



RESEARCH DESIGNS & STANDARDS ORGANIZATION
Manaknagar, Lucknow – 226011

EL-WI-8.1-2

Work Instructions for inspection units works under Electrical Directorate

1.0 Amendment History:

S. No.	Amendment Date	Version	Reasons for Amendment
1.	First Issue	1.0	First Issued under new documentation system for ISO9001:2015.

2.0 Purpose:

To define the work instruction for:

Purchase Inspection for Items against PO placed by Production Units/Zonal Railways and other Non-Railways Organizations.

3.0 Scope of Application:

These work instructions are applicable to office of ED/IE/BHEL/Bhopal of RDSO for conducting purchase Inspection.

4.0 Procedure:

4.1 Criteria for Acceptance of Inspection Calls:

Following category of inspections will routinely be carried out by inspection unit on receipt of inspection calls:

- (i) Purchase inspections at premises of BHEL (Bhopal, Jhansi & Bangalore) and its sub-vendors (for sub components) as per PO placed by Zonal Railways/PUs.
- (ii) Purchase inspections at premises of CGPISL/ Mandideep and its sub vendors (for sub components) as per PO placed by Zonal Railways/PUs.
- (iii) Purchase inspections at premises of other vendors Appearing in RDSO vendor directory as Regular/ Developmental vendors as per PO placed by Zonal Railways/PUs.

Following category of inspections will be carried out by inspection unit on nomination from Loco Dte./RDSO/LKO:

- (i) Purchase inspections at premises of vendors Appearing in RDSO vendor directory as limited supply vendors
- (ii) Purchase inspection at premises of other vendors.
- (iii) CCA / Prototype inspections at firm's premises.

4.2 Inspection call, Nomination & document Scrutiny:

4.2.1 Approved vendors shall submit their call online through website along with all relevant documents including complete summarized ITR {Internal(Routine) test reports, Detailed ITR may be seen at the firm premises during inspection}, PO/CA (Purchase Order/ Contract Agreement) with all latest amendments/modifications (if any) to concerned ED/Director/Joint Director/DD/In-charge of QA/Elect Inspection unit.

4.2.2 The vendors are required to submit their calls at least 10 working days (excluding the no. of days required for inspection) prior to the DP (Delivery Period). The calls received after this period may be rejected by ED/Director/Joint Director/DD/In-charge of the field unit.

4.2.3 Vendor will also submit a declaration on following points

- (i) Latest drawings, QAP/test protocol
- (ii) All applicable latest specifications/Drawings have been used for manufacturing.
- (iii) All applicable SMI/MS/TC & special instructions have been followed.
- (iv) All material / components used are from Railway approved sources.

- (v) All the required machines, equipment, tools as mentioned in QAP / STR had remained available, functional, duly calibrated during production of offered lot.
- (vi) None of the offered equipment had earlier been failed during inspection. (If re-inspection/repared, provide details of rejection/failure, investigation, repair work done & corrective action/ preventive action plan for improvement)

- 4.2.4 In case of difficulties faced by the vendor in online uploading of relevant documents, the documents may be submitted manually in the office of ED/Director/Joint Director/DD/In-charge of field unit within 5 working days of submitting the call.
- 4.2.5 ED/Director/Joint Director/DD/In-charge of the field unit will decide the priority and Inspector for inspection. The inspection call letter and other documents submitted by the vendor will be scrutinized as per norms by nominated inspector. Nominated inspector will communicate with vendor (through E-mail) for inspection scheduling and for any further details/documents required regarding inspection. The inspection calls by vendors may be clubbed so as to limit the number of inspection in a firm.
- 4.2.6 First-in-first-out methodology shall generally be adopted for commencement/disposal of inspection calls received in the inspecting office, to the extent possible. This can however be prioritized differently by the ED/Director/Joint Director/DD/In-charge of inspection unit, on case to case basis, if required.
- 4.2.7 Vendor shall submit the information called promptly through E-mail on receipt of such advice. Any delay beyond 48 hours (excluding holidays) be brought to notice of in-charge of inspection unit.
- 4.2.8 In case of any shortcomings in PO etc. / non submission of complete details within 10 days of original call date or repeated submission of incomplete information by vendor the call shall be reverted for cancellation.
- 4.2.9 Inspections will be done only as per approved QAP/test schedule/checklist/drawings to be followed should preferably be mentioned in PO. Confirmation from PO placing authority about the applicable QAP/test schedule/checklist may be required in case of new items of critical nature.
- 4.2.10 Drawings other than Railway (if applicable) should be with approval (sign & stamp in original) of PO placing authority.
- 4.2.11 CCA / Prototype / Other inspections on nomination from Loco Dte./RDSO/LKO will be done as per directions in each specific case.
- 4.2.12 In case if re-inspection due to rejection or repeat inspection call (where inspection call was earlier cancelled due failure to offer ready material for inspection), inspection charges shall be levied in accordance with Railway Board's letter no. 99/RS(G)/709/4, New Delhi dated 12.02.2016.

4.3 Before Entering Manufacturer's premises:

- 4.3.1 Ensure that Inspection call from manufacturer is available and nomination of the inspecting Official has been made by competent authority.
- 4.3.2 Check that Purchase order and inspection call are in order regarding:
 - (i) The delivery date should not have expired

- (ii) The firm is approved vendor for supply of the product indicated in the inspection call.
- (iii) The internal test result summary is made available by the firm.

4.3.3 Collect the Seal, Hologram, latest Specifications, Drawings & Inspection test Format (QAP/test protocol) against which the inspection is to be done and results are to be recorded. Latest Acceptance Test format shall be used.

4.3.4 Review the concerned documents once again before commencing inspection.

4.4 Actions Before Commencement of Inspection:

The inspecting officials shall:

- 4.4.1** Ensure that the complete offered lot for inspection has been manufactured.
- 4.4.2** Ensure that the material(s) offered for inspection is (are) properly stacked.
- 4.4.3** Check for compliance of external & internal tests wherever required as per vendor's approved QAP/ test protocol.
- 4.4.4** In case some of the components/ sub-assemblies are inspected by other inspector in different stages, the test/ clearance certificate should be seen and sr. numbers be matched.
- 4.4.5** Document like procurement of raw material as mentioned in approved QAP, test result of external agency etc. should be seen in original.
- 4.4.6** Check that all the gauges, tools and testing equipments required for inspection have been provided by the manufacturer are duly calibrated. Calibration of these equipments should not be overdue at the time of Inspection.

4.5 During Inspection:

The inspecting officials shall:

- 4.5.1** Verify the Internal Test results available with the firm.
- 4.5.2** Inspect the material in accordance with the Inspection plan. Reference should be made to the relevant specifications and drawings, wherever required.
- 4.5.3** In case of any attempt of interference in the inspection work, the inspection should be stopped immediately and the matter be reported to the ED/Director/Joint Director/DD/In-charge of Inspection unit.
- 4.5.4** The inspecting official will not leave the firm premises without completion of inspection. In case of non-completion on same day, inspecting official shall direct concerned authorities of vendor to keep the material in proper safe custody (preferably lock & key) before leaving the firms premises. Safe arrangement to be provided by firm.
- 4.5.5** If the inspection requires testing of material at lab outside the vendor premises, the sample should be sealed jointly duly recording the identification details of the sealed sample. The sample should be sent Govt. Lab / Govt. approved Lab / NABL approved Lab only. Cost of testing to be borne by the vendor.

4.6 Result of Inspection:

- 4.6.1** In case the inspecting official has not commenced inspection due to various pre-conditions not being met and has suspended the inspection, the reasons for this shall be recorded and the matter be reported to the ED/Director/Joint Director/DD/In-charge of Inspection unit.

- 4.6.2 Any abnormalities noticed at the firm`s premises during inspection shall be brought to the notice of controlling officer by the inspecting official.
- 4.6.3 The results of inspection will be recorded in the prescribed latest acceptance test formats and it should be ensured that work address where inspection has been carried out is clearly mentioned on top of the Acceptance Test Format.
- 4.6.4 If the material is found conforming to the specifications, the inspecting official will ensure that the material is pasted with '**Hologram**' issued to Inspecting officials for this purpose and will issue Dispatch memo as per format.
- 4.6.5 The fact of completion of inspection shall be brought to the notice of ED/Director/Joint Director/DD/In-charge of inspection unit while issuing Dispatch memo to the manufacturer.
- 4.6.6 In case of non-conformity observed during inspection, complete Acceptance Test should be done and record should be filled in specified formats. Report in this regard shall be given to the firm duly signed by inspecting official. A copy of the non-conformity report shall be put up to ED/Director/Joint Director/DD/In-charge of inspection unit. Rejection advice shall be issued by inspecting official in such case.
- 4.6.7 If the non-conformity is considered non-rectifiable, the firm shall be advised to scrap the material of rejected lot. Scrapping shall be done in presence of RDSO`s inspecting officials in a manner so that its re-use become impossible.
- 4.6.8 In case non-conformity is rectifiable and firm desires to re-offer the material for inspection, after improving the material, it can do so by submitting Root cause analysis of the reasons of rejection along with Corrective & Preventive Action plan to the ED/Director/Jt. Director/Dy. Director/In charge of the inspection unit. Re-inspection will be done only if Root cause analysis along with Corrective & Preventive Action plan is found satisfactory on examination by in charge of the inspection unit. It will be treated as fresh inspection call & inspection charges from firm will be collected in accordance with Railway Board`s letter no. 99/RS (G)/709/4, New Delhi dated 12.02.2016.
- 4.6.9 It should be seen that firm submits Root Cause Analysis and Corrective & Preventive Action Plan expeditiously in each case. Corrective & Preventive action plan also be forwarded to HQ for information.
- 4.6.10 There shall be no restrictions on taking up further inspections on account of any Rejection Advice.

4.7 Issue of Dispatch Memo & Inspection Certificate/ Rejection Advice:

- 4.7.1 If the material is found conforming to the specification, dispatch memo be issued duly indicating the serial nos. of Holograms pasted on the passed material. Declarations by the firm and summary of the inspection done, shall be attached as enclosure to dispatch memo.
- 4.7.2 On completion of inspection in all respect, after signing the Dispatch Memo, Inspection Certificate (IC) will be prepared and signed by inspecting Official. In case of Rejection of material Rejection Advice (RA) will be prepared and signed by inspecting official.
- 4.7.3 The IC shall be put up by inspecting official to competent authority for countersignature, along with the inspection results as checksheet. Countersignature by gazetted officer is a mandatory requirement for releasing of payment against the purchase order. It is the responsibility of inspecting Official to prepare the inspection certificate as per the items and conditions of purchase order, certifying that the goods inspected by him are conforming to the

specifications & drawings mentioned in purchase order along with amendments (if any).

- 4.7.4 Inspection Certificate should be issued within 7 working days after submission of details in office and within 14 days of completion of inspection of the product. If ED/Director/Jt. Director in charge is not available for more than 3 working days, subordinate gazetted officer may countersign the IC/RA and get it issued. If the material has been inspected by an officer then IC shall be counter-signed by higher grade officer.
- 4.7.5 The countersigning authority shall examine whether all entries in the inspection certificate are as per the conditions of Purchase Order. However, the responsibility of the test results and quality of the material inspected will be that of the inspection authority only and not that of countersigning authority.
- 4.7.6 The records of test/ check performed by inspecting official shall be maintained by the concerned office of ED/Director/Jt. Director/Dy. Director/In charge in hard & soft copy. Test reports/certificates of input material and internal tests done by firm (as submitted by firm) related to inspection shall preferably be taken in soft copy & uploaded and stored on RDSO cloud storage facility for online inspection records upload. A soft copy of test records may also be preserved by concerned inspecting official.
- 4.7.7 The validity of IC shall be 30 days. The validity of IC may be extended up to 30 days by the ED/Director/Jt. Director/Dy. Director/In charge of field unit on firm's request with valid reasons. Where extension of the validity beyond Thirty (30) days is required, the extension in such cases will be granted with approval PED/Traction/LKO. ED/Director/Joint Director/Dy. Dir/In-charge of field unit will forward such cases to RDSO/LKO with their comments for taking approval.
- 4.7.8 In case of material has not been dispatched within the validity period of IC, firms may be asked to re-offer the material for inspection again.

4.8 Surprise Checks

Concerned ED/Director/Jt. Director/Dy. Director/In charge of field unit should carry out surprise checks on inspection process. Preferably one check should be done at level of ED/Director/Jt. Director/Dy. Director/In charge of the inspection unit every alternate month. Surprise checks may also be conducted by officials nominated from RDSO/LKO.

5.0 Responsibility and Authority

Responsibility and Authority of creation, maintenance and use of directives is as per table given under:

Activity	Responsible	Approver	Supporting	Consulted	Informed
Creation, maintenance of this document	JDSE/Pn.	PED/Traction	Concern Staff		All Units of directorate through intranet
Compliance of directives contained in this document.	All inspection Unit officer	PED/Traction	All inspection Unit Staff		
Requirement of deviation from directive.	All inspection Unit officer	PED/Traction	Concern Staff	MR/ISO Cell	All directorates through intranet

6.0 Abbreviations

DG	:	Director General
PED/Traction	:	Principal Executive Director Traction
ED/RS	:	Executive Director Rolling Stock
DSE	:	Director Standards Electrical
DDSE	:	Deputy Director Standards Electrical
ADE	:	Assistant Design Engineer
STR	:	Schedule of Technical Requirement
QAP	:	Quality Assurance Plan
DM	:	Directorate Manual
P.O.	:	Purchase Order