

**SCHEDULE OF TECHNICAL REQUIREMENTS  
FOR MANUFACTURE & SUPPLY OF  
NON-ADHESIVE POLYIMIDE FILM TAPE  
FOR  
3-PHASE TRACTION MOTOR OF ELECTRIC  
LOCOMOTIVES.**

**ISSUED BY**

TRACTION MOTOR DESIGN OFFICE  
CHITTARANJAN LOCOMOTIVE WORKS  
CHITTARANJAN – 713 365  
WEST BENGAL

Recommended by	Approved By
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**ALTERATION SHEET FOR MANUFACTURE & SUPPLY OF “NON-ADHESIVE KAPTON FILM TAPE Size:2 mil x 20 mm for 3-PHASE TRACTION MOTOR OF ELECTRIC LOCOMOTIVES.**

Alt.No.	Authority	Description	Initial	Date

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## SCHEDULE OF TECHNICAL REQUIREMENTS FOR MANUFACTURE & SUPPLY OF NON-ADHESIVE KAPTON FILM TAPE FOR 3-PHASE TRACTION MOTOR OF ELECTRIC LOCOMOTIVES.

1. **Scope :-** This schedule of technical requirement (STR) is being issued to serve as guidelines to manufacturers/firms for manufacturing Non-Adhesive Kapton Film Tape, format of Quality Assurance Plan to be followed, Minimum Machinery and Plant, Testing facilities & Measurement facilities required. This STR should be read in conjunction with the relevant CLW Specification. The firm should satisfy themselves having complied with the requirements of the Specification and STR.
2. **Reference :-** DUPONT.
3. **General Requirement :-** The firm should be certified to ISO 9001 by an agency accredited by NABCB.
4. **Desired aspect in QAP: -** Product specific QAP has to be submitted as per RDSO format No. QM-RF-8.1-3 Version No: 1.0 dated: 28.08.2018 or latest format instructed by competent authority
5. **M&P, Testing and Measuring instrument :-** List of typical M&P required for manufacture, testing and measuring instruments furnished Annexure –I is for general guidance only and actual manufacturing operations, specific testing & measuring instruments shall be submitted and get approved by the firm as a part of QAP.
6. **Internal Quality Control System:-**
  - 6.1 The manufacturer shall procure all the raw materials from standard brand preferably from RDSO /CLW approved sources along with test certificates and sources should be available as and when asked for.
  - 6.2 Quality Assurance Process of incoming materials, manufacturing process used for the subject items including type of test, supplying criteria, governing specn., acceptance norms agency if test, format of records etc.
  - 6.3 Detailed process flow chart indicating process of manufacture and individual product.
  - 6.4 The testing and measuring equipments shall be and the validity of calibration should be current and calibration certificate issued by the calibration agency should be maintained.
  - 6.5 Relevant Standards like IS/BS/IEC etc. shall be available with the firm.

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## ANNEXURE-I

**REQUIREMENTS FOR NON-ADHESIVE KAPTON FILM TAPE:****A. Machinery & Plant**

1. Auto slitting machine (digital) range 20 mm wide.
2. Winding machine.
3. Meter counting machine (digital control).
4. Air drier/Compressor.

**B . Testing facilities : -**

1. Tensile Testing Machine ( range minimum 1000 kgf)
2. BDV tester (upto 10 KV with mA meter.)
3. Necessary laboratory for analysis composition.
4. Weighing machine (Digital) 3 digit after decimal.
5. Muffle Furnace (up to 600°C)
6. Stop watch.

**C. Measuring facilities:-**

1. Vernier caliper.
2. Micrometer.
3. Paper Micrometer
4. Scale/Tape.

**D. Other requirements:**

1. Authorisation of OEM
2. DGFT import certificate (Polyimide film/foils/tapes).
3. Dust free space for working & air condition storage for Shelf life items.

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