NOT FOR SALE / FOR WEB BASED TENDERING ONLY

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.
TENDER NOTICE

Sealed and separate tenders in two parts (Part-I & II) are invited from manufacturer or their authorized firms / contractors for following work. The tender documents shall be down loaded from our internet website of **www.ptcul.org**

Tender shall be received through Registered Post only (acknowledgement due) addressed to Superintending Engineer, 400KV Sub-station, Rampura, Ramnagar Road, Kashipur in the office upto 3.00 PM on specified date. The department shall not own any responsibility regarding the postal delay in the receipt of the tender.

The Part-II of the tenders, belonging to only those tenders who qualify for the work on the basis of the documents supplied by them in Part-I, shall be opened publicly on same day. All other terms and conditions shall be as per tender documents.

Part I & II shall contain the following :

(A) **Part-I** : Part-I of the tender shall contain the following :

i) Cost of tender document	:	In the form of Bank Draft in favour of Executive Engineer 400KV (O&M) Division, PTCUL, Kashipur payable at Kashipur.
ii) Earnest Money	:	In the form of FDR/CDR/BG/TDR duly pledged in favour of Executive Engineer, 400KV (O&M) Division, PTCUL, Kashipur payable at Kashipur.
iii) Experience Certificate	:	Certificate regarding similar works issued by reputed firms as well as Government Department.
iv) EPF Registration	:	If available.

(B) **Part-II :** shall contain only "Price Bid".

1-	Tender specification No.		:	**38/2012-13**
	a)	Name of work	:	Providing and Fixing of Fired C- Wedge connectors for 132KV Switchyard at 132KV Sub-station, Kashipur
	b)	Earnest money	:	Rs. 10,000.00
	c)	Cost of tender document	:	Rs. 500.00 + 13.5% VAT
	d)	Starting date for down loading tender document	:	08-02-2013
	e)	Closing date for down loading tender document	:	05-03-2013
	f)	Last date for submission of tender documents	:	12-03-2013 upto 15:00 Hrs.
	g)	Opening date of tender	:	12-03-2013 at 16:00 Hrs.

"Save Electricity in the Interest of Nation"

Superintending Engineer
400KV Sub-station, PTCUL
Kashipur

NOT FOR SALE / FOR WEB BASED TENDERING ONLY

Tender Notice

Sealed and separate tenders are invited by the undersigned from manufacturer or their authorized firms / experienced firms/contractors of electric 'A' class valid license holder from Uttarakhand Government or equivalent authority for the following works. Brief summary of work and details of tender are given below :-

Specn. No.	Name of work	Earnest money (In Rs.)	Cost of Tender documents (In Rs.)	Starting Date for Downloading tender document	Closing Date for Downloading tender document	Last date of receipt & Opening of Tender	Time of Completion
T-38/2012-13	Providing and Fixing of Fired C-Wedge connectors for 132KV Switchyard at 132KV Sub-station, Kashipur	10,000.00	500.00 + (13.5% VAT)	08/02/2013	05/03/2013	12/03/2013	2 Months

For eligibility criteria and full & further details kindly visit our web site. The tender shall only be down loaded from our web site i.e. www.ptcul.org and their cost have to be paid at the time of submission of the tender. The undersigned reserves the right to reject one or all tenders without assigning any reason thereof.

"Save Electricity in the Interest of Nation"

Superintending Engineer
400KV Sub-station, PTCUL
Kashipur

NOT FOR SALE / FOR WEB BASED TENDERING ONLY

TENDER FORM

TENDER FOR .....
.....
against Tender Specification No. .....

From,

To,

The Superintending Engineer
400KV Sub-station
Power Transmission Corporation of Uttarakhand Ltd.
Kashipur (U.S. Nagar)

Sir,

With reference to your invitation to tender for the above, I hereby offer to the Power Trans. Corp. of Uttarakhand Ltd. items in the schedule of prices and delivery annexed or such portion thereof, as you determine in strict accordance with the annex condition of contract form "B" specification and schedule of rates to the satisfaction of the purchaser or in default thereof to forfeited and pay to Power Trans. Corp. of Uttarakhand Ltd. the sum of earnest money mentioned in the said condition.

The rates quoted are inclusive pro-rate and in full of satisfaction of the all claims.

I/We agree to abide by this tender for the period of 120 days from the date fixed for receiving the same

A sum of Rs. ..... in the form of ..... is ..... herewith forwarded duly endorsed in favour of Executive Engineer, 400KV (O&M) Division, Kashipur as earnest money deposit, the full value of which shall be retained by the Power Transmission Corporation of Uttarakhand Ltd. on account of security deposit specified in clause-3 of the said conditions of form "A".

Yours faithfully

Signed

Dated the day of 200

SIGNATURE OF THE TENDERER IN FULL

Witness

Address

Occupation

TENDER PERFORMA

SCHEDULE 'C'

Sr.	Particulars
1.	Specification No. against which you have tendered.
2.	Receipt No. & date by which cost of the Tender Specification deposited by you.
3.	Specification of the material / work for which tender has been submitted. Are you a manufacturer / working contractor of the item / work ordered for or ace-credited Agent of manufacture?
4.	Quantity offered (In there are two or more items state quantities separately with units.)
5.	Amount of form in which earnest money deposited with Executive Engineer, 400KV (O&M) Division, Kashipur Please give referenda in this connection.
6.	Do you agree to all the conditions of the Tender specification clearly which you would desire in the general conditions of contract form (It may please be noted that it shall be entirely at the discretion of the purchaser to accept or to reject the modification proposed.)
7.	Please state clearly(Answer Yes or No) if you would agree to undertake / execute the supply / works incase the modification as suggested under Sl. 6 is not acceptable to the Corp. without imposing any further condition(s) from your side.
8.	Give the reference who can certify your financial status & capability to undertake such supply order / tender. One of the references should be schedule Bank of India.
9.	Do you confirm that there are no typographical errors/omissions in your tender and all other documents forming part of the Tender? (Yes/No).
10.	Have you submitted list of past suppliers work executed.

11. What is the validity period of your Tender?
12. What is the Delivery / Completion Period? Please state if the delivery is guaranteed under penalty state the delivery date/month.
13. Are you agreeable to the delivery period being reckoned from the date of receipt of acceptance letter by you?

PRICE/PRICES

1. Is the quoted prices for each item FIRM/Firm in all respect?
2. If the quoted price(s) is variable please give the price variation formula and also the basis (with documents) of quoted price.

(A) Do you agree that the price variation clauses shall be applicable only within the guaranteed completion period as mentioned in tender and shall not be applicable there after even if extension in delivery is granted at later stage on any ground whatsoever.

(B) Have you furnished the documentary evidence in respect of basis mentioned in item 2(A) above?

3. Is the quoted price exclusive of Trade Tax / Sales Tax / Service Tax?
4. If the price is inclusive of Trade Tax / Sale Tax / Service Tax. What is the amount of Trade Tax / Sale Tax / Service Tax included and at what rate?
5. Is the quoted price exclusive of Excise Duty on finished product?
6. If the quoted price is inclusive of Excise Duty included and at what rate?
7. If the quoted price exclusive of transit Insurance charges covering 30 days?
8. If the quoted prices are inclusive of insurance then mention the amount of insurance charges included and its rate?
9. Please state if you would claim any other charges over & above the price as extra which are not covered by Sl. No. .....

to ..... If yes, please state extra separately indicating the amount in rupees against each on per unit basis.

10. Do you offer any discount and if so what is the discount in unit.
11. Have you read the standard clause 2.10 of special conditions which for change of price/prices or its/their structure after the opening of tender?

TECHNICAL SPECIFICATION:-

(For Supply Only)

1. Is the material offered according to the specification of the purchaser?
2. If the material offer is/not exactly accordingly to the purchasers specification. Please get the verification from the same.
3. Have you enclosed leaflets, descriptive and illustrative catalogues in triplicate?
4. Have you enclosed copies of test certificates in respect of material offered?
5. Have you submitted sealed sample (Non refundable) and delivered the same to the office of E.E., 400KV (O&M) Division, Kashipur.
6. Have you filled up the schedule of technical particulars?
7. Guarantee of offered material shall be 6 or 12 months.

ADDRESS

Place:

Date:

SCHEDULE "B"

DEVIATION FROM SPECIFICATION

Sl.No.	Name of Items	Description of Deviation	Reference of Clause in Specifications

NOT FOR SALE / FOR WEB BASED TENDERING ONLY

APPLICATION FROM TENDERER

(On a Non-judicial stamp paper of Rs.5/- plus 0.20 paise revenue stamp affixed)

AGREEMENT

Tender invited by .....
Tender for .....
Tender Notice No. .....
and Date .....
Name of Tenderer .....

In consideration of the Power Transmission Corporation of Uttarakhand Ltd. having treated the tenderer to be an eligible person, whose tender maybe considered, the tendered, the tenderer here-by agrees to the condition that the proposal in response to the above invitation shall not be withdrawn within three months from the date of opening of the tender and also to the condition that if there, after the tenderer withdraws his proposal within the said period, the Earnest money deposited by him may be forfeited to the Power Transmission Corporation of Uttarakhand Ltd. on the discretion of the Engineer-in-charge.

Signed this ..... day of 200

SIGNATURE OF TENDERER

Full Name .....

WITNESS

1. .....

2. .....

UNDERTAKING EXPERIENCE AND FINANCIAL CAPACITY FOR EXECUTING THE WORK

A. Working experience for last 3 years.

Sl.No.	Name of Work	Cost	Date of completion	Total time of completion	Name and address of office under whom work was executed with certificate

Note :-

1. Testimonials in support of the above may be submitted from officer not below the rank of Executive Engineer.
2. Attach additional paper if details are not covered in this table.

B. Position of last Income Tax clearance.

C. Financial capacity of Contractor.
(Give bankers name and capacity of execute work).

SIGNATURE OF TENDERER

NOT FOR SALE / FOR WEB BASED TENDERING ONLY

STANDARD FORM OF UPLOADING OF TENDER DOCUMENT

S.No.	Description	Entry
1.	NIT Number	**38/2012-2013**
2.	Title of Tender	Providing and Fixing of Fired C- Wedge connectors for 132KV Switchyard at 132KV Sub-station, Kashipur
3(a)	Starting Date for Downloading Tender Document (dd/mm/yy)	08/02/2013
3(b)	Closing Date for Downloading Tender Document	05/03/2013
4(a)	Last Date for submission of tender Document (dd/mm/yy)	12/03/2013 upto 15:00 Hrs.
4(b)	Opening Date of Tender Documents (dd/mm/yy)	12/03/2013 upto 16:00 Hrs.
5.	Address and Place of Tender issuing office	400KV Sub-station, Sita Rampur, Post Dhanauri, Ramnagar Road, Kashipur (U.S. Nagar) Uttarakhand
6.	Contact Telephone Number (Land Line)	05947-274946
7.	E-mail Address of Tender Issuing Office	hs_hyanki@ptcul.org

Superintending Engineer
400KV Sub-station, PTCUL
Kashipur

NOT FOR SALE / FOR WEB BASED TENDERING ONLY

Bill of Quantity against Tender Specification No. 38/2012-13 for Providing and Fixing of Fired C- Wedge connectors for 132KV Switchyard at 132KV Sub-station, Kashipur

Sl.No.	Description of work	Unit	Qty.	Rate	Total
1	**Supply of 'Fired' C-Wedge connectors suitable for :-**				
(a)	Moose to Moose ACSR Conductors (as per specification attached)	No.	12		
(b)	Moose to Panther ACSR Conductors (as per specification attached)	No.	54		
(c)	Panther to Panther ACSR Conductors (as per specification attached)	No.	120		
				Total of Supply	
2	**Work**				
(a)	Removing of old clamps and fixing of new 'Fired' C-Wedge connectors for various type of conductors at 132KV Switchyard of 132KV Sub-station, Kashipur. Deteriorated jumpers shall be replaced with new one wherever required	No.	186		
				Total of Work	
				Total of Supply & Work	

Terms & Condition :

1. The work shall be carried out as per the direction and under supervision of the engineer Incharge

2 All the manpower and T&P required for the proper completion of the work shall be arranged by the Contractor.

3. The contractor shall be solely responsible for any kind of damage/injury to its material, tools or labourer during the complete course of agreement.

4. The contractor have to mention completion period of work, taxes and validity of rates.

Executive Engineer
132KV (O&M) Division, PTCUL
Kashipur

Superintending Engineer
400KV Sub-station
Kashipur

Signature of Tenderer
With Seal

Technical Specification: HT BOLTLESS CONNECTOR

1.0 SCOPE

This specification covers the design, manufacture, testing, supply and installation of HT Boltless connectors which are to be used in overhead bare conductors (11KV and above) for line jumpers, cut-points, T-connections, as equipment connectors to the equipments like isolators, circuit breakers, CTs, PTs and Busbars etc.....

2.0 APPLICABLE STANDARDS

Unless otherwise specified elsewhere in this specification, the rating as well as performance and testing of the HT overhead line connectors shall conform to the latest revisions available of standards as listed below,

1) ANSI C 119.4 - 2004
2) IS 5561/1970 - 1996

3.0 HT BOLTLESS CONNECTOR: Technical Features & Application Requirements

Followings are specific requirements/criteria for connector features

3.1 The connector shall confirm Electrically to Extra Heavy Duty, Class AA and Mechanically to Class 3 as per ANSI C 119.4. It also shall confirm to Indian Standard - IS 5561.

3.2 It consists of a spring 'C' member and a Wedge, both made from a special Aluminium alloy of high ductility and electrical conductivity. The 'C' member and a Wedge shall be factory coated with a conductive inhibitor containing abrasive particles to help in cleaning the contact surface during Installation.

3.3. The connector shall be useful for the conductor size of diameter more than 10mm such as RACOON, DOG, PANTHER and above.

3.4 During the assembly, the wedge shall be inserted at a speed of about 40 m/s using the specified tool. This is also needed to eliminate operator dependency. High-speed insertion with the specified inhibitor shall be very effective in abrading all sliding surfaces and in disrupting surface oxide film to generate large number of contact spot in the electrical surfaces.

3.5 Wedge locking nothing but Notch formation at the end of wedge shall be observed. This will ensure that in any case wedge will not loosen and come back.

3.6 During disassembly of connector, the same specified tool shall be used. Upon disassembly, the conductor & connector shall be reused at least once.

3.7 When connected, this tap shall provide a reliable electrical and mechanical connection for solid, stranded or compressed conductor combinations including AAC, AAAC and ACSR. These shall maintain constant force within the connection for the life of connector while compensating for thermal expansion or Creep.

3.8 The connectors shall have maximum contact surface with conductor and extremely low & stable contact resistance. This shall be with proven track record for Connector Performance.

4.0 CONNECTOR COMPONENTS

4.1 'C' Member

The C member shall be formed from extruded aluminium so that the grain (extrusion direction) runs perpendicular to the conductor (e.g. from C-groove end to C-groove end).

The material used shall be specially designed with tighter tolerances on the chemical composition to ensure consistency of the C-member production regarding dimensions and mechanical properties.

4.2 Wedge

The dimensions for the wedges are manufactured to close tolerances to ensure repeatability and reliability of the connection.

4.3 Inhibitor

An oxidation inhibitor shall be applied to the surface there by elimination of oxidation of metallic surface. The chemical composition of the inhibitor shall be synthetic and compatible with the rubber gloves used by the utilities. This inhibitor shall contain special Aluminium abrasive particles, optimized in size and quantity, to ensure repeatability and reliability of the electrical contact made in every connection.

4.4 Installation Tool

Tool is to be used for HT Boltless Connectors installations, due to which operator dependency & human errors in connector installations are eliminated.

The tool is having 4 moving parts: the ram, the power unit, the breech cap and the gas release knob. This tool shall ensure speed of wedge insertion at approx 40m/s which is vital requirement for connector performance.

4.5 Paddle

Paddles shall be used to connect Boltless Connector to equipment or any other suitable application. These paddles are made up of special Al Alloy.

5.0 FREEDOM FROM DEFECTS

5.1 The wedge type connectors shall be smooth and free from cavities, blowholes, and such other defects, which would likely cause them to be unsatisfactory in service.

5.2 The wedge type connectors shall be so designed and proportioned that they are capable of safely withstanding stresses to which they may be subjected (including those due to short circuit and climatic conditions) and that the effects of vibration both on conductor and connector are minimized.

They shall be designed, manufactured, and finished so as to avoid sharp radius of curvature, ridges and excrescences, which might lead to, localized pressure on or damage to the conductor in service.

6.0 TESTS

6.1 Type Tests

The following Type Tests shall be carried out as specified in respective standard.

As per ANSI C119.4

a) Current Cycle Test (CCT) or Current Cycle Submersion Test (CCST)

b) Mechanical test / Wire Pull-out Test

As per IS5561

1) Tensile Test.

2) Resistance Test

3) Temperature Rise Test.

4) Short Time Current Test.

- For Raccoon and Dog conductors: 25KA for 3 secs
- For higher sizes: as per electrical fault system requirements

5) Dimensional Check

6) Special Tests

- Corona RIV Test on one of size for following combination, "CONDUCTOR TO PADDLE" and "CONDUCTOR TO CONDUCTOR"
- Salt Spray Corrosion Test (Refer ANNEXTURE B, Clause B.1)
- Thermal Shock Test (Refer ANNEXTURE B, Clause B.2)

6.2 Test Certificates

The tenderer shall furnish detailed type test reports of the offered Wedge Type Connector for the tests as per this specification. All the above Type Tests shall be carried out as per the relevant standards at National or International labs, capable of carrying out specified tests. These type tests should have been carried out as per respective standards. Testing for family of connector shall be as per standard, if applicable.

6.3 Acceptance Tests

a) Tensile Test

b) Resistance Test c)

Dimensional check

The acceptance tests are to be carried out in presence of Company's representative. The supplier shall, therefore, give sufficient advance notice to the Company for arranging witnessing of the tests.

6.4 Routine Tests

a) Visual inspection.

b) Dimensional Check.

6.5 Testing Equipments/facilities

The supplier / tenderer shall clearly state as to what testing facilities are available in the works of manufacturer and whether the facilities are adequate to carry out type, routine and acceptance tests as per specification. The bidder shall provide the facilities to purchaser's representative for witnessing the tests in the manufacturer's works. If any test cannot be carried out at manufacturer's works reason should be clearly stated in the tender.

7.0 DRAWING

The bidders shall supply the material as per drawing approved by customer/testing lab.

8.0 GUARANTEED TECHNICAL PARTICULARS (GTP)

GTP of HT Boltless Connectors shall be as per Annexure A respectively. Any deviation w.r.to this specifications shall be clearly mentioned.

9.0 MARKING

Each C-member and wedge is marked with distinct identification code. This identification code is also marked on the packaging to ensure that the correct parts are used for the application. The installer can make a quick visual check before installing.

10.0 PACKING

For packing, suitable materials shall be used. The packing shall be fit to withstand rough handling during transit and storage at destination. The heads and threaded portion of fasteners fitting should be properly protected against damage. The gross weight of the packing shall not normally exceed 50 kg per box or case. All different fitting components shall be packed in different cases and shall be completed with minor accessories fitted in places. The tenderer should be approved the packing list before dispatching the material.

11.0 PERFORMANCE OF BOLTLESS CONNECTORS/MANUFACTURER

11.1 Bidder shall submit performance certificates/Purchase orders to prove satisfactory performance of connectors.

Technical Specification: HT BOLTLESS CONNECTOR

"Annexure A"

Guaranteed Technical Particulars (GTP) for HT Boltless Connectors

Sr. No.	Description	Unit	As per Tender Specifications	Bidder's offer
1	Name of the Manufacturer		-	
2	Place of Manufacture		-	
3	Tender Scope : Boltless Connector with tool as per specification		Yes	Yes/No
4	Applicable Standard/s		ANSI 119.4 & IS5561	
5	Material of Connector a. 'C' Member b. Wedge Member c. Inhibitor		As per Specification	Yes/No
6	Connector Suitable for		Mention Conductor Name, Type and Diameter	
7a	Tooling for Connector Installation		Yes	Yes/No
7b	Speed of Wedge during installation	m/s	40	
7c	Notch at the end of wedge after installation (Wedge Locking provision)		Yes	Yes/No
8	Rated Current	Amp	As per conductor rating	
9	Short Time Current Rating	kA	As per Specification	
10	Rated Tensile Strength	Kgf	As per IS	
11	Type Test Reports a. Current Cycle Test (Class AA) b. Mechanical Test (Class 3)		As per ANSI C 119.4	Yes/No
12	Type Test Reports		As per IS-5561	Yes/No
13	Dimension	mm	-	

"ANNEXTURE B"

B.1 Salt Spray Corrosion Test

Samples shall be subjected to 30 cycles (1cycle = 1day) salt spray corrosion test. Each daily exposure shall consist of,

a) 15 hours in 5% salt spray atmosphere
b) 1 hour at 100 ^{O}C in hot air circulating oven
c) 8 hours at room temperature

Resistance measurements shall be taken after every 5 cycles.

B.2 Thermal Shock Test

One cycle consists of 24 hours as follows and such 5 cycles shall be conducted

a) 2.5 Hours at 150 ^{O}C
b) 15 minutes at 0 ^{O}C water, immediately from the oven
c) 30 minutes at 150 ^{O}C
d) 20.75 hours at room temperature

Resistance measurements shall be taken after every cycle.

Passing Criteria:

1. In both test, there shall be no physical damage to connectors at the end.
2. Percentage change in resistance shall be less than 100% of initial value.

Note: Resistance shall be measured with 10A DC.