Manufacturer's Name and Address.

G.T.P.

TECHNICAL INFORMATION AND GUARANTEED TECHNICAL INFORMATION FOR SUPPLY OF LT SHACKLE INSULATORS.

PART-'A'

Bidder has to confirm following important requirement.

SR. No.	PARTICULARS	CONFIRMATION
1	Insulator shall be manufactured as per IS: 1445/1977 (Second revision) with amendment No.1 & 2.	Yes
2	Size of Insulator 90 x 75 mm. type-I Fig-3 of IS: 1445/77.	Yes
3	Dry power frequency withstand voltage 23 KV RMS.	Yes
4	Wet power frequency withstand voltage 10 KV RMS.	Yes
5	Power frequency puncuture withstand voltage KV RMS i.e. 1.3 x the actual dry freshover voltage.	Yes
6	Mechanical failing load 11.5 KN (Min).	Yes
7	Tolerance in dimension as per relevant IS-1445/1977 (Second revision) with amendment No. 1 & 2.	Yes
8	Marking on insulator as per Clause No.6.	Yes
9	Packing of insulators as per Clause No.7.	Yes

'PART-'B'

Bidder has to furnish below details about material.

1. Colour of glazed of L.T. Shackle Insulator.
2. Type of firing the insulator.
3. Details of test conducted on raw material.
4. Quality assurance plan which are being implemented.

Signature of Tenderer:		Company's Round Seal:
Date:	Place:	

PART-'C':-
ENCLOSURES:

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

SR. No.	PARTICULARS	CONFIRMATION
1	**2 Nos. (Two)** of sample for L.T.Shackle Insulator to be sent with tender.	Yes
2	**Type test certificate covering all the tests as per Cl.No. 5.2 of Tender specification from Govt. approved laboratory.**	Yes
3	**List of Plant & Machinery**	Yes
4	**List of Testing equipments**	Yes
5	**List of orders pending/executed for the items offered** **a) With GEB/GUVNL & Its DISCOMS** **b) With the agencies other than GEB/GUVNL & Its DISCOMS**	 Yes Yes

PART-'D'

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

Signature of Tenderer:		
Date:	Place:	Company's Round Seal:

SPECIFICATION FOR L.T.SHACKLE INSULATORS

1. SCOPE:-

This specification covers the details of the L.T. Shackle White glazed/brown glazed insulators for use on 230/440V overhead lines and to supply within the Regional Store within the territory of Gujarat State.

2. APPLICABLE STANDARDS:-

IS-1445/1977 (Second revision) (Amendment No. 5) and its latest amendment if any but without the porosity test.

3. GENERAL REQUIREMENT:-

3.1 The porcelain shall be sound and free from defects, thoroughly verified and smoothly glazed.

3.2 The glaze, unless otherwise specified shall be brown/white in colour, Except the parts on which the porcelain is supported during firing, which may please be left unglazed, all other surface of the insulators shall be effectively glazed.

3.3 The design of the insulators shall be such that stresses due to expansion and centraction in any part of the insulator shall not lead to deterioration.

3.4 The insulator shall be in one piece.

4. INSULATOR CHARACTERISTICS:-

The insulators shall have the electrical and mechanical characteristics given in Trade-I of IS-1445/1977 and as under:-

Sr. No.	Type of Insulator	Dry P.F Withstand voltage KV RMS	Wet P.F Withstand voltage KV RMS	P.F Puncture withstand voltage KV RMS	Min load KN	Failing
1	Shackle	23	10	1.3 x the actual dry flash over voltage.	11.5	(Type-I)

N.B.:- Size of shackle 90 x 75 mm as per Fig. 3 Type-I of IS: 1445/1997.

Signature of Tenderer:		
Date:	Place:	Company's Round Seal:

5. TESTS:-

The Insulator shall comply with the following tests as per IS : 1445/1977 (Second revision Amendment No. 1 & 2).

5.1. Routine Test:-

The following shall be carried out as routine test.

Visual Examination:-

This test shall apply to all insulators.

5.2 Type Tests: (ISCL No. 8.1)

The firm shall submit the type test report from Govt. approved laboratory not more than five years old along with offer .The following type tests are to be carried out on two nos of samples in the order mentioned bellow as per IS 1445/77

a) Test on the both insulator,

i). Visual examination. (8.4)
ii). Verification of dimensions. (8.5)
iii). Dry power frequency withstand test. (8.6)
iv). Wet power frequency voltage withstand test. (8.7)
v). Temperature Cycle test. (8.8)

b) Test on first insulator,

i). Mechanical failing load test (8.9)

c) Test on second insulator,

i). Power frequency puncture withstand test (8.10)

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

5.3 Acceptance Tests:-

The test samples after having withstood the routine test shall be subjected to the following acceptance tests in the order indicated below :-

a) Visual examination. (8.4)
b) Verification of dimensions. (8.5)
c) Temperature Cycle test. (8.8)
d) Mechanical failing load test (8.9)

6. Marking:-

Each Insulator shall be lightly and indelibly marked to show the following.

a) Name and Trade Mark of the manufacturer.
b) Year of manufacturing.
c) Word 'PGVCL'.
d) Minimum failing load in KN.

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

7. Packing:-

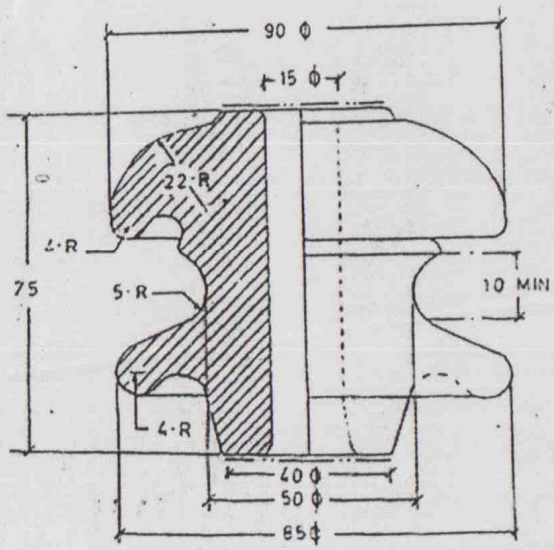
Each Insulator should be wrapped with dry grass. This shall be then packed in either polythene or double gunny bags. No. of insulator should not be more than 50 in one bag.

8. TENDER SAMPLE:-

Signature of Tenderer:		
Date:	Place:	Company's Round Seal:

The Tenderer has to submit **two** nos. of samples along with offer. The offer without samples will be straight-way rejected.

Signature of Tenderer:		
Date:	Place:	Company's Round Seal:



LT SHACKLE INSULATOR

NOTES

1. APPLICABLE STANDARDS DESIGNATION	IS I	1445/1977 FIG-3
2. COLOUR OF GLAZE		WHITE/ BROWN
3. SIZE OF INSULATOR	MM	90x75
4. MIN FAILING LOAD	KN	11.5
5. P.F. WITHSTAND VOLTAGE DRY	KV	23 (rms)
6. P.F. WITHSTAND VOLTAGE WET	KV	10 (rms)
7. V.F. PUNCTURE WITH STAND VOLTAGE		1.5x The actual dry Flash over Voltage
8. MARKING AS PER IS	IS	1445/1977 11.5KN MONTH/YEAR
9. ALL DIMENSION ARE IN	MM	

Addl. Chief Engineer;
Reg. & Corp. Office PGVCL
Rajkot.

PASCHIM GUJARAT VIJ COMPANY LTD. RAJKOT
LT Shackle Insulator
DRG. No: O & M x (R O)

Signature of Tenderer:		
Date:	Place:	Company's Round Seal: