

भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
रेलवे बोर्ड (Railway Board)

No. 2024/RS(G)/779/12 (E3482675)

Dated: 06/01/2025.

The General Managers, All Indian Railways/PUs, NF(C), CORE
DG/RDSO/Lucknow, NAIR/Vadodara,
PCAO, PLW/Patiala, COFMOW
CAO, WPO/Patna, RWP/ Bela.

Sub: Process Inspection of Elastic Rail Clips (ERCs).

Ref: Railway Board letter No. 2022/RS(G)/779/8 dated 18.03.2024

The matter of inspection of ERCs has been deliberated in the Railway Board and the Railway Board has decided, duly considering that ERC is safety and critical item, that inspection of ERCs shall be conducted by RITES (non-TPI) instead of TPI agency.

2. In view of above, inspection by RITES for ERCs will be outside the purview of TPI policy issued by the Railway Board.

3. The inspection of ERCs by RITES shall be through Process Inspection methodology as laid down in the Railway Board letter No. 2022/RS(G)/779/8 dated 18.03.2024 (referred above). The charges for inspection by RITES shall also be as per letter dated 18.03.2024.

4. The Process Inspection Order for process inspection of ERCs is enclosed as Annexure A. Manpower requirement is of one person per shift per production line for the complete process inspection of ERC (in whole numbers) and the minimum lot quantity should be kept 35,000 ERCs for efficient deployment of Inspecting Engineers.

5. Railway Units may also explore implementation of Process Inspection of ERCs in existing contracts as far as possible, for early implementation of process inspection.

6. This issues with the approval of Railway Board (MI).

Encl: As above

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06/01/25

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All AMs, PEDs & Executive Directors of Railway Board.

Annexure A

ERC Process Inspection Sheet

Sl. No.	Item	Sampling procedure	Frequency of internal inspection	Frequency of external inspection	Time taken
1	Checking of length of cut bars	Random	3 bars per hour	3 bars per hour	0.5minute/ERC = 1.5 minutes
2	Turning length	Random	3 bars per hour	3 bars per hour	0.5minute/ERC = 1.5 minutes
3	MPI Test	100%	100%	03 bars per hour	Manual:10sec/bar Automatic: 5sec/Bar =0.5 minutes
4	Forging temperature	Random	Once every hour	NA	1 minute
5	Checking of die	100%	At the start of the shift. If production per shift is more than 4000 ERCs, additional check in the middle of the shift.	At the start of the shift. If production per shift is more than 4000 ERCs, additional check in the middle of the shift.	15 – 20 minutes for each check
6	Quenching temperature and duration	Random	NA	Temperature to be checked every hour. Duration to be checked at the start of the shift.	1 minute each time for checking temperature. 4 minutes for checking duration
7	Quenching hardness	Random	2 ERCs per hour	2 ERCs per hour	4 minute/ERC =8 minutes
8	Tempering temperature and duration	Random	NA	Temperature to be checked every hour. Duration to be checked at the start of the shift.	1 minute each time for checking temperature. 4 minutes for checking duration
9	Dimension check	Random	2 ERCs per hour	2 ERCs per hour	1 minute/ERC =2 minutes
10	Hardness of finished ERC	Random	2 ERCs per hour	2 ERCs per hour	4 minutes/ERC =8 minutes
11	Documentation	100%	NA	NA	Can be done along with the above activities.

Notes:

1. **The above activities can be performed by one official per shift per production line.**
2. **The above process inspection is over and above the inspection of raw material at the ERC Manufacturer's premises and the inspection of finished product.**
3. The external inspecting official should carry these checks and maintain complete records. Additional checks may be carried out if required.
4. The external inspecting official should be Diploma / B Tech with minimum 2 years' experience.
5. Average production capacity per shift is 2880 ERCs for manual MPI and 5760 for automatic MPI.
6. The external inspecting official should check calibration of measuring equipment from time to time.

ERC Process Inspection Order

Sl. No.	Item	Sampling procedure	Frequency of external inspection
1	Checking of length of cut bars	Random	3 bars per hour
2	Turning length	Random	3 bars per hour
3	MPI Test	Random	03 bars per hour
4	Forging temperature	Random	NA
5	Checking of die	100%	At the start of the shift. If production per shift is more than 4000 ERCs, additional check in the middle of the shift.
6	Quenching temperature and duration	Random	Temperature to be checked every hour. Duration to be checked at the start of the shift.
7	Quenching hardness	Random	2 ERCs per hour
8	Tempering temperature and duration	Random	Temperature to be checked every hour. Duration to be checked at the start of the shift.
9	Dimension check	Random	2 ERCs per hour
10	Hardness of finished ERC	Random	2 ERCs per hour
11	Documentation	100%	Specific details / results of all the checks should be recorded.

Notes:

1. The above process inspection is over and above the existing inspection of raw material at the ERC Manufacturer's premises and the inspection of finished product.
2. The external inspecting official should carry these checks and maintain complete records. Additional checks may be carried out if required.
3. The external inspecting official should be Diploma / B Tech with minimum 2 years' experience.
4. The external inspecting official should be issued a Competency certificate by GM/AGM/Dy GM, RITES after testing his knowledge of specification, STR, QAP etc. The certificate shall be valid for a period of one year from the date of issue.
5. The external inspecting official should check calibration of measuring equipment from time to time.
6. Estimated production per shift: 2880 ERCs for manual MPI and 5760 ERCs for automatic MPI.