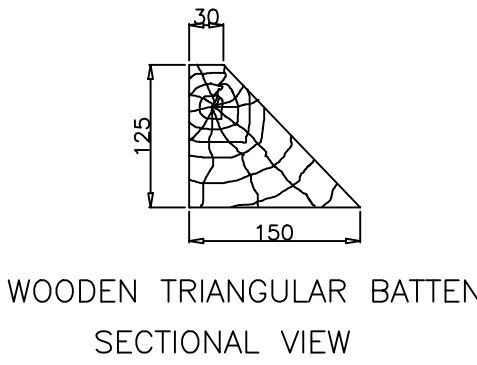
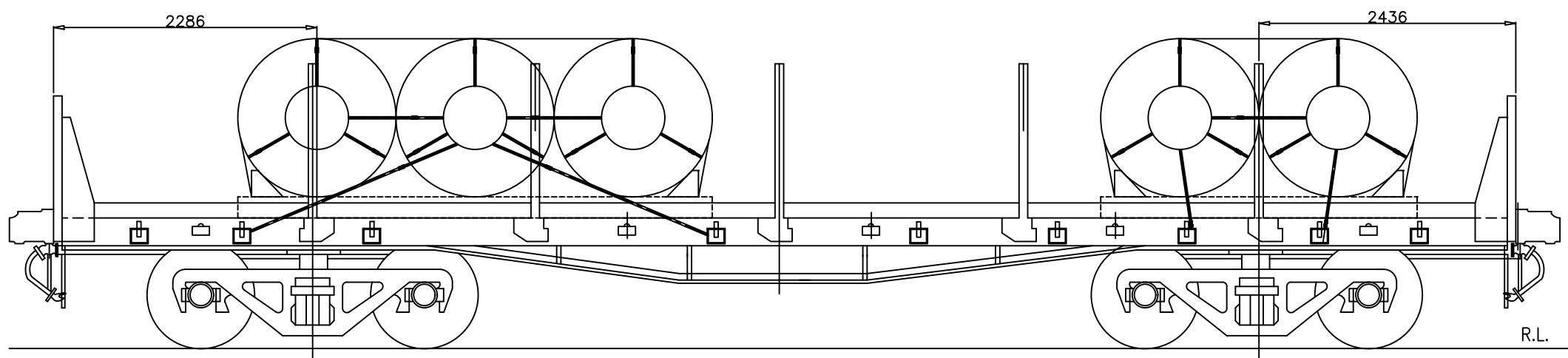
SUPERSEDED BY				LOADING OF H.R./C.R. COILS ON BRH/BRN/BRNA/BRNAHS WAGONS (COIL AXIS VERTICAL)		
SUPERSEDES			DATE			
SCALE	PASSED	A.N.MEHTA -Sd-	07/94			
/	CHECKED	MANJEET SINGH -Sd-	07/94			
	DRAWN	S.K.KHARE -Sd-	02/94			
	TRACED					
	COMPARED					
J.S.NO.		WD3-94/66	02/94			
B.G.		R.D.S.O. [W]	GROUP	WD-94019-S-01		



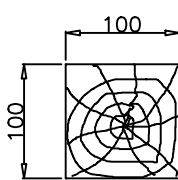
UNITISED IN 2 COILS PACK
FIG.1



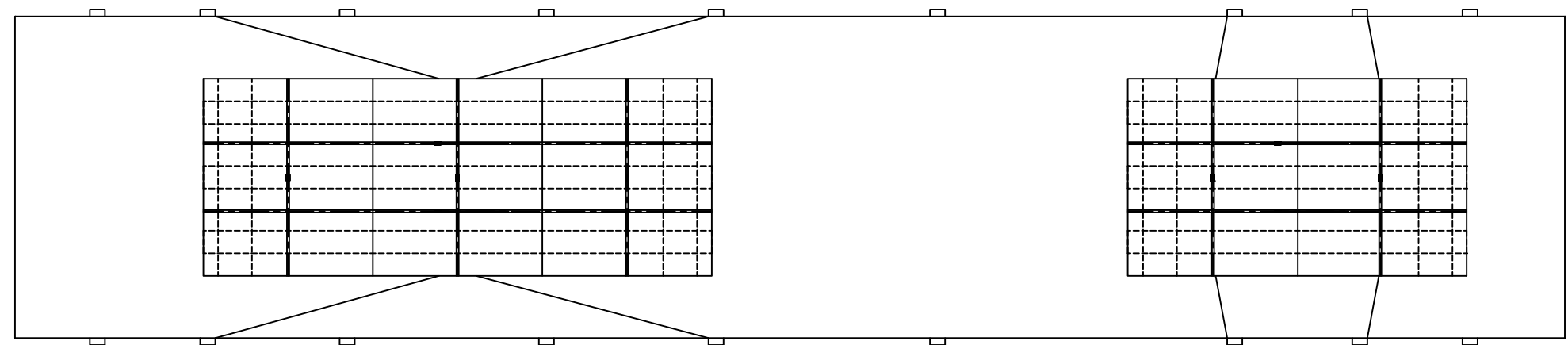
UNITISED IN 3 COILS PACK
FIG.2



WOODEN TRIANGULAR BATTEN
SECTIONAL VIEW



WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW



UNITISED IN 2 AND 3 COILS PACK(5 PER WAGON)
FIG.3

METHOD OF LOADING

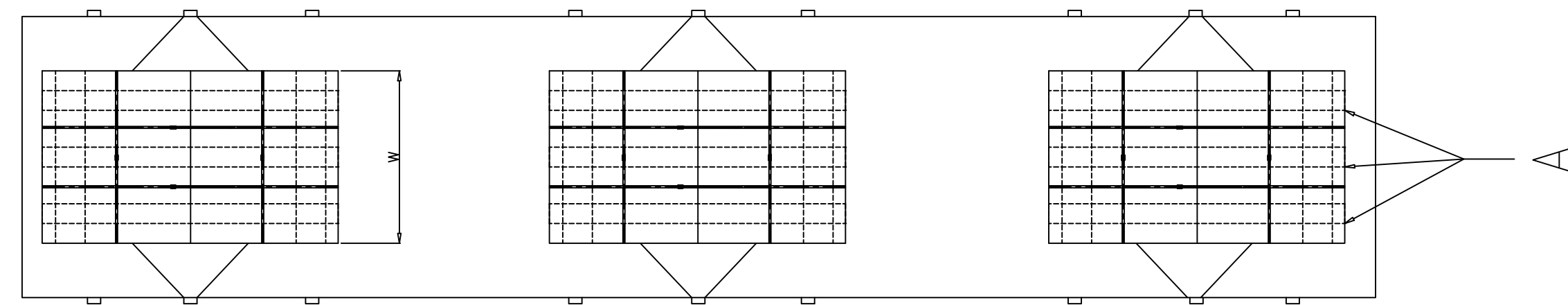
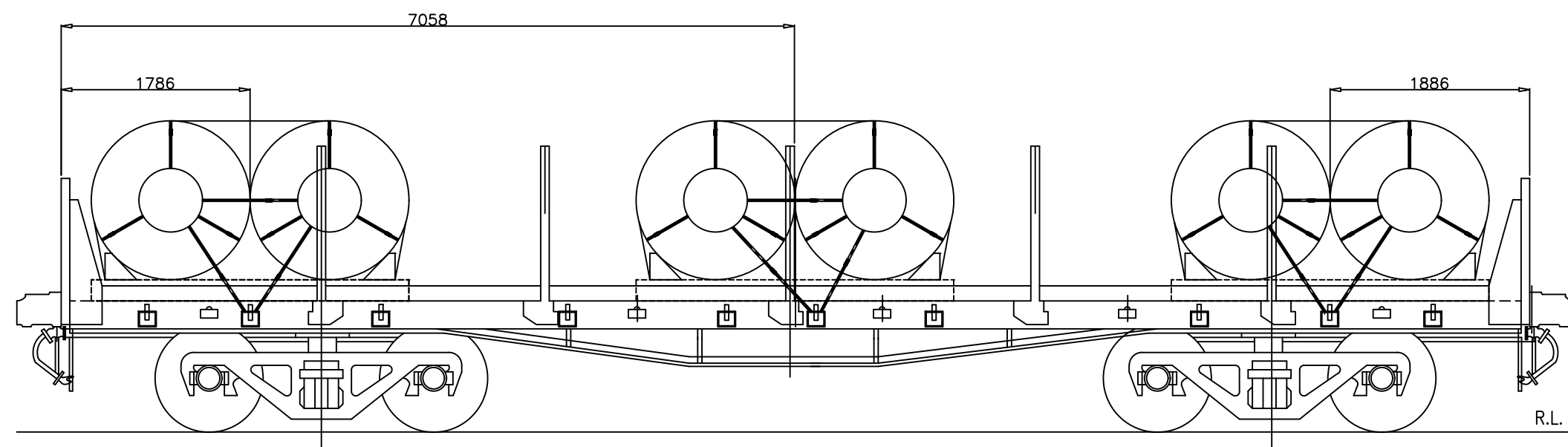
1. UNITISED IN PACKS OF 2/3
2. COIL AXIS PERPENDICULAR TO THE LENGTH OF WAGON.
3. RESTRICTION $D \leq 1.5W$

NOTE :-

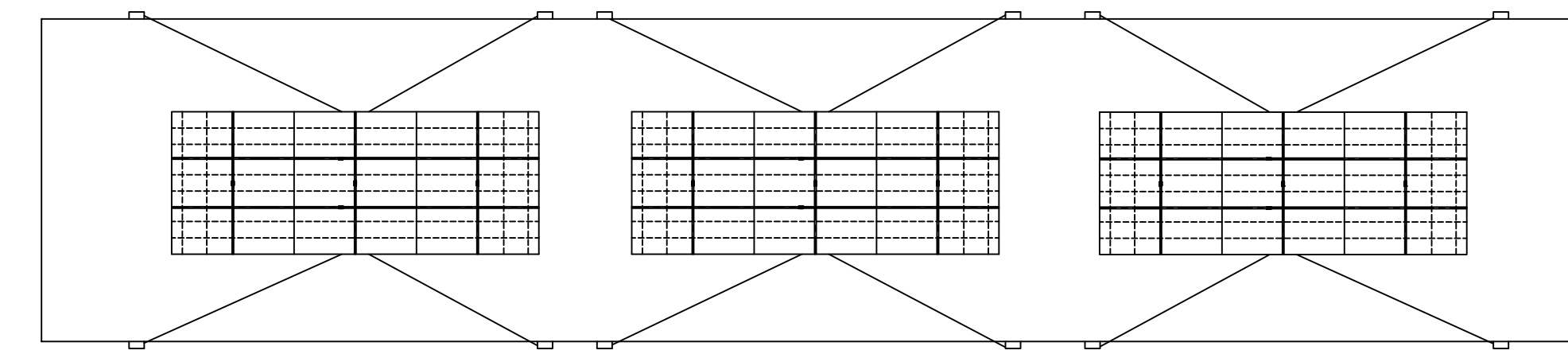
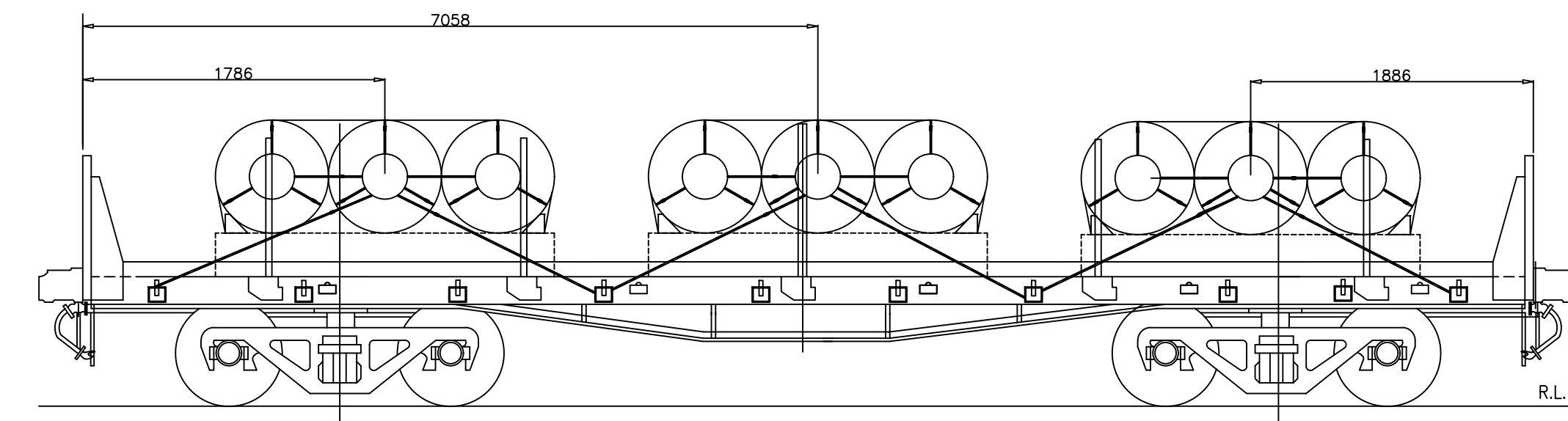
1. ALL INDIVIDUAL COILS ARE TO BE STRAPPED USING HEAVY DUTY STRAPS AS INDICATED BY 'A'.
2. COILS PACKED TO BE PLACED SYMMETRICALLY ABOUT THE LONGITUDINAL CENTRE LINE OF THE WAGON.
3. TRIANGULAR WOODEN BATTENS SHOULD BE CONTINUOUS ACROSS LONG, RUNNERS.
4. LOADING OF COILS TO BE AT THE RATE INDICATED BELOW DEPENDING UPON THE WEIGHT OF THE COILS EACH WEIGHING UPTO 14T MAX.:-
 - 4.1 4 PER WAGON (2+2)
 - 4.2 5 PER WAGON (3+2)
 - 4.3 6 PER WAGON (3+3)
5. LOADING OF COILS SHOULD BE SUCH THAT :-
 - 5.1 THE LOAD ON ANY BOGIE SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - 5.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
- ② 6. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

②	-	WD-21112	NOTE-6 ADDED	01/22	-
①	-	WD-15048	DRAWING REVISED	10/15	-
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

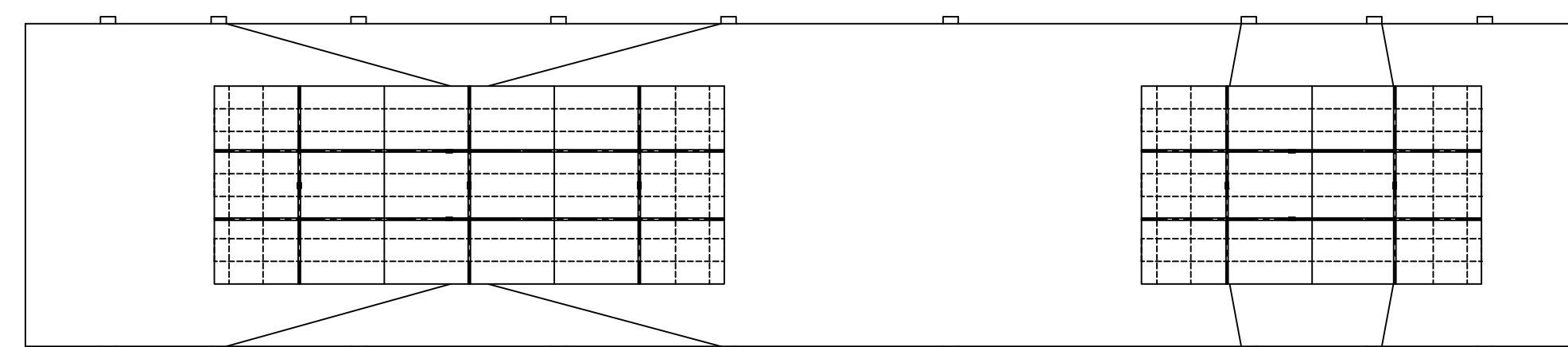
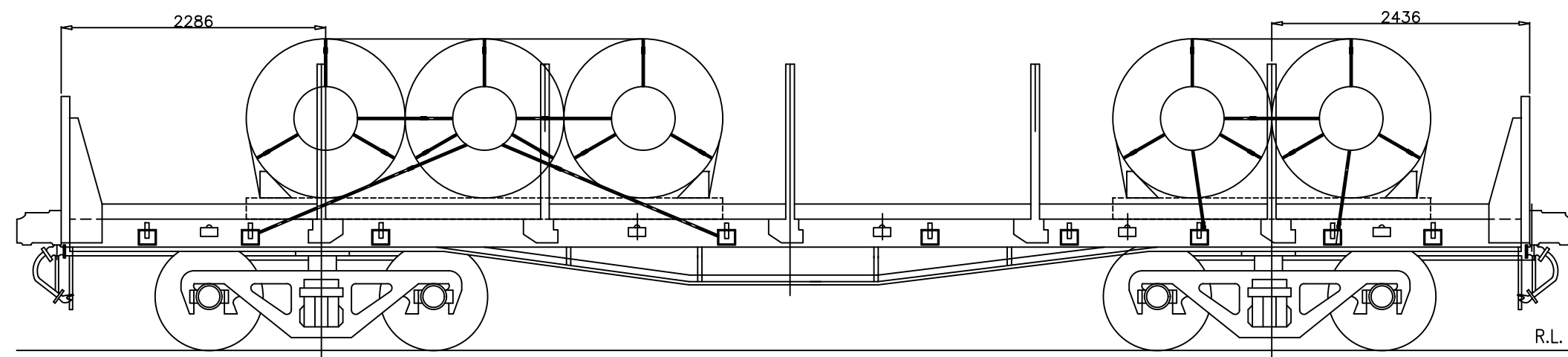
SUPERSEDED BY	DATE	BOGIE FLAT WAGON TYPE
SUPERSEDES	DATE	'BRN', 'BRHC', 'BRHT', 'BRNA' & 'BRNAHS'
SCALE PASSED	A.N.MEHTA Sd/- 05/94	
CHECKED	MANJEET SINGH Sd/- 05/94	
DRAWN	S.K.KHARE Sd/- 05/94	
TRACED		
COMPARED		
J.S.NO.	WD3-94/10 05/94	
B.G.	R.D.S.O. [W]	GROUP
		WD-94038-S-02



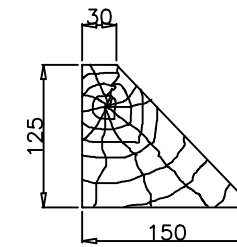
UNITISED IN 2 COILS PACK
FIG.1



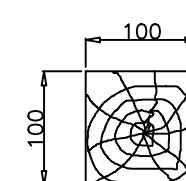
UNITISED IN 3 COILS PACK
FIG.2



UNITISED IN 2 AND 3 COILS PACK(5 PER WAGON)
FIG.3



WOODEN TRIANGULAR BATTEN
SECTIONAL VIEW



WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW

METHOD OF LOADING

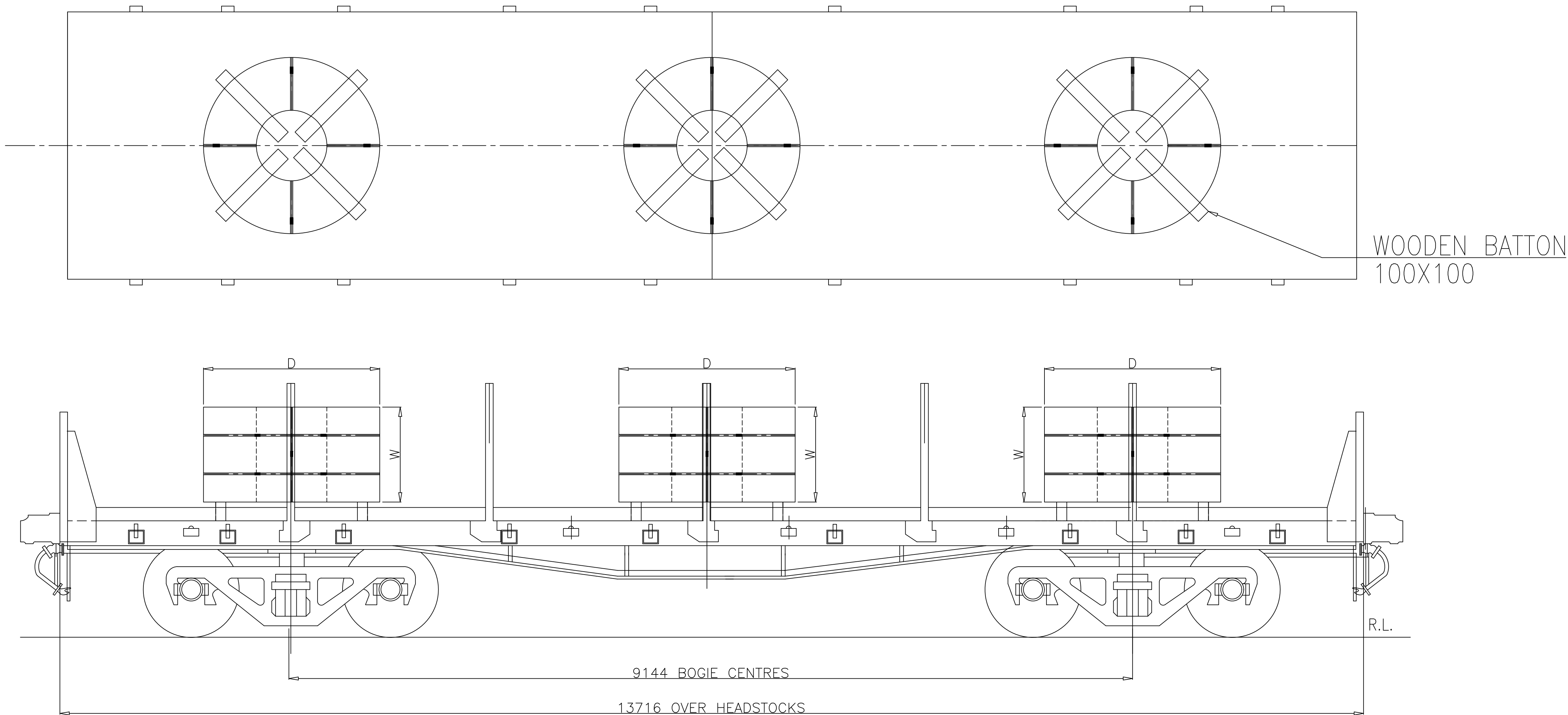
1. UNITIZED IN PACKS OF 2/3
2. COIL AXIS PERPENDICULAR TO THE LENGTH OF WAGON.
3. RESTRICTION $D \leq 1.5W$

NOTE :-

1. ALL INDIVIDUAL COILS ARE TO BE STRAPPED USING HEAVY DUTY STRAPS AS INDICATED BY 'A'.
2. COILS PACKED TO BE PLACED SYMMETRICALLY ABOUT THE LONGITUDINAL CENTRE LINE OF THE WAGON.
3. TRIANGULAR WOODEN BATTENS SHOULD BE CONTINUOUS ACROSS LONG, RUNNERS.
4. LOADING OF COILS TO BE AT THE RATE INDICATED BELOW DEPENDING UPON THE WEIGHT OF THE COILS.
 - 4.1 4 PER WAGON (2+2)
 - 4.2 5 PER WAGON (3+2)
 - 4.3 6 PER WAGON (3+3)/(2+2+2)
 - 4.4 7 PER WAGON (2+3+2)
 - 4.5 8 PER WAGON (3+2+3)
 - 4.6 9 PER WAGON (3+3+3)
5. LOADING OF COILS SHOULD BE SUCH THAT :-
 - 5.1 THE LOAD ON ANY BOGIE SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - 5.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
6. ALTERNATE MATERIAL OF STEEL STRAP SHALL BE EN 13246 TYPE 3.2
- ① 7. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

①	-	WD-21112	NOTE-7 ADDED	01/22	-
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

SUPERSEDED BY		BOGIE FLAT WAGON TYPE
SUPERSEDES	DATE	'BRN 22.9'
SCALE	PASSED	V.SINGHAL 11/15
CHECKED	D.KUMAR	11/15
DRAWN	A.P.SINGH	11/15
TRACED		
COMPARED		
J.S.NO.	WD-15060	11/15
B.G.	R.D.S.O.	GROUP
[W]		WD-15060-S-01



NOTE: LOADING OF COILS SHOULD BE SUCH THAT :—

1. THE LOAD ON ANY BOGIE SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
2. THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
- ① 3. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

INDIVIDUAL WEIGHT = 15 TO 22.5 T (IN CASE OF 3 COILS LOADING)

INDIVIDUAL WEIGHT = 15 TO 34 T (IN CASE OF 2 COILS LOADING)

METHOD OF LOADING — COIL AXIS VERTICAL

RESTRICTION $W \leq 1.5D$

SUPERSEDED BY			
SUPERSEDES			DATE
SCALE	PASSED	A.K.ROY	11/15
	CHECKED	A.P.SINGH	11/15
	DRAWN	D.KUMAR	11/15
	TRACED		
	COMPARED		
	J.S.NO.	WD-15060	11/15

LOADING OF H.R./C.R. COILS ON
BRN 22.9 WAGONS
(COIL AXIS VERTICAL)

①.	-	WD-21112	NOTE-3 ADDED	01/22	-
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

B.G.	R.D.S.O. [W]	GROUP	WD-15060-S-02

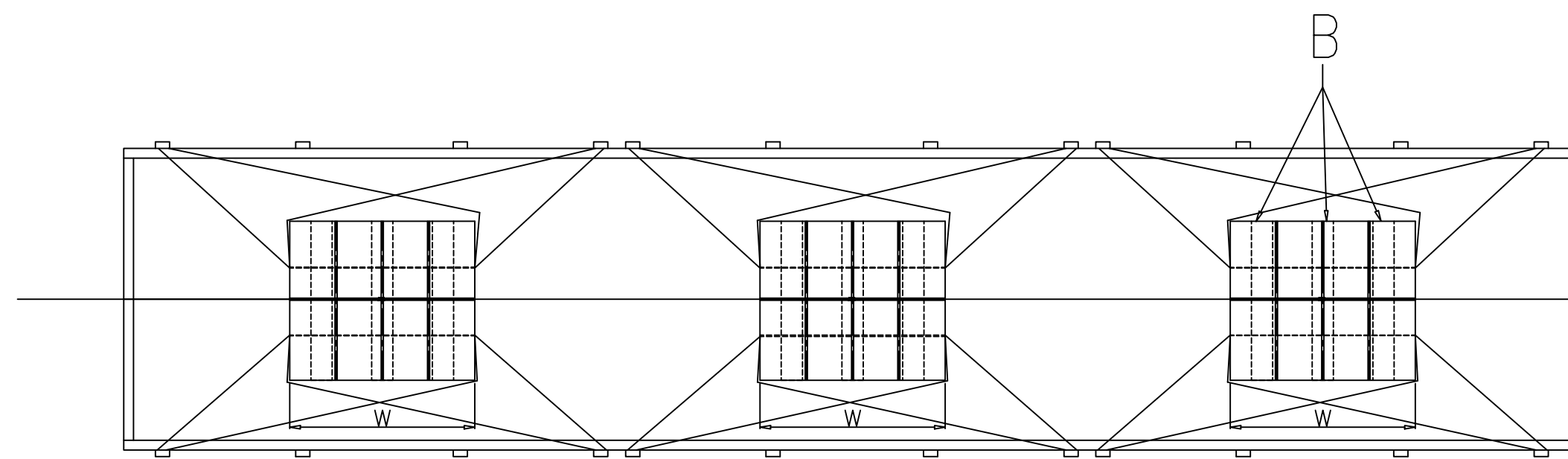
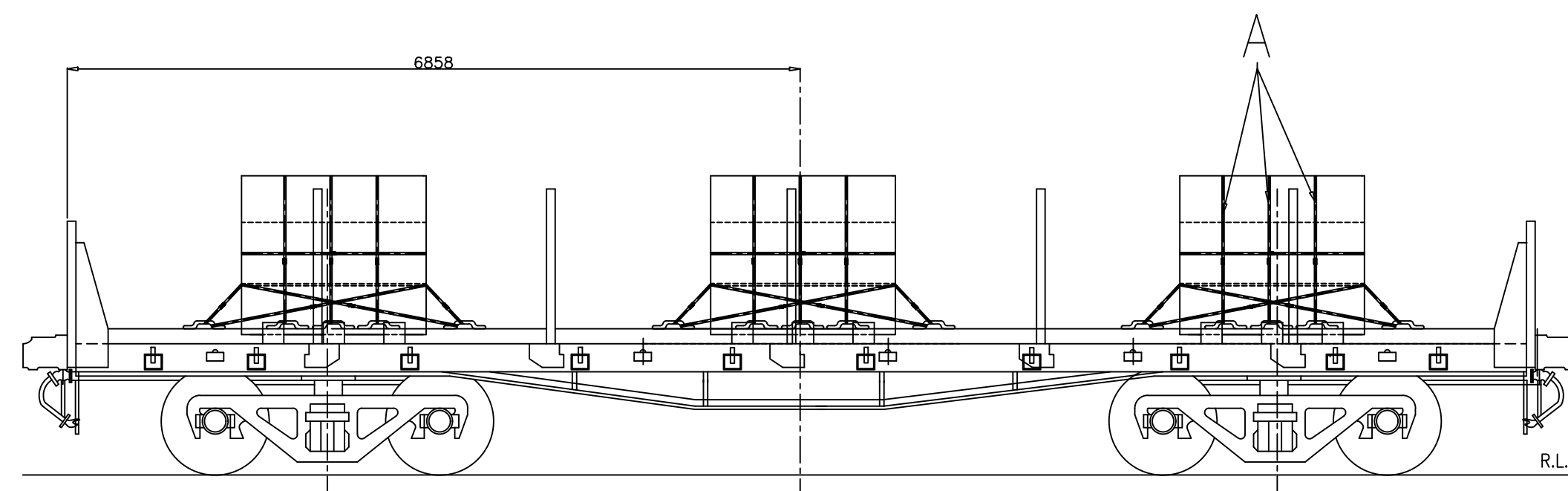


DIAGRAM OF 3 COIL LOADING ON BRN 22.9 WAGON
MAX. WEIGHT OF INDIVIDUAL COIL < 23T

FIG.1

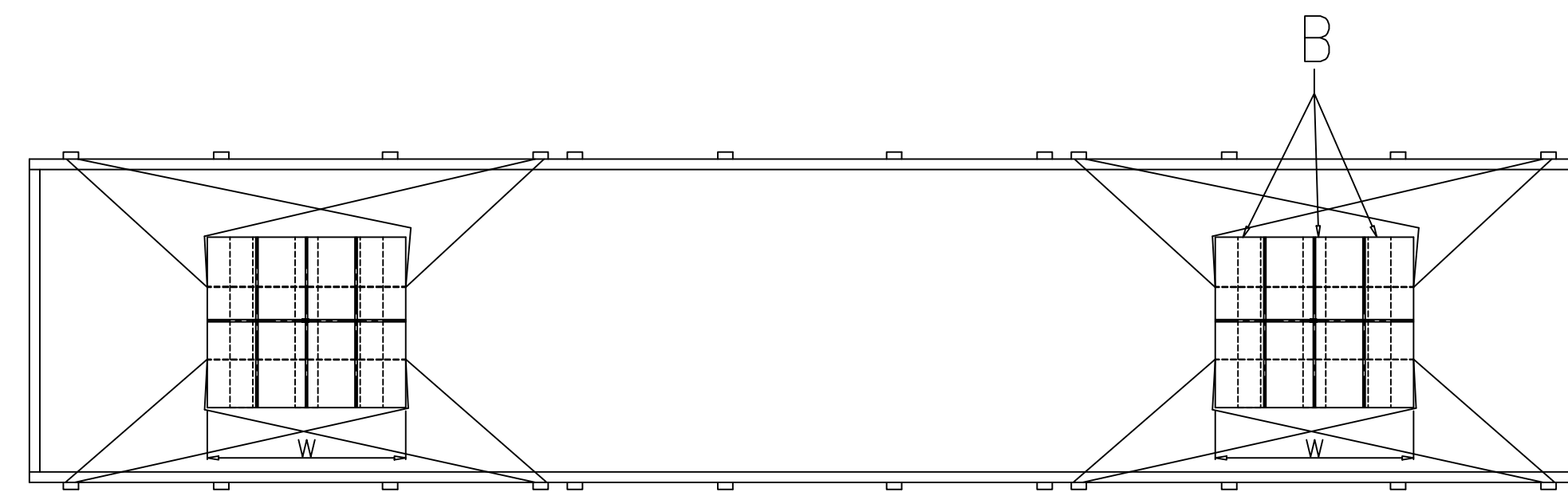
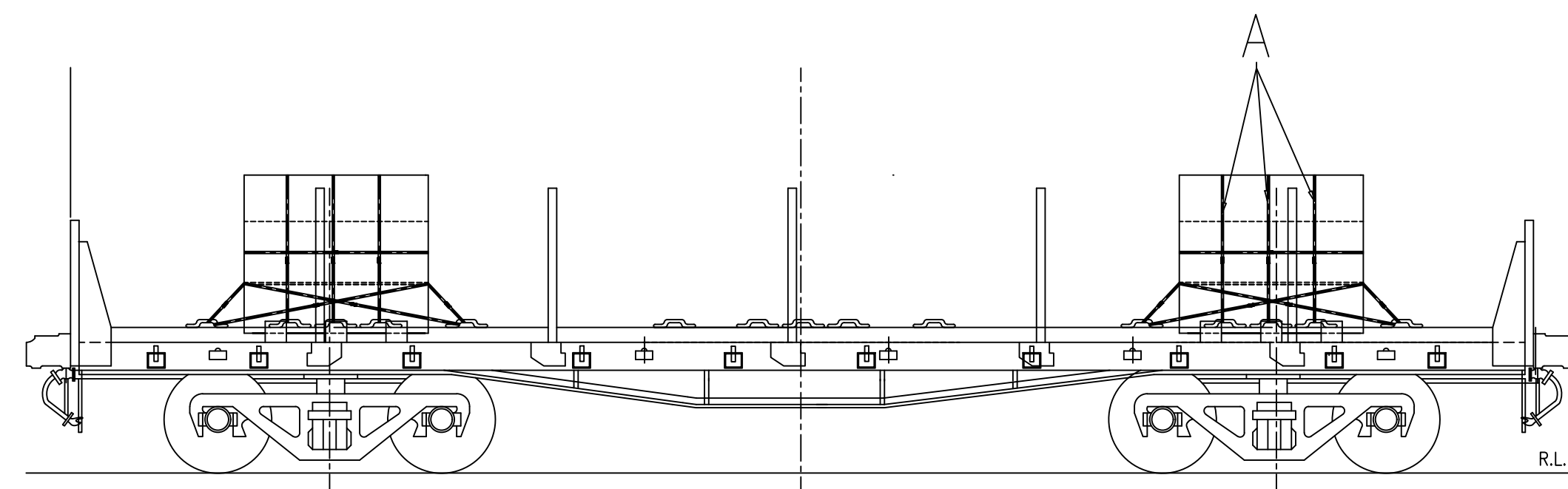
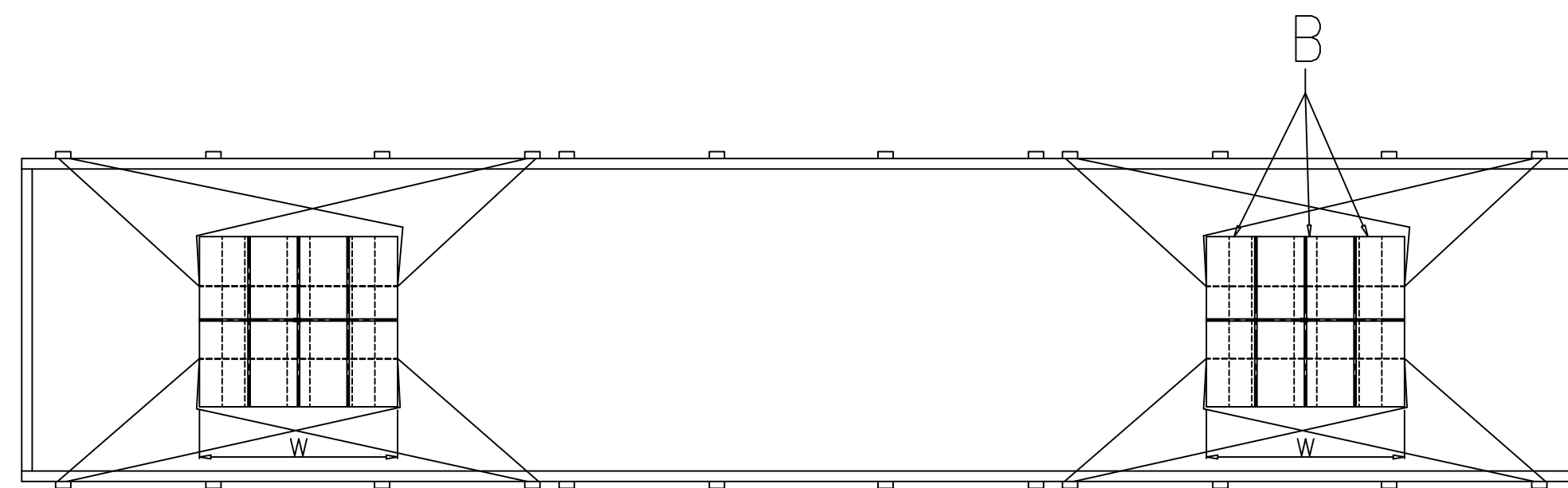
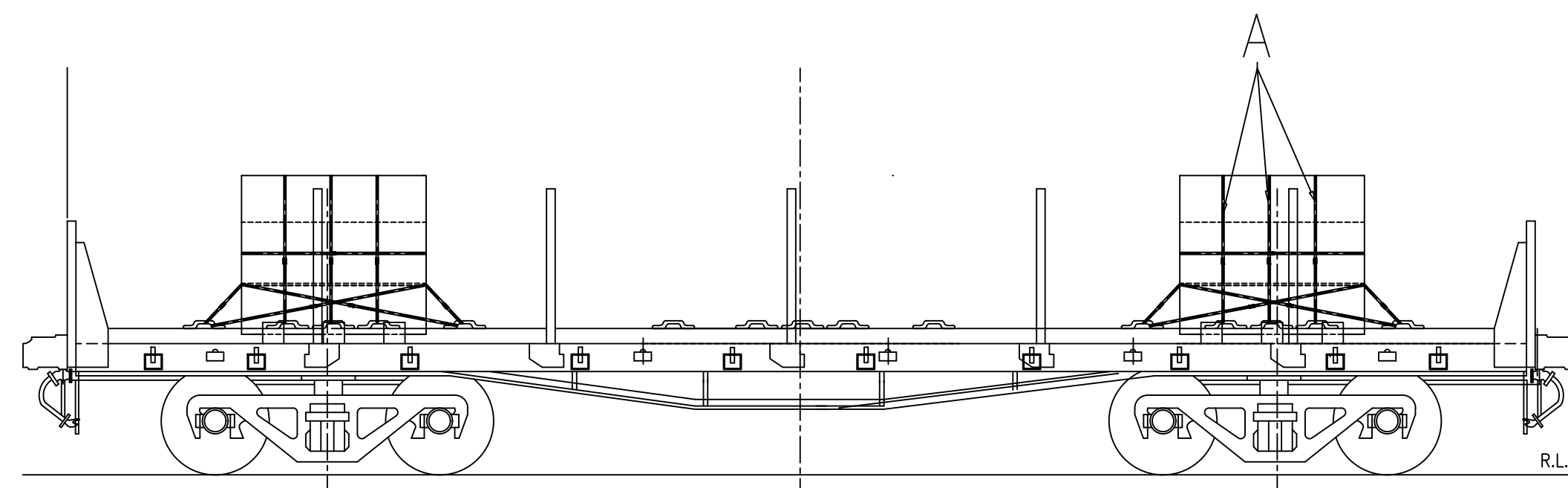


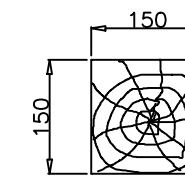
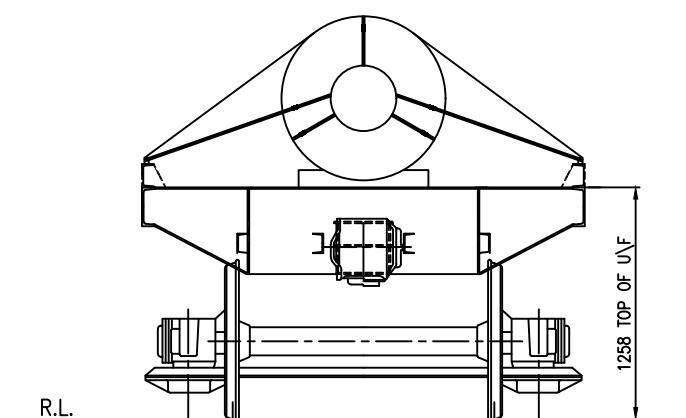
DIAGRAM OF 2 COIL LOADING ON BRN 22.9 WAGON
MAX. WEIGHT OF INDIVIDUAL COIL <= 34T

FIG.2



LOADING DIAGRAM OTHER THAN BRN 22.9
MAX. WEIGHT OF INDIVIDUAL COIL <= 28T

FIG.3



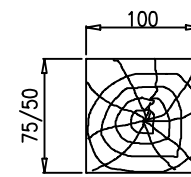
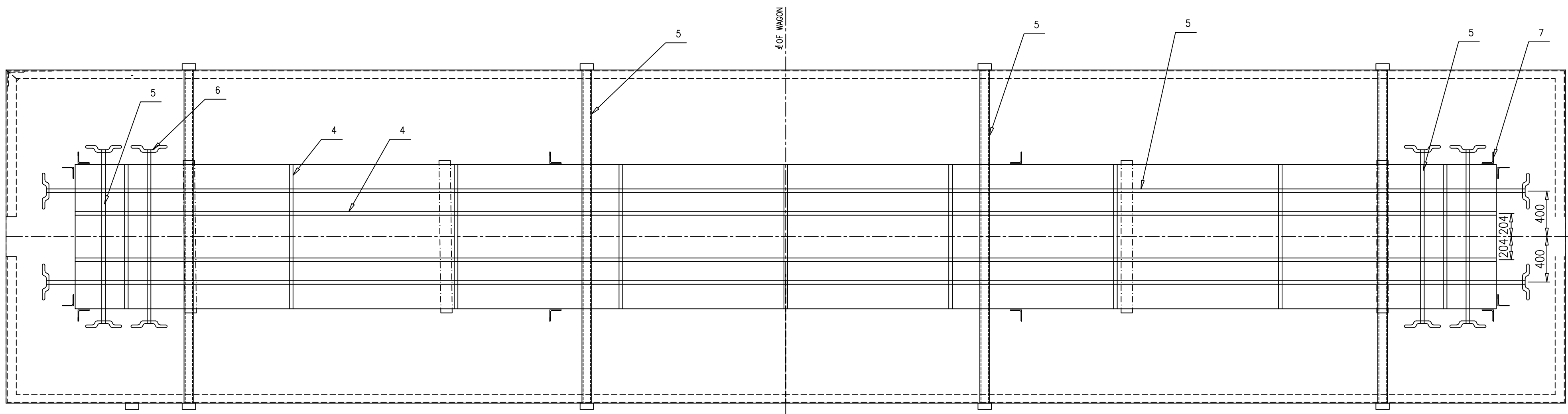
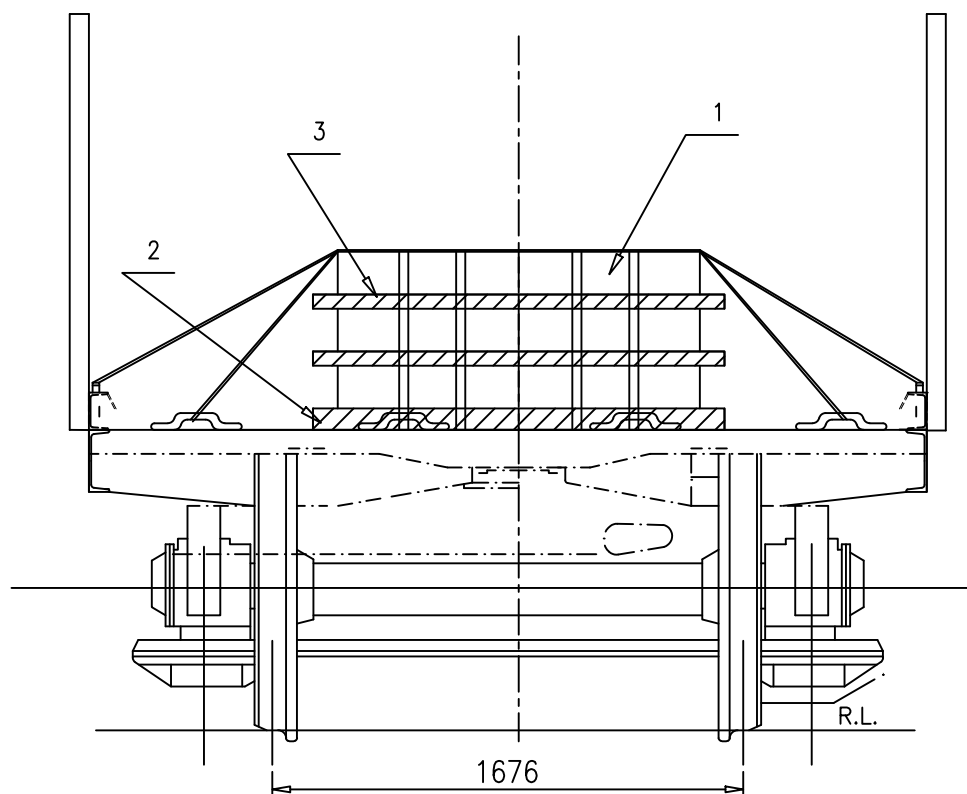
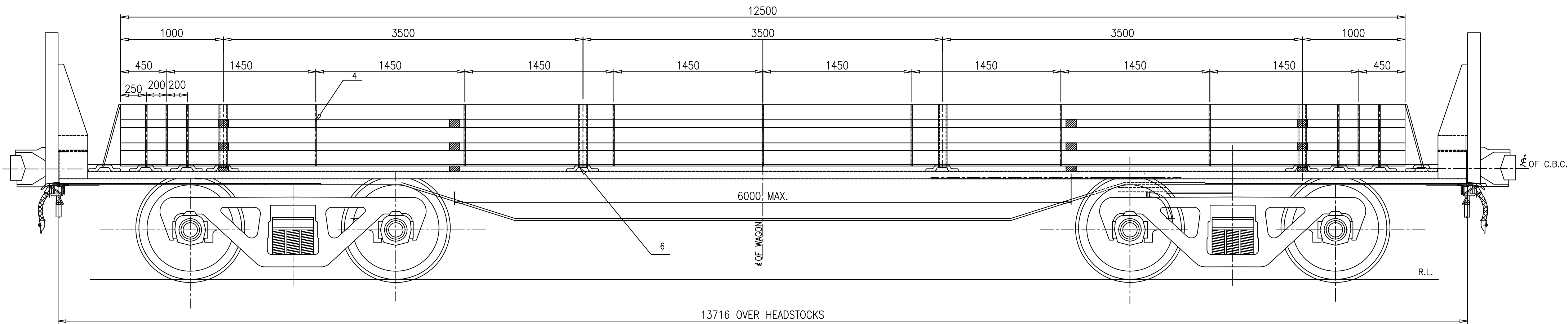
WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW

NOTE :-

1. ALL INDIVIDUAL COILS ARE TO BE STRAPPED USING HEAVY DUTY STRAPS AS INDICATED BY 'A'.
- ① 2. COIL AXIS ALONG THE LENGTH OF WAGON
3. RESTRICTION D <= 1.5 W
- ① 4. NO. OF WOODEN LONGITUDINAL RUNNER PER COIL SHALL NOT BE LESS THAN THREE AS INDICATED BY 'B'.
5. LOADING OF COILS SHOULD BE SUCH THAT :-
 - 5.1 THE LOAD ON ANY BOGIE SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - 5.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
6. ALTERNATE MATERIAL OF STEEL STRAP SHALL BE EN 13246 TYPE 3.2
7. CONSIGNMENTS SHALL BE PROPERLY SECURED BY USING ITEM NO. 01 & ITEM NO. 02 OF DRAWING NO. WD-94038-S-01. ITEM NO. 02 SHALL BE WELDED OR RIVETED WITH FLOOR OR SOLE BAR OF THE WAGON WHERE IT IS REQUIRED AS PER CONSIGNMENT.
- ① 8. STEEL STRAPES SHOULD BE UNIFORMLY TIGHTEND AT EACH STAGE BY TENSOMETER.
- ② 9. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

②	-	WD-21112	NOTE NO. 9 ADDED	01/22	-
①	-	WD-18006	COIL AXIS ALONG THE LENGTH OF WAGON	02/18	-
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

SUPERSEDED BY	DATE	BOGIE FLAT WAGON	
SUPERSEDES	DATE	LOADING AND SECURING OF HR/CR	
SCALE	PASSED	A.K.ROY	10/16
CHECKED	R.K.TAMRKAR	10/16	
DRAWN	A.P.SINGH	10/16	
TRACED			
COMPARED			
J.S.NO.	WD-16042	07/16	
B.G.	R.D.S.O.	[W]	GROUP
			WD-16042-S-01



WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW

NOTE :-

1. LOADING SHOULD BE SYMMETRICAL W.R.T. LONGITUDINAL AXIS AS WELL AS TRANSVERSE AXIS PASSING THROUGH CENTRE OF WAGON FLOOR.
2. IN CASE SLABS ARE LOADED IN LAYERS SEPARATED WITH WOODEN RUNNERS AS PER CUSTOMER'S REQUIREMENT, WOODEN RUNNERS OF SIZE 100MM* 50MM ARE PROVIDED IN INTERMEDIATE LAYERS IN ADDITION TO THE BOTTOM WOODEN RUNNER OF SIZE 100MM*75 MM.
3. HEIGHT TO WIDTH RATIO OF ASSIGNMENT SHOULD NOT EXCEED 1.5 IN ANY CASE.
4. LENGTH OF WOODEN RUNNER MUST BE MORE THAN WIDTH OF LAYERS.
5. STRAPPING SHOULD BE SYMMETRICAL TO EXTENT POSSIBLE MAINTAINING LIMITS AS INDICATED.
6. THE END STRAPS SHOULD NOT MORE THAN 450 MM AWAY FROM EDGES AND MAXIMUM DISTANCE BETWEEN IMMEDIATE STRAPS IS 1450 MM.
7. NO. OF LAYERS SHOULD BE AS PER CONVENIENCE AND REQUIREMENT.
8. ALL SLABS ARE TO BE SECURED USING HEAVY DUTY STEEL STRAPS AS INDICATED
9. NO. OF WOODEN LONGITUDINAL RUNNER PER SLAB SHALL NOT BE LESS THAN AS INDICATED
10. LOADING OF SLABS SHOULD BE SUCH THAT :-
 - 10.1 THE LOAD SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - 10.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
11. STEEL STRAP SHALL BE CONFIRMING TO EN 13246 TYPE 3.2 OR EQUIVALENT.
12. ITEM NO. 7 I.E. STEEL ANGLES OF SUITABLE HEIGHT (APPROX. 300mm. TO 500mm.) ARE TO BE PROVIDED AS INDICATED
13. STEEL STRAPES SHOULD BE UNIFORMLY TIGHTEND AT EACH STAGE BY TENSOMETER.
- ① 14. FOR BOST WAGON, SLAB LENGTH SHOULD BE RESTRICTED TO MAX. 12.5 MTRS.
15. ITEM NO. 5 (04 NOS) FOR STRAPPING BETWEEN SOLEBAR TO SOLEBAR SHALL NOT BE USED IN BOST WAGON LOADING.
- ② 16. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.

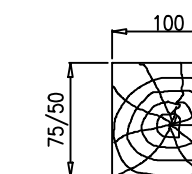
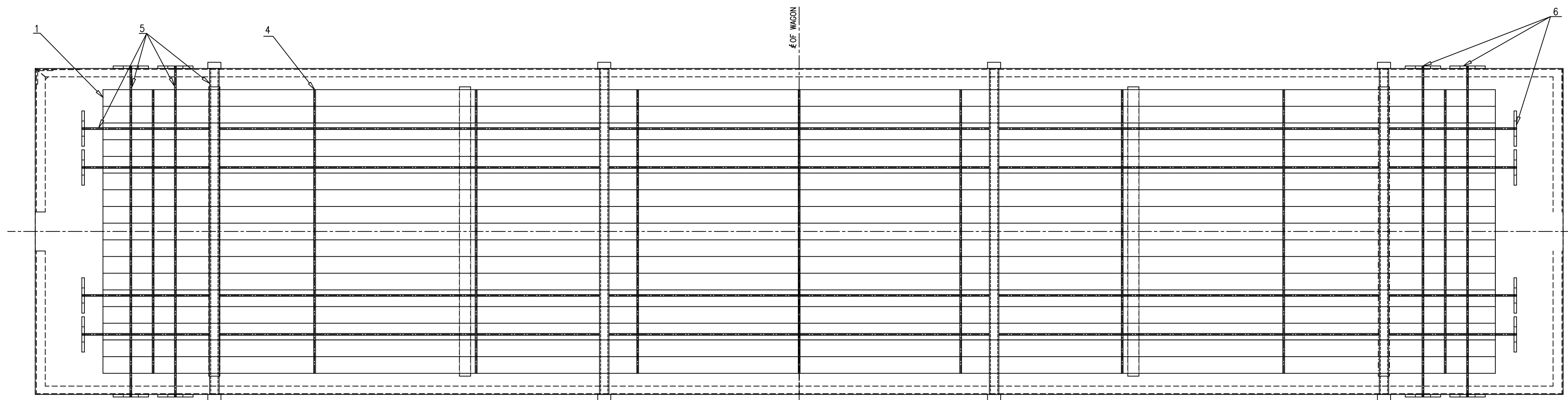
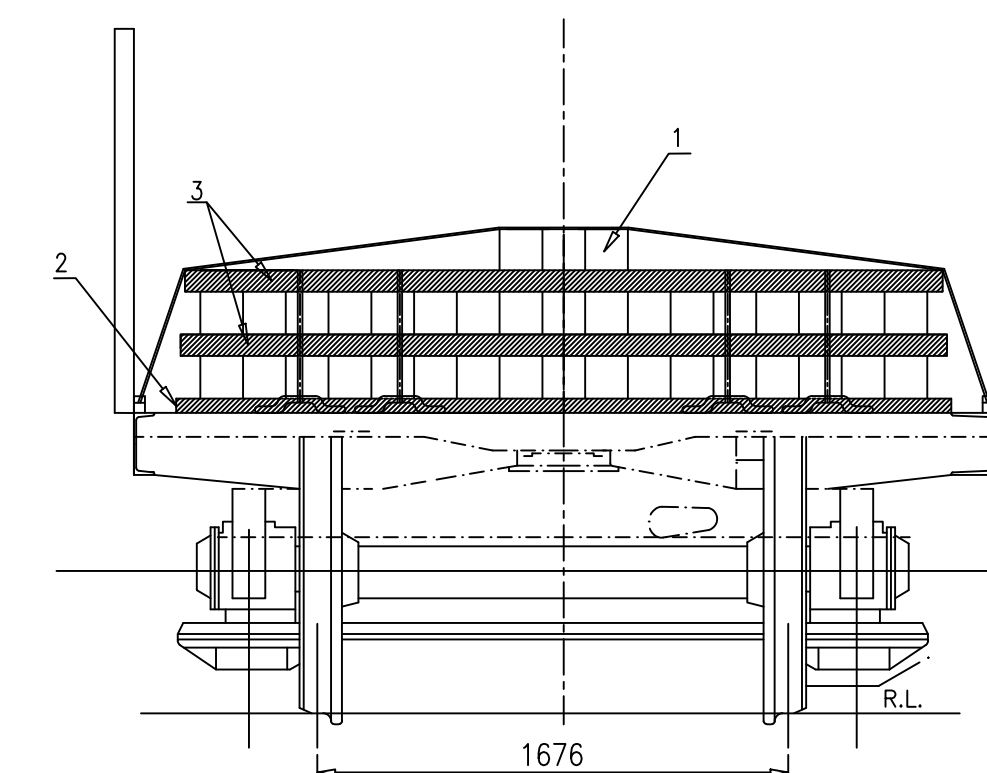
SPECIFICATION FOR STEEL STRAP

S. No.	PURPOSE	WIDTH (IN MM)	THICKNESS (IN MM)	PERCENTAGE ELONGATION MIN.	TENSILE ST (IN KG PER SQ. MM)	PHYSICAL PROPERTIES
1.	FOR BUNDLING & UNITISING	31.75	0.79	6	90 MIN	DEBURRED EDGE PAINTED & WAXED
2.	FOR SECURING WITH WAGON BODY	31.75	1.27	9	92 MIN.	DEBURRED EDGE PAINTED BROWN & WAXED
3.	ISOLATION HOOK	Ø16MM	400 MM LG.			MS

7	ANGLE (100X100X6)	AS PER REQUIREMENT	STEEL	
6	ISOLATION HOOK	AS PER REQUIREMENT	STEEL	
5	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)	AS PER REQUIREMENT	STEEL	
4	HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION)	AS PER REQUIREMENT	STEEL	
3	INTERMEDIATE WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
2	WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
1	STEEL SLABS	AS PER REQUIREMENT	STEEL	

ITEM	DESCRIPTION	NO.OFF	MTL&SPEC	REMARKS
SUPERSEDED BY				
SCALE		PASSED	DATE	LOADING AND SECURING OF STEEL SLABS (9-13MTRS) ON BRN AND BOST WAGON & ITS VARIANTS ①
CHECKED		G.R.SHARMA	10/21	
DRAWN		A.P.SINGH	10/21	
TRACED		DINESH	10/21	
COMPARED				
J.S.NO.		WD-21095	10/21	
B.G.		R.D.S.O. [W]	GROUP	WD-21095-S-01

②	-	WD-21112	NOTE NO. 16 ADDED	01/22	
①	-	WD-21119	NOTE NO. 14 & 15 ADDED AND BOST WAGON & ITS VARIANTS ADDED IN TITLE BLOCK.	12/21	
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.



WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW

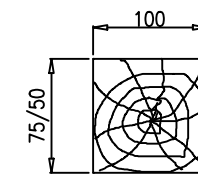
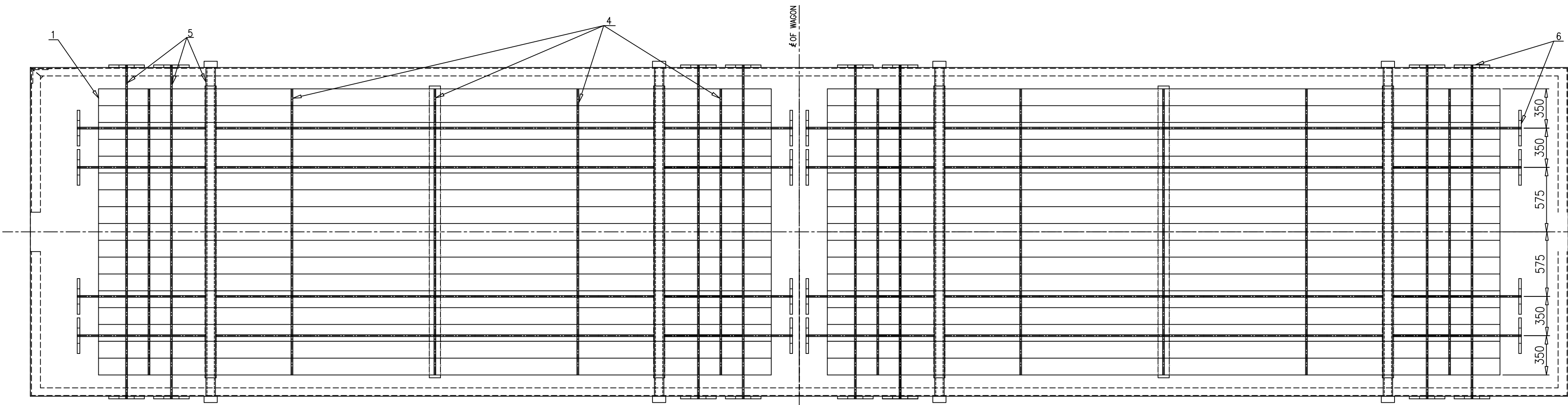
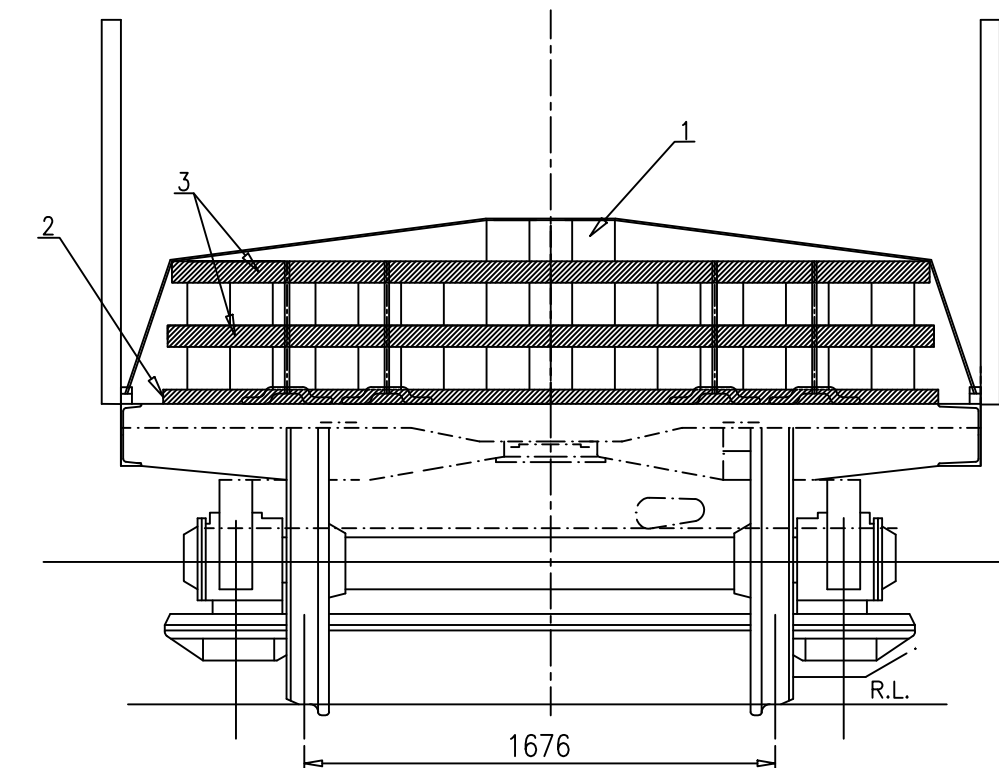
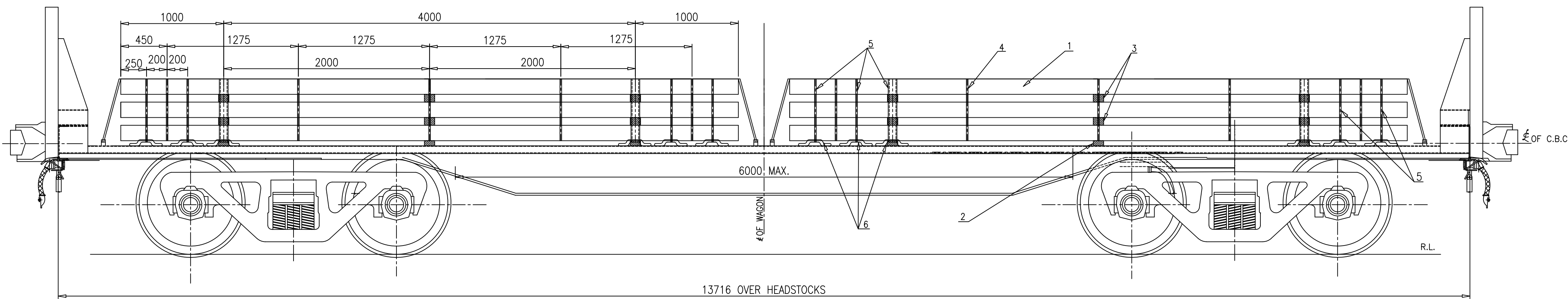
1. LOADING SHOULD BE SYMMETRICAL W.R.T. LONGITUDINAL AXIS AS WELL AS TRANSVERSE AXIS PASSING THROUGH CENTRE OF WAGON FLOOR AND ENSURING EVEN LOAD ON ALL WHEELS.
2. IN CASE BILLETS ARE LOADED IN LAYERS SEPARATED WITH WOODEN RUNNERS AS PER CUSTOMER'S REQUIREMENT, WOODEN RUNNERS OF SIZE 100MM* 50MM ARE PROVIDED IN INTERMEDIATE LAYERS IN ADDITION TO THE BOTTOM WOODEN RUNNER OF SIZE 100MM*75 MM.
3. HEIGHT TO WIDTH RATIO OF ASSIGNMENT SHOULD NOT EXCEED 1.5 IN ANY CASE.
4. LENGTH OF WOODEN RUNNER MUST BE MORE THAN WIDTH OF LAYERS.
5. STRAPPING SHOULD BE SYMMETRICAL AND THE END STRAPS SHOULD NOT MORE THAN 450 MM AWAY FROM EDGES AND MAXIMUM DISTANCE BETWEEN IMMEDIATE STRAPS IS 1450 MM.
6. ALL BILLETS ARE TO BE SECURED USING HEAVY DUTY STEEL STRAPS AS INDICATED
7. NO. OF WOODEN RUNNER PER BILLETS SHALL NOT BE LESS THAN AS INDICATED
8. LOADING OF BILLETS SHOULD BE SUCH THAT :-
 - 8.1 THE LOAD SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - 8.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
9. STEEL STRAP SHALL BE CONFIRMING TO EN 13246 TYPE 3.2 OR EQUIVALENT.
10. STEEL STRAPES SHOULD BE UNIFORMLY TIGHTEND AT EACH STAGE BY TENSOMETER.
11. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.
12. THE MINIMUM NO. OF EACH TYPE OF LONGITUDINAL/LATERAL STRAPS ARE 2.
13. SPECIFICATION FOR WOODEN RUNNER : IRS K-2
14. THE LOADING PARTY SHOULD WELD ISOLATION HOOK WITH WAGON BODY IF THESE ARE NOT AVAILABLE.

S. No.	PURPOSE	WIDTH (IN MM)	THICKNESS (IN MM)	PERCENTAGE ELONGATION MIN.	TENSILE ST (IN KG PER SQ. MM)	PHYSICAL PROPERTIES
1.	FOR BUNDLING & UNITISING	31.75	0.79	6	90 MIN	DEBURRED EDGE PAINTED & WAXED
2.	FOR SECURING WITH WAGON BODY	31.75	1.27	9	92 MIN.	DEBURRED EDGE PAINTED BROWN & WAXED
3.	ISOLATION HOOK	Ø16MM	400 MM LG.			MS

6	ISOLATION HOOK	AS PER REQUIREMENT	STEEL	
5	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)	AS PER REQUIREMENT	STEEL	
4	HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION)	AS PER REQUIREMENT	STEEL	
3	INTERMEDIATE WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
2	WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
1	BILLETS	AS PER REQUIREMENT	STEEL	

ITEM	DESCRIPTION	AS PER REQUIREMENT	STEEL	REMARK
	SUPERSEDED BY			
	SUPERSEDES	DATE		
	SCALE/PASSED	01/22		
	CHECKED	01/22		
	DRAWN	01/22		
	TRACED			
	COMPARED			
	J.S.NO.	WD-21112	12/21	
	B.G.	R.D.S.O. [w]	GROUP	WD-21112-S-0

ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS
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WOODEN LONGITUDINAL RUNNER
SECTIONAL VIEW

NOTE :-

- LOADING SHOULD BE SYMMETRICAL W.R.T. LONGITUDINAL AXIS AS WELL AS TRANSVERSE AXIS PASSING THROUGH CENTRE OF WAGON FLOOR AND ENSURING EVEN LOAD ON ALL WHEELS.
- IN CASE BILLETS ARE LOADED IN LAYERS SEPARATED WITH WOODEN RUNNERS AS PER CUSTOMER'S REQUIREMENT, WOODEN RUNNERS OF SIZE 100MM* 50MM ARE PROVIDED IN INTERMEDIATE LAYERS IN ADDITION TO THE BOTTOM WOODEN RUNNER OF SIZE 100MM*75 MM.
- HEIGHT TO WIDTH RATIO OF ASSIGNMENT SHOULD NOT EXCEED 1.5 IN ANY CASE.
- LENGTH OF WOODEN RUNNER MUST BE MORE THAN WIDTH OF LAYERS.
- STRAPPING SHOULD BE SYMMETRICAL AND THE END STRAPS SHOULD NOT MORE THAN 450 MM AWAY FROM EDGES AND MAXIMUM DISTANCE BETWEEN IMMEDIATE STRAPS IS 1450 MM.
- ALL BILLETS ARE TO BE SECURED BY USING HEAVY DUTY STEEL STRAPS AS INDICATED
- NO. OF WOODEN RUNNER PER BILLETS SHALL NOT BE LESS THAN AS INDICATED
- LOADING OF BILLETS SHOULD BE SUCH THAT :-
 - THE LOAD SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
- STEEL STRAP SHALL BE CONFIRMING TO EN 13246 TYPE 3.2 OR EQUIVALENT.
- STEEL STRAPES SHOULD BE UNIFORMLY TIGHTEND AT EACH STAGE BY TENSOMETER.
- SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.
- THE MINIMUM NO. OF EACH TYPE OF LONGITUDINAL/LATERAL STRAPS ARE 2.
- SPECIFICATION FOR WOODEN RUNNER : IRS K-2
- THE LOADING PARTY SHOULD WELD ISOLATION HOOK WITH WAGON BODY IF THESE ARE NOT AVAILABLE.

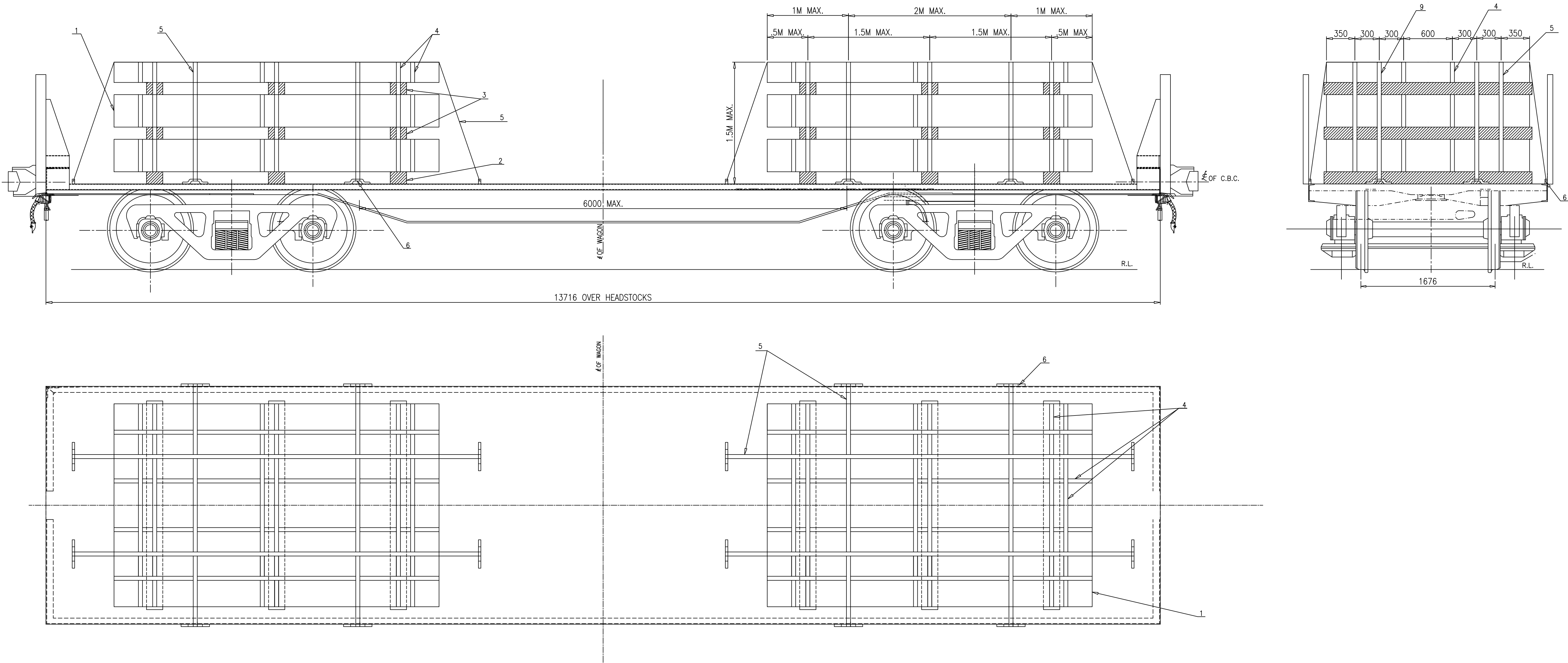
SPECIFICATION FOR STEEL STRAP

S. No.	PURPOSE	WIDTH (IN MM)	THICKNESS (IN MM)	PERCENTAGE ELONGATION MIN.	TENSILE ST (IN KG PER SQ. MM)	PHYSICAL PROPERTIES
1.	FOR BUNDLING & UNITISING	31.75	0.79	6	90 MIN	DEBURRED EDGE PAINTED & WAXED
2.	FOR SECURING WITH WAGON BODY	31.75	1.27	9	92 MIN.	DEBURRED EDGE PAINTED BROWN & WAXED
3.	ISOLATION HOOK	Ø16MM	400 MM LG.			MS

6	ISOLATION HOOK	AS PER REQUIREMENT	STEEL	
5	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)	AS PER REQUIREMENT	STEEL	
4	HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION)	AS PER REQUIREMENT	STEEL	
3	INTERMEDIATE WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
2	WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
1	BILLETS	AS PER REQUIREMENT	STEEL	

ITEM	DESCRIPTION			NO.OFF	MTL&SPEC	REMARKS
SUPERSEDED BY			DATE	LOADING AND SECURING ARRANGEMENT OF STEEL BILLETS (6MTRS) ON BRN & ITS VARIANTS		
SUPERSEDES						
SCALE	PASSED		01/22			
\	CHECKED		01/22			
	DRAWN		01/22			
	TRACED		01/22			
	COMPARED					
J.S.NO.	WD-21112	12/21				
B.G.		R.D.S.O. [W]		GROUP	WD-21112-S-02	

ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.
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- NOTE :-**
- LOADING SHOULD BE SYMMETRICAL W.R.T. LONGITUDINAL AXIS AS WELL AS TRANSVERSE AXIS PASSING THROUGH CENTRE OF WAGON FLOOR AND ENSURING EVEN LOAD ON ALL WHEELS.
 - IN CASE HR SHEETS/PLATES ARE LOADED IN LAYERS SEPARATED WITH WOODEN RUNNERS AS PER CUSTOMER'S REQUIREMENT, WOODEN RUNNERS OF SIZE 100MM* 50MM ARE PROVIDED IN INTERMEDIATE LAYERS IN ADDITION TO THE BOTTOM WOODEN RUNNER OF SIZE 100MM*75 MM.
 - HEIGHT TO WIDTH RATIO OF ASSIGNMENT SHOULD NOT EXCEED 1.5 IN ANY CASE.
 - LENGTH OF WOODEN RUNNER MUST BE MORE THAN WIDTH OF LAYERS.
 - STRAPPING SHOULD BE SYMMETRICAL AND THE END STRAPS SHOULD NOT MORE THAN .5M AWAY FROM EDGES AND MAXIMUM DISTANCE BETWEEN IMMEDIATE STRAPS IS 1.5 M.
 - ALL HR SHEETS/PLATES ARE TO BE SECURED USING HEAVY DUTY STEEL STRAPS AS INDICATED
 - NO. OF WOODEN RUNNER PER HR SHEETS/PLATES SHALL NOT BE LESS THAN AS INDICATED
 - LOADING OF HR SHEETS/PLATE SHOULD BE SUCH THAT :-
 - THE LOAD SHOULD NOT EXCEED WAGON'S MAXIMUM PERMISSIBLE AXLE LOAD.
 - THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL.
 - STEEL STRAP SHALL BE CONFIRMING TO EN 13246 TYPE 3.2 OR EQUIVALENT.
 - STEEL STRAPES SHOULD BE UNIFORMLY TIGHTEND AT EACH STAGE BY TENSOMETER.
 - SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING.
 - H.R. SHEETS/PLATES SHOULD BE IN BUNDLE NOT LESS THAN 1 TONNE.
 - THE MINIMUM NO. OF EACH TYPE OF LONGITUDINAL/LATERAL STRAPS ARE 2.
 - SPECIFICATION FOR WOODEN RUNNER : IRS K-2
 - THE LOADING PARTY SHOULD WELD ISOLATION HOOK WITH WAGON BODY IF THESE ARE NOT AVAILABLE.

SPECIFICATION FOR STEEL STRAP

S. No.	PURPOSE	WIDTH (IN MM)	THICKNESS (IN MM)	PERCENTAGE ELONGATION MIN.	TENSILE ST (IN KG PER SQ. MM)	PHYSICAL PROPERTIES
1.	FOR BUNDLING & UNITISING	31.75	0.79	6	90 MIN	DEBURRED EDGE PAINTED & WAXED
2.	FOR SECURING WITH WAGON BODY	31.75	1.27	9	92 MIN.	DEBURRED EDGE PAINTED BROWN & WAXED
3.	ISOLATION HOOK	Ø16MM	400 MM LG.			MS

6	ISOLATION HOOK	AS PER REQUIREMENT	STEEL	
5	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)	AS PER REQUIREMENT	STEEL	
4	HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION)	AS PER REQUIREMENT	STEEL	
3	INTERMEDIATE WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
2	WOODEN RUNNER	AS PER REQUIREMENT	WOOD	
1	HR SHEETS/PLATES	AS PER REQUIREMENT	STEEL	
ITEM	DESCRIPTION	NO.OFF	MTL&SPEC	REMARKS
SUPERSEDED BY				
SCALE		PASSED	DATE	
		CHECKED	01/22	
		DRAWN	01/22	
		TRACED		
		COMPARED		
J.S.NO.		WD-21112	12/21	
B.G.		R.D.S.O. [W]	GROUP	WD-21112-S-03

ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.
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