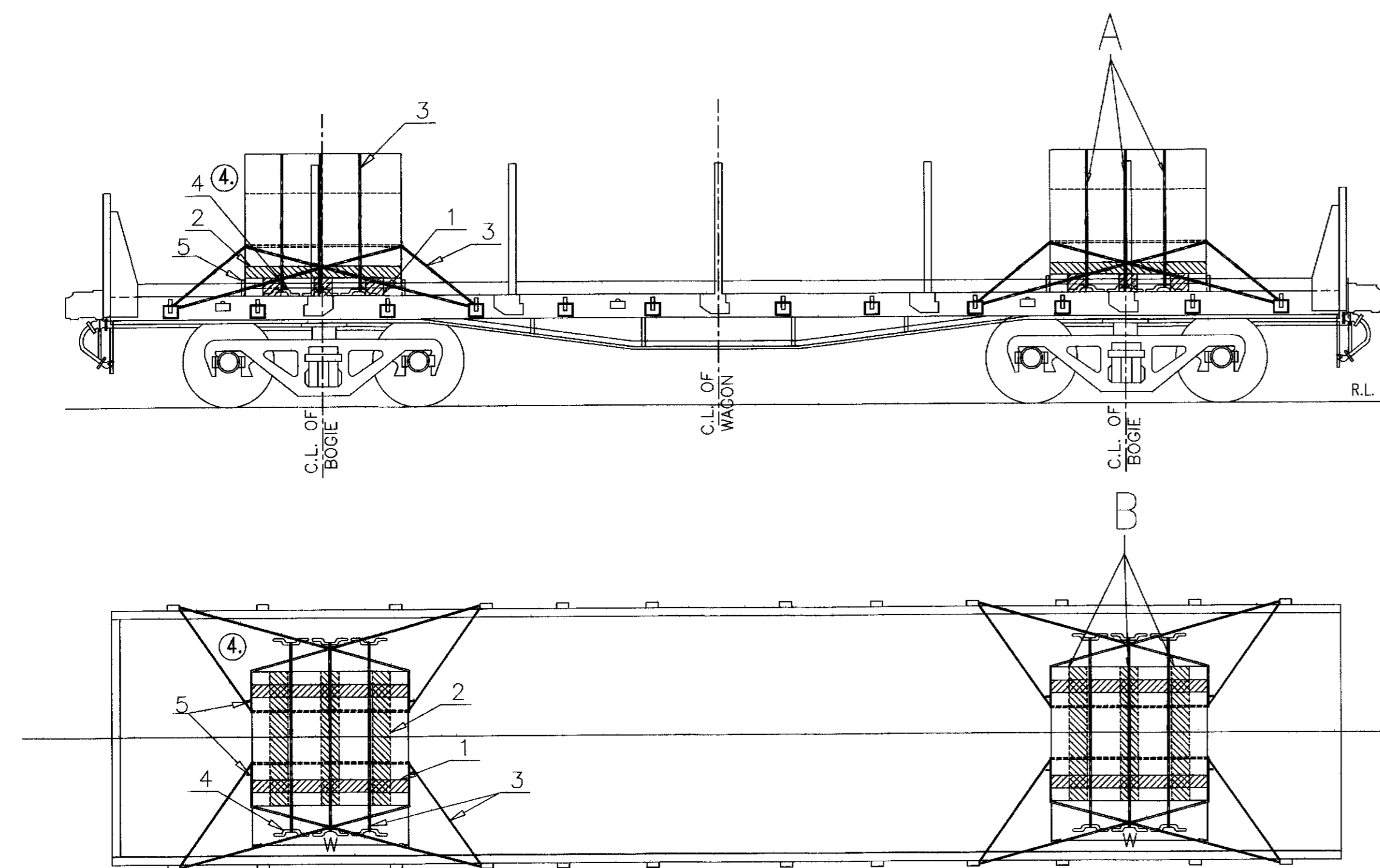


DIAGRAM OF 3 COIL LOADING ON BRN 22.9 WAGON  
MAX. WEIGHT OF INDIVIDUAL COIL < 23T

FIG.1



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

FIG.3

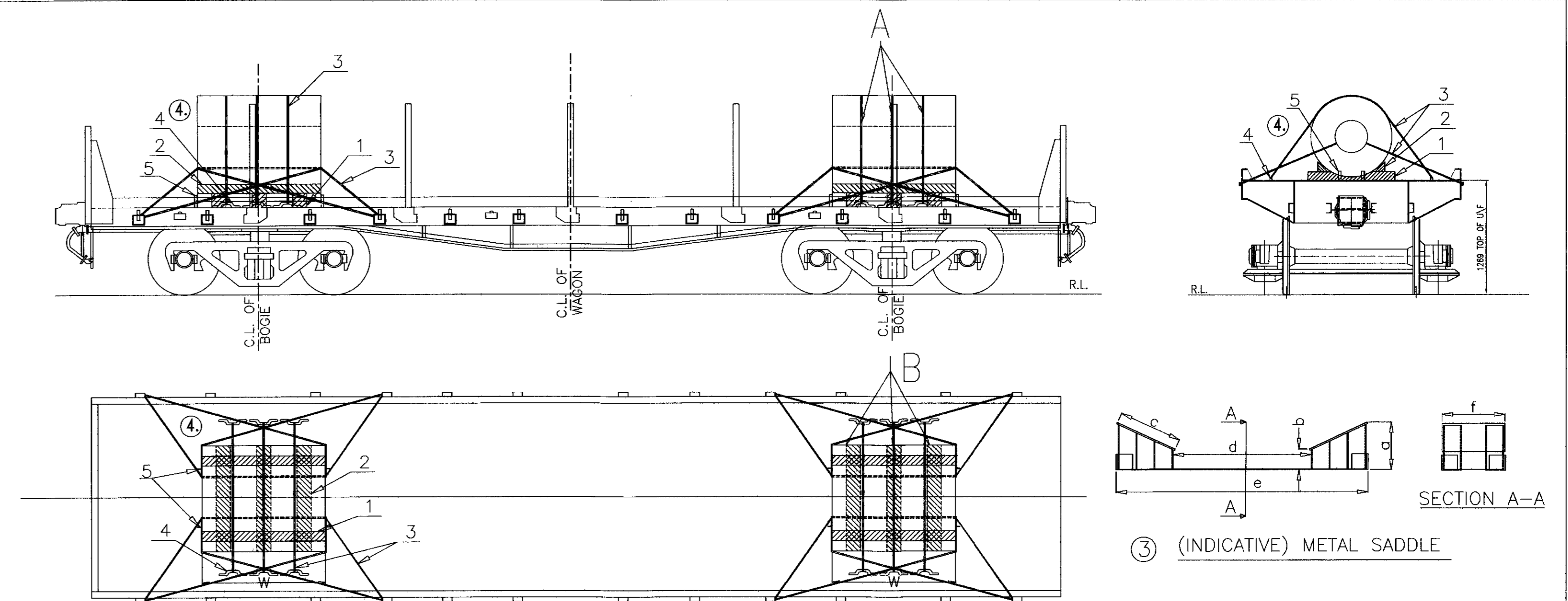


DIAGRAM OF 2 COIL LOADING ON BRN 22.9 WAGON

MAX. WEIGHT OF INDIVIDUAL COIL <= 34T

FIG.2

Parameter	Range (dimension)
a	170-185
b	70-80
c	250-300
d	250-700
e	600-1100
f	250-300

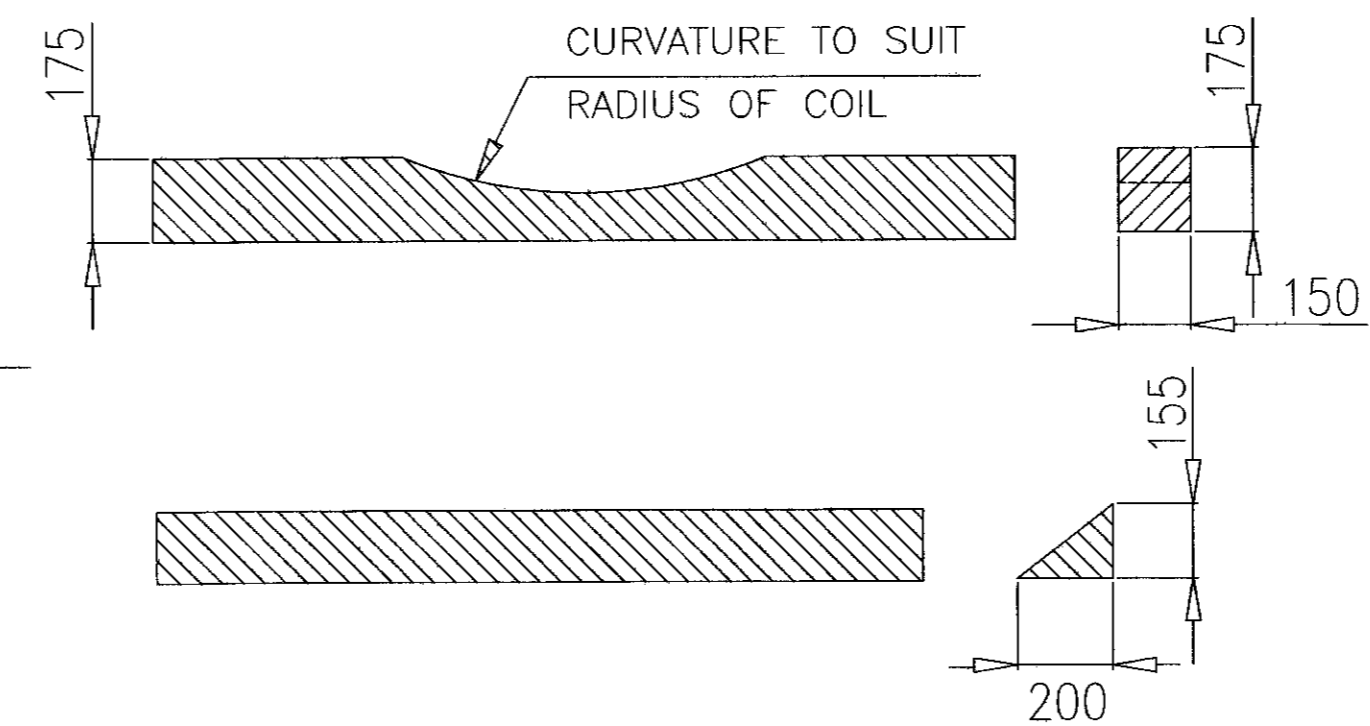
TABLE 1

NOTE :-

- ④ 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 :-
  - ④ 5.1 MAX INDIVIDUAL WEIGHT OF THE COIL ON EACH BOGIE = UP TO PAY LOAD/2.
  - 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.
- ④ ② 9. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING AND DOWNWARD POSITION DURING LOADING/UNLOADING.
- ③ 10. METAL SADDLE MAY BE PROVIDED IN PLACE OF WOODEN BATTENS .
  - i. Material of the metal saddle shall be IS:2062 E250 or superior than it (strength wise)
  - ii. The metal saddles should have sufficient mechanical strength and rigidity to maintain its shape and size after securing and shall be intact/maintained upto final destination of the consignments.
  - iii. The metal saddle may be fabricated by welding, there shall not be any welding failure which led to unsafe operation of the train.
  - iv. An indicative drawing of metal saddle is given here.
  - v. Stoppers of MS angles should be provided to prevent shifting of metal saddles.
  - vi. Metal saddles are not to be fixed/welded the wagon floor.
  - vii. Securing arrangement shall be certified by the concern Railway.
  - viii. The cost of metal saddles will not be borne by indian railways and it will not be a part of the standard wagon.
11. THE MAXIMUM DIFFERENCE IN WEIGHT OF TWO BOGIE SHALL NOT EXCEED MORE THAN 2 TON.
12. THE TENSIONAL STEEL STRAP USED FOR LASHING AND SECURING SHALL MEET THE SPECIFICATION EN13247:2001 THE DIMENSIONAL AND PHYSICAL PROPERTIES ARE MENTIONED IN THE TABLE BELOW (Ref-EN13247:2001)

SN	PARAMETERS	PHYSICAL PROPERTIES
1.	NOMINAL WIDTH	31.75
2.	NOMINAL THICKNEES	1.45
3.	MINIMUM BRAKING STRENGTH	49KN (5TON)

- ④ 13. ELONGATION OF STEEL STRAP SHALL BE GREATER THAN 7% MEASURED USING A GAUGE LENGTH OF 100MM. WHEN TESTED IN ACCORDANCE WITH EN10002-1
14. THE INITIAL TENSION IN THE STRAP SHALL BE IN THE RANGE OF 500kg TO 800kg.
15. WOOD OF ADEQUATE STRENGTH WHICH CAN SUSTAIN THE LOAD IMPARTED ON IT SHALL BE USED.
16. THIS RDSO DRAWING IS AN INDICATIVE DRAWING AS THE SIZE AND SHAPE OF CONSIGNMENT VARIES. THE CONSIGNEE MAY TAKE ADDITIONAL MEASURE TO SECURE THE LOAD FOR SAFE OPERATION.



④	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.
④	WD-23075	DRG. MODIFIED, DESCRIPTION TABLE ADDED & NOTE 11 TO 16 ADDED		08/23	-
③	WD-22096	METAL SADDLE, TABLE 1 AND NOTE NO - 10 ADDED		11/22	-
②	WD-21112	NOTE NO. 9 ADDED		01/22	-
①	WD-18006	COIL AXIS ALONG THE LENGTH OF WAGON		02/18	-

ITEM	DESCRIPTION	NO.OFF	MTL&SPEC.	REMARKS
5	STOPPER ISA 75X75X6 TH.		AS PER REQUIREMENT	
4	ISOLATION HOOK		AS PER REQUIREMENT	WD-15057-S-06
3	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)		AS PER REQUIREMENT	EN13247:2001
2	WOODEN WEDGE	02 NO. PER COIL	WOOD	
1	WOODEN BATTON	03 NO.PER COIL	WOOD	

ITEM	DESCRIPTION	NO.OFF	MTL&SPEC.	REMARKS
SUPERSEDED BY				
SCALE PASSED				
CHECKED				
DRAWN				
TRACED				
COMPARED				
J.S.NO. WD-16042 07/16				
B.G. R.D.S.O. [W]				
BOGIE FLAT WAGON				
LOADING AND SECURING OF HR/CR				
COILS IN NON UNITISED PACKS				
ON BRN & ITS VARIANTS				
GROUP WD-16042-S-01				