



NOTE :-

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 100MMX50 MM.
- ① ARE PROVIDED IN INTERMEDIATE LAYERS IN ADDITION TO THE BOTTOM WOODEN RUNNER OF SIZE 100MMX100 MM.
3. HEIGHT TO WIDTH RATIO OF CONSIGNMENT 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.
 - ① 8.2 THE WEIGHT IMPOSED ON BOTH THE BOGIES SHOULD BE IDENTICAL (EVEN IN CASE OF NON STANDARD STEEL BILLETS).
9. STEEL STRAP SHALL BE CONFIRMING TO EN 13246 TYPE 3.2 OR EQUIVALENT.
10. SIDE STANCHION (L.H. & R.H.) MUST BE ENSURED IN UPRIGHT POSITION AFTER LOADING AND IN DOWNWARD POSITION DURING LOADING/UNLOADING.
11. THE MINIMUM NO. OF EACH TYPE OF LONGITUDINAL/LATERAL STRAPS SHALL BE AS INDICATED IN THE DRAWING.
- ① 12. THE INITIAL TENSION IN THE STRAP SHALL BE IN THE RANGE OF 300kg TO 500kg.
13. WOOD OF ADEQUATE STRENGTH WHICH CAN SUSTAIN THE LOAD IMPARTED ON IT SHALL BE USED.
14. SECURING ARRANGEMENT SHALL BE CERTIFIED BY THE CONCERN RAILWAY.
15. 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.

① SPECIFICATION FOR STEEL STRAP

| S. No. | PURPOSE | WIDTH (IN MM) | THICKNESS (IN MM) | PERCENTAGE ELONGATION MIN. | TENSILE ST. (N/MM ²) | PHYSICAL |
|--------|------------------------------|---------------|-------------------|----------------------------|----------------------------------|-------------------------------------|
| 1. | FOR BUNDLING & UNITISING | 31.75 | 1.0 | 6 | 925 | DEBURRED EDGE PAINTED & WAXED |
| 2. | FOR SECURING WITH WAGON BODY | 31.75 | 1.0 | 6 | 925 | DEBURRED EDGE PAINTED BROWN & WAXED |

| ITEM | DESCRIPTION | NO.OFF | MTL&SPEC | REMARKS |
|------|---|--------------------|-------------------|---------|
| 6 | ISOLATION HOOK | AS PER REQUIREMENT | WD-15057-S-06 | |
| 5 | HIGH TENSILE STEEL STRAP (FOR SECURING WITH WAGON BODY) | AS PER REQUIREMENT | EN 13246 TYPE 3.2 | ① |
| 4 | HIGH TENSILE STEEL STRAP (FOR BUNDLING & UNITIZATION) | AS PER REQUIREMENT | EN 13246 TYPE 3.2 | |
| 3 | INTERMEDIATE WOODEN RUNNER | AS PER REQUIREMENT | WOOD | |
| 2 | WOODEN RUNNER | AS PER REQUIREMENT | WOOD | |
| 1 | BILLETS | AS PER REQUIREMENT | STEEL | |

| | | | |
|---------------|--------------|-------|--|
| SUPERSEDED BY | | DATE | |
| SCALE PASSED | S.M.TRIPATHI | 01/22 | |
| CHECKED | A.P.SINGH | 01/22 | |
| DRAWN | SACHIN KUMAR | 01/22 | |
| TRACED | | | |
| COMPARED | | | |
| J.S.NO. | WD-21112 | 12/21 | |

LOADING AND SECURING ARRANGEMENT OF STEEL BILLETS (6MTRS) ON BRN & ITS VARIANTS

| | |
|-------|---------------|
| GROUP | WD-21112-S-02 |
|-------|---------------|

| | | | | | |
|-----------|--------|-------------|--------------------------|--------------|---|
| ① | - | WD-23075 | NOTE NO. 10 TO 15 ADDED. | 08/23 | - |
| ALT. ITEM | AUTHY. | DESCRIPTION | DATE | ASSLY. DRGS. | |

| | | | |
|------|----------|-------|---------------|
| B.G. | R.D.S.O. | GROUP | WD-21112-S-02 |
| | [W] | | |