

TECHNICAL SPECIFICATION FOR LT, HT GUY INSULATORS

1. SCOPE :

The specification provides for manufacture, testing before dispatch, supply and delivery of LT, HT_Guy Insulators as per the particulars given in the "Schedule of Requirements" attached.

2. STANDARDS:

The LT, HT Guy Insulators shall be as per IS 5300/1969 (the latest issue thereof). The bidders shall go through the above IS thoroughly before making their offer. The material shall be for use in moderately hot and humid tropical climate, conducive to rust and fungus growth.

3. GENERAL REQUIREMENT:

- 3.1 The porcelain shall be sound and free from defects, thoroughly verified and smoothly glazed.
- 3.2 The glazes, shall be Brown in colour except the parts on which the porcelain is supported during firing, which may please be left unglazed, all other surfaces of the insulators shall be effectively glazed.
- 3.3. The design of the insulators shall be such that stresses due to expansion and contraction in any part of the insulator shall not lead to deterioration.

4. BASIC INSULATOR CHARACTERISTICS:

The test voltage of the insulators shall be as per IS-5300/69 (Second reprint March- 1981)

NOTE: - The withstand and flashover voltages are referred to the references atmospheric conditions.

5. MECHANICAL FAILING LOAD :

1. Type 'A' of Table-I of IS-5300/69 Fig.1. 44 KN for LT
2. Type 'C' of Table-I of IS-5300/69 Fig.3. 88 KN for HT

6. TESTS :

The Insulator shall comply with the following routine, type and acceptance tests as per IS : 5300 (Second revision Amendment No. 1 & 2).

6.1. Routine Test :

Visual Examination

6.2 Type Test:

The firm shall submit the type test report shall be from any NABL accredited laboratory not more than 5 years old along with offer .The following type tests are to be carried out on sample in the order mentioned bellow as per IS 5300/69.

- a) Visual examination.
- b) Verification of dimensions.
- c) Dry one minute power frequency withstand test.
- d) Wet one minute power frequency withstand test.
- e) Temperature Cycle test.
- f) Mechanical strength test
- g) Porosity test.

NOTE : The identification marks of firm provided on the insulator should be invariably mentioned in the type test certificate.

6.3 Acceptance Tests : (to be conducted in the following order)

- a) Visual examination.
- b) Verification of dimensions.
- c) Temperature Cycle test.
- d) Mechanical strength test.
- e) Porosity test (Applicable only to HT Guy Insulator Type-C).

7. MARKING:

The Insulators shall be legibly and indelibly marked as shown below.

- a) Name and trade-mark of the manufacturer
- b) Month and year of manufacture
- c) “AP PDCL” (Name of the purchaser)

Markings on porcelain shall be printed and shall be applied before firing.

8. Packing:

Each Insulator should be wrapped with dry grass. This shall be then packed in either polythene or double gunny bags. No.of insulator should not be more than 50 Nos. per bag for type 'B' and 30 Nos. per bag for type 'C'

9. TYPE AND DIMENSIONS :

The dimensions and construction of the LT, HT Guy Insulators should be as per IS 5300/1969 (or latest issues thereof)

(i) HT Guy Insulators should be as per fig. 3, designation 'C' of IS 5300/1969 (or latest issues thereof).

(ii) LT Guy Insulators should be as per fig (1), designation “A ” of IS 5300/1969 (or latest issues thereof).

10. TEST CERTIFICATES:

The test shall be carried out as per the IS before dispatch and the test certificates shall be furnished for approval.

Copies of type test certificates of identical materials for each type with dimensional drawings shall invariably accompany the tender.

The type tests as specified in the IS should be carried out not later than 5 years from the date of opening of bid.

11. SAMPLES:

Two Nos. samples of LT, HT GUY Insulators shall invariably accompany the tender. Tenders for which samples are not received by the stipulated date will be rejected.

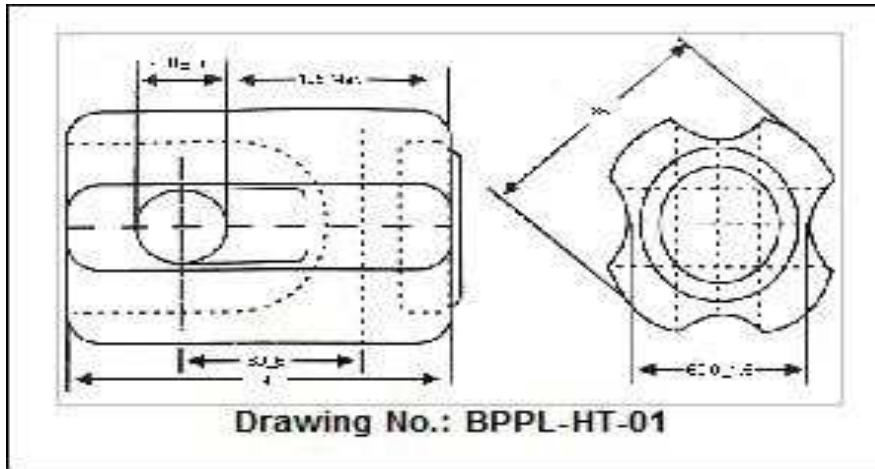
12. GUARANTEED TECHNICAL PARTICULARS:

The technical particulars as specified in the IS shall be guaranteed and a statement of guaranteed particulars shall be furnished along with the tender.

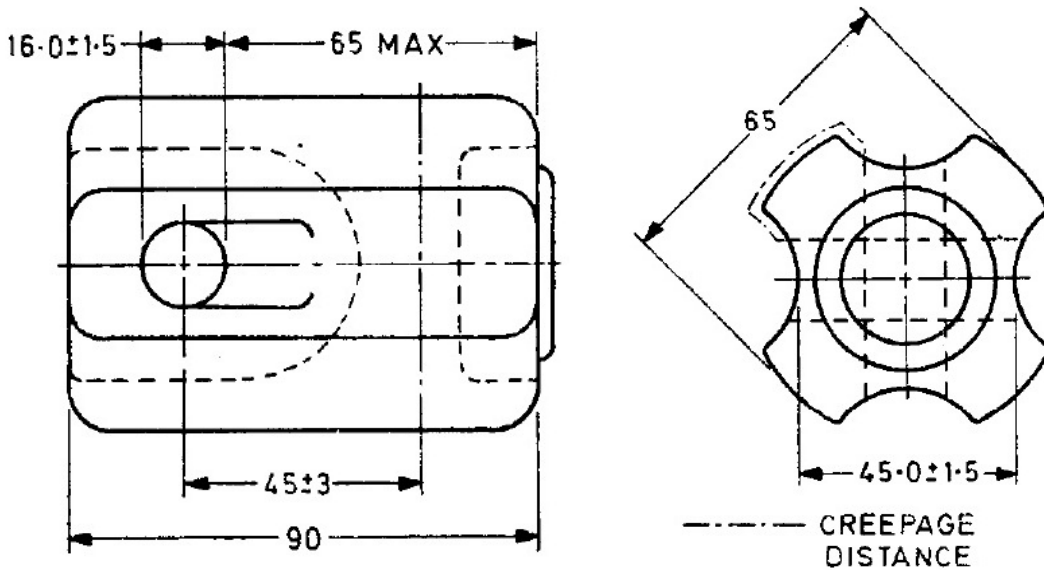
GUARANTEED TECHNICAL PARTICULARS

Sl.No.	Characteristics	HT Guy Insulators	LT Guy Insulators
1.	Standard specification to which the insulator shall confirm	IS : 5300/1969 with latest amendment	IS : 5300/1969 with latest amendment
2.	Dimensions	140X85mm (25mm hole dia)	90X65mm (16mm hole dia)
3.	Working voltage	33KV	11KV
4.	Dry one minute Power frequency withstand voltage	27 KV	18KV
5.	Wet one minute power frequency withstand voltage	13 KV	8KV
6.	Power frequency flashover voltage dry	32 KV	22 KV
7.	Power frequency flashover voltage wet	15 KV	
8.	Tensile strength	88 KN	44KN
9.	Creepage distance	57mm	41mm
10.	Colour of glaze	Brown/Dark Brown	Brown/Dark Brown
11.	Tolerance in dimensions	As per IS : 5300-1969	As per IS : 5300-1969
12.	Standard specification	IS : 5300 1969	IS : 5300 1969

BBPL-HT-01



Type of Insulators	Type C
Standards to which insulators will conform	IS: 5300/1969 Latest amendment
Dimensions	140mm x 85mm x 25mm
Minimum Creepage distance	57 mm
Color of Glaze	Brown
Dry Power freq. Withstand voltage (KV)	27 KV
Wet Power freq. Withstand voltage (KV)	13 KV
Minimum failing Load (KN)	88 KN
Temp Cycle test (as per ISS)	As per clause 7.6 of IS 5300
Porosity test (as per ISS)	As per clause 7.7 of IS 5300
Furnished drawing no.	BPPL-HT-01



All dimensions in millimeters

Fig. 1 Guy Strain Insulators, Designation A

Type of Insulators	Type A
Standards to which insulators will conform	IS: 5300/1969 Latest amendment
Dimensions	90*65 mm(16mm hole dia)
Minimum Creepage distance	41 mm
Color of Glaze	Brown/Dark Brown
Dry Power freq. Withstand voltage (KV)	18KV
Wet Power freq. Withstand voltage (KV)	8 KV
Minimum failing Load (KN)	44 KN
Temp Cycle test (as per ISS)	As per clause 7.6 of IS 5300
Porosity test (as per ISS)	As per clause 7.7 of IS 5300
Furnished drawing no.	Fig 1 of IS 5300/1969

