

J&K Project Construction Corporation Ltd.



Standard Bidding Document

Name of Work	Supply, Installation, Testing and Commissioning of 50 KVA silent DG set at Guest House/Hostel Block at Baba Gulam Shah Badshah University, Rajouri.
District	Rajouri
Unit	Mechanical Unit JKPCC Jammu
Estimated Cost	Rs.8.40 Lacs
Time of Completion	08 Weeks

J&K PROJECTS CONSTRUCTION CORPORATION LTD.

(UT of J&K Govt. Undertaking)

OFFICE OF DEPUTY GENERAL MANAGER, MCHANICAL UNIT, JAMMU

E-NIT No. MECH/J/NIT/05 of 2020-20 Dated: 29-04-2020

On behalf of Managing Director, Jammu & Kashmir Projects Construction Corporation Ltd., the Deputy General Manager, Mechanical Unit JKPCCLtd., Jammu invites e-tenders from Principal Manufacturers or their authorized dealers

Description of work	Approx. Cost Rs. in Lacs	Earnest Money	Cost of tender document	Time of Completion	Class of Contractor
Supply, Installation, Testing and Commissioning of 50 KVA silent DG set at Guest House/Hostel Block at Baba Gulam Shah Badshah University, Rajouri	Rs. 8.40 Lacs	Rs. 0.17 Lacs	Rs. 1000/-	08 weeks	Manufacturer or their authorized dealers Approved Makes <u>Prime Movers</u> Cummins, Kirloskar, Caterpillar, Mahindra, Greaves, Kholar, Ashoka Leyland and Escorts, JCB and Eicher TMTL. <u>Alternator</u> Stamford, Kirloskar Green, and Crompton, Mecc-alte

Scope of Work:

Supply, Installation, Testing and Commissioning of 50 KVA silent DG set at Guest House/Hostel Block at Baba Gulam Shah Badshah University, Rajouri.

GENERAL CONDITIONS:-

A. INVITATION:-

For and on behalf of the Managing Director JKPCCLtd., Jammu e-tenders are hereby invited from Principal Manufacturers or their authorized dealers.

B. INSTRUCTIONS TO TENDERERS:-

1. The NIT Consisting of qualifying information, eligibility criteria, specifications, Bill of Quantities can be seen/downloaded from the departmental website www.jktenders.gov.in from **Dt: 01-05-2020 from 1600 Hrs to Dt: 21-05-2020 upto 1400 Hrs.**
2. The pre bid meeting will be held on date **11-05-2020 at 1300 Hrs** in the office chambers of Deputy General Manager, Mechanical Unit JKPCCLtd., Jammu and **No any correspondence after the pre-bid meeting shall be considered.**

3. The Bids shall be deposited in electronic format on the departmental website www.jktenders.gov.in from **11-05-2020 to 21-05-2020 upto 1400 Hrs.**
4. The complete bidding process will be **online.**
5. That the bids shall be strictly uploaded on the prescribed website and after opening the financial bid, only L1 bidder shall have to submit any required documents in hard copy.
6. The cost of tender shall be deposited by the prospective bidders through banking mechanism as per the following Bank details:-
 - i) **Name of Bank:- J&K Bank Ltd**
 - ii) **Account Title:- Financial Controller JKPCCLtd (Current Account).**
 - iii) **Account No:- 0084010100002408**
 - iv) **Branch:- New Secretariat Road Srinagar.**
 - v) **IFSC Code:- JAKA0PROMPT**
 - vi) **SWIFT Code:- JAKABBINRSGR-Optional**
7. a) The bidder shall only upload scanned copy of payment acknowledgement slip. Similarly the **Earnest Money with minimum validity of six months**, duly pledged to Deputy General Manager, Mechanical Unit JKPCCLtd., Jammu and upload only a scanned copy of the Certificate on the Website.
 - b) **The tender cost deposited and EMD made for e-NIT/59 dated 18-03-2020 for the same work shall be considered for this NIT also.**
 - c) However, before allotting the work or issuing the supply order, the lowest bidder shall have to submit the original certificate, CDR/FDR/Bank Guarantee.
8. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received on the next working day at the same time and venue.
9. The Technical bids shall be opened online on **22-05-2020 at 1200 Hrs** in the Office chambers of Deputy General Manager, Mechanical Unit JKPCCLtd., Jammu.

In case of holidays/Office happens to be closed on the date of opening of the bids, bids will be opened on the next working day at the same time and venue.
10. Financial bids of bidders shall be opened online in the office Deputy General Manager, Mechanical Unit JKPCCLtd., Jammu and shall be communicated separately.
11. The bids for the work shall remain **valid for a period of 90 days from the date of opening of bids** .This office reserves the right to cancel any or all the tenders without assigning any reason thereof and conditional tenders shall be out rightly rejected
12. A bidder shall not be permitted to bid for works in the jurisdiction of officer responsible for award and execution of contract in which his or his spouse's near relative (defined as first blood relations, and their spouses) is posted as unit Accountant or as an officer in any capacity between the grades of General Manager and Manager (both inclusive).
13. No engineer of Gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering department of the Government is allowed to work as a supplier for a period of two years after his retirement from Government service, without Government permission. This contract is liable to be cancelled if either the supplier or any of his employees is found any time to be such a person who had not obtained the

- permission of the government as aforesaid before submission of the tender or engagement in the contactor's service.
14. Any other information regarding e-tendering process can be had from the Office Deputy General Manager, Mechanical Unit, JKPCC Ltd., Mechanical Unit, Jammu at **Mobile no. 9419121510** or **e Tendering Cell on Mob No. 9419139825**.
15. **To qualify for award of the contract, each bidder should upload and submit the following documents with the tech bid :**
- A) Cost of tender document **through Banking Mechanism as per Instructions to bidders Clause 6.**
 - B) EMD in the shape of CDR/FDR/Bank Confirmation Advice only and **bids without requisite EMD shall be considered as NON-RESPONSIVE**
 - C) Original Manufacturer or authorized dealer certificate renewed up-to-date.
 - D) The registered dealer/firm/contractor should have valid:-
 - a) PAN No
 - b) GST registration
 - E) Certificate from any agency (Govt/PSU) for at least one successful Supply, Installation, Testing & Successful Commissioning of DG Set of 50 KVA capacity OR two DG sets of 25KVA capacity each during the previous 07 years (prior to 05/2020). Performance certificate of the user/s may be furnished.
 - F) An affidavit on a judicial stamp paper affirming the following information:-
 - a) That the bid shall remain valid for the period of 90 days from the date of opening of bid.
 - b) That all the terms and conditions, Technical Specifications and BOQ of the tender document are acceptable to the firm.
 - c) That the firm has not been declared bankrupt by any financial institution and nor blacklisted by any Govt. Department during the previous three years.
 - d) That the firm is having a service office at Jammu at ----- (Upload Address proof) OR if found lowest, the firm shall set up a service centre at Jammu for better after sales service and maintenance of the equipments.
 - e) That information furnished in the bidding document is correct to the best of my knowledge and belief and nothing has been concealed.

INSTRUCTION TO BIDDERS REGARDING E-TENDERING PROCESS

- a) The interested bidder can download the bid from the website **<http://jktenders.gov.in>**. Bidders are advised to download bid submission manual for the help of bid submission process from the Downloads option as well as from **Bidders Manual Kit** on website **<http://jktenders.gov.in>**
- b) To participate in bidding process, bidders have to get digital signature certificate card as per information technology Act- 2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get above mentioned digital signature certificate card from any approved vendors. The bidders who already possess valid digital signature certificates card, need not to procure new digital signature certificate card.
- c) **The bidders have to submit their bids online in electronic format with digital signature. The bids proposed without digital signature will not be accepted.**

- d) Bids will be opened online as per time schedule.
- e) Before submission of online bids, bidders must ensure that scanned copy of all the necessary documents have been attached with bid.
- f) The department will not be responsible for delay in online submission due to any reasons.
- g) All required information for bid must be filled and submitted online. The bidder should recheck his online document before submission on line otherwise damaged/ corrupt document shall not be considered in any case.
- h) Bidders are advised to use My Documents area in their user on e-tendering portal to store important documents which are used in all tenders like GST Certificate, sales Tax clearance Certificate etc and attach these certificates as Non Statutory Documents while submitting their bids.
- i) Bidders are advised not to make any change in BOQ (Bill of Quantities) contents/ specifications or its name. In no case they should attempt to create similar BOQ manually. The BOQ downloaded should be used for filling the net item rate inclusive of all taxes and it should be saved with the same with the same name as it contains.
- j) Bidders are advised to scan their documents at 100 DPI (Dots per inch) resolutions with Black and white, JPEG scan properly. Convert scanned images to PDF.
- k) The guidelines for bidders to submit bid online can be downloaded from website <http://jktenders.gov.in> (**Download option**).

Deputy General Manager
Mechanical Unit J&K PCC Ltd.
Jammu.

General Conditions of Contract

1. Scope of Contract :

The contractor shall carry out and complete the said work in every respect in accordance with this contract and under the directions of and to the satisfaction of the Engineer in-charge. The Engineer In-charge may in his discretion and from time to time issue written instructions, details, directions and explanations which are hereunder collectively referred to as “Engineer In-charge” instruction in regard to :-

- a) The variation or modification of the quality or quantity of works or omission or substitution of any work.
- b) Any discrepancy between the schedule of quantities and/or specifications.
- c) The removal and/or re execution of any works executed by the contractor.
- d) The contractor shall forthwith comply with and duly execute any work comprised in such Engineer in-charge instructions provided always that verbal instructions directions and explanations given to the contractor or his representative upon the works by the Engineer In charge shall if involving a variation, be confirmed in writing by the contractor within 14 days. And if not dissented from in writing within a further 7 days by the Engineer in-charge, such shall be deemed to be the Engineer In-charge instructions within the scope of the contract.

2. Details Confidential

The contract and everything contained therein or arising there from shall be treated as strictly confidential. In particular, the contractor shall not publish any information, or photographs concerning the works and shall not use the site for the purpose of advertising except with the written consent of the and Engineer-in-Charge.

3. Contract to Provide Everything Necessary :

The contractor shall provide everything necessary for the proper execution of the work according to the intent and meaning of the schedule of quantities and specifications taken together whether the same or may not be particularly shown or described therein provided that the same can be reasonably inferred there from.

4. Contractor’s Supervision on the Works :

The contractor shall give all necessary personal superintendence during the execution of the works, and as long thereafter as the Engineers In-charge may consider necessary until expiration of the “Guarantee period”.

5. Access of Engineer In charge to Work :

The Engineers In-charge/Employer and their representative shall at all reasonable time have free access to the works. The contractor shall give every facility to the Engineers

In-charge/Employer and their representative, necessary help for instructions and examinations and test of the materials and workmanship.

6. **Certificate of Virtual Completion :**

The works shall not be considered as completed until the Engineer in-Charge has certified in writing that the works have been 'Virtually Completed' and the guarantee period shall commence from the date of such certificate. Such certificate shall not be issued until all prescribed tests are carried out to the entire satisfaction of the Engineers In-charge or his representative.

7. **Date of Commencement and Completion :**

The date of allotment shall be the 'date of commencement' and the contractor shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same on or before the date of completion stated in the allotment order.

8. **Damage for Non Completion :**

If the contractor fails to complete the works by the date stated in the allotment order or within any extended time and the Engineers In-charge certifies in writing that in his opinion the same ought reasonably so to have been completed, the contractor shall pay or allow to the contractor to deduct such damage from any moneys due to the contractor.

9. **Force Majeure :**

The right of the contractor to proceed with the work shall not be terminated because of any delay in the completion of the work due to unforeseen causes beyond the control and without the fault or negligence of the contractor.

10. **Delay and Extension of Time :**

In the opinion of the Engineers In-charge the works be delayed:

- a) By force majeure.
- b) By reasons of civil commotion, location combination of workers on strike or lock-out affecting any of the building trades.
- c) In consequence of the contractor for not having received in due time necessary instructions from the Engineers In-charge for which he shall have specifically applied in writing.
- d) By reasons of Engineers In-charge'. The Engineers In-charge shall make a fair and reasonable extension of time for completion of the contract works.

In case the physical progress of the work is delayed as compared to the time schedule referred to above due to reasons which are beyond the control of the contractor, or due to force majeure conditions, or due to delays owing to other agencies, strike or lock-out,

the contractor shall apply in writing for extension of the time for completion of the work, stating clearly the reasons for the delay, period of delay and the extension of time desired. The owner on satisfying himself that the reasons for delay are really beyond the control of the contractor, may grant extension of time for the completion of work. No payment or compensation shall be made to the contractor in the event of the owner is not in a position to allow the contractor to do the work on specific days and time due to whatsoever reason. Such delays are only for the consideration of extension of time. On no account any compensation shall be made to the contractor for extension of time due to delay made by the owner. However the liquidated damages from the contractor can be recovered on account of delay from his side for completion.

11. **Prices :**

The prices to be quoted shall include the supply and installation of all equipment at site, ancillary material and other items whatsoever required for carrying out the job to fulfill the intent and purpose as laid down in the specifications whether specifically mentioned or not. The quoted amount shall be inclusive of **GST**, all taxes, Entry tax, duties, packing, forwarding, freight, transit insurance and all other levies as applicable by the Central as well as UT Government. Failure to include all other taxes and duties will not entitle the contractor to any extra claims from the employer. The contractor's rates shall remain firm and fixed during the currency of the contract. **However any statutory variation in taxes as per notifications issued by the UT/Central Govt. shall be allowed under rules.**

12. **Maintenance Manuals etc :**

Prior to the completion of the work, the contractor shall furnish to the employer (3) three sets of a comprehensive manual, describing all components, furnish a list of spare parts and settings forth in details the instructions for the operation and maintenance of the equipment .

The contractor shall also fix neatly typed and framed instructions in details, for the starting and running of the System.

13. **Testing and handing over :**

On the completion of the installation the contractor shall arrange to carry out various tests, in the presence of and to the complete satisfaction of the Engineers in-charge or his representative. Any defects or shortcomings found during the tests shall be speedily rectified or made good by the contractors at his own expense.

14. **Copies of bill**

Contractor shall submit all bills and vouchers in Duplicate with GST Nos of firm and JKPCC Ltd.

15. **Defects liability**

The equipment shall be guaranteed against defective materials as per standard warranty of the manufacturer and the entire installation and workmanship for a period of 12 months from the successful commissioning of the System. This however, shall not

impair the validity of any action according to any laws enforced for any non-performance of any work under this contract. If the part of the work is found unsound or defective during the defect liability period, the contractor shall repair and make good the same, within a reasonable time, at his own risk, responsibility and cost. Any delay in such repairing and making good by the contractor, shall entitle the Employer to do it at the contractors entire risk, cost and responsibility

16. **Time of completion**

The work shall be completed within 08 weeks from the date of issue of allotment order.

17. **Rejection of Defective System :**

- a) If on test any component of the system is found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the Engineers In-charge.
- b) In case the contractor fails to remove the defects, within a period considered reasonable by the Engineer in-charge, the employer reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

18. **Variation**

The J.K.P.C.C. shall be entitled to make any variation of the quality or quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any reason it shall, in his opinion be desirable, he shall have power to order the contractor to do.

19. **Contract Specification**

Before execution of contract, the contractor shall check all specification and shall within ten days report any errors, discrepancies or omissions discovered therein to Engineer-in-Charge and obtain appropriate clarifications on the same. Any adjustment made by the contractor without prior approval of JKPCC shall be at his own risk and cost.

20. **Liquidated damages**

- (i) 0.25% (zero point two five percent) of contract value for every week of delay after the schedule date of completion of work.
- (ii) Total Amount of Recovery shall be maximum 5 % (Five percent) of unfinished portion of work value of the contract.

21. **Specifications**

The Specifications lay down minimum Standards of equipment and workmanship. And the tenderer should execute the job strictly as per technical specifications mentioned in the BOQ of the tender document/Brochure of the equipment uploaded.

22. **Completeness of the Job :**

The contractor shall provide all required materials, equipment, ancillary items, etc., to install the air conditioning units capable of fulfilling the intent and purpose of the contract, whether or not each and every item is mentioned in the specifications. Any shortcomings notices at any stage shall be made good at no extra cost.

23. **Guarantee :**

- a) The contractor shall guarantee that all the material, and components supplied, fabricated, designed and installed by him on the System shall be free from defects due to faulty design material and/or workmanship, that the unit shall perform satisfactorily and the efficiency of the System and all the components/parts shall not be less than the values laid down in the specifications and the capacities, shall be at least equal to those specified.
- b) The period of the guarantee shall be minimum (12) Twelve months after the System is successfully commissioned during which period of any or all components found to be defective shall be replaced or repaired free of charge and any short comings found in the system as specified shall be removed at no extra cost. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.
- c) If the defects are not removed with in a reasonable time, the employer may arrange to do so at the contractor's risk and cost, without prejudice to any other rights. **However, the warranty period shall be reckoned from the date of handing over the DG set to the project authorities.**

24. **Terms of payment :**

80% towards contract amount shall be paid after successful supply of the DG set at site, 10% payment shall be paid after successful Installation and final 10% payment shall be paid after Testing and Commissioning of DG set at site. **However the payment shall be released in commensuration with the transfer of funds from the higher authority.**

25. **Bank Guarantee :**

The firm shall execute bank guarantee of any scheduled bank in favour of Dy. General Mgr. Mechanical Unit JKPCC Ltd. Jammu amounting to 10% of the value of the contract after the issue of the Allotment order and will be released after the completion of contract period.

26. **After Sales Service:**
The firm shall provide free services during the warranty period and give prompt attention to any complaint of consignee at short notice.
27. **Arbitration :**
In case of any dispute arising at any time between the Contractor and the Corporation, the same shall be referred to the Managing Director, JKPCC Ltd., who may give decision on such a dispute himself or request the Government to nominate any other officer of the Government for arbitration. Decision of the Managing Director or the officer nominated by the Government shall be final and binding on both the parties.
28. **Tender document fees & Earnest Money:-**
a) Any bid not accompanied by **Tender document fees** acknowledgement slip & **Earnest Money, Pledged in favour of Deputy General Manager, Mechanical Unit, JKPCC Ltd Jammu** shall be rejected by the Employer as non-responsive.
b) The earnest Money of the successful Bidder will be released when the Bidder has signed the Agreement and furnished the required performance security
29. **The earnest money may be forfeited:**
a) If the bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity :
b) In the case of a successful Bidder, if the Bidder fails within the specified time limit to :-
i) Sign the Agreement; and / or
ii) Furnish the required performance security
30. **Watch and ward** of the machinery/equipment supplied during execution shall be included in the scope of contract and any damage to the machinery/equipment during transportation, handling, erection shall be borne by the contractor itself without any extra claim to the department.
31. **Preparation of Bids**
a) Language of Bid is English
b) All documents relating to the Bid shall be in the language specified.
32. **Documents Comprising the Bid**
The bid uploaded by the Bidders shall be in two separate parts:
Part I
This shall be named technical Bid and shall comprise parts:
i. The cost of tender shall be deposited by the prospective bidders through banking mechanism as per the Bank details mentioned in the SBD.
ii. The bidder shall only upload scanned copy of payment acknowledgement slip. Similarly the Earnest Money shall be duly pledged to **Deputy General Manager, Mechanical Unit, JKPCC Ltd Jammu** and shall upload only a scanned copy of the Certificate on the Website. Qualification information, supporting documents, affidavit and undertaking .

- iii. An affidavit affirming that information he has furnished in the bidding document is correct to the best of his knowledge and belief.

Part II

It shall be named Financial Bid and shall be submitted online.

33. SUBMISSION OF BIDS

33.1. Deadline for submission of Bids

The submission of bids shall be online only on the **official website** but not later than **21-05-2020 upto 1400 Hrs.**

- 33.2. The employer may extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

34. Late Bids

Any Bid received by the Employer after the deadline prescribed will be returned unopened to the Bidder.

35. Fundamental breach of contract will include:-

- a) Continuous stoppage of Work for a period of 30 days without authorization of Engineer in-charge.
- b) Contractor is declared bankrupt.
- c) Any evidence of involvement of contractor in corrupt practices.
- d) Contractor delays the completion of work beyond stipulated time of completion.
- e) Pursuant to the process of termination of defaulted contract, the employer reserves the right to invite fresh tender for the balance work at the risk and cost of defaulter contractor. If In case contractor failed to start /complete the work, within the stipulated time period, his CDR/Earnest Money shall be forfeited after termination of the contract. Besides, defaulting contractor shall be debarred from taking works in JKPCC Ltd at least for one year.

36. MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENT ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK:-

Compliance with Labour Regulation Laws of UT of J&K.

37. **Specification/Quality Control:-** All items of works shall conform to specifications as per IRC/MORTH/NBO/CPWD/SSR/ Any other prescribed specifications.
38. **Insurance:-** Insurance cover to Labour / Machinery / Work / Plant material / Equipment by the contractor shall be mandatory.
39. **Laws Governing the Contract:-** The contract shall be governed by Laws of the land.
40. **Court's Jurisdiction:-** In case of any disputes/differences between contractor and Department the jurisdiction shall be UT of J&K.
41. **Any other item, not included in the scope of work but necessary for completion of work shall be deemed to be included in the scope of work.**
42. **All other terms and conditions are as same as are in vogue in JKPCC Ltd.**

Deputy General Manager
Mechanical Unit J&K PCC Ltd.
Jammu.

TECHNICAL SPECIFICATION OF THE EQUIPMENT

Supply, Installation, Testing and Commissioning of 50 KVA silent DG set at Guest House/Hostel Block at Baba Gulam Shah Badshah University, Rajouri

The Technical feature of the Silent DG set with AMF panel are as follows :

1. **Engine/Prime Mover:**

The Diesel Engine of Cummins, Kirloskar, Caterpillar, Mahindra, Greaves, Kholar, Ashoka Leyland, Escorts, JCB and Eicher TMTL make, stationery type, radiator liquid cooled, turbo charged after-cooled, 1500rpm, developing suitable BHP under NTP conditions as per BS:5514:1982,IS 10002/ISO3046. the Engine shall be provided with Electrical starter motor 12V DC, Battery charging alternator, fuel system with mechanical governor, Fuel filter, Residential silencer, Air cleaner, Shut-off coil with safeties for LLOP /HWT/ Overspeed, Flywheel and flywheel housing, Engine instrument Panel with-Starting switch and key, indication for battery voltage Water/ coolant temp, Lub oil pressure, Engine speed, Engine hour counter, Battery Voltmeter, Indication for safety switch, First fill of lub oil and coolant.

2. **Alternator:**

Synchronous Alternator of Stamford, Kirloskar Green, and Crompton, Mecc-alte, make for minimum 50 KVA capacity output (KVA), brushless type self excited self regulated through an AVR, suitable for continuous operation minimum 50 KVA capacity at 1500rpm, 415 volts, 0.8 power factor suitable for 50HZ 3 Phase, 4 wire system, IP 23 protection with insulation Class H, $\pm 1\%$ voltage regulation in static/balanced load and should have the capacity to sustain overload without exceeding temperature rise limits specified in relevant IS. The alternator should be suitable for operation under tropical conditions and shall give rated output at NTP conditions.

3. **Electrical Auto mains failure (AMF) Panel :**

Electrical/Microprocessor/Auto main failure panel shall consist of mild steel, Dust and Vermin proof cubical, duly fitted with protections relays, ammeter with selector switch, current transformers voltmeter with selector switch, phase indicating lamps, MCB/MCCB with overload & short circuit protections and complete internal wiring and fuses, KWH meter , Genset running hrs indication and frequency meter, KVA meter etc. with protections under voltage, over voltage, under/over frequency and any other meter required as per standards of the manufacturer.

4. **Base Frame :**

Engine and alternator should be duly aligned and coupled with each other on the common base frame of MS Channel with AVM pads.

5. **Sound Attenuated System** :

The sound attenuated of DG. Set shall be conforming to latest MOEF/ CPCB standards and mandatory noise level norms upto 75db at 1 meter distance. The system shall be made of high class sheet metal fabricated panels of suitable thickness having modular construction for ease of assembly and dismantling .Sound proofing is done with high Quality Fire proof ACOUSTIC material i.e FOAM/ MINERAL WOOL / ROCKWOOL (conforming to IS 8183). An additional axial flow fan may be provided to achieve optimum output to meet the air requirement and air changes and acoustic hoods with noise splitters if required, to block and reduce the sound leakage. Residential silencer be provided for max. noise reduction and specially designed vibration isolators are used to restrict the transfer of vibrations from the DG set to the body panels and its surroundings. The enclosure sheets a seven tank treatment with powder coating from inside/outside for longer life. Emergency stop switch to be provided outside the container and tube rod should be provided for light inside the canopy.

6. **Fuel Tanks** :

Fuel Tanks of suitable Capacity, made out of suitable MS Sheet, duly painted and fitted with inlet / outlet, return connection, air vent, drain valve and level indicator. **The DG set is to be supplied with initial tank filled (50 litres) with Diesel for testing and commissioning on full load for eight hours.**

7. **Battery and Battery Leads** :

Battery of required Nos. 12 V, of suitable capacity of Exide / Prestolite or equivalent make to cater for the electrical starting of the Engine along with the Battery Leads.

Deputy General Manager
Mechanical Unit
J&K PCC Ltd. Jammu