

Inspection Check Sheet for ERC mark III

Inspection Check Sheet for Elastic Rail Clip

Specification: Indian Railway Standard Specification for Elastic Rail Clip: T-31-1992

Name of the firm :

Purchaser Railway :

Quantity:

Call Letter no. :

S.N	Clause/Para No.	Description of Item	Observation/Remarks (Yes/No)
	Contract details		
1.		Original copy of Purchase Order.	
2.		Delivery Period available or not.	
3.		Consignee details.	
	Inspection Gauges		
4		Working gauges approved by RDSO is available.	
5		Approval certificate for inspection gauges issued by RDSO is available and valid.	
	Quality Assurance Plan		
6		Approved copy of Quality Assurance Programme (QAP) is available.	
7		Firm is following approved QAP (To be verified from the records).	
	Measuring Instruments		
8		Measuring & testing instruments/machines have valid calibration.	
9		Instruments which are required to be cross checked with test pieces, have been checked : Hardness Tester	
	Internal Test Report		
10		Vendor's Internal Test Report is satisfactory.	
11		Samples used in preparation of Internal Test Report are available.	

	Raw material														
12	Para no. 3.0 of T-31-1992	Is raw material has been procured from approved sources as appearing in Master List of Approved Vendors issued by QA/Civil directorate.													
13		Is original Invoice of raw material have following details: <ul style="list-style-type: none">• Name & Address of supplier• Name & Address of purchaser• TC No.• Date• Weight / Quantity													
14	Para no. 4.11.1 of T-31-1992	Is the heat no. & colour code mentioned on spring steel round matches with details mentioned in invoice/Test Certificate.													
15	Para no. 4.3 to 4.9 of T-31-1992	Is test certificate issued by raw material supplier have test results as per specification : Chemical analysis <table><tr><td>Element</td><td>%age</td></tr><tr><td>Carbon</td><td>0.50 - 0.60 (+/- 0.03)</td></tr><tr><td>Silicon</td><td>1.50 - 2.0(+/- 0.03)</td></tr><tr><td>Manganese</td><td>0.80 - 1.0(+/- 0.04)</td></tr><tr><td>Sulphur</td><td>0.04max (+0.005)</td></tr><tr><td>Phosphorus</td><td>0.04max (.+0.005)</td></tr></table> Grain size as per 6 or Finer IS:2853-1964 Inclusion rating as per Not worse IS:4163-1982 than 2.5A,B,C,D Hardness 270 BHN (approx.) Depth of decarb Not more than 0.15 mm Freedom from surface defects	Element	%age	Carbon	0.50 - 0.60 (+/- 0.03)	Silicon	1.50 - 2.0(+/- 0.03)	Manganese	0.80 - 1.0(+/- 0.04)	Sulphur	0.04max (+0.005)	Phosphorus	0.04max (.+0.005)	
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16		Is invoice & test certificate interlinked through reference of invoice no.													
17	Para no. 4.2 of T-31-1992	Verification of following documents. (To be verified from the record of source of purchase of raw material). (i) Steel manufactured by any process except Bessemer process (ii) Minimum reduction ratio of 6:1 (ingot, billet or continuous cast billet to the	Reduction ratio is												

		spring steel round).	
19		Is endorsement made on invoice by inspecting official after checking of invoice and TC.	
20		Is raw material stacked separately heat wise.	
21		Is ANNEXURE-XIII of QAP verified in respect to opening and closing/ balance of raw material with regard to incoming and used material for day to day production.	
22	Para no. 4.11.2 of T-31-1992	Is ERC manufacture carried out all the required tests on raw material spring steel round as per laid down frequency/sample size to verify the required properties. (To be verified from record of implementation of QAP)	
23	Para no. 4.11.3 of T-31-1992	All the required tests on raw material spring steel round as per laid down frequency/sample size to verify the required properties has been conducted by inspecting authority and result are within permissible limit as mentioned under para 15 above including bar diameter and recorded. (Observations to be filled in Annexure I, II,)	
Finished ERC			
24		Is the raw material from which ERC has been manufactured inspected by inspecting agency	
25	Para no. 7.0 of T-31-1992	Is ERC manufacturer carried out required tests as listed below on finished ERC as per laid down frequency/sample size to verify the required properties before offering for inspection. (i) Chemical analysis (ii) inclusion rating (iii) Hardness (iv) Surface defects (v) Dimension (vi) Application & Deflection (vii) Toe Load (viii) Depth of decarb (To be verified from record of	

		implementation of QAP)	
26	Para no. 8.0 of T-31-1992	All the required tests as per laid down frequency/sample size to verify the required properties has been conducted by inspecting authority and result are within permissible limit as mentioned in para 25 above & recorded (Observations to be filled in Annexure III to VIII)	
27	Para no. 5.2 of T-31-1992	Is marking proper	
28	Para no. 10 of T-31-1992	Is packing proper	
29	Para no. 13 of T-31-1992	Is rejected clips cut in two pieces	

Inspecting Authority

Name:

Designation:

Signature:

Stamp:

Check sheet about receipt of ERC

P.O No. –

Consignee –

Delivery Period -

S. No.	Item	Observation/Remarks (Yes/No)
1.	Whether material has been received within D.P. ?	
2.	Whether material is accompanied with Inspection Certificate ?	
3.	Whether no. of packets/bags are as per Inspection Certificate ?	
4.	Whether packet/bags are not torn out and are in proper condition ?	
5.	Whether quantity is as per Inspection Certificate ?	
6.	Whether condition of material is satisfactory ?	
7.	Whether inspection Certificate is duly signed and stamped by inspecting agency ?	
8.	Whether inspection Certificate is valid ?	
9.	Whether marking on material is matching with marking mentioned in Inspection Certificate ?	
10.	Whether unloading of material done properly ?	
11.	Whether material stacked properly ?	

Authority receiving material

Name:

Designation:

Signature:

Stamp: