भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
EPBX (0522) 2451200
Fax (0522) 2458500

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

No. TM/HM/USFD **Date :- -09-2022**

I-	मुख्य अभियन्ता (ट्रैक मशीन) सभी क्षेत्रिय रेलवे	**Chief Engineer (Track Machines) All Zonal Railways**
II-	मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन) सी.पी.ओ.एच. कार्यशाला प्रयागराज, रायनापाडु, कंचरापारा, अहमदाबाद,	**Chief Workshop Manager (Track Machines) CPOH Workshop, Prayagraj, Rayanapadu, Kanchrapara, Ahmedabad**
III-	प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपलगांव प्रयागराज –211011	**Principal,IRTMTC,Pipal Gaon, Prayagraj - 211011**
	Details of addresses are overleaf.	

विषय : क्ररशा –र्निमित बी० आर०एम० मशीन (बी० आर०एम० 114–117), के एक्सल की अल्ट्रासोनिक जाँच करने हेतु टेन्टेटिव कोड आफ प्रोसेड्युर।

Sub: Tentative Code of procedure for Ultrasonic Testing of Axle of Ballast Regulating Machine (BRM 114-117) of Kershaw-make..

Ref.- (i) E- file no.-RDSO-MCONDT(TEST)/12/2020-O/o-Director/MC/RDSO, dt. 14.07.2022.

(ii) Dy CE./TMC/BSL let. No. BSL.W.TM.BRM114/File NO.76/1 dt. 30.06.2022

क्ररशा–र्निमित बी०आर०एम० मशीन (बी०आर०एम०114–117), के एक्सल की अल्ट्रासोनिक जाँच करने हेतु टेन्टेटिव कोड आफ प्रोसेड्युर तैयार किया गया है, जिसे अ.अ.मा सं की बेबसाइट पर निम्न पते पर आप के सूचनार्थ तथा मशीन के कर्मचारियों जो फील्ड में काम कर रहे हैं, के मार्ग दर्शन हेतु अपलोड किया गया है। इस विधि द्वारा एक्सल की अल्ट्रासोनिक जाँच करने के पश्चात जो भी फीडबैक हो उसे अवश्य भेजे। ये फीडबैक एक्सल (जब यह मशीन से अलग उपलब्ध हो एंव व्हील सेट से सलग्न हो) की अल्ट्रासोनिक जाँच करने हेतु विस्तृत कोड आफ प्रोसेड्युर बनाने में सहायता केरेगा। जब इस तरह का एक्सल (जो मशीन से अलग एवं व्हील सेट से सलग्न हो) उपलब्ध हो, तो इसके उपलब्ध स्थान एवं तिथि की सूचना घातु एवं रसायन निदेशालय के साथ इस निदेशालय को भी भेजने की कृपा करें, ताकि आगे की कारवाई जा सकें।

Tentative Code of procedure for Ultrasonic Testing of Axles of Ballast Regulating Machine (BRM 114-117) of Kershaw-make has been uploaded on RDSO's website on the address given below for your information and implementation on your Railways. It is requested to send feedback on ultrasonic testing done on the basis of tentative code of procedure. The feedback may help in preparing detailed code of procedure on the availability of axle in loose (fitted with wheel set) and in fitted condition. Availability of axle (place & date) may please be intimated to M&C Dte. of RDSO as well as to this Dte. for further action.

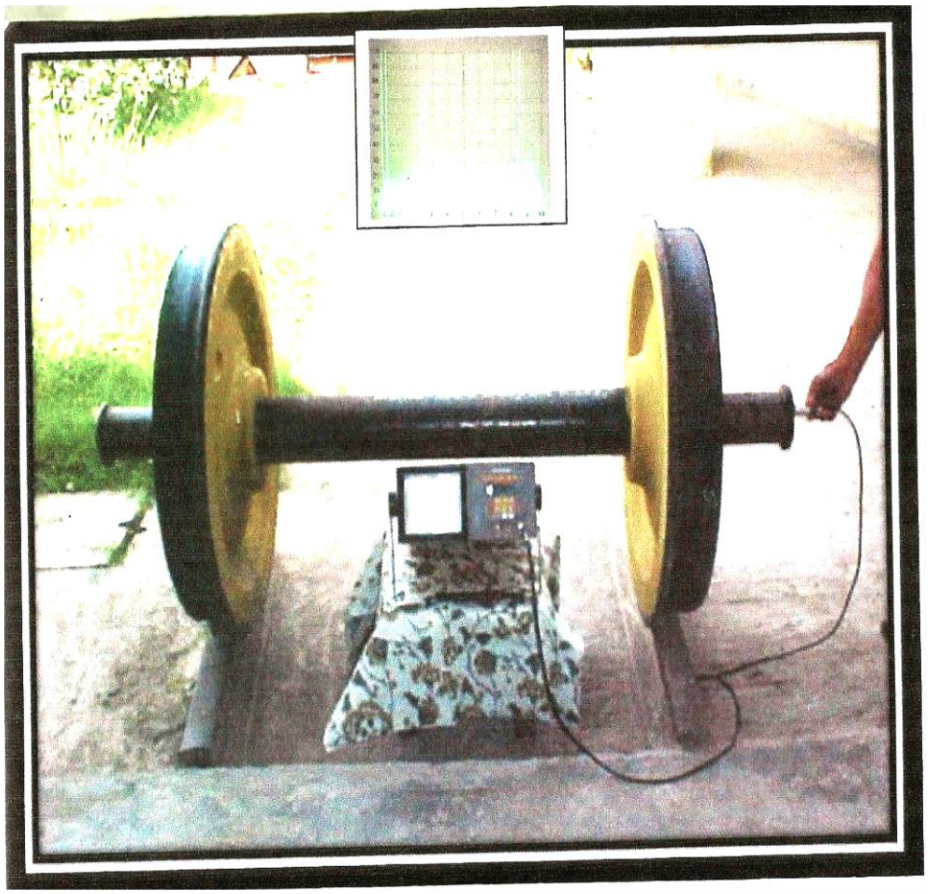
http://www.rdso.indianrailways.gov.in→ Directorates→ Infra 1→ Track Machine and Monitoring → Other Important Links → Code of Procedure for Ultrasonic Testing of Axles of Track Machines (Sr. no.-44)

DA: As above

RITU RAJ
Digitally signed by RITU RAJ
Date: 2022.09.12 10:43:59 +05'30'
(ऋतुराज)
निदेशक रेल पथ मशीन –VI

I-	**मुख्य अभियन्ता (ट्रैक मशीन)**	**Chief Engineer (Track Machines)**
1.0	मध्य रेलवे, सीएसटी, मुम्बई–400001	CST, C R, Mumbai - 400001.
2.0	फेयरलीप्लेस, पूर्वरेलवे, कोलकाता–700001	Fairlie Place, E R, Kolkata-700001.
3.0	बड़ौदा हाउस, उत्तररेलवे, नयी दिल्ली–110001	Baroda House, N R, New Delhi-110001.
4.0	उत्तरपूर्व रेलवे, गोरखपुर 273012	N E R, Gorakhpur-273 012.
5.0	मालीगांव, उत्तरपूर्वसीमान्त रेलवे, गुवाहाटी–781011	Maligaon, N F R, Guwahati -781011.
6.0	पार्कटाउन, दक्षिणरेलवे, चेन्नई–600003	Park Town, S R, Chennai -600003.
7.0	रेलनिलयम, दक्षिण मध्य रेलवे, सिकन्दराबाद–500371	Rail Nilayam, SCR, Secunderabad-500371.
8.0	गार्डनरीच, दक्षिणपूर्व रेलवे, कोलकाता–700043	Garden Reach, S E R, Kolkata-700043.
9.0	चर्चगेट, पश्चिम रेलवे, मुम्बई–400020	Churchgate, W R, Mumbai-400020
10.0	उत्तरपश्चिम रेलवे, जयपुर–302001	N W R, Jaipur-302001.
11.0	पूर्व मध्य रेलवे, हाजीपुर–844101	E C R, Hazipur-844101
12.0	दक्षिणपश्चिम रेलवे, हुवली–580023	SWR, Hubli-580023
13.0	उत्तर मध्य रेलवे, प्रयागराज–211015	NCR, Prayagraj -211015
14.0	पूर्वतट रेलवे, भुवनेश्वर–751001	East Coast Rly, Bhubaneshwar-751001
15.0	पश्चिम मध्य रेलवे, जबलपुर–482001	WCR, Jabalpur-482001
16.0	दक्षिणपूर्व मध्य रेलवे, बिलासपुर–495004	South East Central Rly, Bilaspur-495004
II-	**मुख्य कार्यशाला प्रबन्धक (ट्रैक मशीन)**	**Chief Workshop Manager (Track Machines)**
1.0	सी.पी.ओ.एच. कार्यशाला पो0 धूमनगंज प्रयागराज–221012	CPOH Workshop, PO. Dhoomanganj Prayagraj -221012
2.0	सी.पी.ओ.एच. कार्यशाला, दक्षिण मध्य रेलवे,रायनापाडु,, विजयवाडा, जिला कृष्णा, आन्ध्रप्रदेश. 521241	CPOH Workshop,South Central Railway, Rayanapadu,Vijaywada,Dist.-Krishna,Andhra Pradesh-521241
3.0	सी.पी.ओ.एच. कार्यशाला पूर्व रेलवे, भूतबागान रेलवे कालोनी कांचरापारा पी0एस0 बिजपुर पी0ओ0. कांचरापारा पश्चिमबंगाल.743145	CPOH Workshop, Eastern Railway, Bhutbagan Railway Colony, Kanchrapara, P.S: Bizpur, P.O.: Kanchrapara, West Bengal-743145
4.0	मुख्य अभियन्ता सी.पी.ओ.एच.पश्चिमरेलवे, मंङल रेलप्रबन्धक कार्यालयए चामुंङामाता मन्दिर के पास नरोङारोङए पोस्ट. सैजपुरबोधा अहमदाबाद. 382345	Chief Engineer. C.P.O.H, Western Railway, Divisional Office, Near Chamunda Mata Mandir, Naroda Road, Post- SaijpurBogha, Ahmedabad-382345
III-	**प्रधानाचार्य भा.रे.रे.प.म.प्र.के. पीपलगांव प्रयागराज–211011**	**Principal,IRTMTC,PipalGaon, Prayagraj-211011**

1406572/2022/O/o PED/INFRA-1/RDSO



TENTATIVE CODE OF PROCEDURES FOR ULTRASONIC TESTING OF AXLES OF TRACK MACHINE (BRM-Kershaw)

September-2022

Reference

S.No.	Machine Model	Type of axle	Report / Drawing Referred	RDSO Letter No.	Date of Issue
1.	BRM (Kershaw)	AXLE	BRM 114-117	TM/HM/USFD	Sep-2022

CONTENTS

M&C DIRECTORATE

E-File No: RDSO-MC0NDT(TEST)/12/2020-O/o Director/MC/RDSO

दिनांक: 14.07.2022

विषय: Code of Procedure for Ultrasonic Testing of Axles of Track Machine.

संदर्भ: Your note No. TM/HM/USFD, dtd. 01.07.2022.

With reference to the above, a tentative code of procedure for Ultrasonic testing of axle of Track Machine, Model BRM (Kershaw) to Drawing No. BRM-114-118 has been prepared on the basis of drawing provided and enclosed for your reference please. The detailed Code of Procedures (COP) will be prepared as per the availability of axles (place and date) in loose (fitted with wheel sets) and in fitted condition.

Necessary feedback regarding ultrasonic testing of axle using tentative code of procedure and availability of axles may be intimated to this office for further action please.

Encl: As above

14.7.22

(Rajesh Srivastava)
Director/M&C

Director/TM-III

Provisional Drawing for Axle of BRM 114 to 117

Research Designs and Standards Organization
Ministry of Railways
Lucknow-226011
M&C Directorate

July– 2022

Theoretical calculation and relative positions of signals during Ultrasonic Testing of Axle of Track Machine, Model: BRM (KERSHAW) to Drawing No. BRM-114 to 118 (**Tentative COP).**

(A) Far end Scanning

Calibration: 1 Main Scale Div.=200 mm (compression wave)
Probe: 20/25 mm, Dia., 2.5 MHz, Single Crystal Normal Probe

From END A:-

S. No.	DETAILS	DISTANCE (mm)	SIGNAL (div.)
1.	Direct Reflection from Axle End	1851	9.3
2.	Delayed-2 Reflection from fillet-1(F1)	1633	8.2
3.	Delayed-1 Reflection from fillet-1(F1)	1495	7.5
4.	Delayed-2 Reflection from fillet-2(F2)	1439	7.2
5.	Direct Reflection from fillet-1(F1)	1325	6.6
6.	Delayed-1 Reflection from fillet-2(F2)	1273	6.4
7.	Direct Reflection from fillet-2(F2)	1070	5.4

From END B:

S. No.	DETAILS	DISTANCE (mm)	SIGNAL (div.)
1.	Direct Reflection from Axle End	1851	9.3
2.	Delayed-2 Reflection from fillet-3(F3)	1628	8.1
3.	Delayed-1 Reflection from fillet-3(F3)	1490	7.5
4.	Delayed-2 Reflection from fillet-4(F4)	1382	6.9
5.	Direct Reflection from fillet-3(F3)	1320	6.6
6.	Delayed-1 Reflection from fillet-4(F4)	1218	6.1
7.	Direct Reflection from fillet-4(F4)	1018	5.1

Note: (i) Change of section less than 5mm not considered for reflection.

(ii) As per the drawing, it seems that there is no fillet radius at F2 & F4 locations. But, as per the discussion with TM Dte, delayed reflections have also been calculated based on the considerable changes in the diameters at F2 & F4 locations. The same will be verified/ corrected during preparation of detailed Code of procedure.

14.07.2022
ARO (M&C)
M&C Dte., RDSO
Min. of Rly. Manak Nagar
Lucknow-226011

1406572/2022/O/o PED/INFRA-1/RDSO

मध्य रेल
कार्यालय
उप मुख्य अभियंता
(ट्रैक मशीन) लाइन, भुसावल

CENTRAL RAILWAY
Deputy Chief Engineer
(Track Machine) Line,
Bhusaval

No: BSL.W.TM.BRM 114/File No.76/1

Date: 30.06.2022.

Director Track Machine-III
RDSO, LKO,
Email id -dtm3rdso@gmail.com

Sub: Drawing of axle of Kershaw make BRM 114 machine.
Ref: Director TM-III Lr.N.TM/HM/USFD dated 23.05.2022.

In connection with the above, please find here with the drawing of axle of Kershaw make BRM 114 machine working in Central Railway which is prepared as per the released axle of BRM 114 machine available at Track Machine Depot, Bhusawal as desired by you vide letter mentioned in above reference.

This is being shared so as to develop necessary COP (Code of Procedure) for USFD testing of axles of BRM machines of Kershaw make.

You are requested to kindly arrange to send COP for USFD test of the same on email id dycetmbslcr@gmail.com.

D/A- Drawing in 1 Page.

(Rohit Mehla)
Dy.CE/TM/Line/BSL
उप.मुख्य इंजिनीयर
टी.एम.(लाईन),मध्य रेल,भुसावल
Dy.Chief Engineer
Trak Machines (Line) C.Rly,Bhusawal

Copy to /-
CE/TMc/CSMT for kind information please.

Provisional Drawing for Axle of BRM 114 to 117

NOTE- 1) All Dimensions are in mm.
2) All Data taken from released axle of BRM 114 which is available at TMD/BSL

SSE/TM/IOH-I/BSL	SSE/TM/Co./BSL	XEN/TM-I/BSL	DY.EE/TM/L/BSL

Axle of BRM 114 to 117
(KERSHAW)