

Peshawar Electric Supply Company (PESCO)

Technical Specification

Automatic DES / Transformer Oil Dielectric Strength Test Set

1. Scope

The equipment shall be a fully automatic dielectric strength (breakdown voltage) test set suitable for testing insulating oil used in power transformers, instrument transformers, switchgear and other oil-filled electrical equipment.

2. Minimum Technical Requirements

- Test voltage capacity: 0–80 kV AC minimum or higher
- Fully automatic operation
- Suitable for testing mineral and other commonly used insulating oils
- Digital display of test voltage and breakdown voltage
- Automatic voltage rise, breakdown detection and test termination
- Automatic calculation/display of test results
- Built-in safety interlock to prevent high-voltage operation when the test chamber is open
- Test vessel with suitable electrodes and adjustable/standard electrode gap
- Suitable stirring arrangement, where required by the selected test standard
- Storage of test results preferred
- USB/data transfer and built-in printer may be offered
- Suitable for laboratory and/or field use
- Power supply compatible with 220–240 V, 50 Hz AC

3. Applicable Standards

The equipment shall be capable of performing dielectric breakdown voltage testing in accordance with IEC 60156 and/or equivalent internationally recognized standards such as ASTM D1816 / ASTM D877, as applicable.

Equivalent or updated international standards shall also be acceptable.

4. Accessories

The complete system shall include:

- Oil test vessel/cell
- Required electrode sets
- Electrode gap setting gauge
- Stirrer, where applicable
- Power cord and necessary cables
- Protective cover/carrying arrangement
- Operating manual
- Manufacturer's standard accessories

5. Mandatory Bid Information

The bidder shall clearly provide:

1. Manufacturer, make and model
2. Country of origin
3. Maximum test voltage
4. Voltage measurement accuracy
5. Applicable test standards
6. Available electrode types
7. Test automation/features
8. Display and data-storage facilities
9. Dimensions and weight
10. Standard accessories
11. Manufacturer's technical datasheet/catalogue

6. General Requirement

The equipment shall be new, unused and current production. PESCO does not prescribe any particular make or model. Equivalent or better equipment meeting the required functional performance shall be acceptable to encourage wider competition among qualified bidders.