

**TENDER DOCUMENT TO NIT FLOATED UNDER NO:
Mgr (P&S)12/724-29 dt.20.07.2012 & published under No:
NB-1019 dt. 22.07.12**

1. The detailed specifications would be as contained in Annexure-"A" forming part of this tender document.

2. PURCHASE OF TENDER DOCUMENTS:

The interested tenderer can apply for detailed set of tender documents containing relevant details and other terms and conditions of the work on any working day against cash payment of Rs. 2000/- (non-refundable). The tender documents can also be downloaded from Corporation's website i.e. www.jkminerals.com. in that case the tenderer shall have to attach Demand Draft for an amount of Rs. 2000/- drawn in favour of FA&CAO,J&K Minerals Limited being the cost of tender document, alongwith their offer / Bid.

3. SUBMISSION OF TENDERS:

- i) The tenders affixed with revenue stamp worth `5/- should be addressed to **The Managing Director, J&K Minerals Limited**, and should reach his office at **5th Floor, Jawahar Lal Nehru, Udhog Bhawan, Rail Head Complex, Jammu OR ZUM-ZUM Hotel, Rambagh, Srinagar** by **18.08.2012** by 4 P.M. Tender(s) received late by hand or post or otherwise shall not be entertained, even if the rates quoted are lowest.
- ii) The tenders shall be submitted under two cover system as cover Ist and cover 2nd as under:

Cover Ist shall contain earnest money in the shape of CDR or Bank Guarantee, technical specification of the equipment and shall be opened first.

Cover 2nd shall contain commercial bid, indicating clearly

Basic Rate, FOR Parlanka Gypsum Project
(Distt.Ramban),Jammu

CST / VAT

Excise Duty

State Entry Tax, if any

Delivery period

Packing & Forwarding Charges, if any

Transit Insurance

The sealed envelope containing both the two covers should be super subscribed as 'SUPPLY OF EXCAVATOR" against NIT published under Mgr(P&S)12/724-29 Dt.20.07.2012

- iii) Tenders will be given to those firms / manufacturers/ authorized dealers / approved suppliers who are dealing exclusively with the EARTH MOVING MACHINES & EQUIPMENTS and are having valid CST / GST / VAT registration.
- iv) Rates quoted should be clear and legible without any over writing. However, corrections or insertions in the items other than the rates should be properly signed. Tenders written in pencil, partly typed or partly hand written or written in different inks shall be rejected.
- v) Tenders must be clearly written and all rates written both in figures as well as in words. The tender documents shall be signed and dated on each page by the tenderer.
- vi) The offer should be valid for a period of 180 days from the date of opening of tenders. Such of the tender(s) which are not valid, for 180 days from the date of opening shall be rejected, even if the rates offered are lowest.
- vii) The tenderer(s) shall not put any special conditions outside the Scope of the tender Notice/Document.
- viii) The tender documents(s) are non-transferable.

4. INTERDEPENDENT TENDER:

Tender(s) which are dependent upon the quotations of other shall not be entertained.

5. EXPENSES FOR TENDERING:

The tenderer shall not be entitled to any claim towards expenses incurred incidental to the submission of the tender or subsequent evaluation, clarification thereof.

6. CLARIFICATION:

In respect of any clarification of the conditions /Technical provisions set forth in the tender document, the tenderer(s) shall address this office in writing ten or more days before the last date fixed for receipt of tenders.

7. EARNEST MONEY / SECURITY DEPOSIT:

- i) Tender(s) should be accompanied with Non-interest bearing Earnest Money Deposit equivalent to 2% of the total value of quoted price which should be in the form of CDR pledged to the FA&CAO, J&K Minerals Limited, or in the shape of irrevocable bank guarantee, from a scheduled bank encashable from the local branch at Jammu / Srinagar of the issuing Bank on non-judicial stamp paper, without which the tender(s) shall not be entertained, even if the rates offered are found to be lowest. The earnest money shall be submitted in the sealed envelope marked as **Cover 1st**
- ii) Earnest money shall be refunded to the un-successful tenderer(s) only after, finalization of the tender and shall be retained in case of successful tender(s) which shall be treated as part of security deposit which will be 5% of the value of order to be refunded after successful completion of supplies to the entire satisfaction of Mines Manager, Parlanka Gypsum Project or any other authorized technical representative of management of JKML. In case of successful tender(s) having earnest money in the shape of Bank Guarantee, they shall have to extend the validity of the Bank Guarantee up to warranty/guaranty period.
- iii) The Earnest Money/irrevocable Bank Guarantee of the successful tenders/ (s) who backs out or withdraw his tender or fails to abide by it after the acceptance is conveyed or posted to the addressee, shall be forfeited besides recourse to law in force in the State shall be taken to recover the extra cost, if involved in completion of work order through some other agency, at his risk and cost.

8. PRICE:

Bidders are requested to quote the rates strictly as per the terms and conditions mentioned in the Tender Document. Rate quoted by the Tenderer should be firm and no price increase will be allowed to the tenderer during the supply period.

9. (A) PRICE FALL CLAUSE:

The price being offered for the chain mounted excavator by the Supplier shall in no event exceed the lowest price at which the Supplier sells the store or offers to sell stores of identical description to any other organization during the period of the contract, if at any time, during the said period, the contractor

reduces the sale prices of such stores, or offers to sell or sells such stores to any other organization at price lower than the price chargeable under this contract, he shall forthwith notify to the JKML, and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale, shall stand correspondingly reduced.

(B) PRICE CERTIFICATE:

In the event of placement of Purchase Order on the tenderer they shall have to submit a price certificate in their entire invoice the following format.

"it is certified that the price indicated in this invoice is not higher than the price charged to other Govt. Organization / Public Sector Undertaking / Private Organizations."

10. PAYMENT CLAUSE:

- i. 80% payment shall be released on the receipt EXCAVATOR at the Gypsum Project Parlanka Distt. Ramban.
- ii. 10% shall be released after installation, Testing and commissioning of EXCAVATOR.
- iii. Balance 10% shall be released after expiry of warranty period of 12 months from the date of commissioning of equipment or eighteen months from the date of dispatch, whichever is earlier.

10 Third party Inspection:

Pre-dispatch inspection of the EXCAVATOR shall be conducted by M/S RITES LTD / CEIL. The inspection charges of same shall initially be borne by the supplier, which shall be reimbursed in favour of supplier after submission of relevant bills/documents.

11. Transit Insurance:

The material supplied under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery to destination. Insurance is to be provided by the supplier at his cost.

12. Guarantee/ Warranty:

The supplier must replace, free of charge, any mechanical or electrical parts which owing to defect in design, material or workmanship fail or show signs of failure at any time within 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier.

13. DELIVERY PERIOD:

The Material complete in all respects shall be supplied by the firm within 60 days from the date of placement of Purchase order

14. OPENING OF TENDERS:

- i) Tenders shall be opened by the Tender opening committee (TOC) on 20.08.2012 or any other subsequent date convenient to the TOC in presence of tender(s) who may wish to remain present at the time of opening of tenders.
- ii) The Managing Director, J&K Minerals Limited, reserves the right to accept or reject any / or all tender(s) in part or full without assigning any reason thereof.
- iii) The tenderer(s) should bear in mind that if it comes to the notice of J&K Minerals Limited that they have within the specified period offered lower rates to any other party within the territorial limits of J&K State, penalty clause would be applied and proceedings will be started for effecting recovery of the difference for entire contract besides action initiated to black list the party within the jurisdiction of J&K State.
- iv) The successful tenderers shall not assign or sublet his supply order or any substantial part thereof to any other agency.
- v) The supplies shall be of the standard quality and up to the standard specification and in strict accordance as per Annexure "A" enclosed.
- vi) Any other term and condition as applicable under financial norms shall be incorporated at the time of supply order or in intermediate period.
- vii) The supplier shall also certify on the body of bill that rates charged are lowest, offered to any Govt. Institution/PSU.

15. PENALTY:

In the event of successful tenderer(s), failure, neglecting, declining or delaying the supplies or in the event of any damage occurring or being caused or in the event of any default or failure in complying with any of the terms & conditions of the supply order, the Corporation shall with or without prejudice to any other remedy available to it under any law for the time being in force in the State.

- i) Terminate the supply order after 10 days notice, and / or
- ii) Recover the amount of loss caused by damage, failure or default including the consequential damage as may be determined by the Department and / or
- iii) Recover the extra cost, if any, involved in allotting the Purchase order to other party, and / or
- iv) Forfeiture of earnest money / security deposits in case of delay.

16. FORCE MAJURE:

Any failure or omission to carry out the provision(s) of the Purchase order shall not give rise to any claim by the Corporation or the tenderer against each other if such failure or omission arises from an "Act of God" which shall include all natural calamities such as fires, floods, earthquakes, hurricane, strikes, riots etc. beyond the control of the parties including war, whether declared or not, civil war or a state of insurrection.

17. ARBITRATION:

If at any time, dispute or differences, whatsoever, shall arise between the parties upon or in relation to or in connection with tender, either of the parties may give the other, notice in writing of the existence of such a question of dispute or difference and the same shall be referred to the Arbitration of Managing Director, JKML or his nominee whose decision shall be final and binding upon the parties.

Mgr(P&S)

PROFORMA
EARNEST MONEY

An amount of Rs. _____ (in words) _____

As CDR _____

is enclosed as Earnest Money against N.I.T No: _____

Dated: _____

-----*-----*

ANNEXURE 'A'

These Technical Specifications identify the technical requirements of the Goods and Services which are the subject of this Tender. The Technical Specifications are presented in four parts as follows:

A. Scope of Supply

B. General Requirements

- 1) Goods (Equipment and Machinery)
- 2) Standards
- 3) Supplier's Responsibility
- 4) Spare Parts Provisions
- 5) Composite Warranty / Guarantee
- 6) Quality Assurance

C. Equipment Specifications

Conformity with Specifications

The Equipment to be provided shall conform with the requirements defined in these parts. Where stated requirements conflict, the order in which the specifications shall prevail is as follows:

Part A followed by

Part B followed by

Part C

Site Visits

The Bidder prior to making any Bid calculation and as part of the preparation of it's Bid, shall be deemed to have visited and inspected the Site(s), made all enquiries and collected all information documentary or otherwise, including climatic conditions, as considered necessary by the Bidder for the proper and accurate preparation of its bid.

Technical Response

Bidders shall provide a Clause by Clause commentary demonstrating compliance with the Purchaser's Technical Specifications, identifying any

deviations thereto, together with full supporting technical literature and data sheets. The Equipment offered by Bidders will be evaluated technically based on the information presented in the bid without reference to extrinsic evidence. Additionally Bidders shall provide the information specifically requested in the Attachment to the Technical Specifications. Failure to provide any information requested in any part of this specification may deem the bid non-responsive.

A. Scope of Supply:

1. Equipment Package

The Supplier is required to bid as per the equipment package detailed in the Tender Document

2. Supplementary Items

I. The Equipment shall be provided with a comprehensive tool kit, which shall include any special tools required for erection, commissioning and for the maintenance and repair of all the Equipment.

II. First fill of all oils, grease and lubricants needed for test and commissioning of equipment.

III. As regards supply of all filters & 'O' rings for first 3000 working hours,

3. Information and Drawings

At least one month before the scheduled installation date, the Supplier shall provide:

a) One suitably illustrated copy of Operating, Repair and Maintenance Instructions for all the equipment, written in the English language, substantially bound in book form;

b) One suitably illustrated copy of detailed Spares Parts Manuals covering all plant, Equipment and accessories substantially bound in book form; The Supplier shall also submit the data identified in the specifications for each item of Equipment proposed. In addition to the Equipment drawings requested, where appropriate the Supplier shall supply detailed drawings illustrating erection/assembly site(s), foundation and accommodation requirements for such items as drive motors, switch installations etc.

4. Erection/Assembly, Commissioning and Performance Testing

The Supplier shall provide the Services of Specialist Technicians to supervise the installation/ erection/ assembly, commissioning and any performance testing of the plant, Equipment and accessories supplied .

The Technicians shall remain at site following commissioning until all necessary personnel are fully conversant with the maintenance and operation of the Equipment.

5. Training

The Supplier shall also be responsible for the provision and delivery content of any suitable training program necessary for operation and maintenance of the Equipment.

B. General Requirements

1. Goods (Equipment and Machinery)

Detailed specifications of the Equipment to be supplied are given in Part C of this section. In general, all items shall be new, unused and of the current design (incorporating latest proven features) and not likely to be discontinued or become obsolete in near future designed and constructed to handle without overload and for the working hours stated, the maximum volumes/rates specified; designed to facilitate ready access, cleaning, inspection, maintenance and repair of component parts; designed to facilitate rapid changeover of consumable items.

The component parts of all items shall, wherever possible, be selected from the standard ranges of reputable manufacturers.

The Equipment and accessories shall be physically robust and where necessary capable of dismantling for transportation and ready re-assembly using simple tools.

All Equipment items provided shall be designed to be compatible within the proposed overall Scope of Supply.

Electrical Equipment shall provide all protection devices, controls and interfaces for the Equipment to operate safely and efficiently.

All workmanship and materials shall be of first class quality in every respect.

All parts and surfaces which are exposed to corrosive environments shall be suitably protected to prevent any effects of corrosion or erosion.

2. Suppliers Responsibility

The Purchaser requires that the Supplier shall accept responsibility for the provision of complete operable and compatible Equipment and systems within the Scope of Supply. This document identifies only the major items required for the installation and the Supplier shall ensure that the total supply includes all necessary Equipment for it to function effectively and safely. Any additional items the Supplier considers necessary to ensure compliance with such a requirement shall be identified and included.

If the Supplier observes that this Specification document contains any anomalies, ambiguities, flaws, errors or omissions, the Supplier shall immediately bring these to the attention of the Purchaser.

The Supplier shall be responsible for the testing and commissioning of the Equipment and ensure that it meets the requirements as specified. The commissioning and setting to work of the whole Equipment Supply package

shall be carried out under the supervision of the Supplier in conjunction with the Purchaser's nominated personnel

4. Spare Parts Provisions

4.1 Availability of Spare Parts.

All items and Equipment proposed shall be of current design and manufacture. The Supplier shall warrant that sufficient spares and servicing facilities will be available to maintain the Equipment in use throughout its life.

4.2 Provision of Spare Parts

The supplier shall supply all filters and „O“ rings including Engine Filters required for first 3000 hours of operation of each equipment. Further it is specified that the cost of these items for initial 3000 hours of operation for each equipment shall be included in your quoted basic price of the equipment.

4.3 Emergency Spare Parts

The Bidder shall ensure that Spare Parts required urgently by the Purchaser for repair of breakdown equipment are supplied at over riding priority .

4.4 Lifetime Spare Parts

The Supplier undertakes and guarantees to produce and maintain stocks, to be available for purchase by the Purchaser under separate agreement, of all Spare Parts and Consumables as may be required for maintenance and repair of the Plant throughout its working life. In the event that the Supplier wishes to terminate production of such Spare Parts, the Supplier shall:

(a) give not less than six months notice in writing of it's intention to terminate production in order to permit the Purchaser reasonable time in which to procure needed requirements; and

(b) Immediately following termination, provide to the Purchaser at no cost, manufacturing drawings material specifications and all necessary permissions to facilitate manufacture of the Spare Parts elsewhere. In any event, the Supplier shall not seek to terminate manufacture of spare parts for a period of not less than ten (10) years from Taking-Over.

4.5 Oils, Lubricants and Fluids

Not less than one (1) month before the scheduled date for Acceptance, the Supplier shall provide to the Purchaser a detailed schedule of all necessary oils, lubricants, fluids and the like for the operation and maintenance of Equipment. The schedule shall indicate estimated annual consumption and specify the appropriate international standard number or

the name and reference number of an equivalent available in India considered to be acceptable by the Supplier.

5. Quality Assurance

5.1 The Supplier should furnish in detail its quality assurance plan for various stages of manufacture.. The Quality Assurance plan shall comply with an internationally recognized quality assurance standard such as ISO 9000.

5.2 The Supplier shall provide facilities to Purchaser or their authorized representatives for progress inspection during manufacture at his works and furnish all test data available in this regard for quality control, both for bought out items and his own manufactured items.

5.3 The Purchaser or his agent, when so required by him, shall also be provided with samples of fought-out materials for the purposes of undertaking independent tests which independent tests shall be at the expense of the Purchaser.

C. Equipment Technical Specifications:

The equipment shall comply with the following specifications included as an attachment to this section.

Description	Our Requirement
Engine HP	100 HP + / - 15 %
Digging Depth in Mtr.	5.0 + / - 10 %
Cutting Height in Mtr.	8.5 + / - 10 %
Max. Digging Force (kgf/KN).	10000/100 + / - 10 %
Max. Reach on Ground in Mtr.	8.0 + / - 10 %
Max. Crowing Force (kgf/KN)	8660/85 + / - 10 %

EQUIPMENT SPECIFICATION OF DIESEL ENGINE POWERED HYDRAULIC EXCAVATOR WITH 0.75 cu. mtr BACK-HOE BUCKET.

1. Scope of Specification

This specification is intended to cover the technical requirements for the design, manufacture, testing, delivery, on-site erection and commissioning of a self-propelled, crawler mounted diesel engine powered hydraulic excavator with 0.60 cu. mtr. to 0.80 cu. mtr. Back-Hoe bucket.

2. References

The following International Standards are referred to in, and form part of, the Specification:

ISO 2867 Earth-moving machinery - Access systems

ISO 3457 Earth-moving machinery - Guards and shields - Definitions and specifications

ISO 4557 Earth-moving machinery - Excavators - Operator's controls

ISO 6014 Earth-moving machinery - Determination of ground speed

ISO 6015 Earth-moving machinery - Hydraulic excavators - Methods of measuring tool forces

ISO 6405-1 Earth-moving machinery - Symbols for operator controls and other displays -

Part 1: Common symbols

ISO 6405-2 Earth-moving machinery - Symbols for operator controls and other displays -

Part 2: Specific symbols for machines, equipment and accessories

ISO 6750 Earth-moving machinery - Operation and maintenance - Format and content of manuals

ISO 7135 Earth-moving machinery - Hydraulic excavators - Terminology and commercial specifications

ISO 7451 Earth-moving machinery - Hydraulic excavators - Back Hoe type buckets - Volumetric ratings

ISO 8643 Earth-moving machinery - Hydraulic excavator and back-hoe loader boom

lowering control device - Requirements and tests

ISO 9249 Earth-moving machinery - Engine test code - Net power

3. Design Criteria

The excavator shall be capable of continuous digging for protracted periods on a system of 3 shifts each of 8 hours duration per day throughout the year in soft and hard overburden.

The excavator shall have the following working ranges:

- a) Maximum digging height not less than 8.00 m
- b) Maximum digging reach not less than 8.00 m
- c) Maximum digging depth not less than 5.00 m
- d) Maximum dumping height not less than 6.0 m

Crowd force and Breakout force each measured in accordance with ISO 6015 should not be less than 11,500 kg/m of bucket width.

4. Technical Requirements

1. Bucket

The excavator shall be supplied with a hard faced, heavy duty rock bucket of 0.75 cubic meter (Cum) capacity rated Backhoe bucket, according to ISO 7451. The specific weight of the steel used in construction of the bucket shall not be less than 7800 kg/m³. The tooth points supplied with the bucket shall also be hard faced and should have proper, durable, easily removable and shock absorbing type attachment with the bucket.

2. Work Equipment

The boom and arm should be a rugged durable construction of high strength steel and free from any stress concentrations. The design must take care of all forces i.e. bending, torsion, compression, etc. encountered during operation of the equipment. Sealed bearings should be provided at pivot points. The bucket attachment connecting pins shall be sealed and lubricated

2.1 Engine.

The Equipment shall be powered by a direct injection 4-stroke turbo charged diesel engine of not less than 100 HP net power measured between 2000 r/min according to ISO 9249. The engine shall be provided with 24V electric starting, dry type 2-stage air-cleaner with dust evacuator and dust level indicator and 2-stage fuel filter with water separator.

The engine shall have a water jacket cooling system, thermostatically controlled, using an engine driven water pump, with the cooling water re-circulated through a heavy duty radiator. The system shall be capable of providing sufficient cooling to allow the equipment to continuously operate at the full rated output at the maximum ambient temperature. The moving

parts of the engine shall be lubricated by an engine driven oil pump, with full flow oil filtration and cooling.

The engine shall be equipped with an over-speed governor. The engine shall be provided with a heavy duty removable pan guard. Turbocharger should be provided with buffer plate /guard plate.

2.2 Hydraulic Drive System

The excavator hydraulic system should be powered by the engine for efficient operation of slew and travel motors and the front end of the equipment. The hydraulic pumps, motors and cylinders should be field proven large heavy type and have suitable in-built protection from surge, cavitations loss of oil due to hose leakage or burst, etc. As far as practicable reputable single make pumps, motors, cylinders and valves, etc. shall be used in the machine.

Adequate filtration of hydraulic oil with provision of warning alarm in case of blockage of filter shall be provided. The hydraulic tank preferably be pressurized and should be provided with vent valve on top which can be removed without any tool. . An adequate and effective hydraulic oil cooling system shall also be provided.

All hoses shall be grouped as far as possible and suitably clipped to reduce damage from scuffing. All hoses should be Fire/Heat resistant or retarded type only.

A boom lowering control system which complies with ISO8643 shall be provided. Suitable provision/stopper to be provided for limiting the hydraulic cylinder movement.

2.3 Swing System

An independent preferably closed loop hydraulic system should be provided for the swing motion. Swing motors to be provided with brake system. An upper structure swing lock shall be provided.

2.4 Propel and Steering

Independent crawler drive with independent fail-safe braking system and hydraulically operated emergency and parking brakes shall be provided.

2.5 Undercarriage

The undercarriage shall be heavy duty and of sufficient strength to withstand the high loads which may occur due to uneven ground conditions. It shall be of welded construction and stress relieved as required.

The sprocket should be a single piece type. Lifetime lubricated, idler and rollers, and a reliable track tensioning arrangement should be provided.

Crawler shoes shall be heavy duty and designed for ease of replacement whenever necessary.

The weight of the undercarriage should preferably be 43% of the operating weight of the machine.

2.6 Machinery House

The excavator shall be provided with a dust proof machinery house made of steel sheeting supported by a steel structure and shall cover the engine & drive system. It shall be designed to give ready and safe access to personnel & equipment for maintenance.

Non-slip type walkways and catwalks with handrails shall be provided in and around the machinery house, the operator's cab and service platforms and shall comply with ISO 2867.

2.7 Operator's Cab

A fully insulated, sound suppressed, FOPS operator's, fully Air conditioned cab with front guard, safety glass, wind shield wiper and washer should be mounted on rubber shock absorbers and elevated to facilitate a clear and unrestricted view of the operating area. The operator's seat shall be a fully adjustable bucket type with foam rubber cushion and best quality upholstery. A cooling fan shall also be provided. All operating controls, gauges (with colour indication for safe and unsafe working), monitoring and working signals shall be conveniently located within easy reach of the operator and comply with ISO 4557, ISO 6405-1 and ISO 6405-2. . All function cut-off switch to be provided inside the cabin

2.8 Warning Alarms

Audio visual warning alarm systems shall be provided for the following:

a) Alarm for failure of lubrication points of automatic lubrication system.

2.9 Lighting

The equipment shall be provided with the following:

a) 24V DC electrical system with suitably rated alternator of reputable make.

b) Electric start.

c) The equipment shall be provided with high capacity batteries. The make of the batteries & its capacity shall be given.

d) Battery isolation switch.

All electrical circuits shall be protected by adequately rated fuses which shall be easily accessible for maintenance. At least two spare fuses of each size shall be provided in each fuse box.

Adequate flood lighting and illumination at strategic points both outside and inside of the machine shall be provided for visual observation and night shift operation.

2.10 Guards and Shields

Adequate guards and shields which comply with ISO 3457 shall be provided throughout the excavator.

2.11 Fire Extinguishers

Two numbers of fire extinguishers shall be provided at strategic points on the excavator, suitably mounted in heavy duty brackets for ease of removal. The extinguishers shall be dry powder (cartridge type) with a minimum capacity of 5 kg and shall comply with Indian Standard IS: 2171.

3 Ancillary Equipment And Other Requirements

The following are to be provided on the excavator:

- a) Horn
- b) Hydraulic oil and air filter clogging indicators
- c) 6 additional of initially hard faced tooth points along with lock/ lock bolts.
- d) List of initial set of spares for 2 years of guaranteed operation along with prices against each item. MCL reserves the right either to buy these parts along with the equipment or not. This will not be taken into consideration for evaluation of tender.

5. Technical Details

- a) Volumetric rating of the bucket according to ISO 7451, together with verification calculations and drawings.
- b) Maximum Bucket and Arm Cylinder Digging forces measured according to ISO 6015.
- c) Detailed technical descriptions of the excavator.
- d) Layout drawings and detailed descriptions of all hydraulic systems and components.
- e) Comprehensive commercial literature specifications, the content of which must comply with ISO 7135.
- f) Schematic and layout drawings and details of the Supplier, number, function and type of automatic lubrication systems.
- g) Details of major bought-out assemblies and sub-assemblies including manufacturer, type, etc.
- h) Operation and maintenance manuals in accordance with ISO 6750.

6 Dimensions, Weights and Performance Details (Please submit following details)

6.1 Working Ranges

- a) Maximum digging height _____
- b) Maximum digging reach _____
- c) Maximum digging depth _____
- d) Maximum dumping height _____
- e) Reach at maximum digging force _____
- f) Max. bucket digging force (kgf) _____
- g) Max Arm digging force (kgf) _____

6.2 Dimensions

6.2.1 Basic machine

- a) Upper structure overall width _____
- b) Upper structure overall width, with catwalks _____.
- c) Upper structure rear end swing radius _____
- d) Height to top of FOPS _____
- e) Clearance under upper structure _____
- f) Undercarriage overall width _____
- g) Crawler overall length _____
- h) Crawler tracks height _____

6.2.2 Bucket

- a) Bucket width _____
- b) Boom length with specified bucket _____

c) Arm length with specified bucket _____

d) Bucket Capacity _____

6.4 Performance details

a) Swing speed _____

b) Travel speed _____ Km/hr

c) Gradeability _____

d) Cycle time _____

e) Production capacity of machine _____

f) Fuel Consumption _____

6.5 Hydraulic System

a) Make, Model, number, flow _____

Flow rates; _____

Operating Pressure _____

b) Make, Model _____

c) Make, Model, number, piston _____

diameters and stroke lengths Model:-

of cylinders Number:04 No.

Piston dia x Stroke (mm):-

Boom: _____

Arm: _____

Bucket: _____

d) Relief valve operating pressures _____

6.6 Undercarriage

a) Crawler width _____

b) Crawler shoes, total number _____

c) Centre to centre of idler roller _____ and sprocket

d) Ground contact area _____

e) Ground bearing pressure _____

6.8 Lighting details

(Details to be provided by the bidder)

a) Work lamp tool box _____

b) Work lamp boom mounted _____

c) Cabin lamp _____

PRICE BID

We, M/s. _____

Quote our rate as under against your Tender No.
for Supply Installation, Testing & Commissioning of Hydraulic Excavator As per
technical specification mentioned in tender document at 'C'

Description of Item:

Tendered Quantity	01 No.
Basic Price Ex-Works (Per Unit)	
In words Rupees	
Packing & Forwarding	
Excise Duty (% age) on	
Sales Tax (% age) on	
Freight	
Insurance	
Other levies (Details)	
Net Landed Cost (Per Unit)	
Total Price of tendered quantity	