BOKARO POWER SUPPLY CO. (P) LTD.

HALL NO:- M-01, OLD ADMINISTRATIVE BUILDING,
ISPAT BHAVAN, BOKARO STEEL CITY – 827001

TENDER NOTICE NO.: BPSCL/CEO/P&C/08-09/PUR-083/NIT-139/ 5018 dated 28/06/08

TENDER DOCUMENT

NAME OF WORK: SUPPLY OF "PASSIVE FIRE PROTECTION MATERIALS" FOR CABLE GALLERIES (INCLUDING ITS INSTALLATION).

COST: 3000/-
(Rupees Three Thousand Only)

INDEX

Bokaro Power Supply Co. (P) Ltd.
(A Joint Venture of SAIL & DVC)
Hall No:- M-01, Old Administrative Building,
Ispat Bhavan, Bokaro Steel City – 827001
NOTICE INVITING TENDER

No: BPSCL/CEO/P&C/08-09/PUR-083/NIT-139/5018 Date:28/06/08

For and on behalf of BOKARO POWER SUPPLY COMPANY (P) LIMITED (BPSCL), sealed tenders in duplicate **in four bids**, i.e.

) Cost of tender documents (Part-I) b) Earnest Money Deposit (Part-II)
b) Techno-Commercial bid (Part-III) and d) Price bid (Part-IV)

are invited by the undersigned from reputed Tenderer for supply of 'Passive Fire Protection Materials for Cable Galleries including its installation' as per following specification:

Sl. No.	Material Description	Quantity
01	Fire Proof fire stop / barrier panels (for fire proof sealing of penetrations / openings of facilities like cables, trays, other associated utilities etc.)	**68 Sq. M**
02.	Fire Resistant sealant (for sealing of small gaps around cables, trays, other utilities etc.)	**33.20 Kg**
03.	Fire Retardant coating (for fire retardant coating of utilities like cables, etc.)	**2216.50 Kg**

Qualifying Requirements :

) The bidder should be original manufacturer of passive fire protection materials / safety materials / products, or such a manufacturer's authorized representative acting as principal in India, in case of foreign manufacturer. Proof of the same should be submitted
) The bidder should have carried out similar type of work in factories /plants of PSU/ Jt. Ventures of PSUs/ Govt. department/Reputed Pvt. Sector. Proof to be enclosed.
) The bidder / manufacturer's facility for Passive Fire Protection / Safety materials/products should have an ISO 9001 approval. Proof of the same should be submitted.
) The bidder / manufacturer's products shall be tested and approved by international testing and approval bodies like DNV, FM global, UL and LPC (Loss Prevention Council).
) The bidder / manufacturer's production facility should be audited every year and accredited. Audit certificates (or, self attested copies thereof) by an international accredited agency for the last (03) years should be submitted.
) All the necessary test certificates (from IEC, FM Global, UL,LPC or any other certifying agency) for the products quoted (or, self attested copies thereof) are to be submitted.
) The bidder shall give a declaration that he /it/they or the bidder's associated company is / are not under any blacklist / holiday list by any central / state government agencies or by the central / state PSU company.
) Latest FM Global audit report (not later than the previous year 2007) on product manufacturing facility of the manufacturing company (or authenticated copies thereof) is to be submitted.
) The Bidder must submit self attested copy(s) of completed P.O. / W.O. issued during last three years from the date of NIT for similar items supplied, or, similar work of Passive Fire Protection done in plant/factory of a factory / plant belonging to PSU's, or Joint Venture's of PSU's, Central / State Government Organisations or reputed Pvt. Organizations, of following value:
) One similar completed work costing at least Rs. 70,00,000/-.
) Two similar completed work costing of Rs. 35,00,000/- each
) Average annual turnover of the company of the last three financial years should not be less then 1.0 Crore.

Other Information :	
Cost of Tender Paper (non refundable)	**Rs. 3000/- (Rupees Three Thousand Only)**
Bid Opening Date & Time (Part-A)	**08/08/2008 at 15:30 Hrs.**

General Terms & Conditions:

-) Cost of the tender documents (non-refundable) shall be deposited in the form of **Demand Draft, drawn in favour of Bokaro Power Supply Company (Pvt.) Limited on any Indian Nationalised / Scheduled Bank, payable at Bokaro Steel City, India**.
-) Tender shall be enclosed with EMD of Rs. 1,75,000/- (Rupees One Lakh Seventy Five Thousand Only) in shape of DD/Bank Guarantee drawn on any PSU Bank in favour of Bokaro Power Supply Company (P) Ltd., Payable at Bokaro Steel City. EMD exemptions wherever applicable may be availed of by Government organizations/ SSI units against entitlement document.
-) Tender shall be received up to **03.00 PM on 08/08/2008.**
-) The undersigned reserves the rights to either reject any/all the tenders without assigning any reason thereof & also reserves the right to alter the qualifying requirements.
-) Tender papers have to be downloaded only from our website www.bpscl.in.

For and behalf of
Bokaro Power Supply Co.(P) Ltd.
Sd/-
(Rakesh Ranjan)
Superintending Engineer (P&C)

1.00 Conditions & Rules to be observed in submitting Tenders

0.00 Manner of Submission of the Tender

The tender shall be divided into 04 parts. **On 08/08/08, Part- I** of the tender will be opened first. Part-II & Part-III envelope will be opened only of those bidders who qualify in eligibility criteria. The tender paper may be arranged as follows:-

a) Part - I : Cost of Tender document and documents in support of eligibility criteria,

b) Part-II : Earnest Money Deposit,

c) Part- III : Technical & Commercial Offer in duplicate and

d) Part – IV : Price Bid in duplicate

0.00 Tender Validity Period

The tender shall be valid for 90 (Ninety) days from the date of opening.

0.02 General

i) The bidder shall complete the Bid Proposal in all respect by inserting correct applicable 'data' in the 'blank box' against each item/Sl. No. positively.

ii) The tender rates shall be written in English, in ink both words and figures. In the case of any discrepancy between the words & figures of the rates quoted, the rates expressed in words shall be taken as correct. In the case of discrepancy in the Unit Rate and Amount, Unit Rate will govern. Erasures, changes and corrections of whatever type/nature shall be attested by the tenderer. The rates amount shall be written in Rupees and Paise only. The rates in words shall be written in one single line only without admitting any interpolations.

iii) All pages of the tender documents, conditions, specifications, drawings etc. shall be initialed at the lower left hand corner and signed wherever required by the tenderer before submission of the tender.

iv) If the intending tenderers are a Firm or Company, then they shall in the forwarding letter mention the number and names of all the partners shall sign before submitting the same unless the Power of Attorney holder has specifically been authorized in this respect.

v) If any tenderer withdraws his tender before its acceptance or refuses within a reasonable time without giving any satisfactory and acceptable explanation thereof, the tenderer shall be disqualified for making any tender of the BPSCL for a minimum period of one year and the Earnest Money will be forfeited.

vi) DGS&D rates wherever available for the above item be quoted and concerned documents such as DGS&D certification and approved lists be attached with the quotation.

vii) EMD exceptions wherever applicable may be availed of by Government organisations / SSI units against entitlement document.

viii) Proprietary Article Certificate (PAC) and Price Reasonable Certificate (PRC) stating that the prices charged are reasonable and the same being charged to all the Govt./Semi govt. organisations/ PSUs including D.G.S.&D. where applicable. Where agent commission is involved, the same in percentage invariably be indicated.

ix) Mode of deposit of Earnest Money:

a) Every tender must accompany 'Earnest Money' in the shape of Demand Draft/ Bank Guarantee drawn on any nationalized Bank in favour of Bokaro Power Supply Company (P) Ltd., payable at Bokaro Steel City.

b) Earnest Money will be refunded to the tenderer after finalisation of tender and no interest will be paid for the same.

c) Public Sector Undertakings/ Govt. Undertakings/ SSI units are exempted from depositing Earnest Money against entitlement documents.

d) The amount of Earnest Money will be adjusted against Security Deposit only in case of successful Tenderer.

x) In case the date of tender opening happens to be holiday, the tender will be opened on the next working day at same time.

xi) **Any conditional offer or offer having deviations from our specification & instruction sheets is liable to be rejected.**

xii) The undersigned reserves the right either to reject any/all the tenders without assigning any reason thereof.

For & behalf of
Bokaro Power Supply Company (Pvt.) Limited
Sd/-
(Rakesh Ranjan)
Superintending Engineer (P&C)

2.00 Terms and Conditions

2.01 Specification, quantity, unit rate, taxes, duties, freight, insurance, packaging, forwarding etc. should be mentioned separately and clearly.

2.02 Offer is to either type written or by handwritten and is in no case partly type written and partly hand written. No corrections, overtyping shall be permitted. If so, the same shall be summarily rejected.

2.03 The Tenderer shall quote the unit rate in figures as well as in words. The rates quoted shall be inclusive of, in all cases, costs, taxes etc. It should be in the format given in PART 'B'

2.04 Tenderers shall deposit Earnest Money amount of Rs. 1,75,000/- (Rupees One Lakh Seventy Five Thousand Only) in the form of DD/Bank Guarantee only drawn in favour of Bokaro Power Supply Company (P) Limited payable at Bokaro Steel City along with their quotation.

2.05 Tenders shall be accompanied by a copy of latest IT Return submitted, Commercial Tax Clearance Certificate, Sales Tax Clearance Certificate of the Individual/Party/Firm submitting the tender.

2.06 Bank details mentioning account number, bank name, city, branch name and branch code should be mentioned in the offer.

2.07 Paying authority – Jr. Manager (F&A), BPSCL but bill in triplicate duly receipted on the revenue stamp with a copy of MTC, TC & GC, Packing list etc. be submitted to Consignee : In-Charge (Stores), Power Plant, Bokaro Power Supply Company (P) Limited for processing of the same.

2.08 Tenderers shall quote their firm rates and no negotiations will be held except with the lowest tenderer, if required.

2.09 Supplies must be strictly in accordance with material specifications. Suppliers will be responsible for deviation whatsoever.

2.10 a) The supplier will be held responsible for the stores not being sufficiently and properly packed at his expenses for the transport by rail, road and sea; so as to ensure them being free from loss or injury at their destination. This will apply Ex-Godown office also.

b) Each bale or package delivered under our order shall at the expense of the supplier be distinctly marked with description and quantity of contents with the consignee's name and address with gross weight with the name of supplier and with a distinctive number or mark which is also to be shown for the purpose of identification of the suppliers packing account.

c) Each bale or package shall contain a packing note quoting the number and date of our order showing its contents in detail.

2.11 In accepting the order you are understood to accept to all responsibilities for and infringement in registered design, trademark, patent rights etc.

2.12 Arrangements for insurance, where necessary, will be made by us. The name of the insurance Company shall be National Insurance Company. If insurance be arranged by supplier without our prior written approval, expenses will not be met by us.

2.13 Where a claim of Sales Tax is preferred and admitted, the supplier must satisfy that he is a registered dealer under Sales Tax Act and Possesses a Certificate of Registration in the firms name in which the supply is made and shall in proof thereof, while submitting bills for payment, furnish the number date and other particulars of such Certificate.

2.14 **Security Deposit :** The successful tenderer will have to deposit as security, for satisfactory execution of the order, an amount equivalent to 10% of the total value of the order in any form :- Bank Guarantee (as per BPSCL format), Bank Draft/ Bankers Cheque in Favour of Bokaro Power Supply Company (P) Ltd., B.S. City.

The expression satisfactory execution of the order shall mean fulfillment of all obligation arising out of and the guarantees stipulated in the contract. In default at satisfactory execution of the order the security deposit shall be forfeited to the BPSCL.

Any penalty for which the successful tenderer shall be found liable or any liquidated damages which shall be payable to the BPSCL in terms of the Purchase Order/ Contract, shall also be recoverable by the BPSCL from the Security deposit. If such security deposit will not be adequate for the purpose of liquidating the amount of penalty and/or damages as contemplated, the amount in excess thereof shall be deducted from any sum or sums which may be due or may become due to the successful tenderer from the BPSCL on any account whatsoever.

Notwithstanding what has been stated above if the successful tenderer shall have duly performed all his obligation under and the guarantees stipulated in the purchase order / contract and observe all the terms and conditions thereof and no penalty shall have been recoverable from him and / or the BPSCL shall not have suffered any damages whatsoever, then security deposit shall be refunded, on receipt of a certificate from the consignee that there is no claim against the Successful tenderer under the Purchase Order / Contract.

iii) The Parties should clearly indicate their prices firm in all respects till execution of the order and on door delivery basis by Bank approved road transport to BPSCL Stores.

iv) In case of asking any variation on any account whether raw materials or sales tax or excise duty or transportation etc. will not by treated as firm price on that account and hence parties should state everything clearly.

Delivery Required: Earliest possible delivery date may please be quoted.

Note : Without any specific mention regarding Sales Tax, packing and forwarding charges, they would be taken as included in the quoted prices and no claim for these would be entertained latter.

Maker's name brand, if any and Country of Origin should be quoted, otherwise tender will be rejected.

Special Instruction: Tenders must signify their willingness to submit security deposit. Tender will be opened on **08/08/2008 at 03.30 PM.** If it is declared a holiday by BPSCL then in the next working day in the presence of Tenderer's Authorized Representatives, who wish to be present.

For & behalf of
Bokaro Power Supply Company (Pvt.) Limited
Sd/-
(Rakesh Ranjan)
Superintending Engineer (P&C)

3.00 Instruction Sheet

3.00 Tenderer / Supplier must have executed the supply of the material as indicated in the NIT.

3.00 Tenderer must agree to furnish the following:
a) All the necessary Test Certificate as indicated in NIT
b) Guarantee Certificate

3.00 Tenderer must agree with Price Basis F.O.R. BPSCL Stores.

3.00 Tenderer must agree with Payment terms of 100% against GRN. In case of payment to be made through dispatch documents all Bank Charges shall be borne by Supplier.

3.00 Tenderer must agree with validity of offer for 90 days from date of opening of Techno-Commercial bid.

3.00 Delivery:-

) Timely delivery and completion of the job is the essence of the contract.

) In the event of supply not being effected within the contractual delivery schedule given in the order, liquidated damages @1% of the value of the materials with taxes and duties, per month of delay or part thereof, subject to a maximum of 10% is recoverable from the supplier without prejudice to the right of BPSCL to procure the balance material at the risk & cost of the supplier.

) In the event of failure to supply the goods, or part thereof, within the contracted delivery period, BPSCL reserves the right to cancel the contract part thereof, and if so desired, to purchase the goods from alternate source at the risk and cost of the defaulting supplier.

3.00 Tenderer must agree to give guarantee of this product against defect due to poor workmanship and bad materials and unsatisfactory performance for a period of 12 months from the date of installation and 18 months from the date of supply which ever is earlier.

For & on behalf of
Bokaro Power Supply Company (Pvt.) Limited

Sd/-
(Rakesh Ranjan)
Superintending Engineer (P&C)

Section - IV

1.0 Description of Material

Sl. No.	Material Description	Quantity	Cat No.
01	Fire Proof fire stop / barrier panels (for fire proof sealing of penetrations / openings of facilities like cables, trays, other associated utilities etc.)	**68 Sq. M**	**0000 6111 001**
02.	Fire Resistant sealant (for sealing of small gaps around cables, trays, other utilities etc.)	**33.20 Kg**	**0000 6111 002**
03.	Fire Retardant coating (for fire retardant coating of utilities like cables, etc.)	**2216.50 Kg**	**0000 6111 003**

NOTES:

0. The bidding agency should be a manufacturer of Passive Fire Protection materials / products, or it's authorized agent.
0. The scope of the supply of the subject Passive Fire Protection items does not only involve delivery of these items, but also envisages design, manufacture, supply, installation (including supervision) of the said items for passive fire protection of cables of Power Plant, Phase – I, (in the specific areas given in Annexure – II), as per the details given in Annexure – I. All these should be done **free of cost** by the bidder agency (or its authorized agent).
0. The details of the areas (cable galleries) where the items are to be installed are given in Annexure – II attached herewith.
0. Special conditions to be followed during supply & installation of the subject items are given in Annexure – III.
0. The technical requirements of the items are attached herewith in Annexure – I
0. The relevant standards & norms to which the items must conform are given in Annexure – I.
0. The test / approval certificates (or properly authenticated copies thereof) to be submitted are given in Annexure – I.
0. The bids are to be accompanied with the certificates (or properly authenticated copies thereof) and declarations as detailed in Annexure – I, otherwise the bids will be summarily rejected.
0. Guarantee certificates for the materials & certificates for their shelf-life are also to be submitted by the bidder as detailed in Annexure – I, barring which the bids will be summarily rejected.

Annexure-I

TECHNICAL REQUIREMENTS OF THE MATERIALS OF PASSIVE FIRE PROTECTION

SCOPE:

The scope of the supply of the subject passive fire protection items does not only involve delivery of the subject items, but also envisages design, manufacture, supply, installation (including supervision) of the said items for Passive Fire Protection of Cables of Power Plant, Phase – I, (in the specific areas given in Annexure – II) having the following steps:

( ) Fire Proof sealing of penetration / openings, etc of utilities like cables, trays, other associated objects, etc, by fire stops / barriers panels, sealing of gaps & effective fire retardant cable coating immediately after the panels.

( ) Fire Retardant cable coating, in running cables, apart from the same required for effective fire retardant sealing of penetration / openings as required in above step.

The scope of supply also includes providing all resources like men, materials, consumables, equipments, plants, services, & all other items required to complete successful installation / application of the designated fire protection materials / products in accordance with the details given in this document.

(A) FIRE PROOF SEALING OF CABLE PENETRATION / OPENING BY FIRE STOPS / BARRIERS PANELS:

The following areas are to be covered for effective fire proof sealing of penetrations / openings of cables / trays / other associated objects at suitable optimum locations, sealing of small gaps around the penetrating utility like cables, trays, etc. by means of effective FR sealants, and effective fire retardant coatings in accordance with the norms & specifications of the associated passive fire protection products & relevant standards {all cables of minimum one (01) Mtr. Length from the installed FR panels should be coated with FR coating}:

0. Cable gallery under control room MCB.
0. Cable gallery under control room ECR – II.
0. Cable gallery under control room GCB – I, II, & CDF Room.
0. Cable gallery under control room UCR – I & II, & MCC Rooms of CPP.
0. Cable gallery under TG # 1, 2, 3, 6, 7, 8 basements of TPP & CPP.
0. Cable gallery under 11KV Switch Gear of TPP.
0. Cable gallery under 11KV Switch Gear & LT Switch Gear of CPP.
0. Cable tunnels from 11KV Cable gallery to 6.6KV Cable gallery of TPP & CPP.
0. Cable gallery under 6.6KV Switch Gear of TPP & CPP.
0. Cable gallery under Ball Mill basement of TPP.
0. Cable gallery under Bowl Mill basement of CPP.
0. Cable tunnels under ID Fan basement of TPP & CPP.

(B) <u>FIRE RETARDANT CABLE COATING</u>:

Effective fire retardant (FR) coatings of cables are to be done by means of fire stitches, as per the relevant standards and norms (and also the specifications of the associated products) applied for each specific case of the areas given below:

1. Cable gallery under control room MCB.
2. Cable gallery under control room ECR – II.
3. Cable gallery under control room GCB – I, II, & CDF Room.
4. Cable gallery under control room UCR – I, II, & MCC Rooms of CPP.
5. Cable gallery under TG # 1, 2, 3, 6, 7, 8 basements of TPP & CPP.

(A1) TECHNICAL SPECIFICATIONS FOR FIRE STOP / BARRIER PANELS FOR PNETRATIONS / OPENINGS OF UTILITIES LIKE CABLES, OTHER ASSOCIATED OBJECTS.

The fire stops / barriers shall satisfy the following technical requirements:

1. The fire retardant sealing of cable penetration / openings of any size in walls or floors shall be done by providing properly installed fire stops / barriers which shall have a smoketight & gastight fire resistant sealing around penetrating cables / cable-trays / ducts.
2. Fire stops / barriers shall have a fire rating of at least two (02) hours.. The products must be tested, approved & further listed in UL, NFPA & FM Global (tested as per UL 1479, BS 476 p-20, ASTM E814, DIN 4102 standards. Valid Test Certificates (or, properly authenticated copies thereof), issued within last five (05) years, will have to be submitted along with the bids, barring which the bids will be summarily rejected.
3. Fire stops / barriers shall have valid approvals of the Fire Endurance Test, Hose Stream Test, & Temperature Measurement of non-flaming side as per BS 476 p20 – Fire Test on building materials & structures, part 20, Method for determinations of fire resistance of tests of building constructions, & UL 1479. UL, LPC Test & Approval Certificates (or, properly authenticated copies thereof), issued within last five (05) years, will have to be submitted along with the bids, barring which the bids will be summarily rejected.
4. The fire stops / barriers shall also conform to the incombustibility test carried out in accordance with ISO 834. LPC Test and Approval Certificate (or, authenticated copies) shall be submitted.
5. It should be possible to retrofit additional of new cables, etc, without damage / without removal of the fire protection system anytime after installation. Openings shall be made by soft drilling / sharp knife to accommodate new penetrating items i.e. cables, pipes etc.
6. Fire stopping / barrier system shall be made Water & Weather Resistant using fire retardant coating when and where required, especially wherever exposed to humid & damp (or other detrimental type of) environment, etc.
7. The design shall be such as to allow pre and post inspection of the materials used during and after execution of installation activities. **<u>UL, FM & BS Approved drawings (or authenticated copies) shall be made available.</u>**
8. The fire stop / barrier system shall **<u>not adversely affect the ampacity (Current carrying capacity) of the protected cables by more than two per cent (02%).</u>** UL,

FM, LPC Test certificates (or, authenticated copies) by International Third party shall be made available in this regard.

0. The fire stops / barriers shall be completely gas and smoke tight besides being efficient fire seals.
0. The fire stops / barriers shall not contain flammable materials or solvents, which are toxic or release toxic gases during exposure to fire.
0. The materials used in the fire barrier / stop system shall have no shrinkage or cracking after prolonged use. The encasing panels shall not contain any material, which is prone to ageing or getting adversely affected by moisture, adverse weather conditions, or prone to damage by white ants / termites and rodents.
0. Asbestos shall not be used in the construction of fire stop / barrier materials.
0. The materials used in the system shall be non-hygroscopic.
0. The fire stop / barrier shall have a **life expectancy of at least thirty (30) years**. UL, FM, LPC Test certificates (or authenticated copies) shall be made available in this regard.
0. The system shall retain its integrity and perform satisfactorily even after remaining in water for long duration.
0. The materials used in the system shall not be corrosive but shall be anti-rodent.
0. The system should be non-hazardous and should not emit any excess of smoke under exposure to fire.
0. The system shall have compatibility with FRLS PVC, PVC neoprene, silicone rubber sheathing materials, or similar materials used in manufacturing of cables.
0. The system shall be resistant to chemicals.
0. The material used for fire stops / barriers shall have high oxygen index (greater than 60%).
0. The shelf life of all materials, which form a part of supply of the fire stops / barriers, shall be indicated. All material shall be new, freshly manufactured and of assured good quality.
0. If cutout is circular in nature, round and spongy type of plug shall be used.
0. The system including reinforcing elements shall be capable of withstanding mechanical loads such as foot traffic, drop loads, vibrations, etc, through out the service life of approximately thirty (30) years.
0. All materials used for the entire passive fire protection system shall be freshly manufactured & have shelf life of at least twelve (12) months (at room temperature) from the date of receipt at our plant site.
0. The agency should supply and install fire retardant stop / barrier panels made of the following, (or, equivalent panels): High Density Mineral Wool Panels coated with Fire Retardant coating used in combination with suitable Sealant to close small gaps around the penetrating utility like cables, trays, etc. The technical specifications of such component items are given below.

(A2) TECHNICAL SPECIFICATIONS OF HIGH DENSITY MINERAL WOOL PANELS:

9. HD Mineral Density shall be greater than 150 Kg / Cu.M.
9. HD Mineral Wool Building Materials Fire Rating A1 shall be as per DIN EN 13501-1.
9. HD Mineral Wool Melting Point of Rock Fiber shall be greater than 1000 Deg C, as per DIN 4102-17.
9. HD mineral Wool Specific Heat Capacity Cp shall be 0.84 KJ / (KGK).
9. HD Mineral Wool Thermal Conductivity shall be 0.040 W / (mk) as per DIN EN 13162.

9. HD Mineral Wool Compressive Strength at 10% compression shall be greater than 70KPa as per DIN 826.
9. HD Mineral Wool Print Load Resistance at 5m deformation Fp shall be greater than 800N as per DIN EN 12430.

(A3) TECHNICAL SPECIFICATION FOR FIRE RESISTANT SEALANT:

0. Sealant shall consist of tightly woven, durable fibre-glass cloth, consisting of water-based thermoplastic resins, inorganic incombustable fibers, fillers, pigments, various flame retardant chemicals and water insoluble expansion agents.
0. Sealant shall not contain asbestos or any other toxic substances.
0. Sealant shall not have any adverse effect on human skin or general health in any way either during application, or, while coming in contact with flame.
0. Sealant shall be odourless while dry & shall have negligible odour while wet.
0. Sealant shall be resistant to moisture or humidity, and shall be suitable for exterior application, and shall have no flash point.
0. Sealant should have following Reaction to fire:

   At 130 Deg.C: glueing up and sticking together;
   At 280 Deg.C: begins to expand up to 45%;
   At 800 Deg.C: becomes "ceramic wall".
0. Sealant shall be tested successfully to UL / FM / DIN / IEC / BS standards. Valid test certificates shall be submitted.

(B1) TECHNICAL SPECIFICATION FOR FIRE RETARDANT COATING FOR CABLES & OTHER UTILITIES:

0. Fire Retardant coatings on cables & panels etc, shall retard fire and shall arrest its propagation in horizontal and vertical directions and tested to FM 3971, IEC 332 – 3, BS 476 (P.6 & P.7) & DIN 4102, IEC 331, CEI 20-22 (Fire survival) standards, test and approvals certificates shall be submitted.
0. Fire Retardant coatings shall prevent propagation of fire arising from internal short circuit of cables and fire arising due to external sources, tested as per DIN 4102, BS 476 p.6 & p.7 & CEI 20-22 standards, test and approvals certificates shall be submitted.
0. Fire Retardant coatings shall be tested and approved for its Flammability, Di-Electric Strength, Effect of Salt water exposure, as per FM 3971 standard (Factory Mutual Approvals), test certificates shall be submitted.
0. Fire Retardant coatings shall **not adversely affect the Ampacity, i.e., Current Carrying Capacity of protected cables by more than two per cent (02%)**, and tests for this shall be done as per FM 3971 standard (Factory Mutual Approvals), relevant valid International Third Party test and approval certificates shall be submitted.
0. LOI (Limited Value Index) value of Fire Retardant coatings shall be more than 95% (Tested as per ASTM D2863), test certificates shall be submitted.
0. Fire Retardant coating shall be Water & Weather Resistant by itself after cure, relevant Independent Third Party Twenty Five (25) Year Test Certificate shall be submitted.
0. Fire Retardant coatings shall also be approved by SOLAS, DNV, Lloyds Register, American Bureau of shipping, Bureau Veritas. Relevant certificates shall be submitted.
0. Fire Retardant coatings should not be affected even after prolonged exposure to high humidity, moisture, tap or rain water, UV radiation, outdoor environment, etc, which is to be verified by a twenty five (25) year test report submitted.

9. Dermatology test certificate for Fire Retardant coatings shall be submitted. Certificates testifying no other health hazards of the product shall also be submitted.
10. Fire Retardant coatings shall be tough, permanent, non-intumescent, water based, suitable for moisture & damp areas and lasting to the lifetime of the cables.
11. Fire Retardant coatings shall have good mechanical resistance and human health compatibility during application and also during its exposure to fire.
12. Fire Retardant coatings shall be compatible with various chemicals commonly used in industry. Chemical compatibility chart shall be submitted.
13. Fire Retardant coatings applied on cables after curing shall be flexible enough to sustain movements and bending without any cracks or peeling-off of the coatings.
14. Fire Retardant coatings shall have thermal conductivity higher than that of the cable-insulation under normal working conditions.
15. Fire Retardant coatings shall be easily spray-able or brush-able (Installation Procedure shall be supplied).
16. Fire Retardant coatings must not contain any organic solvents; coatings shall be compatible with cable jackets.
17. Fire Retardant coatings shall not require application of any solvents, or chemical cleaning of cables, etc, prior to its application.
18. Fire Retardant coatings shall not emit toxic gases or fumes during its application, or, when exposed to fire.
19. Fire Retardant coatings shall be totally free from asbestos or any of its derivatives. It shall also be free from Antimony and any materials that is identified as carcinogenic.
20. Fire Retardant coatings shall be further listed in FM, UL, or LPC directory for more than 10 years continuously.
21. Fire Retardant coatings shall have a **life expectancy of at least twenty five (25) years**, which should be supported by UL, FM, LPC test certificates (or authenticated copies).

(C) TEST REPORTS / APPROVAL CERTIFICATES TO BE SUBMITTED

(C1) TEST REPORTS / APPROVAL CERTIFICATES TO BE SUBMITTED FOR FIRE STOPS / BARRIERS PANELS:

Test reports, not more than five (05) years old from date of notice inviting tender enquiry / **Approval certificates** for following tests (or, properly authenticated copies of such certificates) shall be submitted:

a) UL, FM, LPC, DIN or NFPA Test & Approval certificates
b) Fire Endurance, Hose Stream Test and Temp measurement on non flaming side.
c) Impact Test
d) Water Absorption Test
e) Ageing Test
f) Fire Rating Test **(Incombustibility Test) as per ISO 834.**

(C2) TEST REPORTS / APPROVAL CERTIFICATES TO BE SUBMITTED FOR FIRE RETARDANT COATINGS:

a) FM Global Approval USA as per FM 3971 Test and Approval Certificate, or, NFPA Test Approval Certificate.

b) Latest FM Global Audit Report (Previous Year) on product manufacturing facility.
c) LPC Test Certificate on Flame Spread as per BS 476p.7 (Flame Spread) & as per BS 476 p.6 (Fire Spread)
d) Flame Propagation on coated cables Test Certificate as per IEC 332-3
e) Flame propagation on coated cables Test Certificate as per DIN 4102 p.1B1
f) Circuit Integrity Test of coated cables as per IEC 331 (With coatings applied on cables & Without coatings on cables)
g) 100% LOI (Limited Oxygen Index) Test Certificate Acc to ASTM D2863
h) DNV Test Certificate
i) Germanischer Lloyd Test & Approval Certificate
j) Lloyds Register Test & Approval Certificate
k) TUV Test & Approval Certificate

(C3) TEST REPORTS / APPROVAL CERTIFICATES TO BE SUBMITTED FOR FIRE RESISTANT SEALANT:

As per UL / FM Standards & norms for fire retardant sealant.

(C4) WRITTEN DECLARATION TO BE SUBMITTED ALONGWITH THE TEST CERTIFICATES:

A written declaration, duly signed by the authorized signatory of the agency, is also to be submitted, detailing whether the desired technical specifications (listed above) of the fire protection materials are matching with those of the products to be supplied, point by point, or not. A list of deviations, with reasons, if any, should also be submitted along with it. In case of any unjustified deviations, the associated products are liable to be rejected. The judgment of the engineer-in-charge of BPSCL will be final & abiding in this regard.

(C5) IMPORTANT NOTE:

The **Testing Laboratory or Testing Institute** testing and issuing the subsequent test certificates shall be approved by the standard governing body, i.e., the testing laboratory / institute testing & issuing test certificates as per UL / IEC standards, should have written permission and approval from UL (Underwriter Laboratories) / IEC (International Electro Technical Commission) to conduct the tests and issue the test certificates. Properly authenticated (duly self attested) copy of the said approval shall be submitted. If required, the said approval shall be produced in original upon request.

Test certificates / approval certificates issued by non approved test labs / institutes will not be acceptable and the associated products will be summarily rejected in such a case.

Annexure II

Areas (Cable Galleries) where the Passive Fire Protection Materials / Products are to be installed.

( ) FIRE PROOF SEALING OF CABLE PENETRATION / OPENING BY FIRE STOPS / BARRIERS PANELS:

The following areas are to be covered for effective fire proof sealing of penetrations / openings of cables / trays / other associated objects at suitable optimum locations, sealing of small gaps around the penetrating utility like cables, trays, etc. by means of effective FR sealants, and effective fire retardant coatings in accordance with the norms & specifications of the associated passive fire products & relevant standards {all cables of minimum one (01) Mtr. Length from the installed FR panels should be coated with FR coating}:

0. Cable gallery under control room MCB:
   Gallery Size 18.5M x 15M x 3.5M.

Length of Cable Tray	:	15 M
Width of Cable Tray	:	400 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	4, 7, 6 & 11
No of Cable Tray's Row	:	4

   Cable occupancy - 60%
   Approximate Area to be sealed by FR panels -7.3 Sq Mtr

0. Cable gallery under control room ECR – II:
   (x) Gallery No. 1, Size 15M x 18M x 4M
   (x) Gallery No. 2, Size 10M x 6M x 4M (entry area)

Length of Cable Tray	:	15 M
Width of Cable Tray	:	430 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	4 & 9
No of Cable Tray's Row	:	2

   In this cable gallery four cable trays is on the floor and four cable trays is from roof side.

   Cable occupancy : 90%
   Approximate area to be sealed by FR panels : 4.1 Sq Mtr

0. Cable gallery under control room GCB – I, II, & CDF Room:
   (v) Gallery No. 1, Size 42M x 7.5M x 3.5M
   (v) Gallery No. 2, Size 36M x 7.5M x 3.5M
   (v) Gallery No. 3, Size 19M x 7.5M x 3.5M & 11M x 2M x 3.5M
   (v) Gallery No. 4, Size 11M x 5M x 3.5M
   (v) Gallery No. 5 between TPP & CPP, Size 6M x 7.5M x 3.5M.

For Gallery No. (i) to (iv):-

Length of Cable Tray	:	100 M
Width of Cable Tray	:	350 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	6,3,3,7,3,10 & 6.

No of Cable Tray's Row - 5

i.e, each row has 6,3,3,7,3,10 & 6.cable trays stacked in five (5) rows.
So no. of cable tray is sixteen.

For gallery No. (v):-

Length of Cable Tray	:	6 M
Width of Cable Tray	:	480 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	4
No of Cable Tray's Row	:	3

i.e, Each row has four (4) cable stacked in three (3) row.
So no. of cable tray is fifteen.

Cable occupancy : 90%

Approximate area to be sealed by FR panels : 2.3 Sq Mtr

0. Cable gallery under control room UCR – I & II, & MCC Rooms of CPP:
   ( ) Gallery No. 1, Size 15M x 8M x 3.5M
   ( ) Gallery No. 2, Size 15M x 9M x 3.5M
   ( ) Gallery No. 3, Size 8.5M x 9M x 3.5M
   ( ) Gallery No. 4, Size 21.5M x 9M x 3.5M
   ( ) Gallery No. 5, Size 13M x 8M x 3.5M
   ( ) Gallery No. 6, Size 18M x 8M x 3.5M
   ( ) Gallery No. 7, Size 23.5M x 9M x 3.5M.

Length of Cable Tray	:	110 M
Width of Cable Tray	:	480 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	8 & 3
No of Cable Tray's Row	:	5

i.e. There are eight (8) cable stacked in first four (4) row and in one row three cables tray stacked.
So no. of cable tray is thirty five

Cable occupancy : 100%

Approximate area to be sealed by FR panels -1.6 Sq Mtr

0. Cable gallery under TG # 1, 2, 3, 6, 7, 8 basements of TPP & CPP:
( ) Gallery No. 1, Size 24M x 14M x 4M
( ) Gallery No. 2, Size 24M x 14M x 4M
( ) Gallery No. 3, Size 24M x 14M x 4M
( ) Gallery No. 4, Size 24M x 14M x 4M
( ) Gallery No. 5, Size 24M x 14M x 4M
( ) Gallery No. 6, Size 24M x 14M x 4M

For Gallery No. 1:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	2
No of Cable Tray's Row	:	3

i.e, Each row has eight (8) cable stacked in two (2) row.
So no. of cable tray is six.

For Gallery No. 2:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No Of Cable Tray Stacked	:	6 & 8
No Of Cable Tray's Row	:	2

i.e, Each row has eight (8) cable stacked in two (2) row.
So no. of cable tray is sixteen.

For Gallery No. 3:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height f Cable Tray	:	60 mm
No Of Cable Tray Stacked	:	2
No Of Cable Tray's Row	:	2

For Gallery No. 4:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm

For Gallery No. 5:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm

For Gallery No. 6:-

Length of Cable Tray	:	24 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm

Cable occupancy - 100%
Approximate area to be sealed by FR panels -2.5 Sq Mtr

0. Cable gallery under 11KV Switch Gear of TPP:

( ) Gallery No. 1, two compartments together,
Size 90M x 5M x 2.5M (below 11KV section 1, 2 & 3)

( )Gallery No. 2, two compartments together, Size 90M x 3.5M x 2.5 (below 11KV section 1, 2 & 3)

( ) Gallery No. 3, two compartments together, Size 90M x 3.5M x 3M (below 11KV section 1, 2 &3)

( ) Gallery No. 4, Size 6M x 3.5M x 3.5M (entry to gallery no. 1)

( )Gallery No. 5, Size 6M x 3.5M x 2.5M (entry to gallery no. 2)

( )Gallery No. 6, Size 6M x 3.5M x 2.5M (entry to gallery no. 2)

( )Gallery No. 7, Size 6M x 4M x 3.5M (entry to gallery no. 3)

( )Gallery No. 8, Size 12M x 3.5M x 3.5M (common area no. 1)

( )Gallery No. 9, Size 12M x 6.5M x 3.5M (common area no. 2)

For Gallery No. 1:-

Length of Cable Tray	:	80 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	4
No of Cable Tray's Row	:	3

i.e, Each row has four (4) cable stacked in three (3) row.
So no. of cable tray is twelve.

For Gallery No. 2:-

Length of Cable Tray	:	80 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	9
No of Cable Tray's Row	:	2

i.e., each row has nine (9) cable stacked in two (2) row.
So no. of cable tray is eighteen.

For Gallery No. 3:-

Length of Cable Tray	:	80 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	6 & 8
No of Cable Tray's Row	:	2

i.e, There are fourteen (14) cable stacked in two (2) row.
So no. of cable tray is fourteen.

For Gallery No. 4, 5, & 6:-

Length of Cable Tray	:	15 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	5, 5 & 8
No of Cable Tray's Row	:	2

i.e, Each row has eight (8) cable stacked in two (2) row.
So no. of cable tray is eighteen.

For Gallery No. 8 & 9 :-

Length of Cable Tray	:	65 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	5 & 9
No of Cable Tray's Row	:	2

i.e, Each row has thirty (30) cable stacked in two (2) row.
So no. of cable tray is fourteen.

Cable occupancy	:	100%

Approximate area to be sealed by FR panels : 25 Sq Mtr

0. Cable gallery under 11KV Switch Gear & LT Switch Gear of CPP:
   ( ) Gallery No. 1, Size 19M x 11.5M x 3M (below 11KV section 4)
   ( ) Gallery No. 2, Size 36M x 11.5M x 3M (below CPP LT S/G hall 1)
   ( ) Gallery No. 3, Size 40M x 11.5M x 3M (below CPP LT S/G hall 2).
   ( ) Gallery No. 4, Size 11.5M x 11M x 2.5M (between 11KV basements of TPP & CPP)
   ( ) Gallery No. 5, Size 18.5M x 20M x 3M (entry area)

For Gallery No. 1:-

Length of Cable Tray	:	33 M
Width of Cable Tray	:	460 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	7
No of Cable Tray's Row	:	4

i.e, Each row has seven (7) cable stacked in four (4) row.
So no. of cable tray is twenty eight.

For Gallery No. 2:-

Length of Cable Tray	:	33 M
Width of Cable Tray	:	460 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	7
No of Cable Tray's Row	:	4

i.e, Each row has seven (7) cable stacked in four (4) row.
So no. of cable tray is twenty eight.

For Gallery No. 3:-

Length of Cable Tray	:	33 M
Width of Cable Tray	:	460 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	7
No of Cable Tray's Row	:	4

i.e, Each row has Seven (7) cable stacked in four (4) row.
So no. of cable tray is twenty eight.

For Gallery No. 4:-

Length of Cable Tray	:	14 M
Width of Cable Tray	:	460 mm

Height of Cable Tray : 60 mm
No of Cable Tray Stacked : 1
No of Cable Tray's Row : 1
i.e, Each row has ten (10) cable stacked in one (1) row.
So no. of cable tray is one.

For Gallery No. 5 :-
Length of Cable Tray : 20 M
Width of Cable Tray : 460 mm
Height of Cable Tray : 60 mm
No of Cable Tray Stacked : 4
No of Cable Tray's Row : 7
i.e, Each row has twenty (20) cable stacked in one (1) row.
So no. of cable tray is twenty eight.

Cable occupancy - 100%
Approximate area to be sealed by FR panels -7.4 Sq Mtr

0. Cable tunnels from 11KV Cable gallery to 6.6KV Cable gallery of TPP & CPP:

For Tunnel No.1:-
Length of Cable Tray : 28 M
Width of Cable Tray : 380 mm
Height of Cable Tray : 60 mm
No of Cable Tray Stacked : 9
No of Cable Tray's Row : 1

For Tunnel No.2 & 3 :-
Length of Cable Tray : 28 M
Width of Cable Tray : 380 mm
Height of Cable Tray : 60 mm
No of Cable Tray Stacked : 9
No of Cable Tray's Row : 1

Cable occupancy - 100%
Approximate area to be sealed by FR panels -0.9 Sq Mtr

0. Cable gallery under 6.6KV Switch Gear of TPP & CPP:

For Galleries of TPP :-
Length of Cable Tray : 124 M
Width of Cable Tray : 460 mm
Height of Cable Tray : 60 mm
No of Cable Tray Stacked : 4,4 & 5,6
No of Cable Tray's Row : 4
i.e, Two of row has eight (4) cable tray stacked and in another has five and six cable tray stacked respectively.
So no. of cable tray is Nineteen.

Cable occupancy - 100%
Approximate area to be sealed by FR panels -0.9 Sq Mtr

For Galleries of CPP :-

Length of Cable Tray	:	90 M
Width of Cable Tray	:	460 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	5
No of Cable Tray's Row	:	4

i.e, each row has five (5) cable stacked in four (4) row.
So no. of cable tray is twenty

Cable occupancy - 100%
Sealing area by FR panels is to be judged.

0. Cable gallery under Ball Mill basement of TPP:

Length of Cable Tray	:	120 M
Width of Cable Tray	:	460 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	6 & 4
No of Cable Tray's Row	:	2

i.e, Each Row Has Six (6) & Four (4) Cable Stacked In Each Row Respectively.
So No. of Cable Tray Is Ten.

Cable occupancy - 100%
Approximate area to be sealed by FR panels -1Sq Mtr

0. Cable gallery under Bowl Mill basement of CPP:

Length of Cable Tray	:	90 M
Width of Cable Tray	:	1000 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	6 & 3
No of Cable Tray's Row	:	4 & 2

i.e, Each row has Six (6) cable stacked in four (4) row and three (3) cable tray stacked in two (2) row.
So no. of cable tray is Thirty.

Cable occupancy - 100%
Approximate area to be sealed by FR panels -7 Sq Mtr

0. Cable tunnels under ID Fan basement of TPP & CPP:

For Tunnels of TPP :-

Length of Cable Tray	:	120 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	3
No of Cable Tray's Row	:	1

i.e, The row has three cable tray has going all along through the cable tunnel.

For Tunnels of CPP :-

Length of Cable Tray	:	90 M
Width of Cable Tray	:	380 mm
Height of Cable Tray	:	60 mm
No of Cable Tray Stacked	:	3
No of Cable Tray	:	3

So no. of cable tray is three

Cable occupancy - 100%
Approximate area to be sealed by FR panels -8 Sq Mtr

(B) FIRE RETARDANT CABLE COATING:

Effective fire retardant (FR) coatings of cables are to be done by means of fire stitches, each stitch shall be of 8 mtr. Length of FR coating & gap between two stitches shall be 40 mtr. The relevant standards & norms are to be followed in each specific case. The areas to be covered are given below:

5. Cable gallery under control room MCB.
5. Cable gallery under control room ECR – II.
5. Cable gallery under control room GCB – I, II, & CDF Room.
5. Cable gallery under control room UCR – I, II, & MCC Rooms of CPP.
5. Cable gallery under TG # 1, 2, 3, 6, 7, 8 basements of TPP & CPP.

The details of above galleries are same as given in above Sl. No 1, for Fire Proof Sealing of Cable Penetration / Opening By Fire Stops / Barriers Panels.

N.B:

The above list contains only **approximate** descriptions & average dimensions / parameters and is merely indicative in nature. The actual conditions and dimensions / parameters of the cables / trays / penetrations / openings are difficult to be precisely assessed & subsequently written in detailed format. The bidder agency is being requested to visit the cable galleries at the site and get their professional experts' assessment of the actual length, width, height, occupancy, etc of existing cables and also of penetrations / openings of facilities like cables, trays, etc, of the associated cable galleries of the power plant.

Special Conditions for Supply including the Installation of Passive Fire Protection Materials / Products.

A) The supply, followed by installation work, should include but not be limited to the following:

1. The field study & research required for the design, manufacture, supply & installation of the subject Passive Fire Protection Materials /Products.
2. Supply of all resources like men, materials, consumables, equipments, plants, tools & tackles, safety appliances & all other items necessary (including supervision, transportations, off-loading, handling at site, etc) for completing efficient fire proof sealing of cable penetrations and / or openings at suitable optimum locations, and effective fire retardant cable coatings in accordance with the norms & specifications of the passive fire stop / barrier cable-coating products.
3. Supervision / inspection of the entire job of installation by technically competent & approved representative of the manufacturers / supplier.
4. Ensuring no over spread of the materials on any surface other than the designated area as per norms. Necessary cleaning & disposal of all construction waste to the dumping yard (about 4Km away from the site) shall be done by the agency to the satisfaction of the engineer-in-charge of BPSCL.
5. Mobilization / demobilization of men, materials, plants, equipments & other items required for the complete job of installation, and provision of relevant insurance, if any.
6. If the work of installation, or any part thereof, is not satisfactory as per the engineer-in-charge of BPSCL, the unsatisfactory work, or any part thereof, is to be reworked by the agency at its own cost to the full satisfaction of the engineer-in-charge of BPSCL.
7. Representatives of the agency are welcome to visit the actual site (the concerned cable galleries) at our plant for assessment estimation of the work to be done.
8. BPSCL will only provide LT power supply & space for work.

B) Other conditions to be followed are given below:

1. The successful bidder & the workmen employed by him will have to follow and observe all the safety & statutory rules, norms & requirements for electrical jobs.
2. The field study & research required for the design, manufacture, supply & installation (including supervision) will have to be conducted by the bidder at their own cost.
3. Some sealing had already been done in the concerned cable galleries more than a decade ago. The FR Sealing (by means of FR panels only, and not supplemented by FR coating of the cables in vicinity of such FR panels) are already installed for some penetrations / openings (of cables, etc) in few cable galleries like (i) Cable gallery under control room GCB – I, II, & CDF Room, (ii) Cable gallery under control room UCR – I, II, & MCC Rooms of CPP, (iii) Cable gallery under TG # 1, 2, (iv) Cable gallery under 6.6KV Switch Gear of TPP & CPP. The existing old FR sealing is to be checked, its effectiveness is to be assessed, and additional Passive Fire Protection is to be adequately done by the bidding agency, over & above it.
4. If any installation (like cables, cable trays, the already existing FR panel seals, any obstruction or hindrances, etc.) is to be removed / dismantled / re-positioned for installation of the passive fire protection products, the same is to be done by the bidding agency without damaging the existing facilities like cables, trays, etc.
5. Most of the cables in the cable galleries are in electrically charged condition & proper safety measures & precaution must be taken while working in the cable galleries.

Wherever shut-down is required for installation of passive fire protection products, such shut-down is to be approved by the competent authority.

1. The supervision & execution of all jobs (like conducting field study & research, etc) and the safety of its employees will solely be the responsibility of the bidding agency. BPSCL will not be responsible in any way in case of any violation of safety or statutory rules, or any unworthy incident, major or minor, caused by the employees deputed.
1. Employees may have to overstay beyond normal working hours as per the requirement of the work
1. The work should be done as per the satisfaction of the engineer in-charge of BPSCL. The work completion will also be certified by him.
1. A written declaration shall have to be submitted by the agency after the completion of the installation job, stating that the installation of Passive Fire Protection Materials / Products has ensured effective Passive Fire Protection of the associated cable galleries, up to a satisfactory level as per the relevant standards / norms, also declaring any shortfall in achieving such a satisfactory level of Passive Fire Protection in a particular cable gallery, if any, with reasons.

GUARANTEE CLAUSE:

Workmanship of the job should be guaranteed at least for one year after completion of the job or eighteen months after delivery of the materials whichever is earlier. If any defect(s) arises any where in the fire protection seals / panels / coatings installed in the job, within the guarantee period under normal operational conditions, then the bidder is to redo the work or replace the defective installations free of costs.

PENALTY CLAUSE:

0. The successful bidder must take proper work permit, shutdown clearance, etc, duly issued by competent authority, before starting the work of field study, if so instructed by the engineer-in-charge of BPSCL. The work, if started without proper permission (work-permit, duly issued by competent authority), will be penalized @ Rs. 2000/- each time of such an occurrence.
0. If the waste & garbages generated by the job of installation is found to be present in the working areas three days after completion of the job, a penalty of Rs. 2000/- will be charged from the bidder.

For & on behalf of
Bokaro Power Supply Company (Pvt.) Limited
Sd/-
(Rakesh Ranjan)
Superintending Engineer (P&C)

Bokaro Power Supply Company (Pvt.) Limited

(A Joint Venture of SAIL & DVC)

PART 'A'

Tender Form/ Bid Proposal Sheet

1. Enquiry/NIT No. BPSCL/CEO/P&C/08-09/PUR-083/NIT-139/5018 Date: 28/06/2008

   Date of Opening 08 (Day) 08 (Month) 2008 (Year)

2. Name of the firm : M/s ……
   Phone No. ……Fax No. …… Email ……
   Grams ……

3. Address of the firm :
   a) Head Office :
   b) Registered Office :
   c) Local/Branch Office :
   d) Works :
   e) Authorised Distributor/Agent, If any :

4. Registered with ☐☐
   ('01' NSIC/ '02' SSI/ '03' NSIC & SSI/ '04' DGS&D/ '05' None)
   Proof for '01' to '04' attached: YES / NO

6. Manufacturer/ Make of the item(s):

   M/s ……
   (annexure may be attached)

4. (a) Specify relevant specification No. ……

   (b) Whether Certified by BIS or any other International Standard. ('01' Yes/ '02' No) ? ☐☐

   (c) Whether Certified by ISO? ('01' Yes/ '02' No) ? ☐☐

4. Furnished along with the offer / tender

   ( ) Technical Literature ('01' Yes/ '02' No) ? ☐☐

   ( ) Drawing ('01' Yes/ '02' No) ? ☐☐

   ( ) Sample ('01' Yes/ '02' No) ? ☐☐

4. To be furnished

(a) Drawing within ☐☐☐ days of date of the P.O.

(b) Sample within ☐☐☐ days of date of the P.O.

4. Delivery (a) at ☐☐

('01' Consignee Site / '02' Works / '03' Consignee's nearest Transporters godown / Railway Station)

(b) Period ☐☐☐ days from ☐☐

('01' Date of P.O./ '02' Date of approval of Drawing/ '03' Date of approval of Sample / '04' Date of Issue of guiding sample)

4. Inspection: At ☐☐

('01' Consignee's Site / '02' Works / '03' Airport or Dock / '4'Specify if any other)

4. Testing: At ☐☐

('01' Consignee's Site / '2' Works / '03' Govt. Test House/ '04' Govt. Approved Test House/ '5' Specify if any other)

4. Guaranteed Period:

) …… months from date of dispatch and

…… months from the date of commissioning whichever is earlier

) …… of running hours.

4. Security Deposit : 10% of value of P.O. in the form of ☐☐

('01' BG '02' Bank Draft/ '03' Bankers Cheque / '04' Retention from Bill)

4. Security Deposit cum performance Guarantee: 10% of value of P.O. in the form of ☐☐

('01' BG '02' Bank Draft/ '03' Bankers Cheque / '04' Retention from Bill)

4. Liquidated Damage: 1/2 % per week subject to maximum 10% of undelivered value.

4. Validity of offer upto:

Minimum for a period of 90 days from the date of opening) Day Month Year

Bokaro Power Supply Company (Pvt.) Limited
(A Joint Venture of SAIL & DVC)
PART 'B'

Commercial Terms

Enquiry/NIT No. BPSCL/CEO/P&C/08-09/PUR-083/NIT-139/5018 Date: 28/06/2008

Price:

Item Description	Quantity	Rate/ Unit	Excise Duty	Sales Tax	Amount after Rebate/ Discount (Rs.)
Fire Proof fire stop / barrier panels (for fire proof sealing of penetrations / openings of facilities like cables, trays, other associated utilities etc.)	68 Sq. M				
Fire Resistant sealant (for sealing of small gaps around cables, trays, other utilities etc.)	33.20 Kg				
Fire Retardant coating (for fire retardant coating of utilities like cables, etc.)	2216.50 Kg				

1. Note :
) Freight, insurance, packing, forwarding etc. to be mentioned separately & Clearly
) Conditional offer is liable to be rejected.

2. Price Based on : ☐☐
   (01 door delivery at BPSCL Stores site/ '02' upto Transporters godown nearest to BPSCL Stores / '03' F.O.R. Destination nearest to Railway Station / '04' Ex-works or showroom or godown / '05' F.O.R. Despatching Railway station).

3. Discount / Rebate : ☐☐
   ('00' Not Applicable. Other wise mention percentage on quoted basic price)

4. Packing : ☐☐
   ('00' Not Applicable. Other wise mention percentage on quoted basic price)

Note: If not indicated 1% on quoted basic price against packing will be loaded for the purpose of ranking of offer.

5. Forwarding : ☐☐
   ('00' Not Applicable. Other wise mention percentage on quoted basic price)

Note: If not indicated 1% on quoted basic price against forwarding will be loaded for the purpose of ranking of offer.

6. Sales Tax : ☐☐
('00' Inclusive with Concession Form/'01' Inclusive without Concession Form/ '02' Not Applicable/ '03' Extra
If '03' mention percentage on quoted price. ……%

Note: If not indicated the current Sales Tax with or without concession form will be loaded for the purpose of ranking of offer.

7. Surcharge on Sales Tax: ☐☐
('00' Inclusive with Concession Form/'01' Inclusive without Concession Form/ '02' Not Applicable/ '03' Extra
If '03' mention percentage on quoted price. ……%

Note: If not indicated the current surcharge on Sales Tax if applicable will be loaded for the purpose of ranking of offer.

8. Service Charge : ☐☐ %
(If applicable, indicate percentage on quoted basic price.)

9. Excise Duty: ☐☐
('00' Inclusive /'01' Not Applicable/ '02' Extra
If '02' mention percentage on quoted price. ……%

Note: If not indicated the current Excise Duty will be loaded for the purpose of ranking of offer.

10. Basis of Excise Duty: ☐☐
('01' Firm/ '02' AS applicable at the time of delivery

Note: If '02' 16% of excise duty will be loaded for the purpose of ranking of offer.

11. Special Excise Duty (Education cess): ☐☐
('00' Inclusive /'01' Not Applicable/ '02' Extra
If '02' mention percentage on quoted price. ……%

Note: If not indicated the current Special Excise Duty will be loaded for the purpose of ranking of offer.

12. Basis of Special Excise Duty: ☐☐
('01' Firm/ '02' As applicable at the time of delivery)

Note: If '02' 03% of excise duty will be loaded for the purpose of ranking of offer.

13. Octroi /any other Levy: ☐☐
('00' Inclusive /'01' Not Applicable/ '02' Extra)
If '02' mention percentage on quoted price. ……%

Note: If not indicated the current Octroi/ any other Levy will be loaded for the purpose of ranking of offer.

14. Freight Charge: ☐☐
('00' Inclusive /'01' Not Applicable/ '02' Free Delivery/
'03' Freight Charge in percentage on quoted basic price ……%
or in lump sum.) Rs.……

Note: If not indicated 3% on quoted basic price will be loaded for the ranking purpose and payment will be restricted at actual but not exceeding 3% of quoted price.

15. Basis of Freight Charge: ☐☐
('01' Firm / '02' at actual against documentary evidence
through Bank Approved Transporter)

Note: If '02' 05% of Freight Charge will be loaded for the purpose of ranking of offer.

16. Freight Charges based on : ☐☐
('01' by Road / '02' by rail on freight paid basis/ '03' through messenger or courier)

17. Payment Terms: ☐☐
('01' BPSCL payment terms 100% within 30 days after receipt
of materials in good condition/ '02' Any other, specify ……

Note: I) If payment is made through bank, bank charges to be borne by the firm.
II) Advance/ Payment against PI is not allowed.

18. Insurance: ☐☐
('01' against BPSCL Open Transit Policy/ '02' Any Other
specify with percentage ……

Note: I) Against '01' the actual percentage of BPSCL's Open Transit Policy will be loaded.
II) Against '02' & '03' percentage indicated by the firm will be loaded.
III) If silent, 0.15% will be loaded.