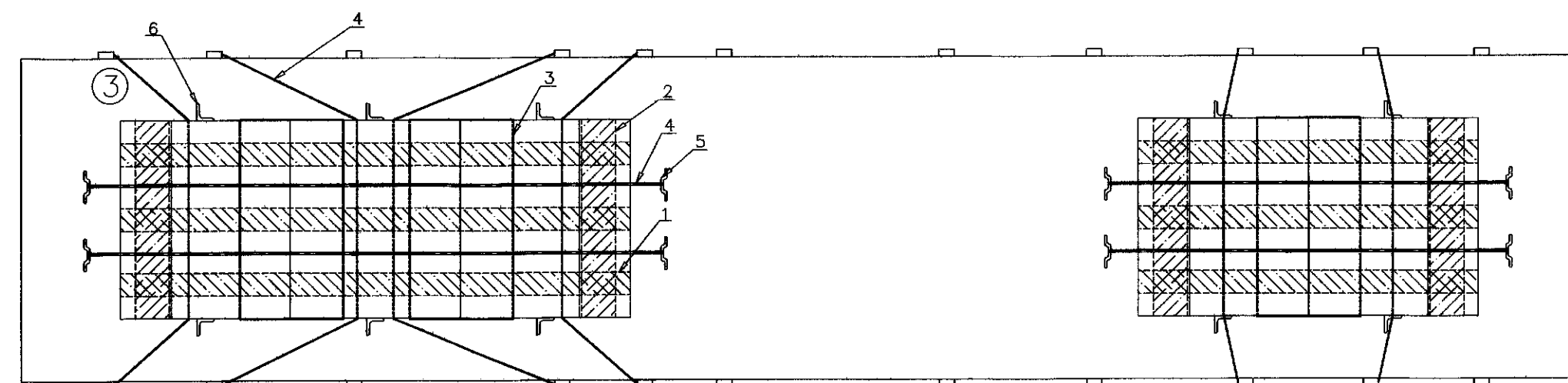
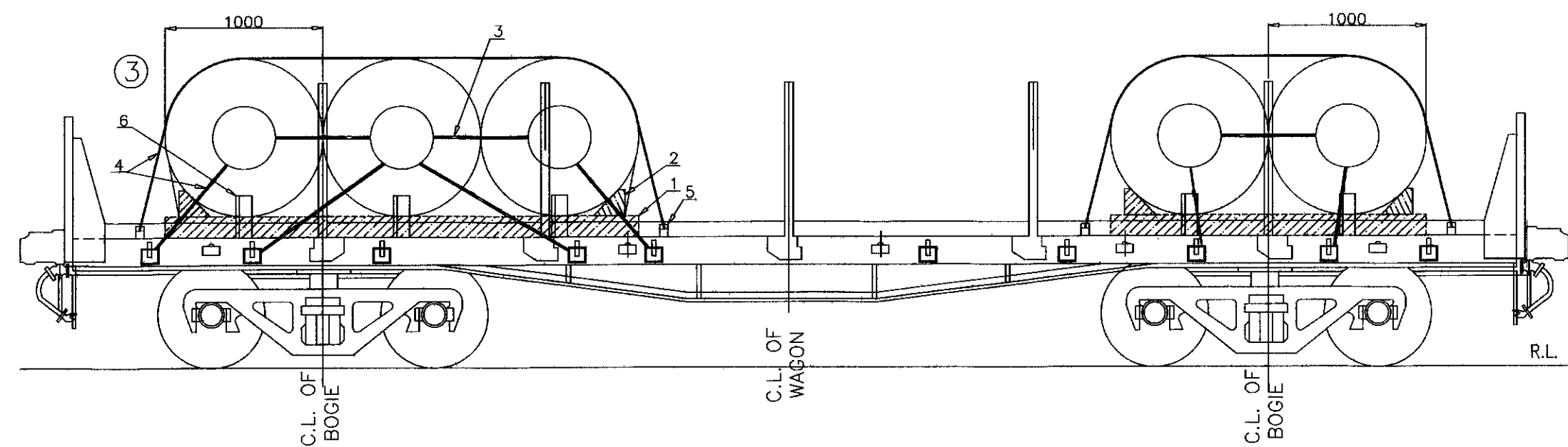


UNITISED IN 2 COILS PACK

FIG.1

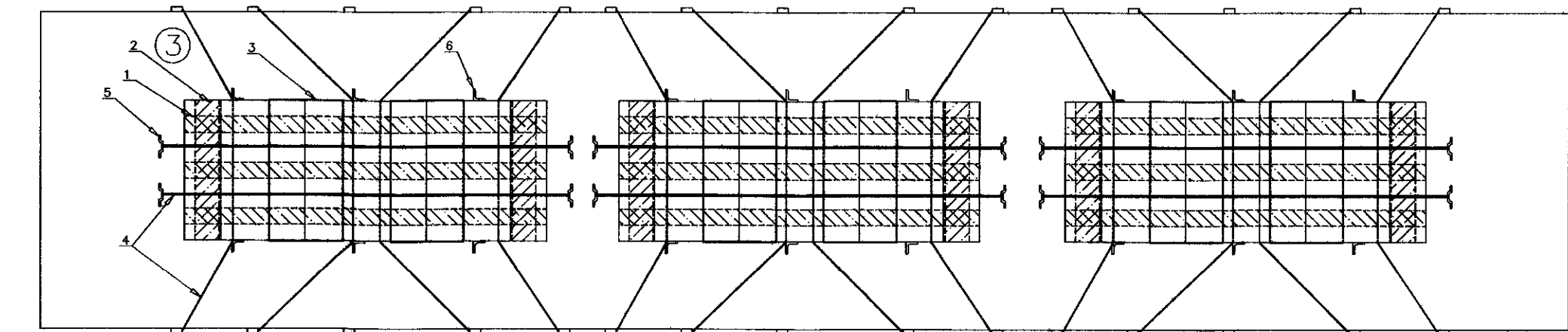
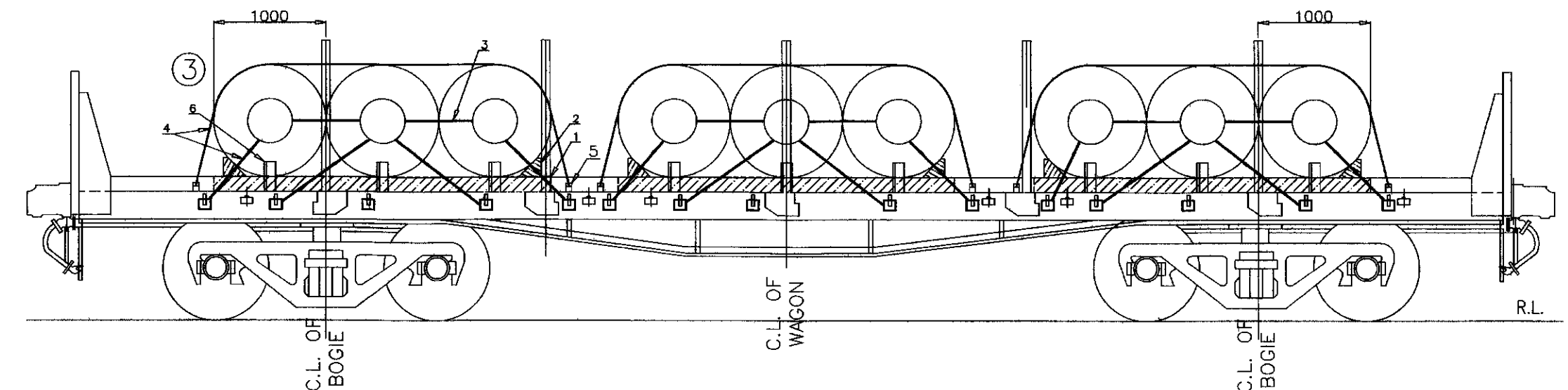


UNITISED IN 2 AND 3 COILS PACK(5 PER WAGON)

FIG.3

METHOD OF LOADING

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



UNITISED IN 3 COILS PACK

FIG.2

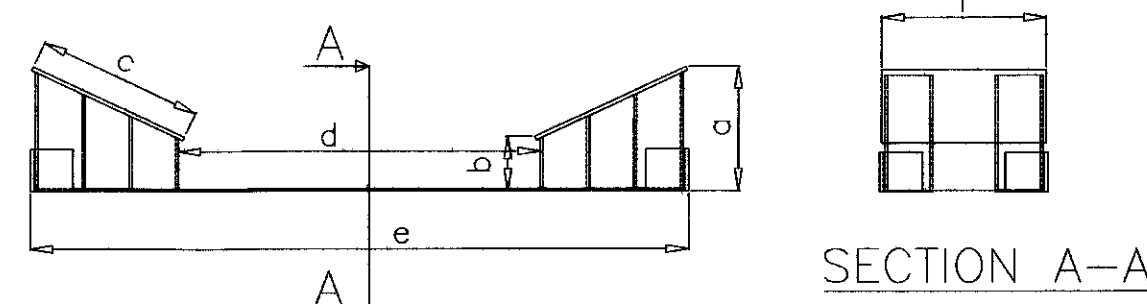
NOTE :-

- ③ 1. ALL INDIVIDUAL COILS ARE TO BE UNITIZED BY 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 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.
- ③ ① 6. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING AND DOWNWARD POSITION DURING LOADING/UNLOADING.
- ② 7. 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.

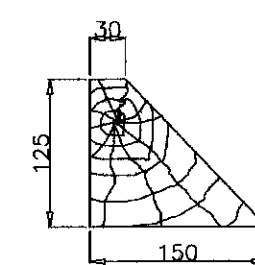


SECTION A-A

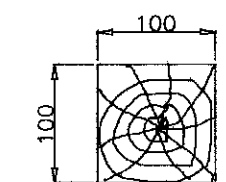
② (INDICATIVE) METAL SADDLE

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

② TABLE 1



WOODEN TRIANGULAR BATTEN SECTIONAL VIEW



WOODEN LONGITUDINAL RUNNER SECTIONAL VIEW

8. THE MAXIMUM DIFFERENCE IN WEIGHT OF TWO BOGIE SHALL NOT EXCEED MORE THAN 2 TON.
 9. 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 THICKNESSES | 1.45 |
| 3. | MINIMUM BRAKING STRENGTH | 49KN (5TON) |
- ③ 10. ELONGATION OF STEEL STRAP SHALL BE GREATER THAN 7% MEASURED USING A GAUGE LENGTH OF 100MM, WHEN TESTED IN ACCORDANCE WITH EN10002-1
 11. THE INITIAL TENSION IN THE STRAP SHALL BE IN THE RANGE OF 500kg TO 800kg.
 12. WOOD OF ADEQUATE STRENGTH WHICH CAN SUSTAIN THE LOAD IMPARTED ON IT SHALL BE USED.
 13. 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.

6	STOPPER ISA 75X75X6TH.	AS PER REQUIREMENT	
5	ISOLATION HOOK	AS PER REQUIREMENT	WD-15057-S-06
4	HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY)	AS PER REQUIREMENT	EN13247:2001
3	HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION)	AS PER REQUIREMENT	EN13247:2001
2	WOODEN WEDGE	02 NO. PER BUNDLE	WOOD
1	WOODEN BATTON	03 NO. PER BUNDLE	WOOD

ITEM	DESCRIPTION	NO.OFF	MTL&SPEC.	REMARKS
SUPERSEDED BY				
SUPERSEDES				
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				
				BOGIE FLAT WAGON TYPE 'BRN 22.9'
				LOADING AND SECURING OF HR/CR COILS IN UNITISED PACKS
				GROUP
				WD-15060-S-01

③	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.
	WD-23075		DRG. REVISED DESCRIPTION TABLE ADDED AND NOTE NO - 8 TO 13 ADDED	08/23	-
	WD-22096		METAL SADDLE, TABLE 1 AND NOTE NO - 8 ADDED	11/22	-
	WD-21112		NOTE-7 ADDED	01/22	-

B.G. R.D.S.O. [W]