



འབྲུག་གློག་མེ་ལས་འཛིན།

Bhutan Power Corporation Limited

(An ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007

Certified Company)

Registered Office, Thimphu

Procurement Services Department

Thimphu: Bhutan



BPC/PSD/2021 Materials/2020/10/ 326

September 09, 2020

Subject: Addendum No. II

Tender Title: Supply and Delivery of Electrical line and substation materials (Package B)

Reference: BPC/PSD/2021 Materials/2020/10 dated August 15, 2020

Dear Sir(s),

This is to inform all the bidders that PSD, BPC would like to make the following amendments in response to the queries received for the above referred bid document.

A. Test Standards

The standards for Testing and Inspection provided for the materials which are not included in the above tender is deleted. The revised standard for Testing and Inspection for the tender lots is attached here as *Annexure-1*.

B. Technical Specification

For lot-4 Distribution Transformer (item 6# 1 phase transformer 25kVA, 11/.240kV): The losses for the item is missed out. The detail Maximum losses for the item is as follows;

- No load losses: 0.07 kW
- Load losses: 0.425 kW

For lot-1 Distribution Boards: The Breaking capacity of MCCB of the LVDB shall be 35 kA.

For lot-5 Lubricant (Item 2# Governor Oil): Oil shall be use in mini hydro governors.

For lot-8 Galvanized Pole fittings: The detail M-Clamp drawing for steel tubular pole fittings is attached here as *Annexure -2* for your reference.

- The detail M-Clamp drawing for item no. 14 (Transformer platform assembly) is attached as *Annexure -3* for your reference.

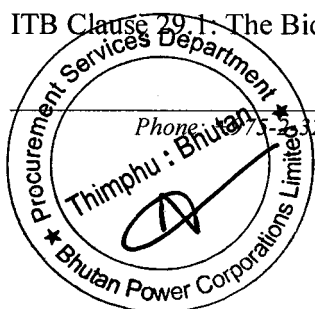
For lot-9 Galvanized telescopic pole fittings: The Detail Drawing for Y-Clamp for telescopic pole fitting is attached here as *Annexure-4* for your reference.

C: Bid Data Sheet (BDS)

ITB Clause 25.1: The deadline for bid submission has been extended till September 24, 2020 at 14:30 hours.

ITB Clause 29.1: The Bid shall open on September 24, 2020 at 15:00 hours.

Phone: +975 326289; Box 580; E-mail: psdbpc@gmail.com; psd@bpc.bt; web: www.bpc.bt

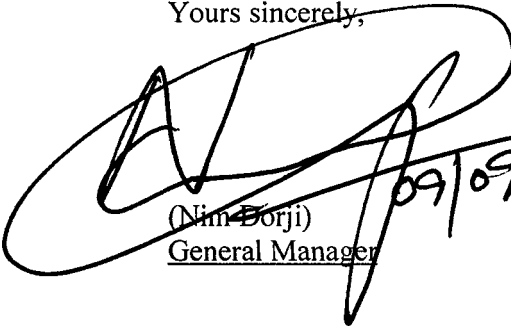


This is also to inform that the EMD shall be drawn in favor of Director, Finance & Accounts Services, BPC, Thimphu, Bhutan.

Bidders are advised to note the above changes and quote accordingly. All other terms and conditions shall remain same.

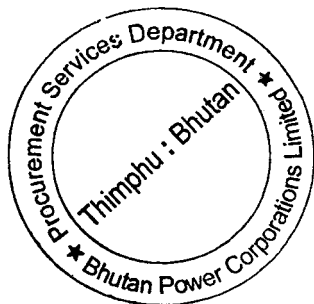
Thanking you.

Yours sincerely,

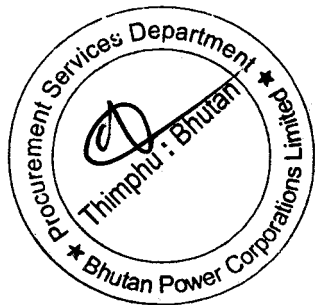


09/09/2020

(Nim Dorji)
General Manager



Annexure-1



2. Test Standards

1. Standards

The design material, construction, manufacture, inspection and testing of all equipment supplied under this Specification shall conform to the latest editions of the International Electrotechnical Commission (IEC) Specifications and other international standards where the material is not covered by IEC. Other national or international standards are accepted if they promise to confer equal or superior quality and performance than IEC or the specified standards.

2. Testing

The tests shall be divided into the categories described below.

2.1 Routine Tests

All the routine tests specified by the standards shall be carried out. If the tests are not witnessed by the Purchaser's representatives, test certificates shall be submitted to the Purchaser for approval. The test certificates must show the actual values obtained from the tests, in the units used in this Specification, and not merely confirm that the requirements have been met. No materials shall be dispatched until the test certificates have been received by the Purchaser and the Supplier has been informed that they are acceptable.

Despatch clearance will be given only if the test results are approved.

2.2 Type Tests

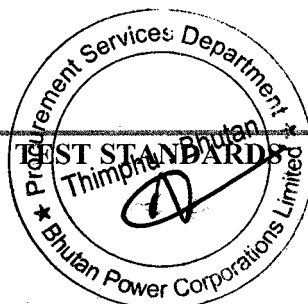
Bidder shall include with his bid type test certificates, issued by an approved, reputed, independent testing laboratory. The type tests should have been carried out in the last five years. Type tests shall be carried out at an independent testing laboratory or be witnessed by a representative of such laboratory or some other representative acceptable to the Purchaser. Type tests may be dispensed with at the Purchaser's discretion, if the Supplier furnishes evidence to the Purchaser's satisfaction, that the relevant tests have already been performed on identical materials and equipment.

In addition, the Purchaser may call for type tests to be carried out at the Manufacturer's Works and to be witnessed by the Purchaser or his representatives. Type testing shall only be performed if the manufacturer is unable to provide type test certificates issued by an independent test laboratory of international repute. Such tests will be on random samples at the discretion of the Purchaser and failure to meet the conditions of test could result in the rejection of a complete batch of equipment.

3. Inspection and Testing of Pole Fittings

The inspector shall examine the poles for, among other things, the following characteristics:

- general appearance;
- finish;



- dimensions; and
- Straightness.

At least the following dimensional checks shall be made by the inspector:

- length;
- butt diameter and circumference;
- top diameter and circumference;
- non-circularity;
- accuracy of drillings;
- suitability of pole sections to overlap and bolt together;
- straightness, where appropriate;
- Internal dimensions.

All cross-arms, clamps and fittings shall be examined by the inspector for, among other things, the following characteristics:

- general appearance;
- finish;
- dimensions;
- straightness;
- appropriate markings; and
- Accuracy of drillings.

At least the following dimensional checks shall be made by the inspector:

- length;
- cross section of cross arm
- dimensions of clamp;
- position and size of holes;
- Vertical alignment of all through holes.

The group of poles or fittings offered at any one time shall constitute a batch. Within a batch, poles and fittings presented for inspection shall be segregated on a size basis. If 5% of the inspected items show damage or serious deviations from the design criteria, the entire batch shall be unconditionally rejected without further sorting.

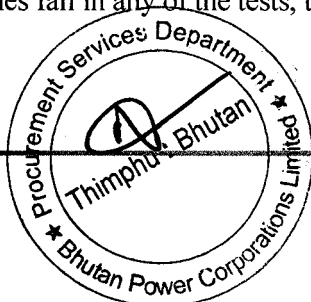
Dimensions, such as length and top diameter, shall be measured with a standard steel tape.

Tests

The following tests shall be carried out on samples drawn from each consignment of the poles:

- i) Deflection Test/Permanent Set Test
- ii) Drop Test.

All the samples subjected to above tests shall pass the tests. Should one or more number of poles fail in any of the test, a second set of samples, double in number shall be drawn and subjected to above tests. Should one or more number of poles from second set of poles fail in any of the tests, the entire consignment shall be rejected.



4. Inspection and Testing for Switching Equipment and Surge Arresters

Tests to establish whether the performance guarantees in the Schedules have been met shall be carried out by the Contractor, to the satisfaction of the Purchaser.

Type and routine factory tests shall comprise the following:

- Insulation level tests, including withstand tests at power frequency voltages on auxiliary equipment.
- Temperature rise test.
- Rated peak withstand current and rated short-time withstand current tests.
- Tests to prove satisfactory operation and mechanical endurance.

5. Inspection and Testing for Distribution Pillar

The Distribution Pillar shall be subject to following tests:

- High voltage test (2000V for 1 minute)
- Megger test
- Electrical control, interlocking and sequential operation test.

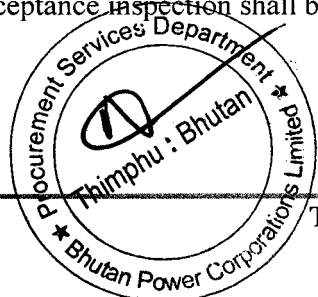
6. Inspection and Testing for LV Switchboards

Tests and test reports

The meter shall pass the manufacturer's standard routine tests. The following type tests shall be in accordance with the latest relevant IEC or ANSI:

- Test of insulation properties:
 - impulse voltage test
 - A.C. voltage test
- Influence of short-time over currents
- Influence of heating:
 - windings, if any
 - external surface
- Electromagnetic compatibility (E.M.C.):
 - radio interference measurement
 - fast transient/burst test
 - immunity to electromagnetic HF field test
 - immunity to electrostatic discharge test
- Others according to manufacturer's standard
- Heating (permissible temperature rise) of:
 - windings, if any, in K
 - external surface in K

The acceptance inspection shall be according to the latest relevant IEC or ANSI



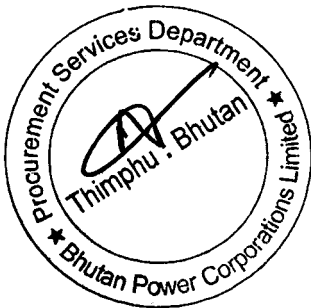
Routine factory testing, in accordance with IEC standards, shall be carried out and shall include the following:

- Check of conformity with wiring diagrams and plans.
- Mechanical operation tests and checking of interlocks.
- Low voltage dielectric tests.
- Low voltage functional checking.

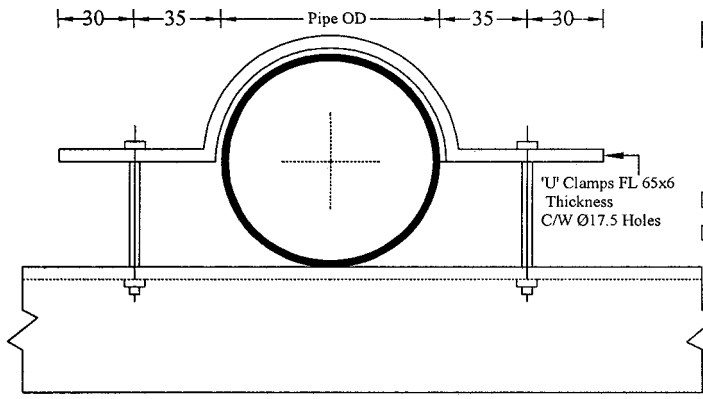
7. Inspection and Testing for Earthing Equipment

The Earthing Equipment shall subject to following tests as per the International Standards:

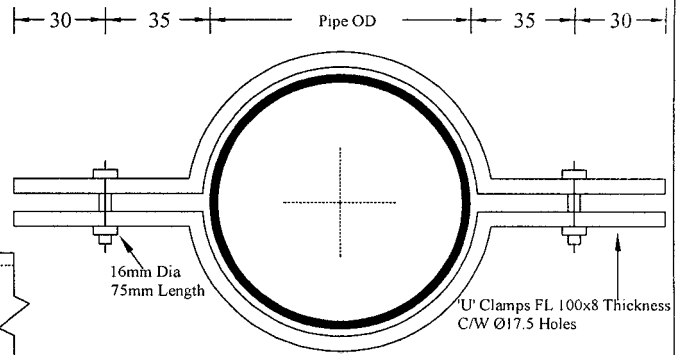
- Uniformity of zinc coating
- Mass of zinc coating
- Wrapping test
- Dip Test
- Adhesion test



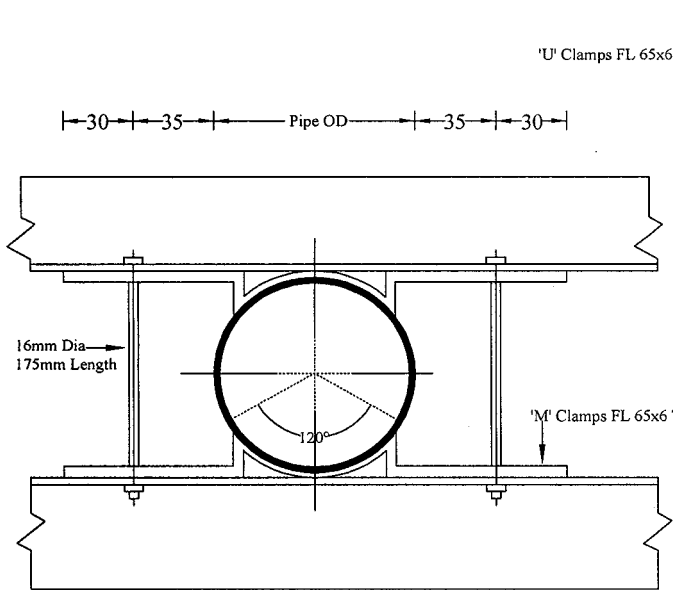
Annexure - 2



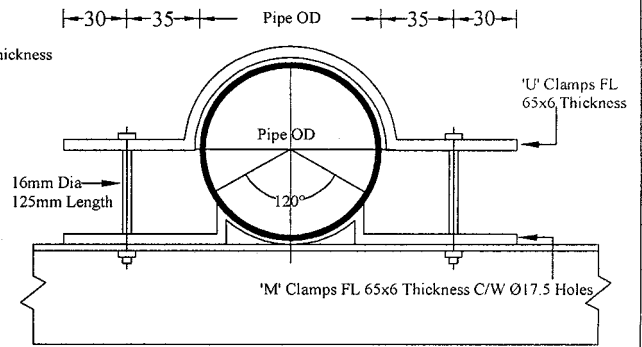
'U' CLAMP



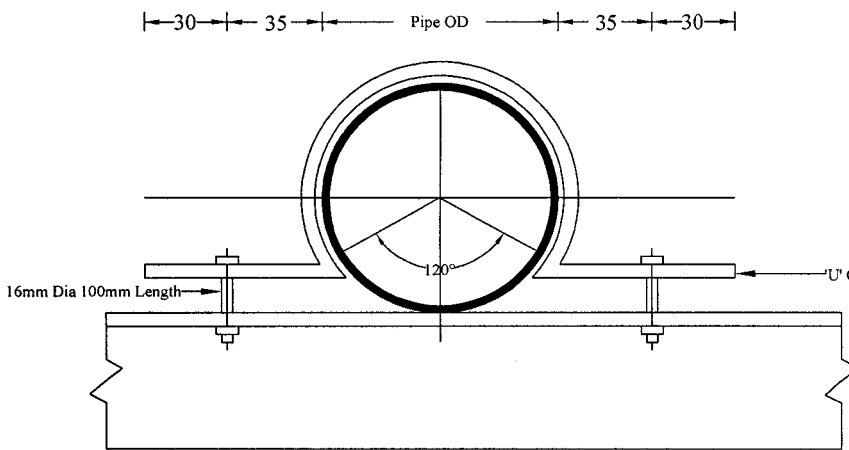
STAY CLAMP



'M' CLAMP



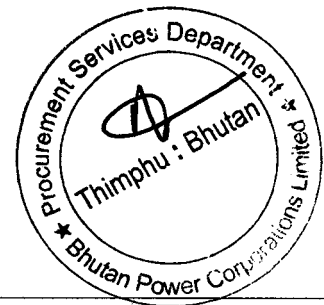
CROSS ARM CLAMP (U+M)




FULL CLAMP

Notes

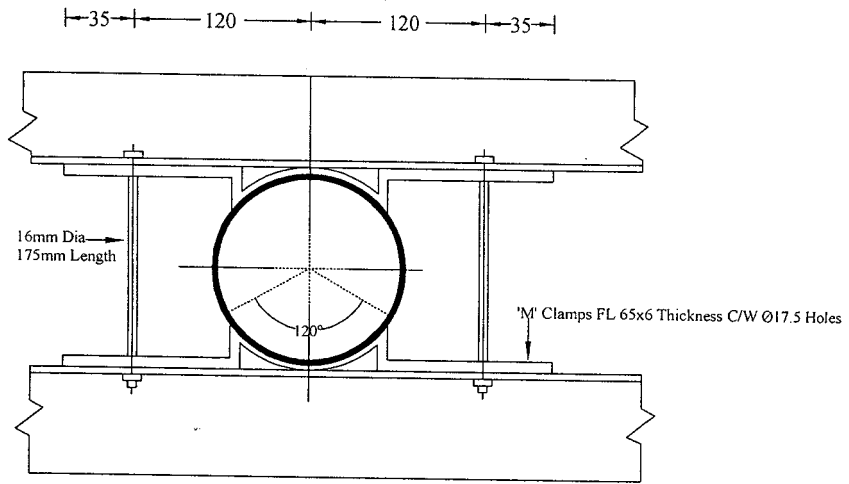
1. Dimensions as shown are in mm
2. Drawing not to Scale
3. All Bolts to be Ø16 C/W Nuts & Spring Washers



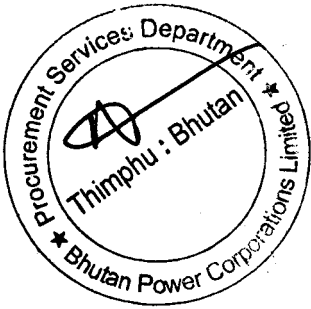
 <p>BHUTAN POWER CORPORATION LIMITED (BPCL)</p>		
	NAME	DATE
PREPARED BY	PSD	
CHECKED BY	R&DD	
APPROVED BY	DCSD	

PROCUREMENT SERVICES DEPARTMENT	
CLAMP OF STEEL TUBULAR POLE FOR 11 & 33kV	
DRAWING NO. PSD000	REVISION : 2019

Annexure: 3



'M' CLAMP FOR TRANSFORMER PLATFORM



Notes

1. Dimensions as shown are in mm
2. Drawing not to Scale
3. All Bolts to be Ø16 C/W Nuts & Spring Washers



BHUTAN POWER CORPORATION LIMITED (BPCL)

PROCUREMENT SERVICES DEPARTMENT

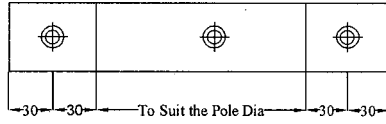
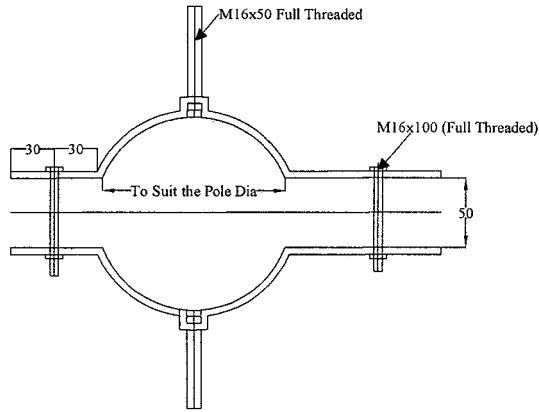
CLAMP OF TRANSFORMER PLATFORM

	NAME	DATE
PREPARED BY	PSD	
CHECKED BY	R&DD	
APPROVED BY	DCSD	

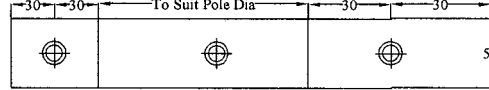
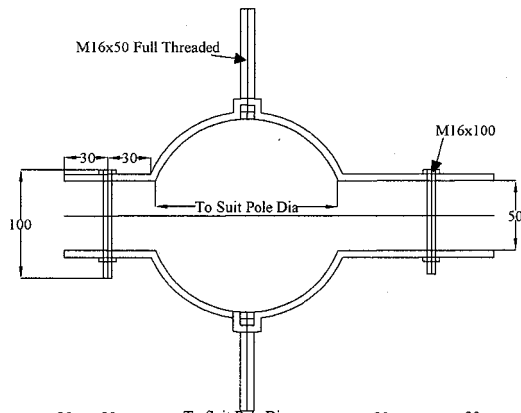
DRAWING NO. PSD000

REVISION : 2019

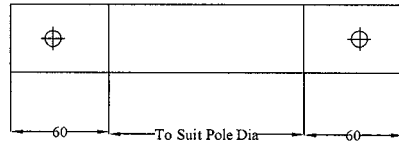
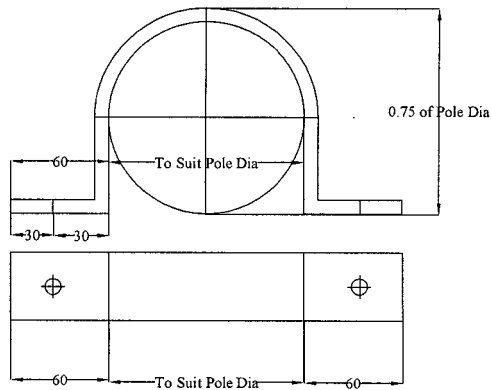
Annexure: 4



Y TYPE-CLAMP (FULL CLAMP)



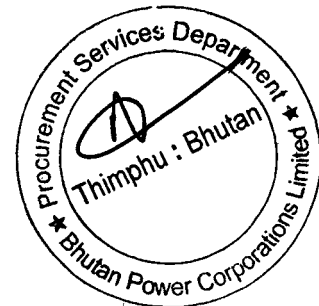
STAY CLAMP



X Type -Clamp (Half Clamp)

Notes

1. Dimensions as shown are in mm
2. Drawing not to Scale
3. All Materials shall be Galvanized
4. All the Bolts shall be Full Threaded Type



BHUTAN POWER CORPORATION
LIMITED (BPCL)

PROCUREMENT SERVICES DEPARTMENT

CLAMP FOR TELESCOPIC POLE

	NAME	DATE
PREPARED BY	PSD	
CHECKED BY	R&DD	
APPROVED BY	DCSD	

DRAWING NO.

REVISION 2019