

	Total Time for all Tests (in Minutes) Based on assumption of Chemical Test by Spectro meter and using proving Ring for Toe Load Test and Hardness on Rockwell Appratus				817.50	1132.50	
10	Total Time for all Tests (Minutes) Based on assumption of Chemical Test by wet method, using UTM for Toe Load Test and Hardness On Rockwell Appratus				925.00	1235.00	
11	Total Time for all Tests (in Minutes) Based on assumption of Chemical Test by Spectro meter, using Proving Ring for Toe Load Test and Hardness on Brinell Hardness Appratus				942.50	1320.00	
12	Total Time for all Tests (Hrs) for item 9 above				13.63	18.88	
13	Total Time for all Tests (Hrs) for item 10 above				15.42	20.58	
14	Time Required for Sampling and numbering and Signing (Hours)				3	3	
15	Grand Total Time (Hrs) for 9 above				16.63	21.88	
16	Grand Total Time (Hrs) for 10 above				18.42	23.58	
17	Grand Total Time (Hrs) for 11 above				15.71	22.00	
18	Average Representative Time(Hrs)				19.70		

NOTE: 1.0 The time for Preparation of samples has not been included as after identification and signing the preparation of sample can be done in parallel.  
2.0 The time estimates are based on experience of officials of QA Civil Dte.  
3.0 Time required will vary from person to person and availability of skilled manpower with the firm.



## Time Required for Testing of ERC Mark-III Samples

Sl. No.	Activity	Time per sample		For Lot of 10000 Nos.		Remarks
		Range (From )	Range (To)	Sample Size	Time Required (Min) Range (From ) Range (To)	
1	Dimensions by Approved Gauges	2	3	125	250 375	
2	Chemical Analysis*					
a.	By Spectrometer i) Testing Time	15	20	1	15 20	Time Indicated is for testing of sample in Laboratory at firm's premises and or in Spectro Laboratory and does not include transit time of sample
	ii) Transit Time	180	240		180 240	
b.	By Wet Analysis	240	300	1	240 300	Time Indicated is for testing of sample in Laboratory of firm's premises and assuming that activities like weighing, dissolution, titration, Filtration, ignition, calculation etc. have been undertaken in
3	Hardness					
a.	Rockwell Hardness	1	1	125	125 125	Most of the manufactures have this Testing machine where direct reading of hardness are displayed.
b.	Brinell Hardness	2	2.5	125	250 313	Time indicated is for test and taking dimension of indent.
4	Inclusion Rating	4	4	6.00	24 24	
5	Depth of Decarburisation	4	4	6.00	24 24	
6	Freedom from Surface Defects	2	2	6.00	12 12	
7	Application Deflection Test	0.50	1.00	125	63 125	
8	Toe Load Test					Two application blocks are used for test.
a.	By Proving Ring	1	1.5	125	125 188	
b.	By UTM	1.5	2	125	188 250	



### 1.0 The Principal Chief Engineer:

1. Central Railway, CST Mumbai-400 001.
2. Eastern Railway, Fairlie Place, Kolkata-700 001.
3. North East Frontier Railway, Maligaon, Guwahati-781 001.
4. North Eastern Railway, Gorakhpur-273 012.
5. Northern Railway, Baroda House, New Delhi-110 001.
6. South Eastern Railway, Garden Reach, Kolkata-700 043.
7. South Central Railway, Rail Nilayam, Secunderabad-500 371.
8. Southern Railway, Park Town, Chennai-600 003.
9. Western Railway, Churchgate, Mumbai-400 020.
10. North Western Railway, Near Railway Station Jaipur-302 001.
11. East Central Railway, Hajipur-844 101.
12. East Coast Railway, Bhubaneshwar-755 001.
13. North Central Railway, Allahabad-211 001.
14. Southeast Central Railway, Bilaspur-495 004.
15. South Western Railway, Hubli-580 023.
16. West Central Railway, Jabalpur-482 001.

### 2.0 Chief Administrative Officer Construction:

1. Central Railway, New Administrative Office Building, 6<sup>th</sup> Floor, D.N. Road, Mumbai CST- 001.
2. CAO/Cons(I) Eastern Railway, 4<sup>th</sup> Floor, New Koilaghat Building, Strand Road, Kolkata-700 001.
3. CAO/Cons(II) Eastern Railway, 4<sup>th</sup> Floor, New Koilaghat Building, Strand Road, Kolkata-700 001.
4. East Coast Railway, Bhubaneshwar, Chandra Shekhar pur – 751 023.
5. CAO/Cons(I) Northern Railway, Kashmere Gate, Delhi – 110 006
6. CAO/Cons (II), Northern Railway, Kashmere Gate, Delhi - 110 006
7. North Central Railway, Allahabad – 211 001
8. North Eastern Railway, Gorakhpur - 273012.
9. Southern Railway, Egmore, Chennai-600 003
10. North East Frontier Railway, Maligaon, Guwahati-781 001.
11. South Central Railway, Rail Nilayam, Secunderabad – 500 371.
12. South Eastern Railway, Garden Reach, Kolkata – 700 043.
13. South Western Railway, 18, Millar Road, Bangalore – 560 046.
14. Western Railway, Churchgate, Mumbai –400 020.
15. Chief Engineer (Const), West Central Railway, Jabalpur – 482001
16. CAO/Cons (North), East Central Railway, Mahendru Ghat, Patna.
17. CAO/Cons (South), East Central Railway, Mahendru Ghat, Patna.
18. North Western Railway, near Rly Stn. Jaipur - 302001

### 3.0 GM (Const.), N.F. Railway, Maligaon, Guwahati – 781 001

### 4.0 GM Metro Railways, Metro Bhawan, 33/1 Chowringhee Road, Kolkata-700 071.

### 5.0 Chairman-cum-Managing Director, Konkan Railway Corporation Ltd., Belapur Bhawan, Plot No. 6, Sector 11, CBD, Belapur, New Mumbai-614.

*Handwritten signature and date 16/16*



Fax : 91-0522-2450193  
P&T : 0522-2450193  
Railway : 2451200 Extn: 42550  
g-mail : edqacrdso@gmail.com



Government of India - Ministry of Railways  
Research Designs & Standards Organisation  
Lucknow - 226011

No. QA/CT/ERC/Policy

Dated: 22.06.2010

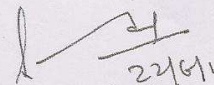
24

All PCEs/CAOs (Con.) as per mailing list

**Sub: Inspection of Elastic Rail Clips Mark-III.**

- 1.0 During the course of preventive check on quality of Elastic Rail Clips Mark-III, it has been observed by RDSO Vigilance that adequate testing time is not devoted by inspecting officers during inspection of ERC Mark-III. The inspection of ERC Mark-III is done by officers of Zonal Railways. Two days training course is being organized at RDSO for training of officers.
- 2.0 Based on experience of QA Civil Directorate, the calculation of testing time required for inspection of ERC Mark-III has been prepared for guidance of inspecting officers of Zonal Railways and is enclosed herewith. The same may please be brought to notice of all the inspecting officers of ERC Mark-III.
- 3.0 The calculations were deliberated during "Training for inspection of ERC Mark-III" held at RDSO from 15.12.09 to 16.12.09. The same will be included in future training course also.
- 4.0 It is requested that inspecting officers of Zonal Railways may please be advised to devote sufficient time in inspection of ERC Mark-III as per testing time required so that quality of ERC Mark-III can be ensured.

DA/As above

  
( S.K. Pandey )  
Executive Director/QA/ Civil

o/c



GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)

No.2001/Track-II/22/7/2/(Genl.Policy)Vol. I

N. Delhi dated 28.08.2009

Executive Director(QA)/Civil,  
RDSO,  
Lucknow.

Sub: Inspection of raw material for Elastic Rail Clips Mark-III.  
Ref: RDSO's letter No.QA/CT/ERC/Policy dt.13.8.09

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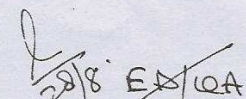
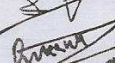
Kindly connect your letter under reference above regarding inspection of raw material for Elastic Rail Clips Mark-III. The proposal submitted by RDSOP vide their letter under reference above has been examined in Board's office. In order to ensure strict and uniform quality control, it has been approved by Board(ME) that clause 4.2 of General Guidelines for inspection of raw material of ERC Mark-III and Clause 4.11.3 of IRST-31 be replaced as under:-

*"Inspection of raw material is mandatory for inspecting officials. The manufacture of product shall be allowed only after inspection of raw material by inspecting authority. It shall be the responsibility of the firm to get the raw material inspected before its use for production of clips".*

Necessary action may be taken for strict compliance by all Zonal Railways under intimation to this office.

  
28.08.2009  
(Alok Misra)  
Director Track (M)  
Railway Board.  
Tele & fax No.23389161

Copy to: Executive Director/Track-II, RDSO., Lucknow.

  
28/8/09 EX/CA C  
D/CA C-I  
25/9/09 AIE-III SV  




टेलीफोन/Tele : 2492 XXX  
2493 XXX  
फैक्स/Fax : 91-0522-2458500



सत्यमेव जयते

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

AN ISO 9001  
CERTIFIED  
ORGANISATION

No: QA/CT/ERC/Policy

Dated: 10.09.09

**As per enclosed mailing list**

Sub: Inspection of raw material for Elastic Rail Clips (ERC).

Ref: i) Railway Board letter no. 2001/Track-II/22/7/2/(Genl.policy) Vol.I dated 28.8.2009

ii) This office letter of even No. dated 03/14.7.2009

In continuation to our earlier letter under reference ii) above the issue was examined in Board's office and Railway Board vide their letter no. 2001/Track-II/22/7/2/(Genl.policy) Vol.I dated 28.8.2009 (Copy enclosed) has approved and modified the clause 4.11.3 of IRS Specification for Elastic Rail Clips (ERC) Serial No. T-31-1992 (Inspection clause of raw material) as under:

*"Inspection of raw material is mandatory for inspecting officials. The manufacture of product shall be allowed only after inspection of raw material by inspecting authority. It shall be the responsibility of the firm to get the raw material inspected before its use for production of clips".*

You are advised to ensure that production of ERC is under taken only after getting raw material inspected by inspecting agency.

Kindly acknowledge the receipt of this letter.

DA: As above.

  
(A.K.Jha) 10/9/09

Director/QA/Civil  
For Director General/QA/Civil



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Government of India - Ministry of Railways  
Research Designs & Standards Organisation  
Quality Assurance - Dte (Civil)  
Lucknow - 226011

No. QA/CT/ERC /Policy

Dated: 16.04.08  
22

As per Mailing List,

Sub: Inspection of Raw Material for Elastic Rail Clips.  
Ref: This office letter of even no. dated 14/18.03.08 & 25/27.03.08  
-----

Reference is made to above referred letter dated 14/18.03.08 vide which it had been advised that inspection of raw material of ERC Mk-III be undertaken. Subsequently in reference to this office letter t. 25/27.03.08, a workshop was held on above issue at RDSO which was attended by 17 officers from Zonal Railway. After discussion in workshop, a procedure order has been prepared for inspection of raw material and copy of same is enclosed.

It is requested that Inspecting official may be advised to follow this procedure order while inspecting ERC Mk-III Raw Material and product.

DA: As above

*[Signature]*  
22/4

*[Signature]*  
21/4/08  
( Naveen Chopra )  
Executive Director /QA (Civil)

Copy to: The Executive Director Track (M), Railway Board, Rail Bhavan, New Delhi-01



## 1. TITLE

### GENERAL PROCEDURE FOR INSPECTION OF RAW MATERIAL OF ERC MARK-III

## 2. PURPOSE

To provide General Guideline to Inspecting official of zonal railways etc. for Inspection of Raw Material of ERC Mark -III being inspected by them at Vendor's Premises.

## 3. SCOPE

Raw material for manufacturing of ERC Mark-III is spring steel grade 55 Si 7 20.64 mm diameter. The raw material is to be procured by ERC Mark-III manufactures from vendors approved for this item by QA Mechanical Dte. of RDSO. The quality of Raw Material is important for ensuring quality of ERC Mark-III. Therefore, this procedure order is being issued as general guideline for inspecting official.

## 4.0 Inspection Procedure

- 4.1 Vendors to submit a call to Zonal Railway/purchaser giving adequate notice for carrying out inspection of raw material. In this regard a letter has already been sent to Zonal Railways.
- 4.2 The raw material shall normally be inspected by purchaser/his inspecting agency. However, dispensation can be given by purchaser/his inspection agency on case to case basis, where inspection of raw material by the inspecting agency is not possible due to any reason. It shall be responsibility of firm to get the raw material inspected before its use for production of clips or to obtain specific dispensation from the purchaser/his inspection agency regarding not carrying out inspection of raw material, before starting production. Such dispensation may also clearly mention that onus of quality of raw material will lie with vendor.
- 4.3 Points to be taken care of while carrying out inspection of raw material:-
  - 4.3.1 Only original Invoice of raw material **marked Buyer/Purchaser's copy** containing details like name of vendor, T.C. No., date & Quantity of raw material should be taken as a proof of purchase of raw material by manufacture from authorized source.
  - 4.3.2 Inspection of raw material shall be carried out as per provision of specifications and QAP and result should be recorded on Annexure-I, II & XIII of QAP. Annexure-XIII has been modified by **adding a column for Invoice number**. This item is important.
  - 4.3.3 Annexure-XIII is to be maintained in continuity on one register only irrespective of purchase order or Rly. This item should be checked and compliance ensured.
  - 4.3.4 On above mentioned invoice an entry should be made by Inspecting official which may read as under:



- 4.3.5 Out of — MT quantity /balance quantity indicated on invoice approximately ———  
(MT) inspected & passed for manufacture of ERC Mark-III against ——— Rly's P.O.  
No. ——— Dated ———.
- 4.3.6 Bundles of raw material shall be checked with regard to colour code as indicated in test  
certificate, manufacturer's Tag on bundles, Heat number as indicated on Tag and  
whether same matches with TC linked to invoice or not.
- 4.3.7 After clearance of raw material manufacturer can undertake production.
- 4.3.8 At the time of inspection of product (ERC Mk-III) Inspecting official should check Annex-  
XIII with regard to entry of production details on this Annexure.