

Guidelines For Inspection Of Anti-Theft ERC

Anti-theft ERC consists of two components i.e. a Clip to drawing number RDSO/T-6254 and a Circlip to drawing number RDSO/T-6255. Following procedure shall be adopted for carrying out inspection of Anti-theft ERCs by consignee zonal railways:

A. Inspection of Raw Material:

- a) Raw material for the anti-theft clips shall be inspected for all parameters as per provisions in Clause 4.11.3 of IRS: T-31/1992.
- b) Raw material for the Circlips shall also be inspected for chemical parameters only as per provisions in clause 4.11.3 of IRS: T-31/1992 as the grade of raw material 55 Si 7 being same as that of raw material for the clips as per Clause 1.0 of specification for Spring Steel Circlips Prov.2003.

B. Approval of Inspection Gauges:

Two sets of dimensional inspection gauges for anti-theft clips and circlips to RDSO drawing number RDSO/T-3746 with latest alteration shall be got approved by the vendor from RDSO as per Clause 12 of IRS: T-31/1992 before offering the antitheft ERCs for inspection by the zonal railways.

C. Inspection of Finished product:

- a) **Inspection of clips:** All tests shall be carried out as per provisions of IRS:T-31/1992 except for dimensional checking, which shall be done by using dimensional inspection gauge to RDSO drawing number RDSO/T-3746 with latest alteration. Anti-theft ERCs shall be checked for dimensions as per prevailing ~~specification~~ *specification* for anti-theft clips. The inspection gauge shall be used from the topside so that the extended portion of central leg enters into the space provided from the same in the gauge. Clips shall be checked for dimensions keeping the clip touching with the front plate of inspection gauge.
- b) **Inspection of Circlips:** Circlips shall be inspected as per provisions of specification for Spring Steel Circlips Prov.2003. Circlip shall be checked for dimensions as per tolerances provided in the inspection gauge to RDSO drawing number RDSO/T-3746 with latest alteration. Circlips shall then be subjected to application test as per Clause 3.3 of specification for Spring Steel Circlips Prov.2003. After driving the circlips consecutively for five times in the groove of anti-theft ERC, circlips shall again be checked for dimensions using the dimensional gauge. For acceptance the circlips shall meet the requirements of dimensional gauge after the above driving.

For chemical analysis of finished circlips, following is suggested:

With the experience gained by carrying out inspection of anti-theft ERCs by RDSO of limited quantity, it has been found that the circlips are being manufactured using 4mm thick plate by punching it to the required dimensions and shape through a suitable die and then heat treated. As the size of circlip is small, its chemical analysis through spectrography is a bit difficult. Therefore the spectro may be done on the left out portion of the plate from which the circlips have been punched OR by expanding the size of circlip by hammering it to the required size suitable for spectro analysis. The choice of method shall be solely at the discretion of the inspecting official. Firms where facility for chemical analysis exists in-house as per provisions of IS: 228, test samples shall be taken from the circlips only.