

**QUALITY ASSURANCE PLAN:**

The bidder shall invariably furnish following information alongwith his bid, failing which his bid shall be treated as Non-responsive. This information shall be separately given for individual type of material offered.

- i. Statement giving list of important raw materials, names of sub-suppliers for raw materials, list of standard according to which the raw materials are tested. List of test normally carried out on raw materials in presence of Bidder's representative, copies of test certificate.
- ii. Information and copies of test certificates as in (i) above in respect of bought out accessories.
- iii. List of manufacturing facilities available.
- iv. Level of automation achieved and list of areas where manual processing exists.
- V List of areas in manufacturing process where stage inspection are normally carried out for quality control and details of such tests and inspections.
- vi. List of testing equipment available with the bidder for final testing of equipment and specify test limitation, if any, vis-a-vis the type, special acceptance and routine tests specified in the relevant standards. These limitations shall be very clearly brought out in schedule of deviations from specified test requirements.

1.1.2 The successful Bidder shall within 30 days of placement of order, submit following information to the purchaser.

- (i) List of raw materials as well as bought out accessories and the names of sub-suppliers selected from, furnished alongwith offer.
- (ii) All type of test certificate of raw materials, bought accessories and components as per relevant standards.
- (iii) Quality assurance plan (QAP) with holds points for purchaser's inspection. The quality assurance plan and purchaser's hold points. Shall be discussed between the purchaser and Bidder before the QAP is finalized.

The contractor shall operate system which implement the following

**Hold Point:** A stage in the material procurement or workmanship process beyond which work shall not proceed without the documental approval of designate /individual or organization The purchasers written approval is required to authorize work to progress beyond the hold points indicated in quality assurance plans.

**Notification Point:** A stage in material procurement or workmanship process for which advance notice of activity is required to facilitate witness if the purchaser does not attend after receiving documented notification in accordance with the agreed procedures and with the correct period of notice then work may proceed.

1.1.4. The successful bidder shall submit the routine test certificate of bought out accessories and central excise passes for raw material for the raw material at the time of routine testing if required by the purchaser and ensure that Quality Assurance requirements of this specification are followed by the sub-contractors.

The Quality Assurance program of the contractor shall consist of the quality systems and quality plans with the following details.

**(i) Quality System:**

The structure of organization.

The duties and responsibilities assigned to staff ensuring quality of work.

The system for ensuring a quality workmanship.  
The system for retention of record.  
The arrangement of contractor's internal auditing.

A list of administration and work procedures required to achieve and verify contract's quality requirements. These procedures shall be made readily available in the proper manner for inspection request.

**ii) Quality Plans:**

An out line of the proposed work and programme sequence.  
The structure of the contractors organization for the contract.  
The duties and responsibilities assigned to staff ensuring quality of work.  
Hold and notification points.

Submission of Engineering documents required by the specification.  
The inspection of material and components on receipt.  
Reference of the contractor's work procedures appropriate to each activity.  
Inspection during fabrication/construction.  
Final inspection and test.

12.0 **DOCUMENTATION:** The bidder should append with the offer detailed cross section lay out drawing of the material and should also clearly indicate, the co-relation between the dimensions in the drawing to the quantities of material supplied as per the Bill of Material for the material to be submitted with offer.

13.0 **PACKING & FORWARDING:**

13.1 For the purpose of identification, gloves shall be marked clearly and permanently in a prominent position with the supplier's name and reference number.  
Electrically conducting components shall be marked 'conducting' clearly and permanently.

13.2. It shall be marked with the following:

1. PVVNL-MT/Name of manufacturer.
2. DESTINATION OF CONSIGNEE AND DESTINATION RAILWAY STATION.
3. SL. NUMBER.
4. CONTRACT/SPECIFICATION NO.
5. STANDARDS USED FOR MANUFACTURING OF MATERIAL.

13.3 The components shall normally be supplied in a package, which shall be designed to protect the contents against mechanical damage.

13.4 Components supplied with adhesive coatings shall have means to prevent coated surfaces from adhering to each other

13.5 Detailed bill of material along with installation instruction shall be provided.

13.6 Whenever the material is supplied to a consignee, the supplier shall prepare the following information in the form of packing slip in quadruplicate and send the same to the consignee and obtain its acknowledgement on the same. The consignee will return to the supplier one copy of the packing slip with the remarks

1. Purchase Order No. and date.
2. Quantity allotted to the stores and rate applicable.
3. Quantity so far supplied and rates applied.
4. Quantity now supplied and the rate applied.
5. Total quantity supplied under the P.O. with rates applied.
6. Program for supply of balance quantity to the store.