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### AMENDMENT No.3 TO FINAL SPEED CERTIFICATE FOR OPERATION OF BOXNHL OVER IR

No.	MW / SPD /BG / BOXNHL/22.9t	Date	03.09.2020
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#### (I) महाप्रबंधक (इंजी),

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई— 400 001.
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता — 700 001.
3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली — 110 001.
4. दक्षिण रेलवे, पार्क टाउन, चेन्नई — 600 003.
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद — 500 071.
6. दक्षिण पूर्व रेलवे, गार्डन रीच, कोलकाता — 700 043.
7. पूर्वोत्तर रेलवे, गोरखपुर — 273 012.
8. पूर्वोत्तर सीमान्त रेलवे, मालीगौव, गुवाहाटी — 781 011.
9. पश्चिम रेलवे, चर्चगेट, मुम्बई — 400 020.
10. पूर्व मध्य रेलवे, हाजीपुर — 844 101.
11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्पलेक्स, चन्द्रशेखरपुरा, भुवनेश्वर,—751 016.
12. उत्तर मध्य रेलवे, प्रयागराज — 211 011.
13. उत्तर पश्चिम रेलवे, जयपुर — 302 006.
14. दक्षिण पश्चिम रेलवे, हुबली — 580 023.
15. पश्चिम मध्य रेलवे, जबलपुर — 482 001.
16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्पलेक्स, बिलासपुर — 495 004.

#### (II) प्रबन्ध निदेशक, डेडीकेटेड फ्रेट कोरीडोर कार्पोरेशन आफ इण्डिया लि0, पॉचवा तल, प्रगति मैदान मेट्रो स्टेशन बिल्डिंग काम्पलेक्स, नई दिल्ली—110 001

Sub:	<b>Amendment No.3 to final speed certificate of Broad Gauge Bogie Open wagon type 'BOXNHL' with maximum axle load of 22.9t for operation at 75 kmph in loaded condition and 100 kmph in empty condition over Indian Railway B.G route.</b>
Ref:	(i) Final speed certificate No. MW/SPD/BG/BOXNHL/22.9t dated 23-03-2009 of BOXNHL followed by Amendment No.1 dated 09-04-2009 & Amendment No.2 dated 31-12-2009 (ii) Director Civil Engg. (Plg.) Railway Board's letter No. 2020/CE-II/TS/22.9 dated 20-08-2020.

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1.0	Vide reference (i) above, final speed certificate followed by amendments no.-1&2 of Broad Gauge Bogie Open wagon type 'BOXNHL' with maximum axle load of 22.9t for operation over Indian Railway B.G route, have been issued.
1.1	Railway Board vide letter no 2009/CEDO/SR/48 dated 02.12.2009 issued first sanction for operation of BOXNHL wagons with maximum axle load of 22.9t at 75 kmph in loaded condition for two years. Further, Railway Board vide letter no -2017/CEDO/SR/14 dated

	27.03.2018 has issued final sanction for operation of 22.9t axle load BOXNHL wagons at 60 kmph in loaded condition.
2.0	Now, Railway Board, vide letter under reference (ii), has permitted operation of 22.9 t axle load wagons at maximum speed of 75 kmph in loaded condition on 60 kg (90 UTS) rail of Indian Railway routes and advised to issue amendment to the final speed certificate.
3.0	<p>In view of above, <b>Amendment No.3</b> with following modifications to the referred final speed certificate of BOXNHL is being issued: -</p> <p><b>(i) Additional Para 1.3 added before para-2.0</b></p> <p><b>“1.3</b> “General Manager of Zonal Railway shall identify the route for operation of (CC+8+2)t/ (CC+6+2)t axle load wagon at 75kmph in terms of Railway Board letter No. 2020/CE-II/TS/22.9 dt 20.08.2020.”</p> <p><b>(ii) Para 2.1</b> of the referred final speed certificate and of amendment nos. 1 &amp; 2 of BOXNHL shall be read as below:</p> <p><b>“2.1 Track</b></p> <p><b>2.1.1 For Empty condition</b></p> <p>(a) Minimum standard of 52kg (72UTS) rail, PSC sleeper with 1540 Nos/Km on ballast cushion below sleeper of 250mm, which may consist of at least 100mm clean and rest in caked up condition on compacted and stable formation for speed up to 60 kmph.</p> <p>(b) Minimum standard of 52kg (90UTS) rail, PSC sleeper with 1540 Nos/Km on ballast cushion below sleeper of 250 mm, which may consist of at least 100mm clean and rest in caked up condition on compacted and stable formation for speed above 60 kmph and upto 100 kmph.</p> <p><b>2.1.2 For Loaded condition:</b></p> <p><b>(a) Speed up to 60 kmph</b></p> <p>The track shall be to a minimum standard of 52kg (90UTS) rail laid on PSC sleeper with 1540 Nos/Km on 300mm ballast cushion below the sleeper which may consist of 150mm clean and rest in caked up condition, on compacted and stable formation with following condition:</p> <p>Operation of (CC+8+2)t on routes falling in Temperature Zone IV and Zone III as per IPRWM June – 2020 would be as per Railway Board letter no 2019/CE-II/TSC/88/Puri dated 28.08.2020 with the following conditions for 52kg (90UTS) rail track:</p> <p>(i) De-stressing temperature for LWR in Temperature Zone IV would be reduced by 5°C (T<sub>m</sub> to T<sub>m</sub>+5).</p> <p>(ii) USFD testing of rail would be carried out at a higher frequency corresponding to 6 GMT of traffic (present stipulation corresponds to 8 GMT).</p> <p><b>(b) Speed above 60 kmph and upto 75 kmph</b></p> <p>The track shall be to a minimum standard of 60kg (90UTS) rail laid on PSC sleeper with 1540 Nos/Km on 300mm ballast cushion below the sleeper which may consist of 150mm clean and rest in caked up condition, on compacted and stable formation with the following condition :</p> <p>For temperature Zone IV as per IRPWM, de-stressing of LWR at reduced temperature (T<sub>m</sub> to T<sub>m</sub>+5) shall be completed before onset of winter season. If De-stressing in Zone IV is not done at lower temperature, loaded wagon will run at 60 kmph during the winter period of 1<sup>st</sup> November to 28<sup>th</sup> /29<sup>th</sup> of February of next calendar year.</p>

	<p>2.1.3 For track maintained to lower standard than that mentioned above, the Chief Engineer shall decide the lower maximum permissible speed on the basis of maintenance condition. In this connection, instructions issued by Railway Board letter no.65/WDO/SR/26 dt 19/20.10.1966 may be seen. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.</p> <p>2.1.4 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual, June 2020. Maximum cant deficiency permitted would be 75mm.</p> <p>2.1.5 The welds shall be protected by joggled fish plates as per provisions of USFD Manual and AT welding manual and other policy instructions of Railway Board. The maintenance of Rails and Rail joints shall be ensured as per provision of Indian Railways Permanent Way Manual, June - 2020. In addition, wherever condition warrants on account of corrosion on rail/weld collar, wear on rail, cupping of welds etc., necessary precautions shall be taken for fish plating/ joggled fish plating.</p> <p>2.1.6 Zonal Railway may ensure further detailed examination of track as deemed fit based on age cum condition basis, overdue renewal and condition of formation etc. as per provisions of Indian Railways Permanent Way Manual June- 2020 regarding permanent way renewals and may suitably restrict maximum speed of operation based on such examination.”</p> <p><b>(iii) Para 2.2 Bridges-</b> Clause nos 2.2.1, 2.2.2, 2.2.3, 2.2.6 &amp; 2.2.7 of referred final speed certificate and of amendment nos. 1 &amp; 2 of BOXNHL, as applicable, shall be replaced as below &amp; clause 2.2.9 stands deleted:</p> <p>“2.2.1 The clearance refers to Bridges “Standard Spans” with standard design of girders, slabs, pipe culverts, piers and abutments etc. issued by RDSO for BGML, RBG and MBG-1987, HM Loading and 25T Loading-2008 Standard. However, the bearings of span 76.2m (clear) designed for BGML standard loading as per RDSO’s drawing No. BA-11154 shall be strengthened by providing two additional anchor bolts.</p> <p>2.2.2 Superstructure &amp; Bearings of “Special Spans” (designed and constructed by Zonal Railways based on site requirements) including all arches and substructure of all bridges (all Standard Spans &amp; Special Spans) are to be examined under the directions of the Chief Bridge Engineer concerned and certified safe with respect to current Indian Railway Standard Codes with up to-date correction slips.</p> <p>2.2.3</p> <p>(a) For regular operation in empty condition of BOXNHL wagon over Indian Railway B.G. routes, there are no speed restrictions on bridges of BGML/RBG/MBG/25T: 2008 Loading Standards for proposed speed of 100 kmph.</p> <p>(b) For regular operation in loaded condition of BOXNHL wagon with <b>C.G.Height 1998 mm</b>, following restrictions shall be applicable:-</p> <p>(i) All standard spans up to 31.9 m (all effective) of BGML/RBG/MBG loading Standards shall be fit for proposed speed of 75 kmph.</p> <p>(ii) Standard spans of 47.25 m (all effective) of BGML/RBG/MBG loading Standards shall be fit for speed up to 70 kmph.</p>
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	<p>(iii) Standard spans of 63.0 m &amp; 78.8m (both effective) of BGML/RBG/MBG loading Standards shall be restricted to 50 kmph.</p> <p>(iv) Standard spans of 25T: 2008 Loading Standards shall be fit for proposed speed of 75 kmph.</p>
(c)	Track on bridges and approaches of BGML loading standard spans 31.9m,47.3m, 63.0m & 78.8m (all effective) shall be strengthened or modified in such a way so as to allow for dispersion of longitudinal force as per clause 2.8.3.2 of IRS Bridge rules. In cases where dispersion cannot be allowed as per clause 2.8.3.2 such as due to provision of SEJ in bridges etc., the bridge superstructure including bearings and sub-structure shall be checked for longitudinal force without dispersion and certified safe by the Chief Bridge engineer concerned.
2.2.6	The directives of RDSO for operation of (CC+8+2)t axle load 22.82t communicated vide RDSO letter no. CBS/Golden/Q/Strength dated 21/27-07-2009 & its amendment dated 25/09/2009 shall also be followed.
2.2.7	The above clauses have been arrived considering bridges are in physically sound condition. In case the bridges are not in satisfactory physical condition, necessary speed restriction to be imposed by concerned Chief Bridge Engineer of the Zonal Railway.”
2.2.9	Deleted
(iv)	<b>Para 2.3</b> of the referred final speed certificate of BOXNHL shall be read as below: <b>“2.3 Signalling</b>
2.3.1	Provisions of GR, SR, IRSOD, SEM an all extant instructions issued from time to time as applicable shall be complied with.
2.3.2	In case train (having this wagon in its composition)/ rolling stock having EBD of more than 1 Km and non provision of second distant signal/ 4 Aspect automatic signaling in the section, action as per A&C No. 09 of SEM Pt. – I shall be taken.”
(v)	<b>Under heading ‘General’, Para 2.5.3 of the referred final speed certificate of BOXNHL stands deleted.</b>

**ENCLOSURES: / संलग्नक:**

	Nil
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-Signed-

(वी.के. अग्रवाल)

कार्यकारी निदेशक मानक/चालन शक्ति

प्रतिलिपि: सूचनार्थ (copy for information)

- (1) सचिव (यांत्रिक/इंजी), रेलवे बोर्ड, रेल भवन, नई दिल्ली — 110001
- (2) मुख्य रेल संरक्षा आयुक्त, अशोक मार्ग, लखनऊ—226001
- (3) महा प्रबंधक (मैकेनिकल/यातायात/संकेत एवं दूरसंचार),
  - (i) मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई— 400 001.
  - (ii) पूर्व रेलवे, फेयरली प्लेस, कोलकाता — 700 001.
  - (iii) उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली — 110 001.
  - (iv) दक्षिण रेलवे, पार्क टाउन, चेन्नई — 600 003.
  - (v) दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद — 500 071.
  - (vi) दक्षिण पूर्व रेलवे, गार्डेन रीच, कोलकाता — 700 043.
  - (vii) पूर्वोत्तर रेलवे, गोरखपुर — 273 012.
  - (viii) पूर्वोत्तर सीमान्त रेलवे, मालीगौव, गुवाहाटी — 781 011.
  - (ix) पश्चिम रेलवे, चर्चगेट, मुम्बई — 400 020.
  - (x) पूर्व मध्य रेलवे, हाजीपुर — 844 101.
  - (xi) पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्पलेक्स, चन्द्रशेखरपुरा, भुवनेश्वर,—751 016.
  - (xii) उत्तर मध्य रेलवे, प्रयागराज — 211 011.
  - (xiii) उत्तर पश्चिम रेलवे, जयपुर — 302 006.
  - (xiv) दक्षिण पश्चिम रेलवे, हुबली — 580 023.
  - (xv) पश्चिम मध्य रेलवे, जबलपुर — 482 001.
  - (xvi) दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्पलेक्स, बिलासपुर — 495 004.
- (4) अध्यक्ष एवं प्रबंध निदेशक, कोंकण रेलवे कार्पोरेशन लिमिटेड, पोस्ट बाक्स नं० 9, बेलापुर भवन, सेक्टर —11, सीबीडी बेलापुर, नवी मुम्बई — 400614

**ENCLOSURES: / संलग्नक:**

	<u>Nil</u>
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**Digitally signed by VINAY  
KUMAR AGARWAL  
Date: Thu Sep 03 19:00:00 IST  
2020**

**Reason: Approved**

(वी.के.अग्रवाल)

कार्यकारी निदेशक मानक/चालन शक्ति