

No: MC/WA/Genl.

Dated: 19.06.2025

Through e-mail

**Principal Chief Mechanical Engineer,
All Zonal Railways**

Sub: Use of intermediate worn wheel profile on BG Coaching Stocks over IR.

Ref: (i). This office letter No. MC/WA/Genl. dated 28.04.2006 & 08.08.2012.

(ii). This office letter No. MC/EMU/MTA dated 28.11.2018 & 29.12.2023.

(iii). This office letter No. MC/WA/TP dated 28.12.1992.

RDSO vide letters under reference have issued instructions from time to time for adoption of intermediate worn wheel profile as per RDSO drawing No. Sketch-92082 in various types of coaching stocks. However, some zonal Railways are still found not using intermediate worn wheel profile in some of coaching stocks even after existence of clear instructions on it.

To avoid any confusion on this account, a consolidated list for adoption of intermediate worn wheel profile is being reiterated as under:

S. No.	Rolling stock	Profile Nos.	Flange thickness (mm) (during tyre-turning)	Rejection criteria (flange thickness less than)	Remarks
1	LHB Coaches	1. New profile (Sk-91146) 2. Intermediate profiles (4 nos.) (Sk-92082)	1. New Profile: 29.4 2. Intermediate profile : 28, 27, 26 & 25	22 mm	IRCA Part-IV RDSO letter No. MC/WA/Genl. dated 28.04.2006 & 08.08.2012
2	ICF coaches and DEMU coaches	1. New profile (Sk-91146) 2. Intermediate profiles (9 nos.) (Sk-92082)	1. New Profile: 29.4 2. Intermediate Profile: 28, 27, 26, 25, 24, 23, 22, 21 & 20	16 mm	IRCA Part-IV RDSO letter No. MC/WA/TP dated 28.12.1992
3	EMU & MEMU coaches	1. New profile (Sk-91146) 2. Intermediate profiles- 9 nos. (Sk-92082)	1. New Profile: 29.4 2. Intermediate Profile: 28, 27, 26, 25, 24, 23, 22, 21 & 20	16 mm	IRCA Part-IV RDSO letter No. MC/WA/TP dated 28.12.1992 RDSO letter No. MC/EMU/MTA dated 28.11.2018

4	Vande Bharat coaches	1. New profile (Sk-91146) 2. Intermediate profiles- 4 nos. (Sk-92082)	1. New Profile: 29.4 2. Intermediate Profile: 28, 27, 26 & 25	22 mm	IRCA Part-IV RDSO letter No. MC/EMU/MTA dated 29.12.2023
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Note:- For coaches running at speed > 110 kmph, S.No.1 / 4 to be followed.

Accordingly, all railways are advised to ensure strict compliance of adoption of intermediate worn wheel profile in various coaching stocks as per above table.

This is for kind information and necessary action please.

DA: As above

**ANIL
KUMAR
SINGH**

Digitally signed by ANIL KUMAR SINGH
DN: c=IN, o=Indian Railways,
2.5.4.20=e708629bc82b8a7c5196c3e71c
c2fd88ee5bc608f1b539a1d64937448940
7535, postalCode=226011, st=Uttar
Pradesh,
serialNumber=3d9aa5179a9dacc43494d
5c6484985951697408671b4fecdb9cb1
81163d31fe, cn=ANIL KUMAR SINGH
Date: 2025.06.19 17:45:22 +05'30'

(A.K.Singh)

Exe. Director (Stds.) /Carriage

Copy to: for kind information please.

- 1. PED/CAMTECH, Gwalior**
- 2. PED/PS&EMU/RDSO**
- 3. EDME (Chg.), Railway Board, New Delhi**



No: MC/EMU/MTA

Dated: 29.12.2023

Through e-mail

Principal Chief Mechanical Engineer,

1. Northern Railway, Baroda House, New Delhi - 110 001	10. West Central Railway, Jabalpur-482 001.
2. Western Railway, Churchgate, Mumbai - 400020	11. South East Central Railway, Bilaspur - 495 004.
3. Central Railway, CSMT, Mumbai - 400 001.	12. South Western Railway, Hubli - 580023.
4. Eastern Railway, Fairly Place, Kolkata- 700 001	13. East Coast Railway, Railway Complex, Bhubaneshwar - 751 023.
5. Southern Railway, Park Town, Chennai - 600 003.	14. East Central Railway, Hajipur - 844 101.
6. North Frontier Railway, Maligaon, Guwahati - 781 001.	15. North Western Railway, Jaipur - 302 006.
7. North Eastern Railway, Gorakhpur -273 001.	16. North Central Railway, Allahabad -211 001.
8. South Eastern Railway, Garden Reach, Kolkata - 700 043.	17. Konkan Railway Corpo. Ltd., Corporate Office, Belapur Bhawan, Navi Mumbai - 400 614.
9. South Central Railway, Secunderabad - 500 071.	

Sub: Use of intermediate worn wheel profile for Vande Bharat Coaches.

Ref: This office letter No. MC/WA/Genl. dated 08.08.2012.

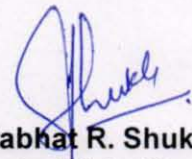
At present, wheel profile of 29.4 mm flange thickness is being used for BG main line coaches including Vande Bharat Coaches as per RDSO drawing No. Sketch-91146 for a new wheel.

RDSO vide letter under reference has issued instructions to use intermediate worn wheel profile (RDSO drawing No. Sketch-92082) of 25 mm to 28 mm thick flange for the coaches running at maximum permissible speeds of 110 kmph and above including LHB coaches.

As the operating speed potential of Vande Bharat Coaches are same as LHB Coaches, therefore, the intermediate worn wheel profile of 25 mm to 28 mm thick flange as per RDSO drawing No. Sketch-92082 is also applicable for Vande Bharat Coaches.

This is for kind information and necessary action please.

Encl: As above


(Prabhat R. Shukla)
Jt. Director/Stds./Carriage

Copy to: for kind information please.

1. PED/CAMTECH, Maharajpur, Gwalior - 474 005
2. EDME (Chg.), Railway Board, New Delhi - 110 001



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
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Fax (0522) 2458500

Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011
DID (0522) 2450115
DID (0522) 2465310



सं. एम.सी./डब्ल्यू.ए./जनरल

दिनांक: 08-08-2012

महाप्रबन्धक (यांत्रिक)

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, गार्डेन 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 काम्प्लेक्स, चन्द्रशेखरपुरा, भुवनेश्वर, उड़ीसा - 751 016.
12. उत्तर मध्य रेलवे, हास्टिंग रोड, इलाहाबाद - 211 001.
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 काम्प्लेक्स, बिलासपुर - 495 004.

विषय: Use of intermediate worn wheel profile for LHB coaches.

At present, wheel profile of 29.4 mm flange thickness is being used for main line coaches as well as LHB coaches as per RDSO drawing No. Sketch-91146 for a new wheel. For intermediate worn wheel profile, flange thickness of 25 mm is being used for high speed coaches running at 110 kmph and above as per RDSO drawing No. Sketch-92082. Intermediate worn wheel profiles of 25 mm to 28 mm thick flange should be used for the coaches to run at maximum permissible speeds of 110 kmph and above including LHB coaches. In this regard CME/Western Railway had been advised vide this office letter of even No. dated 28-04-2006. A copy of the same is enclosed herewith for reference.

संलग्नक: यथोक्त।

(विनय श्रीवास्तव)
निदेशक (एस.एस.)/सवारी डिब्बा

प्रतिलिपि:

1. कार्यकारी निदेशक यांत्रिक इन्जी./कोचिंग, रेलवे बोर्ड, रेल भवन, नई दिल्ली - 110 001
2. कार्यकारी निदेशक/डब्ल्यू.ए. रेलवे बोर्ड, रेल भवन, नई दिल्ली - 110 001
3. कार्यकारी निदेशक/कैमटेक, महाराजपुरा, ग्वालियर
4. एन.सी.ओ./आइ.आर.सी.ए., नई दिल्ली

(विनय श्रीवास्तव)
निदेशक (एस.एस.)/सवारी डिब्बा

यह आरेख अनुसंधान अभिकल्प और मानक संगठन रेल मंत्रालय लखनऊ 226011 भारत की संपत्ति है और पूर्व लिखित अनुमति के बिना इसका आंशिक या पूर्ण रूप से प्रयोग वर्जित है।

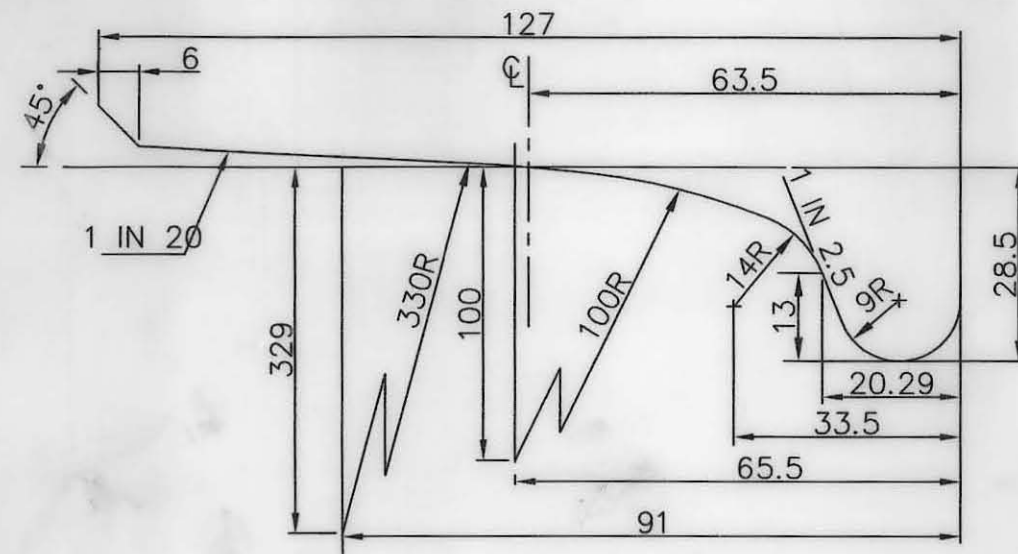


FIG.1: 20mm THICK FLANGE

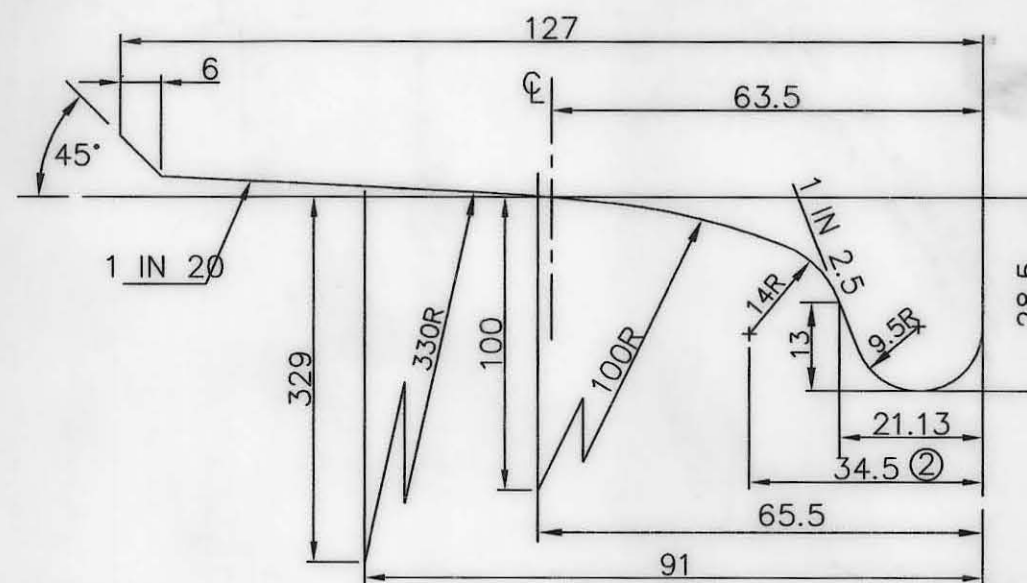


FIG.2: 21mm THICK FLANGE

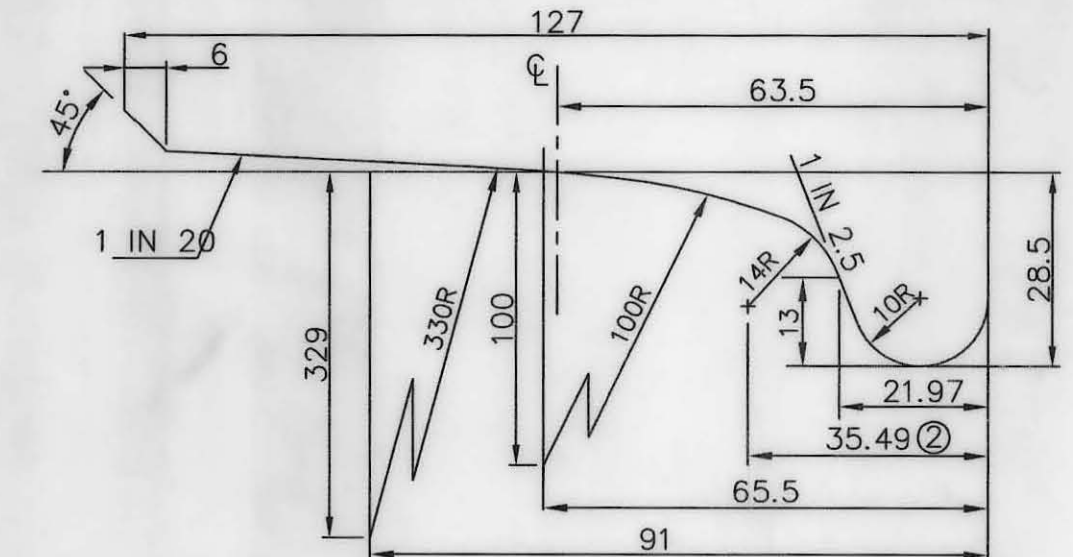


FIG.3: 22mm THICK FLANGE

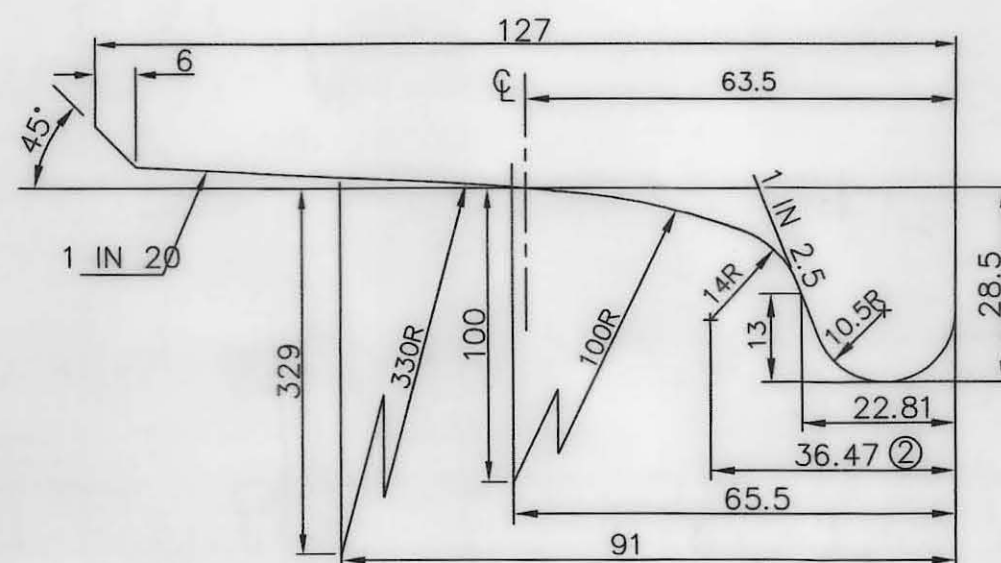


FIG.4: 23mm THICK FLANGE

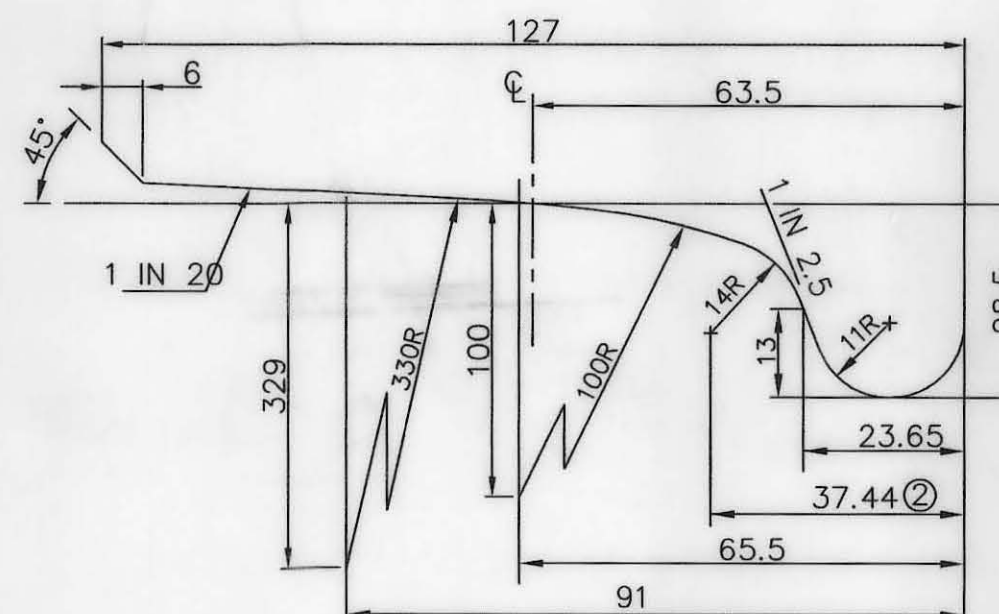


FIG.5: 24mm THICK FLANGE

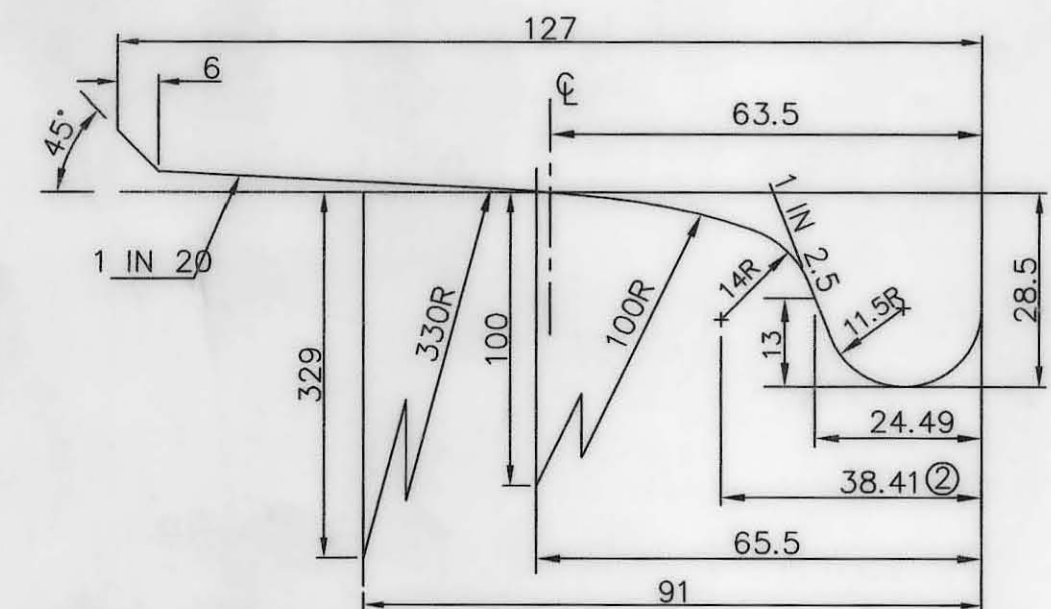


FIG.6: 25mm THICK FLANGE

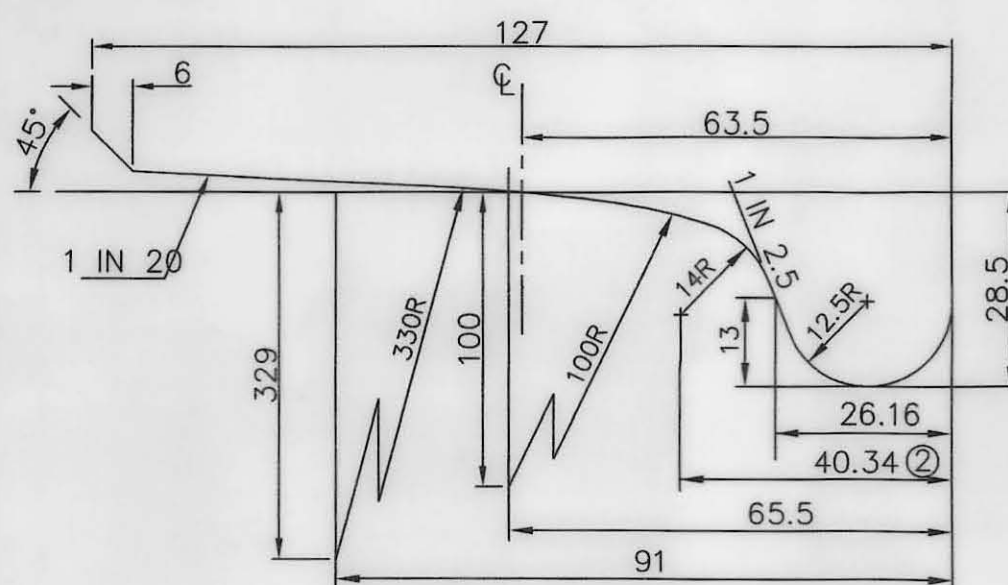


FIG.7: 26mm THICK FLANGE

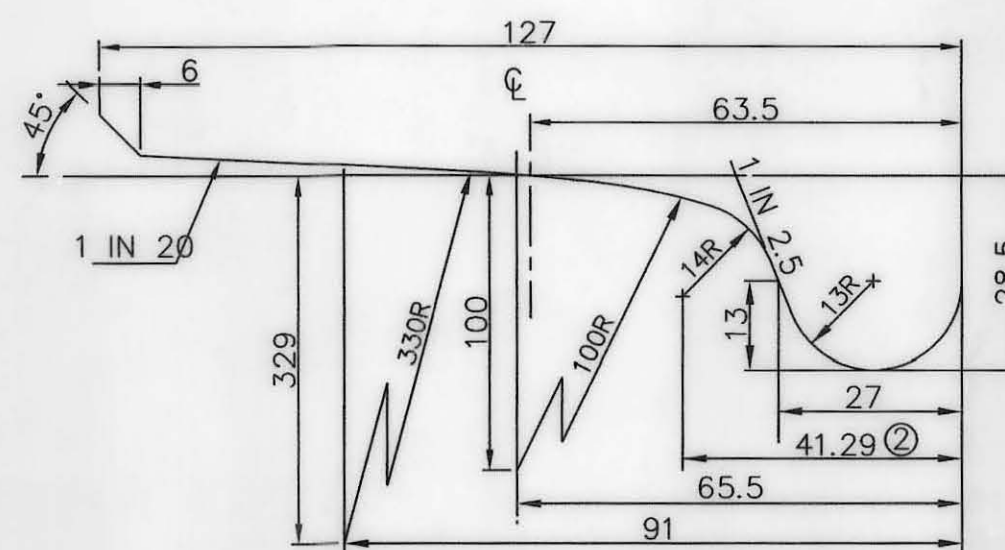


FIG.8: 27mm THICK FLANGE

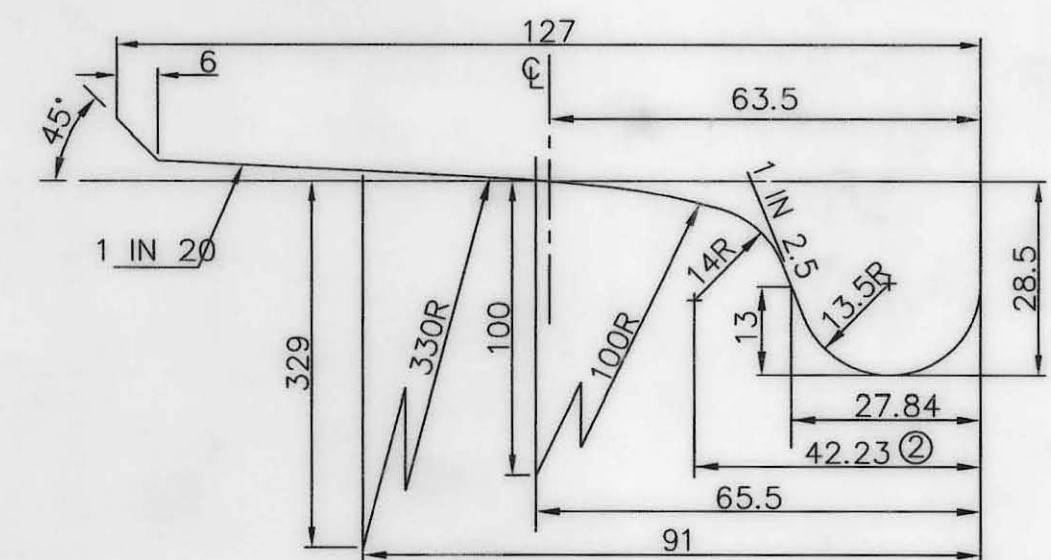


FIG.9: 28mm THICK FLANGE

NOTE:—

1. INTERMEDIATE WORN WHEEL PROFILES OF 25mm TO 28mm THICK FLANGE (FIG.6 TO 9) SHOULD ONLY BE USED FOR THE COACHES TO RUN AT MAXIMUM PERMISSIBLE SPEEDS OF 110 kmph AND ABOVE.
2. ALL THE 9 INTERMEDIATE WORN WHEEL PROFILES (FIG.1 TO 9) CAN BE USED FOR THE WHEELS FOR OTHER TYPE OF COACHES.

②	—	SS/01/12	DIMENSION 34 (FIG.2), 35.5 (FIG.3), 36.34 (FIG.4), 37.32 (FIG.5), 38.5 (FIG.6), 40.21 (FIG.7), 41.17 (FIG.8) AND 42.11 (FIG.9) CORRECTED AS 34.5, 35.49, 36.47, 37.44, 38.41, 40.34, 41.29 AND 42.23 mm RESPECTIVELY.	01/12
①	—	SS/01/10	INTERMEDIATE WORN WHEEL PROFILES OF 21,23,24, 26,27 AND 28mm THICK FLANGE ADDED AND EXISTING PROFILES OF 20,22 & 25mm THICK FLANGE MODIFIED. NOMENCLATURE OF FIG.1,FIG.2, FIG.3 DELETED AND FIG.1 TO FIG.9 ADDED FOR ALL 9 PROFILES. NOTE 1 AND 2 MODIFIED.	03/10
ALT. ITEM		AUTHY.	DESCRIPTION	DATE

ASSY. DRGS REFERENCE	SUPERSEDED BY		INTERMEDIATE WORN WHEEL PROFILE FOR COACHING STOCK
	SCALE	P	
FLOPPY No.	1: 1	C	GROUP ②
		D	
B.G.	R.D.S.O. [C]	T	SKETCH-92082
		J.S.	

फैक्स/ FAX : 91-0522-2458500
91-0522-2450679
तार : 'रेलमानक' लखनऊ
Telegram : 'RAILMANAK', Lucknow
टेलीफोन/ Tele : 2451200 (PBX)
2450567 (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

No. MC/WA/Genl

Date: 28-4-2006

Chief Mechanical Engineer,
Western Railway,
Headquarters Office,
Churcgate,
Mumbai - 400 020

Sub: Use of intermediate worn wheel profile for LHB coaches.

Ref: Your letter No. M.113/8/Vol.6 dated 09-3-2006. SN 5526

At present wheel profile of 29.4 mm flange thickness is using for mainline high speed coaches as well as LHB coaches as per RDSO drg. No. Sk-91146 for a new wheel. For intermediate worn wheel profile, flange thickness of 25 mm is using for the high speed coaches run at 110 kmph and above as per RDSO drg. No. Sk-92082. The same profile of 25 mm flange thickness is permitted for LHB wheels. Railways may use any other intermediate worn wheel profile with flange thickness between 25 mm and 29.4 mm based on their practice and experience. However, Wheel profile of below 22 mm flange thickness should not be permitted on high speed coaches.

DA: Nil

(Shailendra Singh)
for Director General/Carriage

07C



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
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Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011
DID (0522) 2450115
DID (0522) 2465310



No. MC/EMU/MTA

Date: 28.11.2018


Principal Chief Mechanical Engineer

1- Southern Railway, Park Town, Chennai - 600 003	10- East Central Railway, Hajipur - 844 101
2- South East Central Railway, Bilaspur - 495 004	11- East Coast Railway, Chandrasekharpur, Bhubaneswar - 751 016 (Orissa)
3- Northern Railway, Baroda House, New Delhi - 110 001	12- North Central Railway, Allahabad - 211 001
4- Central Railway, Chhatrapati Shivaji Terminus, Mumbai-400 001	13- South Central Railway, Rail Nilayam, Secunderabad - 500
5- 071 North Western Railway, Jaipur - 302 006	14- South Western Railway, Hubli - 580 023
6- South Eastern Railway, Garden Reach, Kolkata-700 043	15- West Central Railway, Jabalpur - 482 008
7- North Eastern Railway, Gorakhpur - 273 001	16- Eastern Railway, Fairlie Place, Kolkata - 700 001
8-Northeast Frontier Railway, Maligaon, Guwahati-781 011	17-Konkan Railway, Corporation Ltd., Corporate office, Navi Mumbai-400 614
9- Western Railway, Churchgate, Mumbai - 400 020	

Sub: Adoption of intermediate worn wheel profile in EMU/MEMU coaches.
Ref: Eastern Railway letter No. MD/Wheel/Policy/Vol.VI dated 05.09.2018.

In reference to the above, it is informed that RDSO has already issued instructions to use intermediate worn wheel profile to RDSO drawing No. Sketch-92082 for re-profiling of wheels in-service for all coaching stock including EMUs. A copy of the same is enclosed herewith.

Encl.: As above


28-11
(Shobhit Pratap Singh)
Dy. Director (VDG)/Carriage

तार : 'रेल मानक' लखनऊ
Telegram : 'RAILMANAK' LUCKNOW



टेलीफोन [50567 & 50017
Telephones

भारत सरकार-रेल मंत्रालय

अनुसंधान अभिकल्प और मानक संगठन

Government of India-Ministry of Railways
RESEARCH DESIGNS & STANDARDS ORGANISATION

पत्र संख्या

Our Reference.....No.MC/WA/TP

लखनऊ-226011 दिनांक

LUCKNOW-226011 Date.....28-12-92.

The General Manager (Mech.),
The General Manager (Elect),*

1. Central Railway, Bombay V.T. -400001.
2. Eastern Railway, Fairlie Place, Calcutta - 700001.
3. Northern Railway, Baroda House, New Delhi - 110001.
4. N.E. Railway, Gorakhpur - 273001.
5. N.F. Railway, Maligaon, Guwahati - 781001.
6. Southern Railway, Park Town, Madras - 600003.
7. S.C. Railway, Rail Nilayam, Secunderabad - 500371.
8. S.E. Railway, Garden Reach, Calcutta - 700043.
9. Western Railway, Churchgate, Bombay - 400020.

Sub: Adoption of worn wheel profile on BG
Coaching Stock.

Ref: i) RDSO's letter of even number dated
26-11-91.

ii) Railway Board's letter No.76(MC)/137/56
dated 2-1-79 addressed to GM/All Indian
Railways with a copy to RDSO/Lucknow

Please refer to this office letter mentioned at reference
(i) vide which railways were advised to adopt the worn wheel
profile for BG coaching stock and reduce the wheel flat limit to
40 mm. In this connection it is to advise that limit of wheel
flat has since been delinked from the worn wheel profile and a
revised limit of 60 mm as already advised for the Wagon stock
vide Wagon Dte.'s letter No.MW/CWSC/58 dated 18-3-92, has been
fixed for the IRS Coaching Stock. The limit of the wheel flat
for the ICF and BEML coaches would continue to be the same as
specified under IRCA rules Part-IV.

2. It may be noted that Railway Board vide their letter under
reference at (ii) above approved certain intermediate sizes for
the wheel flange keeping the remaining portion of IRS wheel
profile same for coaching stock including Rajdhani Express and
EMUs. As the worn wheel profile has been adopted for the
coaching wheels, intermediate worn wheel profiles for the same as
per RDSO Sk.No.92082 have been finalised and approved by Railway
Board. As such, all the railways are advised that the

intermediate worn wheel profiles as per RDSO Sk.92082 are permitted for all the coaching stock including those meant for running at maximum permissible speed of 110 kmph and above and EMUs.

(R.K. Gupta)

DA: sk.92082 -

for Director General (Carriage)

*Except S.Nos.(4), (5) & (7).

Copy to:-

1. Shri L.K. Sinha, EDME (RS), Railway Board, New Delhi ---
110001 - In reference to his discussions on 4-12-92 with Shri R.K. Gupta, JDSC-III/RDSO.
2. Adviser (Mech.), Railway Board, Rail Bhavan, New Delhi-1.
3. Adviser (PU), Railway Board, Rail Bhavan, New Delhi-1.
4. Secretary (Stores), Railway Board, Rail Bhavan, New Delhi-1.
5. General Manager (Mech.)/ICF/Madras - 600038.
6. General Manager (Mech.)/RCF/Hussainpur/Kapurthala - 144602.
7. General Secretary, IRCA, Chelmsford Road, New Delhi - 110055
8. Principal, Railway Staff College, Vadodara.
- ✓ 9. Director Stds. (Wagon), RDSO, Lucknow.
10. Director (Track), RDSO, Lucknow.

(R.K. Gupta)

for Director General (Carriage)

DA: sk.92082

यह आरेख अनुसंधान अभिकल्प और मानक संगठन रेल मंत्रालय, लखनऊ 226011 भारत की संपत्ति है और पूर्व लिखित अनुमति के बिना इसका आंशिक या पूर्ण रूप से प्रयोग वर्जित है।

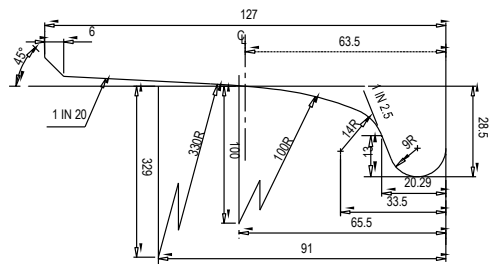


FIG.1: 20mm THICK FLANGE

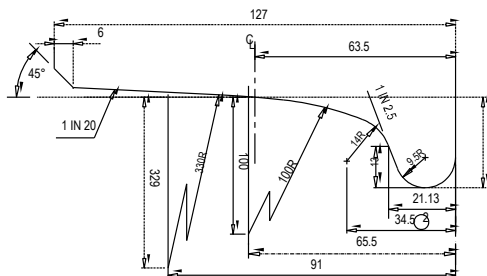


FIG.2: 21mm THICK FLANGE

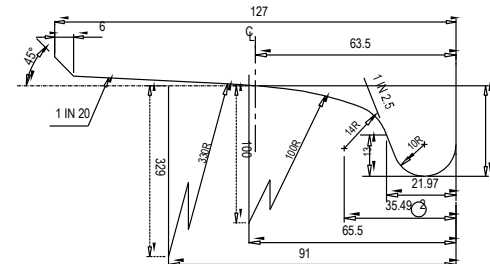


FIG.3: 22mm THICK FLANGE

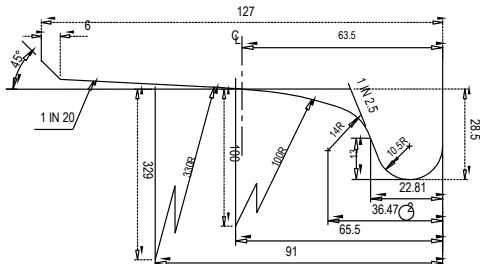


FIG.4: 23mm THICK FLANGE

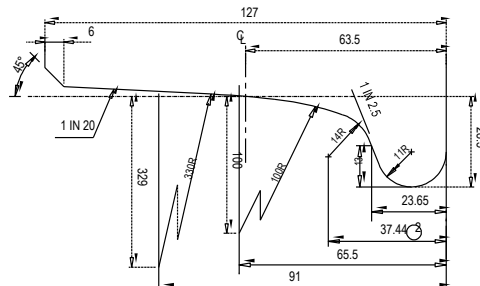


FIG.5: 24mm THICK FLANGE

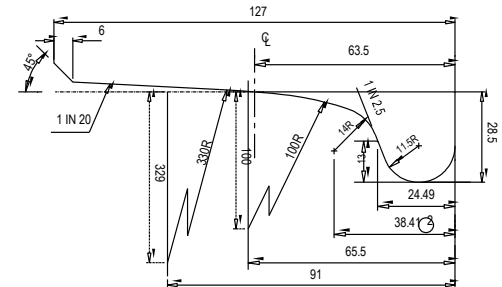


FIG.6: 25mm THICK FLANGE

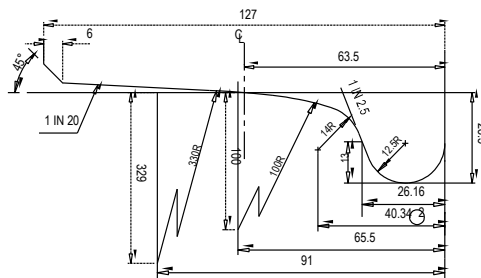


FIG.7: 26mm THICK FLANGE

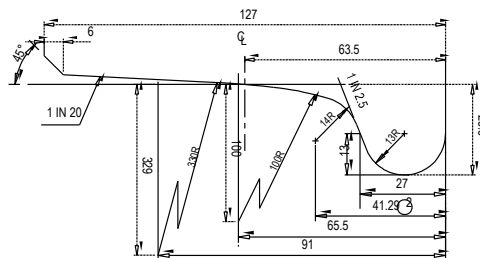


FIG.8: 27mm THICK FLANGE

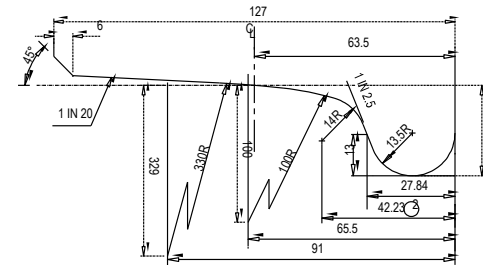


FIG.9: 28mm THICK FLANGE

NOTE:--

- INTERMEDIATE WORN WHEEL PROFILES OF 25mm TO 28mm THICK FLANGE (FIG.6 TO 9) SHOULD ONLY BE USED FOR THE COACHES TO RUN AT MAXIMUM PERMISSIBLE SPEEDS OF 110 kmph AND ABOVE.
- ALL THE 9 INTERMEDIATE WORN WHEEL PROFILES (FIG.1 TO 9) CAN BE USED FOR THE WHEELS FOR OTHER TYPE OF COACHES.

2	-	SS/01/12	DIMENSION 34 (FIG.2), 35.5 (FIG.3), 36.34 (FIG.4), 37.32 (FIG.5), 38.5 (FIG.6), 40.21 (FIG.7), 41.17 (FIG.8) AND 42.11 (FIG.9) CORRECTED AS 34.5, 35.49, 36.47, 37.44, 38.41, 40.34, 41.29 AND 42.23 mm RESPECTIVELY.	01/12
1	-	SS/01/10	INTERMEDIATE WORN WHEEL PROFILES OF 21.23, 24, 26, 27 AND 28mm THICK FLANGE ADDED AND EXISTING PROFILES OF 20.22 & 25mm THICK FLANGE MODIFIED. NOMENCLATURE OF FIG.1, FIG.2, FIG.3 DELETED AND FIG.1 TO FIG.9 ADDED FOR ALL 9 PROFILES. NOTE 1 AND 2 MODIFIED.	03/10
ALT.	ITEM	AUTHY.	DESCRIPTION	DATE

	SUPERSEDED BY		INTERMEDIATE WORN WHEEL PROFILE FOR COACHING STOCK				
ASSY. DRGS	SUPERSEDES						
REFERENCE	SCALE 1:1	P					
		C					
		D					
		T					
		J.S.					
FLOPPY No.	B.G.	R.D.S.O. [c]	GROUP (X2) <table><tr><td></td><td></td><td></td><td></td></tr></table>				
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