

JAMAICA PUBLIC SERVICE COMPANY LTD.

**ENGINEERING AND STANDARDS DEPARTMENT
TECHNICAL SPECIFICATIONS - GENERAL REQUIREMENTS**

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This Technical Specifications, General Requirements applies to all Technical Specifications

1. FORM OF SPECIFICATIONS

- 1.1 The "Technical Specifications" which form a part of these documents are written in an abbreviated, outline format.
- 1.2 The quantities relating to the specific items are detailed in the Schedule of Material.
- 1.3 These General Requirements apply to all "Technical Specifications" and shall be read and constructed as forming a part of the "Technical Specifications".

2. SUBMITTAL OF INFORMATION

2.1 SPECIFIC INFORMATION TO BE INCLUDED WITH PROPOSAL

- 2.1.1 The Bidder shall provide with his **tender**, copies of drawings/complete schematics and descriptive bulletins thoroughly discussing the equipment he proposes to supply. A short description in the tender is not satisfactory.
- 2.1.2 Where Additional information relating to specific types of equipment is required such information is requested in the "Detailed Requirements" of the appropriate Technical Specifications.
- 2.1.3 All information and communication shall be in the English Language. Dimensions and weights may be in the Imperial and Metric System.
- 2.1.4 Drawings, schematics and descriptive bulletins describing the equipment shall have sufficient information to permit a correct evaluation of the Bid/Tender in relation to the technical specifications, including at least: -
 - 2.1.4.1 Outline drawings showing details of construction, principal dimensions and weights.
 - 2.1.4.2 Manufacturer's guaranteed certified ratings and performance data.
 - 2.1.4.3 Manufacturer's name and catalogue or model number.
 - 2.1.4.4 Complete catalogue information, showing materials used, manufacturing methods, etc.
 - 2.1.4.5 National Standard(s) used for design, manufacture and tests.
- 2.1.5 The Bidder shall provide all information relating to product life and warranty.

2.2 DRAWINGS ETC. BY SUPPLIER

2.2.1 When the "Technical Specifications" require drawing approval, the Supplier, within fourteen (14) calendar days from acceptance of order shall forward to the Purchaser for approval, by Air Mail the following as applicable:

2.2.1.1 Two (2) sets of dimensioned outline drawings; wiring and connection diagrams, nameplate data, and shipping weights and sizes.

2.2.1.2 Purchaser will within fourteen (14) calendar days from receipt of this information return one (1) set to Supplier; "Approved" or "appropriately" marked.

2.2.1.3 Prior to shipment of any and all material the Supplier shall forward to Purchaser by Air Mail, the following as applicable:

2.2.1.3.1 Three (3) sets of all final Drawings; wiring and connection diagrams etc. giving all the necessary dimensions and details for proper installation, operation and maintenance of the equipment or material.

2.2.1.3.2 Three (3) sets of application, installation, operation, and maintenance instructions.

2.2.1.3.3 Three (3) sets of spare parts lists.

2.3 ADDRESS

For communications relating to commercial or technical matters, the following address shall be used:

Technical Matters:

Jamaica Public Service Company Limited
693 Spanish Town Road
Kingston 11
Jamaica W.I.

Attention: Chief Engineer – Engineering and Standards Department
Telefax: 876-514-0259

Commercial Matters:

Jamaica Public Service Company Limited
6 Knutsford Boulevard
Kingston 5
Jamaica W.I.

Attention: Manager - Purchasing And Customs
Telefax: 876-511-2154

3. CODES AND STANDARDS

3.1 WORKMANSHIP, QUALITY AND CONFORMANCE

- 3.1.1 All material used in the construction of equipment shall be new and manufactured in accordance with best present-day manufacturing practices.
- 3.1.2 Work shall be performed in accordance with best present-day manufacturing practices.
- 3.1.3 Unless specifically noted to the contrary, materials and equipment shall conform with and be tested in accordance with applicable sections of latest revisions of Codes and Standards listed in the Technical Specifications.

These Codes and Standards are established recognized National or International Standards describing material, dimensions, strength, design, manufacturing, process, performance, tests, etc. for production items widely manufactured. Production items according to other recognized National or International Codes or Standards may be considered, provided offered Standard is clearly identified by name of issuing body with standard numbers, etc. It will be the Bidder's responsibility to demonstrate and prove to the Purchaser's satisfaction that alternatives offered meet the minimum specifications.

3.2 CONFLICTS

- 3.2.1 In the event of conflicts between referenced Codes and Standards, the Code or Standard establishing more stringent requirements shall be followed. The bidder shall however point out these conflicts in his bid.

3.3 DEFINITIONS

- 3.3.1 The term "NEMA" shall mean National Electrical Manufacturers Association, 2101 1 St. N. W. Washington D.C. 20037 and specifications and tests thereof.
- 3.3.2 The term "NEC" shall mean National Electrical Code of the National Fire Protection Association, Battery March Park Quincy, Massachusetts 02269, and Specifications and tests thereof.
- 3.3.3 The term "NESC" shall mean National Electrical Safety Code Publication C2 of the American National Standard Institute, 1430 Broadway, New York N.Y. 10018 and Specifications and Tests thereof.
- 3.3.4 The term "ASTM" shall mean American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103, and Specifications and tests thereof.
- 3.3.5 The term "REA" or "REA Bulletins" shall mean the Rural Electrification Administration, U.S. Department of Agriculture Washington D. C. 20250 or bulletins published thereby.
- 3.3.6 The term "ANSI" shall mean American National Standard Institute, 1430 Broadway, New York, N.Y. 10018, and specifications and tests thereof.
- 3.3.7 The term "IEC" shall mean International Electrotechnical Commission, 1 Rue de Varembe, 1211 Geneva 20, Switzerland, and specifications and tests thereof.
- 3.3.8 The term "IEEE" shall mean Institute of Electrical and Electronics Engineers, 345 East 47 Street, New York N.Y. 10017
- 3.3.9 The term "IPCEA" shall mean Insulated Power Cable Engineers Association, P. O. Box P South Yarmouth, Massachusetts 02664, and Specifications and tests thereof.
- 3.3.10 The term "AWPA" shall mean American Wood-Preservers' Association, P.O. Box 286 Woodstock, Maryland 21163-0286, (410-456-3169) and Specifications and tests thereof.

3.4 BRAND NAMES OR CATALOG NUMBERS

- 3.4.1 Reference to brand names, manufacture or catalog numbers, if any, in the Schedules or Technical Specifications have been made only for that material or for which it has been determined that a degree of standardization is necessary to maintain certain essential features.

In certain instances such reference have also been made for purposes of convenience to specify standards of comparison only as to type, design, quality, or character of item desired.

In either case offers of alternative goods, which have similar characteristics and provide performance and quality equal or better to those specified may be considered. It will be the Bidder's responsibility to demonstrate and prove to the Purchaser's satisfaction that alternatives offered are substantially equivalent to the brand names manufacturers or catalog numbers identified.

4. GEOGRAPHIC CONDITIONS

- 4.1 Equipment will be installed outdoors in a tropical climate, subject to severe lightning, high humidity, and occasional hurricanes. The atmosphere is salty.
- 4.2 The general conditions are:-
- 4.2.1 Altitude above sea level: Less than 1,524 m (5,000 ft) . .
 - 4.2.2 Relative humidity (Annual Average): 80 per cent
 - 4.2.3 Minimum extreme temperature: 4.4 degrees C. (40 degrees F).
 - 4.2.4 Maximum extreme temperature: 40 degrees C. (104 degrees F).
 - 4.2.5 Average temperature over any 24-hour period will not exceed: 30 degrees C, (86 degrees F).
 - 4.2.6 Annual average temperature: 26 degrees C (79 degrees F).

5. TEST

- 5.1 Tests shall be made in accordance with the applicable standards in section 5 of appropriate Technical Specifications.
- 5.2 Manufacturer's standard production and quality control tests shall be made.
- 5.3 All tests shall be conducted at the place of final manufacture by and at the expense of the Supplier for the entire contract quantity.
- 5.4 Certified copies of test reports made in accordance with 5.1, 5.2 above shall be submitted by Supplier to the Purchaser along with required documents for each shipment.

6. DEFECTIVE EQUIPMENT AND MATERIAL

6.1 DEFECTIVE EQUIPMENT

- 6.1.1. If equipment fails to conform to requirements of Contract Documents or to operate satisfactorily, the Supplier shall correct such defects promptly at no cost to Purchaser.
- 6.1.2 The Purchaser shall have the right to operate unsatisfactory equipment until it is replaced or corrected, without cost for depreciation, use or wear.
- 6.1.3 Equipment shall be removed from operation for examination, adjustment, alteration or change only at times approved by Owner.

6.2 DEFECTIVE MATERIALS

- 6.2.1 If materials fail to conform to requirements of Contract Documents the Supplier shall correct such defective materials promptly at no cost to Purchaser.
- 6.2.2 The Supplier shall repair or replace defective materials only at times approved by Purchaser.

7. LABELING AND PACKAGING

- 7.1 The Supplier shall provide packing of the goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The Packing shall be sufficient to withstand, without limitation, rough handling during transit, salt and precipitation during transit, exposure to extreme temperatures, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 7.2 Conductor shall be transported on non-returnable reels, except where otherwise stated in Technical Specifications.
- 7.3 All products shall be stamped or labeled with the manufacturer name, manufactured date and catalog/manufacture number.
- 7.4 Conformance to the requirements above shall not be construed as cause to neglect the special markings or packaging detailed in a products technical specification.

8. EXPORT MARKING

- 8.1 All packages shall be plainly marked to facilitate field identification as directed by Manager - Purchasing and Customs.
- 8.2 All external markings shall be legibly and durably printed or stenciled on two sides and both ends (where applicable) of containers in letters at least 51 mm (2") high.
- 8.3 In order to facilitate field identification, shipping documents shall include lists with type and quantities of materials contained in each crate.

9 SHIPMENT OF MATERIALS

- 9.1 Supplier/Manufacturer shall await the written authorization of the purchaser before the shipment of materials commences. Purchaser will require test certificates of equipment of materials/equipment before authorization for shipment can be given.