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

No.2019/M(N)/204/6 (E. No. 3324111) Dated: 05.12.2023

Principal Chief Mechanical Engineers
All Zonal Railways

Sub: Loading of Steel Coils in BOXNHL wagons
Ref: (i) SWR's letter no. SWR/M/N/19 Vol-XII dated 29.11.2023 (copy enclosed)
(ii) Board's letter of even no. dated 28.11.2023 (copy enclosed)

Vide letter under reference (i) Zonal Railways have been advised regarding loading of steel coils in BOXNHL wagon by using more no. PU Dunnage instead of BOXNHL wagons.

In reference to above, SWR, vide letter under reference (ii) above, has sought for clarification which have been examined and advised as below:

SN	Issue	Clarification
1	Whether loading of bigger steel coils is to be restricted up to 28 tonnes only or upto 30 tonnes.	As per note 4 of RDSO's sketch/WD-II/10 the maximum weight of individual coils at the ends should not exceed 28 tonnes and at middle should not exceed 8 tonnes.
2	Whether such loading arrangement can be permitted by SWR also for loading of steel coils by M/s. JVSL on trial basis for six months, or not	Such loading arrangements can be permitted by ZRs to any third party. However the format as advised by RDSO should be duly filled up by the Zonal Railway and the concerned loading party

DA: as above

05.12.2023

(Happy Walia)
EDME(Freight)
Railway Board
Email: edmef@rb.railnet.gov.in

दक्षिण पश्चिम रेल्वे
SOUTH WESTERN RAILWAY

प्रधान कार्यालय/ Headquarters Office
यांत्रिक विभाग/ Mechanical Department
न्यु जीएम बिल्डिंग/ New GM Building,
गदग रोड/Gadag Road
हुबली/ HUBLI-580020

Lr.No. SWR/M/N/19 Vol-XII

Dt : 29.11.2023

EDME(Freight)
Railway Board
New Delhi

Sub: Loading of Steel Coils in BOXNHL wagons

Ref: 1) Railway Board's Lr.No.2019/M(N)/204/6 (E.No.3324111) Dt: 28.11.2023.
2) RDSO's Lr.No.MW/BOXNHL dated 23.11.2023.

***

Railway Board vide letter u/r (1) has issued instructions for loading of steel coils up to 30 tonnes, by increasing number of wooden PU Dunnage from 3 to 6, instead of strengthening of BOXNHL wagons. In this regard, following is submitted.

a) As inferred from the Note-4 of Sketch/WD-II/10, attached with RDSO's letter No. MW/BOXNHL dated 23.11.2023 (letter u/r-2), the maximum loading in the BOXNHL wagons is permitted up to 64 tonnes (28t+8t+28t) only.

b) This pattern of loading has been permitted on trial basis for 6 months with performance to be monitored by Zonal Railway and TATA Steel in the format prescribed by RDSO in the letter u/r (2).

In this regard following may be clarified/confirmed at the earliest:-

(i) Whether loading of bigger steel coils is to be restricted up to 28 tonnes only or upto 30 tonnes.

(ii) Whether such loading arrangement can be permitted by S.W. Railway also for loading of Steel Coils by M/s. JVSL on trial basis for six months, or not.

VINAY KUMAR AGARWAL
Digitally signed by VINAY KUMAR AGARWAL
Date: 2023.11.29 18:59:07 +05'30'

(V.K. Agarwal)
PCME/SWR

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

No.2019/M(N)/204/6 (E. No. 3324111) **Dated: 28.11.2023**

The Principal Chief Mechanical Engineers
All Zonal Railways

Sub: Loading of Steel Coils in BOXNHL wagons upto 30T.
Ref: RDSO's letter no. MW/BOXNHL dated 23.11.2023 (copy enclosed).

Vide letter under reference, RDSO has issued a new sketch **Sketch/WD-II/10** permitting loading of steel coils upto 30 Ton, by increasing number of wooden PU Dunnage from 3 to 6, instead of strengthening of BOXNHL wagons.

Zonal Railways are requested to undertake necessary arrangements for loading of steel coils in BOXNHL wagons duly complying stipulations enumerated in RDSO's letter cited under reference (i) above, which are listed below:

a. This trial arrangement shall initially be valid for six months only. Post analysis of trial data, further decision on continuation/modification shall be worked out by RDSO.
b. Placement of wooded/PU dunnage on the wagon should be supported by structural members like cross bar, stringers, bolsters & centre sill of the wagon.
c. Monitoring of wagons for every loading and unloading cycle.
d. Proper lashing & securing of steel coil as per sketches in the wagon.
e. The BOXNHL wagons being used for coils loading shall be flagged in FMM and its performance shall be monitored by Zonal Railways. Format for monitoring and reporting of trial data through FMM by concerned Zonal Railways and Tata Steel is attached as Annexure-I of RDSO's letter.

DA: as above

28.11.2023

(Happy Walia)
EDME(Freight)
Railway Board
Email: edmef@rb.railnet.gov.in

Copy to :
1.PED/TT(M): For kind information and necessary action.
2. EDS(W), RDSO, Lucknow: For kind information and necessary action.
3. GM/CMM & FMM: Please make arrangement in FMM for monitoring of wagons being used for loading of steel coils in BOXNHL wagons by M/s. TATA Steel Ltd.

फैक्स / Fax : 91-0522-2452494
टेलीफोन / Tele: 0522-2456165

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

No.MW/BOXNHL

As signed

EDME (Freight),
Railway Board,
Rail Bhawan,
New Delhi.

Sub: Loading of steel coil in BOXNHL wagons.

Ref: (i) Railway Board`s letter No. 2019/M(N)/204/6 (E. No. 3324111) dt. 13.11.2023
(ii) Tata Steel letter No. Chief Logistics/2023/29 dt. 09.11.2023.
(iii) Tata Steel letter No. Chief Logistics/2023/24 dt.13.10.2023.
(iv) This office letter even dated 31.08.2023.
(v) Tata Steel letter No. Chief Logistics/2023/16 dt.09.08.2023.
(vi) This office letter even dated 23.06.2023, 07.07.2023 & 02.08.2023.
(vii) SWR Letter No. SWR/M/N/12 Vol. 19.06.2023.
(viii) Railway Board`s letter No. 2019/M(N)/204/6 dt. 19.06.2023.

1. The BOXNHL wagon has primarily been designed for UDL carrying of bulk commodities and design is not conducive for point loading as in case of steel coils etc. As reported by Zonal Railways, there have been several cases in the recent past (more than 400) where the centre sill was found cracked and sagging have also been noticed. Primary reason of these failure has been attributed to point loading due to steel coils.
2. In reference to (viii) above, five sketches (SKETCH/WD-II/ 01 to SKETCH/WD-II/05) for steel coil loading in BOXNHL wagon were prepared by this office. Accordingly Railway Board had issued a letter to SWR for loading of steel coils as per sketches on trial basis for 03 months. The trial report from SWR is still awaited.
3. Vide letter under reference (v) above M/s Tata Steel has proposed loading of steel coils up to 30t at the bolster area. The proposal has been examined by this office.
4. To meet this transportation requirement through BOXNHL wagons, strengthening arrangement of BOXNHL wagon to suit point loading was issued vide this office letter at reference (iv). Three sketches (SKETCH/WD-II/06 to SKETCH/WD-II/08) were issued for loading with strengthening scheme of BOXNHL wagon which essentially involve provision of additional plates of size 1932x1932x4 mm welded at the specified locations to make this wagon fit for proposed point loading.
5. Further to this, M/s Tata Steel vide letter under reference (ii) & (iii) above, has submitted a proposal to increase number of wooded/PU dunnage from 3 to 6 instead of strengthening of BOXNHL wagon.
6. The loading diagram proposed by M/s Tata Steel has been examined by this office. On the basis of detailed analysis, a new sketch no Sketch/WD-II/10 has been prepared for implementation on trial basis.
7. For permitting loading of steel coil in BOXNHL wagon according to sketch no. Sketch/WD-II/10, following shall have to be ensured:

a) This trial arrangement shall initially be valid for six months only. Post analysis of trial data further decision on continuation/modification shall be worked out by RDSO.
b) Placement of wooded/PU dunnage on the wagon should be supported by structural members like cross bar, stringers, bolsters & centre sill of the wagon.
c) Monitoring of wagons for every loading and unloading cycle.
d) Proper lashing & securing of steel coil as per sketches in the wagon.
e) The BOXNHL wagons being used for coils loading shall be flagged in FMM and its performance shall be monitored by M/s Tata Steel and Zonal Railways. Format for monitoring and reporting of trial data through FMM by concerned Zonal Railway is attached as Annexure-I.

8. Railway Board may consider allowing M/s Tata Steel for loading of steel coils in BOXNHL wagons with the aforesaid stipulations.
9. This has approval of competent authority.

DA: As above

Digitally Signed by Arvind Kumar
Date: 29-11-2023 16:00:27
Reason: Approved

(Arvind Kumar)
Jt. Director Stds/Wagon
For Director General/Wagon

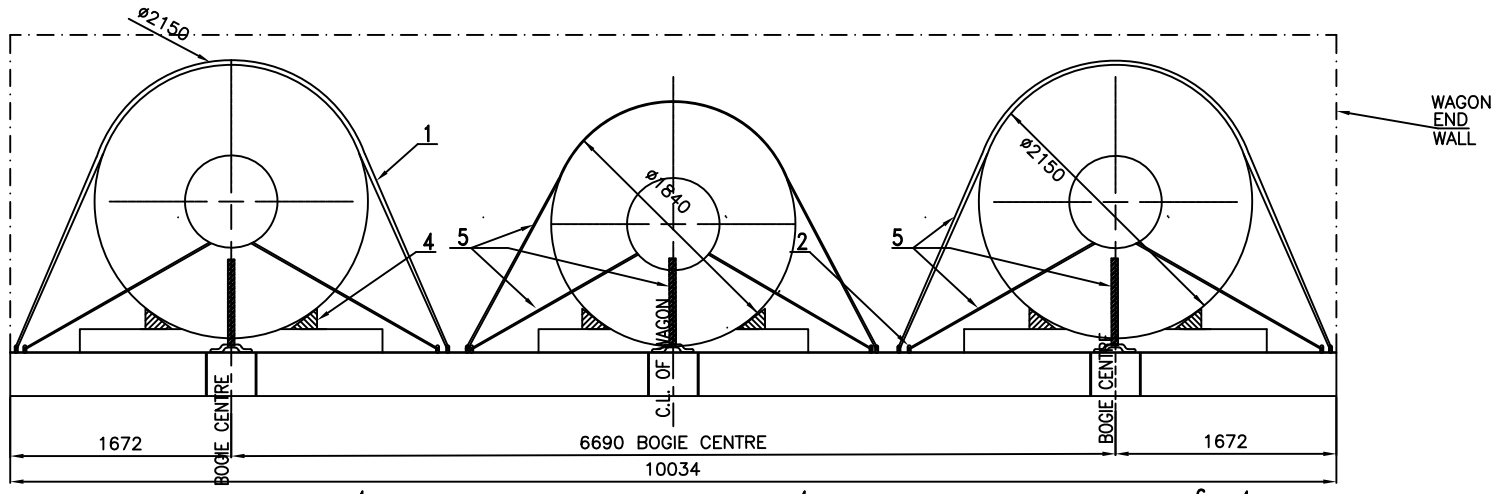
Annexure-I

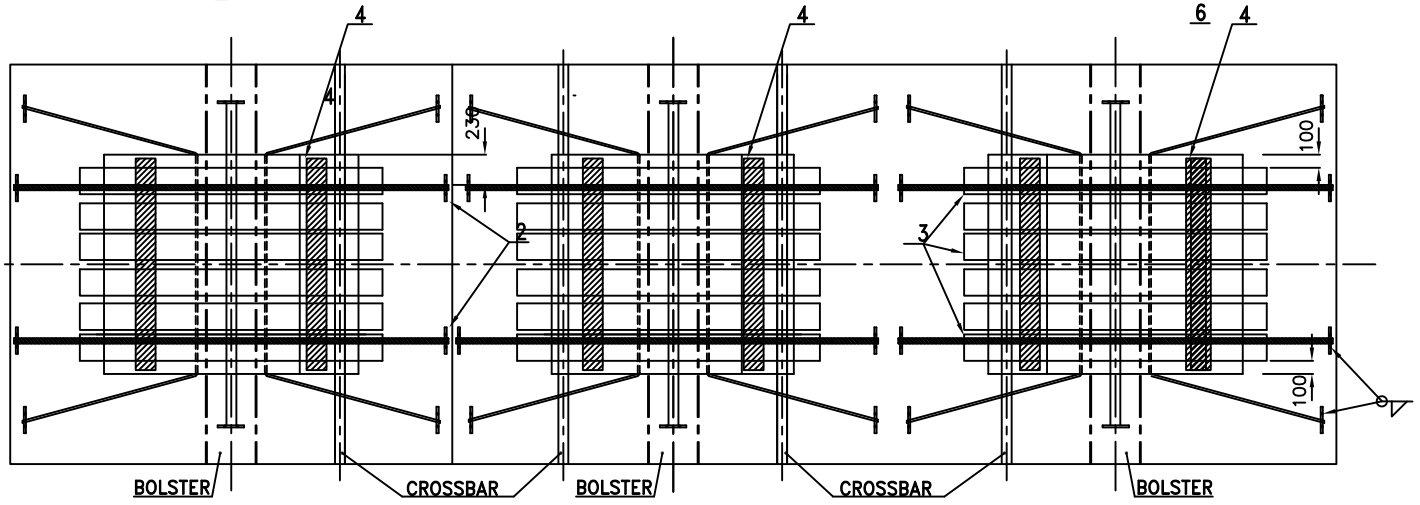
Format for monitoring of steel coil loading in BOXNHL wagon

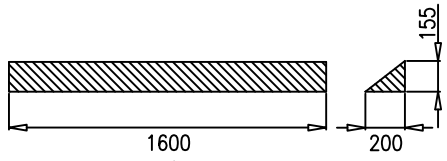
(Ref: MW/BOXNHL dated 23.11.2023)

Loading point	Date of loading	Wagon no.	Whether loading & securing done as per RDSO sketch no SKETCH/WD-II/10	Detail on Block/Dunnage used for loading		Weight of coil in tonnes			Any defect noticed in wagon superstructure members (Sole bars, Centre sill, cross bars, head stocks, longitudinal stringers and floor plate etc.)
				Nos.	Wooden/PU	Above bogie no.-1 bolster	Middle of the wagon	Above bogie 2 bolster	

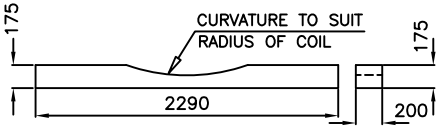
File No.RDSO-MW0WD(OPEN)/2/2020-O/o PED/SW/RDSO



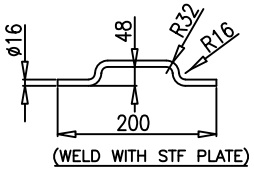




4



3



2

NOTE:-

1. STEEL COILS SHOULD BE STRICTLY LOADED ON THE WAGON AS PER LOADING PATTERN SHOWN IN DRAWING.
2. LASHING AND SECURING OF THE COILS SHOULD BE AS SHOWN IN THE DRAWING.
3. THE DIAMETER OF THE COIL SHOWN IN DRAWING IS THE MAXIMUM LOADABLE DIAMETER. LOWER DIAMETER COILS CAN ALSO BE LOADED.
4. THE MAXIMUM WEIGHT OF INDIVIDUAL COIL AT ENDS SHOULD NOT EXCEED 28 TONNES AND AT MIDDILE SHOULD NOT EXCEED 8 TONNES.
5. LOAD SHOULD BE EVEN AT BOTH SIDE.
6. BEFORE LOADING, ENSURE THAT METALLIC, NON- METALLIC CRADLES ARE PLACED AT CORRECT POSITION AS SHOWN IN DRAWING. PROPER QUALITY OF HARD WOOD IS THE RESPONSIBILITY OF LOADING PARTY.
7. AFTER PLACING THE COIL ON METALLIC, NON- METALLIC CRADLE, PLACE WOODEN WEDGE ON BOTH SIDE OF COIL AT THE CRADLE AND THEN USE TWO STRAPS ON EACH COIL FOR TIGHTENED WITH WAGON FLOOR AS SHOWN IN DRAWING, FOR SAFE OPERATION .
8. AFTER TIGHTENING THE COIL WITH WEDGE BY ONE STRAP, EACH COILS SHALL BE TIGHTENED ADEQUATELY BY 04 NOs. OF LASHING CHAIN/ HEAVY DUTY STEEL STRAP WITH ISOLATION HOOK.
9. THE LASHING CHAIN/ HEAVY DUTY STEEL STRAP USED SHOULD HAVE MINIMUM BREAKING STRENGTH OF 5000 KG PER LASHING CHAIN/STRAP.
10. LASHING CHAIN/ STEEL STRAPS SHOULD BE UNIFORMLY TIGHTENED AT EACH STAGE BY TENSOMETER.
11. THE LOADING PARTY SHOULD WELD ISOLATION HOOK (ITEM NO.2) WITH WAGON FLOOR/BODY.
12. THE LOADING/UNLOADING OF COILS TO BE CARRIED OUT IN SUCH A WAY THAT IT WILL NOT DAMAGE THE WAGON & LOOSE DURING TRANSPORTATION.
13. IT SHOULD BE ENSURED THAT THE CRADLES SHALL BE PLACED OVER LOAD BEARING MEMBERS OF THE WAGON AS PER THE DRAWING.

ITEM	DESCRIPTION	NO. OF PCS PER COIL	MTL&SPEC	REMAKS
5.	LASING CHAIN OR HEAVY DUTY STRAP	15	STEEL	
4.	WOODEN WEDGE	6	WOOD	
3.	METALLIC/ NON-METALLIC/ WOOD CRADLE	18	METALLIC/ NON-METALLIC/WOOD	
2.	ISOLATION HOOK	30	STEEL	
1.	STEEL COIL (02 NO./ WAGON)	03	STEEL	

ALT.	ITEM	AUTHY.	DESCRIPTION	DATE	ASSLY. DRGS.

SUPERSEDED BY
SUPERSEDES DATE
SCALE PASSED
CHECKED
DRAWN
J.S.NO.

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

LOADING DIAGRAM FOR STEEL COIL ON BOXNHL WAGON

GROUP

SKETCH/WD-II/10