

500 3474

फैक्स/ FAX : 91-0522-2458500
91-0522-2450679
तार : रेलमानक, लखनऊ
Telegram : 'RAILMANAK',
Lucknow
टेलीफोन/ Tele : 2451200 (PBX)
2450115 (DID)



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011

Government of India - Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011

MC/LHB/Coach

Date: 05.6.2014

महाप्रबन्धक (इंजीनियरिंग)

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई- 400001
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता - 700001
3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली - 110001
4. दक्षिण रेलवे, पार्क टाउन, चेन्नई - 600003
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद - 500071
6. दक्षिण पूर्व रेलवे, गार्डन रीच, कोलकाता - 700043
7. पूर्वोत्तर रेलवे, गोरखपुर - 273012
8. पूर्वोत्तर सीमान्त रेलवे, मालीगाँव, गुवाहाटी - 781011
9. पश्चिम रेलवे, चर्चगेट, मुम्बई - 400020
10. पूर्व मध्य रेलवे, हाजीपुर - 844101
11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्पलेक्स, चन्द्रशेखरपुरा, भुवनेश्वर, उड़ीसा - 751016
12. उत्तर मध्य रेलवे, हास्टिंग रोड, इलाहाबाद - 211001
13. उत्तर पश्चिम रेलवे, जयपुर - 302006
14. दक्षिण पश्चिम रेलवे, हुबली - 580023
15. पश्चिम मध्य रेलवे, जबलपुर - 482001
16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्पलेक्स, बिलासपुर - 495004

Sub: Final Speed Certificate for operation of AC-2 Tier (LWACCW), AC First Class (LWFAC), AC First cum AC 2-Tier (LWFCWAC), AC Hot Buffet Car (LWCBAC) BG LHB AC EOG variant coaches fitted with FIAT bogies at speed of 160 kmph on track maintained to C&M-I, Volume-I standard.

RCF has built LHB AC EOG variant broad gauge coaches fitted with FIAT bogies under Transfer of Technology from M/s. ALSTOM-LHB. These coaches, generally confirming to RDSO's drawing no. Sk. 96077 has a speed potential for operating at a maximum speed of 160 km/h, on track maintained to standards contained in RDSO's Report No. C&M-I, Vol.-I. These coaches are built to the-state-of-art technology, provided with disc brakes and centre buffer couplers and have a unique feature of wheel slide protection device (WSP), to prevent formation of wheel flats.

- 1.1 LHB AC EOG Chair car has undergone detailed oscillation trials up to test speed of 180 kmph on Palwal-Mathura section of Northern Railway & North-Central Railway on track maintained to C&M-I, Vol.-I standard. The results of trial are contained in RDSO Report no. MT-240, exhibits satisfactory riding and stability behavior up to a maximum test speed 180 kmph on track maintained to C&M-I, Vol.-I, standard. On the basis of satisfactory results of oscillation trials, LHB AC EOG Chair Car has been cleared to run up to maximum speed of 160 km/h on track maintained to C&M-I, Vol.-I standard vide this office letter no. MC/LHB/COACH dated 19.03.2003. On the basis of LHB AC EOG Chair car, CCRS/Lucknow has accorded sanction for dispensation of oscillation trials for AC-2 Tier (LWACCW), AC First Class (LWFAC), AC First cum AC 2-Tier (LWFCWAC), AC Hot Buffet Car (LWCBAC), BG LHB AC EOG variant coaches vide letter no. स्. 17016/06/2013-14-T.W. dated 05.03.2014.
2. Based on the above, it is certified that AC-2 Tier (LWACCW), AC First Class (LWFAC), AC First cum AC 2-Tier (LWFCWAC), AC Hot Buffet Car (LWCBAC), BG LHB AC EOG

variant coaches are fit for operation upto maximum speed of 160 kmph on track maintained to C&M-I, Vol.-I standard, subject to the conditions given below:

2.1 Track

- 2.1.1 The track shall be to a minimum standard of 60 kg (90 UTS) rails on sleepers to M+7 density and minimum depth of ballast cushion below the sleepers to 300 mm which may consist of at least 150 mm clean blast and the rest in caked up condition on compacted and stable formation and maintained to standards as recommended in RDSO's Report No. C&M-1 Vol.-1. In this connection, the instructions for maintenance of track of high speed routes circulated to the Railways under RDSO's D.O. no. CRA/509 dated 7.7.1971 and approved by Railway Board vide their letter no. 71/W6/HS/8 dated 27-8-71 and no. 71/W6/HS/1 dated 21.10.71
- 2.1.2 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, Railway Board's letter No. 65/WDO/SR/26 dated 19/20.10.1966 may be seen. When the Chief Engineer considers that the roadbed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed, depending upon the local conditions.
- 2.1.3 The maximum permissible speed on curves shall be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual Second Reprint-2004.
- 2.1.4 (i) Replacement of existing loose heel switches with fixed heel curved switches laid on PSC sleeper layout with CMS crossings with adequate arrangements to ensure designed geometry of turnouts. Turnouts with TWS shall be preferred on such routes.
- (ii) Preferably improved SEJ should be provided on such routes.
- 2.1.5 All the level crossing shall be manned.

2.2 Bridges

- 2.2.1 The clearance refers to bridges with standard design of girders, slabs, pipe culverts, piers and abutments etc. issued by RDSO for BGML, RBG and MBG-1987 standard loadings. However, the bearings of span 78.8 m (effective) designed for BGML standard loading as per RDSO's drawing no. BA-11154 should be strengthened by providing two additional anchor bolts.
- 2.2.2 Superstructures and bearings of non-standard spans including Arches and sub-structures of all bridges are to be examined under the directions of the Chief Bridge Engineer concern and certified safe by him in terms of current IRS Bridge Rules, Steel Bridge Code, Concrete Bridge Code, Arch Bridge Code, Bridge Sub Structures and Foundations code etc. read with upto-date correction slips.
- 2.2.3 Specific restrictions are applicable which are indicated in relevant Speed Certificates of hauling locomotives issued by RDSO.
- 2.2.4 The above clauses have been arrived considering bridges are in physically sound condition. Zonal Railway to certify the adequacy of bridges for permitting rolling stocks based on physical condition of bridges.
- 2.2.5 Location of bridges on which speed restrictions are imposed shall be notified by the Railways and incorporated in the working timetable.

2.2.6 This clearance is subject to the following parameters of LHB AC EOG variant coaches:

(A) For LHB AC EOG Coaches

i) AC-2 Tier (LWACCW)

Maximum Axel Load	:	16.25 t
Maximum Braking Force	:	5.8 t
CG height above rail level	:	Not exceeding 1830 mm

ii) AC First Class (LWFAC)

Maximum Axel Load	:	16.25 t
Maximum Braking Force	:	5.8 t
CG height above rail level	:	Not exceeding 1830 mm

iii) AC First cum AC 2-Tier (LWFCWAC)

Maximum Axel Load	:	16.25 t
Maximum Braking Force	:	5.8 t
CG height above rail level	:	Not exceeding 1830 mm

iv) AC Hot Buffet Car (LWCBAC)

Maximum Axel Load	:	16.25 t
Maximum Braking Force	:	5.8 t
CG height above rail level	:	Not exceeding 1830 mm

2.3 Signaling

2.3.1 Provision of GR, SR, SEM and all extant instructions issued from time to time shall be complied with.

2.3.2 On the sections where these coaches are used in the rake, EBD of more than 1 Km is to be catered for, second distant signal or automatic signaling should be available failing which suitable speed restriction is to be imposed.

2.4 Traction Installation

For 25 kV AC Traction area

2.4.1 In 25kV a.c. traction area, the CEE of Railway shall have to ensure that the minimum height of contact wire and electrical clearances as stipulated in provision of Chapter-V and V-A, Electric Traction "Schedule of Dimension of 1676 gauge (BG) revised 2004 with latest Addendum & Corrigendum slips" is not violated and strictly followed to ensure its safe running".

For DC Traction area

2.4.2 "In DC traction area, the condition of operation shall be decided by CEE of the concerned Railway"

2.5 Rolling Stock

2.5.1 Before starting the operation, Mechanical department of the concerned Railway shall arrange to certify the track worthiness and safety of the rolling stocks. He will also ensure proper maintenance of the stocks.

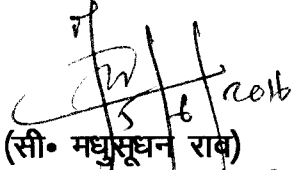
- 2.5.2 The Wheel Slide Protection (WSP) device of all the coaches in the rake shall be functional at the starting station. If the WSP of any coach becomes defective enroute, the brake system of that particular coach shall be isolated.
- 2.5.3 The LHB EOG coaches shall be maintained as per "Maintenance Manual for LHB Coaching Stock" issued by Railway Board.
- 2.5.4 CEE of concern railway shall ensure rake formation of train according to capacity of diesel alternator set and current carrying capacity of inter vehicle coupler (IVC)/Z.S. coupler.

2.6 General

- 2.6.1 All the permanent and temporary speed restrictions in force and those that may be imposed from time to time due to track, bridges, curves, signaling and interlocking etc. shall be observed.
- 2.6.2 Attention is also invited to the note on "Preparation of Electrical Equipment of Diesel and Electric Locomotives for high speed operation" circulated with this office letter No. EL/3.3.15/WAM2/Gr.CON dated 24.12.1970 and the locomotive should be attended accordingly.
- 2.6.3 LHB AC EOG variant coaches does not infringe any clause of IRSOD-2004 (Re-print).

संलग्नकः

- (i) RDSO Sk.96077
(ii) CCRS letter no. ऋ-17016/06/2013-14-T.W. dated 05.03.2014.


(सी० मधुसूदन राव)

कार्यकारी निदेशक मानक/चालन शक्ति

प्रतिलिपि:

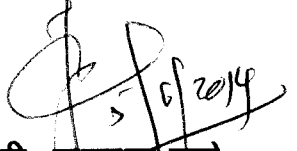
1. सचिव (यांत्रिक/इलेक्ट्रिकल/इंजीनियरिंग-जी), रेलवे बोर्ड, रेल भवन, नई दिल्ली-110 001.
2. मुख्य रेल संरक्षा आयुक्त, मण्डल रेल प्रबन्धक कार्यालय, पूर्वोत्तर रेलवे परिसर, अशोक मार्ग लखनऊ-226 001
3. महाप्रबन्धक (यांत्रिक/ इलेक्ट्रिकल /ओपरेटिंग/एस एण्ड टी)
 - i) मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई- 400 001.
 - ii) पूर्व रेलवे, फेयरली प्लेस, कोलकाता - 700 001.
 - iii) उत्तर रेलवे, बडौदा 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, मालीगाँव, 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, उड़ीसा-751 016.
 - xii) उत्तर मध्य रेलवे, हास्टिंग रोड, इलाहाबाद - 211 001.

- 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.

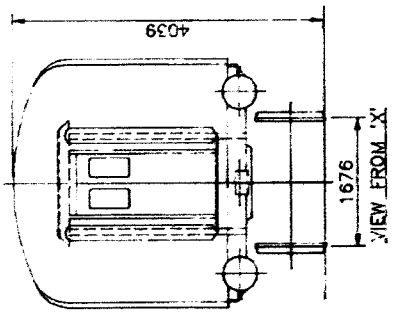
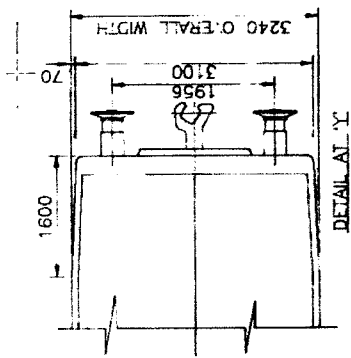
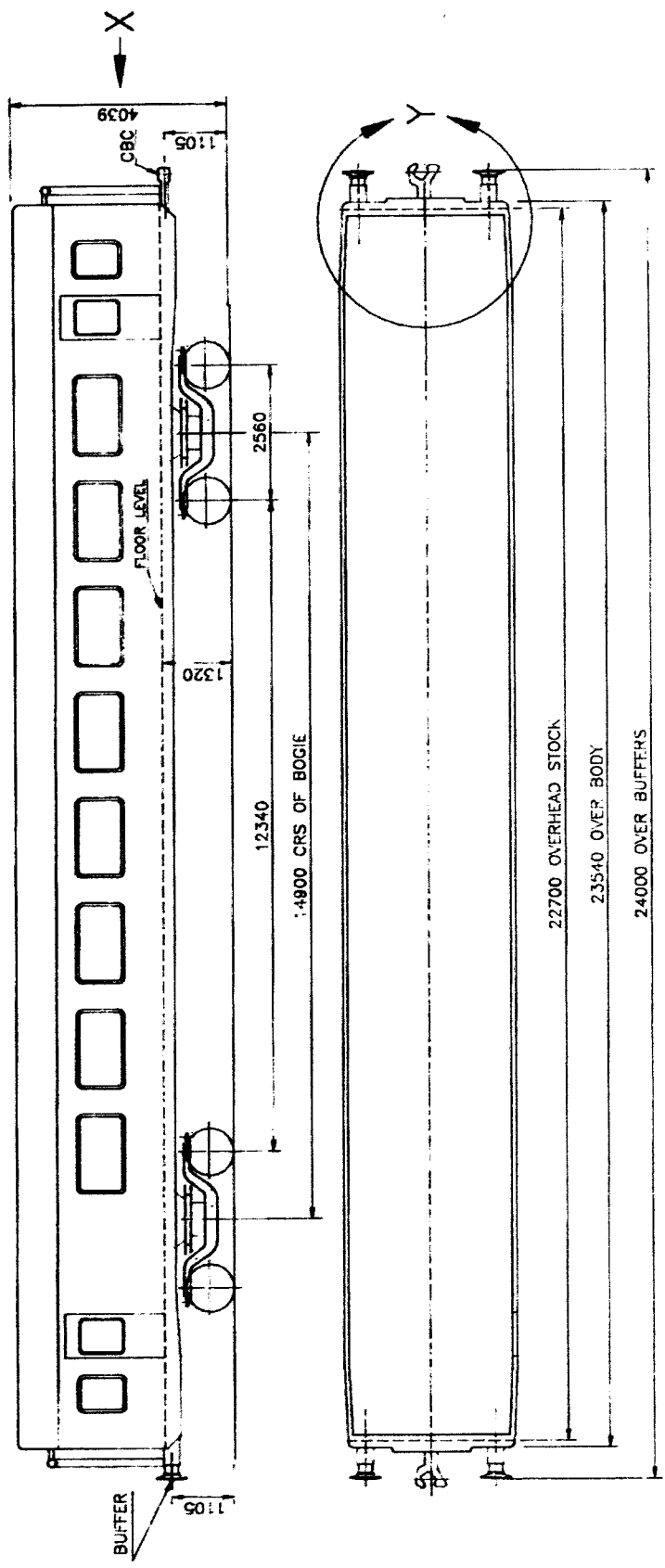
4. मैनेजिंग डायरेक्टर, कोंकण रेलवे कार्पोरेशन लिमिटेड, बेलापुर, नवी मुम्बई – 400 614.

संलग्नक:

- (i) RDSO Sk.96077
(ii) CCRS letter no. ँ-17016/06/2013-14-T.W. dated 05.03.2014.


(सी. मधुसूदन राव)

कार्यकारी निदेशक मानक/चालन शक्ति



22700 OVERHEAD STOCK
23540 OVER BODY
24000 OVER BUFFERS

NOTE:--
BUFFERS ARE TO BE PROVIDED ONLY
IN POWER CAR.

DIAGRAM SHOWING MAIN DIMENSIONS
OF LHB-IR COACH

तार : चीफकॉम
Telegram : Chiefcom
e-mail : chiefcom@rediffmail.com



फोन/Ph. : 0522-2233087 (P&T)
0522-2233109 (P&T)
N.E.Rly. 31-140, 31-168
N.Rly. 23-290
टेली फैक्स/Tele Fax-0522-2233086
0522-2233087

भारत सरकार
नागर विमानन मंत्रालय
रेल संरक्षा आयोग

GOVERNMENT OF INDIA

MINISTRY OF CIVIL AVIATION
(COMMISSION OF RAILWAY SAFETY)

अशोक मार्ग, लखनऊ-226 001
Ashok Marg, Lucknow - 226 001

संख्या-क्यू.17016/06/2013-14-टी.डब्ल्यू.
सेवा में,

दिनांक:05.03.2014

महानिदेशक (सवारी डिब्बा),
अनुसंधान, अभिकल्प और मानक संगठन,
लखनऊ ।

विषय: Dispensation to detailed oscillation trials of BG EOG AC LHB coaches- (i) AC First Class Sleeper LHB variant coach (LWFAC)
(ii) AC Two Tier Sleeper LHB variant coach (LWACCW)
(iii) AC Hot Buffet Car LHB variant coach (LWCBAC)
(iv) AC First cum AC two Tier Sleeper LHB variant coach (LWFCWAC).

संदर्भ: अनुसंधान, अभिकल्प और मानक संगठन, लखनऊ का पत्र संख्या
MC/LHB/Coach दिनांक 12.02.2014.

महोदय,

संदर्भ में दिये पत्र द्वारा भेजे गये उपरिलिखित प्रस्ताव के सम्बन्ध में मुख्य आयुक्त रेल संरक्षा आयुक्त द्वारा सहमति प्रदान कर दी गयी है ।

यह पत्र रेल संरक्षा आयुक्त के अनुमोदनोपरान्त जारी किया जा रहा है ।

05/03/2014
(उत्तम प्रकाश)

उप रेल संरक्षा आयुक्त (यांत्रिक)
कृते मुख्य आयुक्त रेल संरक्षा

उत्तम प्रकाश
5/3/2014

प्रेषित किया
05/3/2014
अ.प्र.न.
लखनऊ