

## Specification for HT/ LT Stay Insulators

### SPECIFICATION FOR HT-LT STAY (GUY) INSULATORS:

#### 1. SCOPE:

This specification covers the details of the Guy (Strain) insulators Porcelain White/Brown glazed insulators suitable for G.I. Stay Wire 7/3.15mm and to supply to any **Regional Store / Division Store / Any Destination within the territory of Gujarat State.**

#### 2. APPLICABLE STANDARDS:

IS-5300/1969 (Fourth Reprint May-1989) and its latest amendment if any.

#### 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 colour for type 'C' of Table of IS-5300/69 Fig-3 and 'White' colour for type 'B' of Table of IS-5300/69 Fig.2, 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.

**The drawings as per Fig. 2 and Fig. 3 of IS-5300:1969 and its latest amendments are attached with specifications.**

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.

3.4 The insulator shall be in one piece.

#### 4. BASIC INSULATOR CHARACTERISTICS:

The test voltage of the insulators shall be as per IS-5300/69 (Fourth Reprint May-1989)

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

#### 5. MECHANICAL FAILING LOAD:

- |                                             |       |
|---------------------------------------------|-------|
| 1. Type 'B' of Table-I of IS-5300/69 Fig.2. | 53 KN |
| 2. Type 'C' of Table-I of IS-5300/69 Fig.3. | 88 KN |

## 6. TESTS:

The Insulator shall comply with the following routine, type and acceptance tests as per IS: 5300 complying latest amendments and revisions, if any.

### 6.1 ROUTINE TEST:

Visual Examination

### 6.2 TYPE TEST:

The firm shall submit the **notarized copy** of type test report from Govt./**NABL** approved laboratory not more than **seven** 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) Temperature Cycle test.
- d) Dry one minute power frequency withstand test.
- e) Wet one minute power frequency withstand 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.

The number of insulators to be selected at random from the lot for acceptance tests shall be in accordance with following Table.

| Lot Size       | Sample Size                                         |
|----------------|-----------------------------------------------------|
| (1)            | (2)                                                 |
| Up to 500      | As agreed to between the purchaser and the supplier |
| 501 to 800     | 12                                                  |
| 801 to 3200    | 16                                                  |
| 3201 to 8000   | 18                                                  |
| 8001 and above | 20                                                  |

**7. MARKING:**

7.1 Each insulator shall be legibly and indelibly marked to show the following.

- a) Name or Trade mark of manufacturer.
- b) Year of manufacture.
- c) Name of DISCOM i.e. DGVCL/MGVCL/PGVCL/UGVCL
- d) Minimum failing load in KN.

7.2 Marking on porcelain 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'.

Manufacturer's Name  
and Address:

## GUARANTEED TECHNICAL PARTICULARS (GTP)

Technical information and guaranteed technical information for LT-HT stay (guy) insulators.

### PART – 'A'

Bidder has to confirm following important requirement:

| Sr. no. | Particulars                                                                                                                         | Confirmation      |                   |
|---------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|
|         |                                                                                                                                     | HT                | LT                |
| 1       | Type & Designation<br>a) HT Type C of Table-I of IS-5300/69 Fig-3.<br>b) LT Type B of Table-I of IS-5300/69 Fig-2.                  | Yes<br>---        | ---<br>Yes        |
| 2       | Overall Dimensions<br><br><div> <div>HT</div> <div>LT</div> </div> Length 140mm 110mm<br>Diameter 85mm 75mm<br>Cable hold 25mm 22mm | Yes<br>Yes<br>Yes | Yes<br>Yes<br>Yes |
| 3       | Minimum failing load<br>HT 88KN<br>LT 53KN                                                                                          | Yes<br>---        | ---<br>Yes        |
| 4       | Colour of insulator<br>HT Brown<br>LT White                                                                                         | Yes<br>---        | ---<br>Yes        |
| 5       | Tolerance of insulator as per IS-5300/69 (4th reprint May-89)                                                                       | Yes               |                   |
| 6       | Dry power frequency/withstand<br>HT- 27 KV<br>LT – 22 KV                                                                            | Yes<br>---        | ---<br>Yes        |
| 7       | Wet power frequency withstand<br>HT-13 KV<br>LT- 9 KV                                                                               | Yes<br>---        | ---<br>Yes        |
| 8       | Marking on insulator DISCOM, Name of manufacturer, Year and Min. failing load.                                                      | Yes               | Yes               |
| 9       | Packing of insulator as per Clause No. 8.0 under heading packing.                                                                   | Yes               | Yes               |

### PART-'B'

Bidder has to furnish below mention details about material

1. Type of firing the insulator.
2. Details of test conducted on raw materials.
3. Quality assurance plan which are being implemented.

Signature & Seal of Tenderer.

### PART-'C'

#### ENCLOSURES:

Bidder has to enclose following documents and has to confirm for the same.

| Sr. No. | Particulars                                                                                                                                                                            | Confirmation |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1       | <b>3 nos. (Three)</b> of samples for HT & LT Stay Insulators to be sent with tender.                                                                                                   | Yes          |
| 2       | Type test certificate covering all the tests as per Cl.no. 6.2 of specification under heading type test from Govt. approved laboratory.                                                | Yes          |
| 3       | List of Plant & Machinery                                                                                                                                                              | Yes          |
| 4       | List of Testing equipments                                                                                                                                                             | Yes          |
| 5       | List of orders pending/executed at least for past two years for the items offered<br>a) With GUVNL & subsidiary company<br>b) With the purchases other than GUVNL & subsidiary company | Yes<br>Yes   |

PART-'D'

Bidder has to mention below deviation if any, quoting relevant clause of specification.

Signature & seal of Tenderer.

Manufacturer's Name  
and Address: