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Order no 17100114519260 dated 17.03.2020 placed on M/S Radiant Mining technologies Ltd



"Under Jurisdiction of Nagpur Court only"

	<p>Western Coalfields Ltd. (A Mini Ratna company) (A Govt. of India Undertaking) (Website :westerncoal.nic.in) e-mail: gmmm.wcl@coalindia.in</p>	 <p>OFFICE OF THE GENERAL MANAGER (MM) FAX . : 0712- 2510284</p>
<p>Regd. Off. : Coal Estate, Civil Lines, Nagpur – 440 001.</p>		

Purchase Order No:11100114519260

Dated: 17.03.2020

By registered post with A/D

To,
M/s Radiant Mining Technologies Ltd,
Room No-5 /5 Building No 5
Koyla Vihar, Vasundhara
VIP Road Kolkata-700052

Vendor Code:129089
Fax No:033-25250230/25250327
Vendor Type: MSE Registered
GST Registration No 19AADCR0175MIZ2
e-mail: radiantminingtech@gmail.com

Dear Sir,

Sub: **Formal Supply Order for Supply of Hydraulic Roof Drilling and Bolting Machines**

Ref:1.Our Open Domestic E- tender no:wcl-hq-pur-sb-e065-2019-20 (tender ID 2019_WCL_146878_1) opened on 07.09.2019

2. Your Bid ID: 437040 dated 02.09.2019.

3 Your e-mail dated 16.03.2020

With reference to the above, we are pleased to place a formal supply order on you for supply of Hydraulic Roof Drilling and Bolting Machines as per the Price, quantity, specifications, terms and conditions detailed below and as per enclosed general terms and conditions.

SI no	Item description	Quantity(nos)	Unit price (Rs)	Total value(Rs)
1	Hydraulic Roof drilling and bolting machine complete with hydraulic power pack, wet drilling arrangement for dust suppression and accessories for use in below ground coal mines-As per Technical specifications given below a) closed/collapsed height: 880mm to 900mm b) Extended height of the machine:1600mm to 1700mm c) Extension of leg:800mm to 900mm Detailed technical specification enclosed as Annexure I Make Radiant Model: RM-1330 Material code: 29256000004	06	449998.98	2699993.88
	Total			2699993.88
	GST @18%			485998.89
	Grand total			3185992.78

Total value: (RsThirty One Lakh Eighty Five Thousand Nine Hundred Ninety Two and paise Seventy Eight Only)

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Other Terms & Conditions:

1. **Prices:** The above prices are FIRM and on F.O.R. destination basis inclusive packing, forwarding, freight and insurance charges upto destination stores. The safe arrival of the consignment at destination stores shall be your responsibility.

2. **GST:** Shall be payable extra as applicable. The present applicable rate of GST is @ 18%. Input tax credit on GST shall be availed by WCL as per GST rule. You shall submit GST compliant invoice enabling WCL to avail Input Tax Credit (ITC) under GST. In case of any failure on supplier's account, the penalty including interest (if any) borne by WCL on ITC shall be recovered from supplier..

3. **Delivery:** Supply to be completed within 6 months from the date of supply order. The delivery period shall be reckoned from 7th (seventh) day of order date.

4 **Consignee:** Depot Officer, Regional Stores, Pathakhera Area, WCL P.O.:-Pathakhera Colliery-460449, Distt.:-Betul.(M.P) GST Regd no 23AAACW1578L1Z4

5. **PAYING AUTHORITY:** GM(Fin), WCL, HQ ,Coal Estate ,Civil Lines, Nagpur -440001

6. **Payment Terms:** Payment for 80% of the Invoice value (landed value of the equipment including taxes and duties and excluding installation and commissioning charges (if any)) shall be made within 21 days from the date of receipt and acceptance of the materials at the Consignee stores and against acceptance of the Performance Bank Guarantee.

Payment for balance 20% of the Invoice value (landed value of the equipment including taxes and duties) shall be made within 21 days after successful field testing, commissioning and trial runs of the machines in the Mines, where the machines will be deployed. at the allocated locations and submission of satisfactory commissioning and training certificate issued by the end users

EFT details: Bank account details for EFT as provided by you are given below:Bank Account Details for making payment through EFT:-

Name of the Account Holder	Hindusthan Mercantile Company
Account Number	00082320005690
Name of the Bank and Branch with location	HDFC Bank STEPHEN HOUSE BRANCH 4 BBD BAGH EAST KOLKATA 700001
Nature of Account	C C Account
IFS Code of the Branch	HDFC0000008

7. **Inspection :** Final Inspection of the consignment shall be carried out at the destination stores, which will be arranged by the consignee on receipt of stores.

8 **Supply and Billing:** As indicated in your offer Supply and billing shall be done by your authorised dealer M/S Hinduathan Mercantile Company 144/145 J N Mukherjee Road Plot No 48, Near Shaktipir Howrah-711107 (WB)

9. **Security Deposit:** You shall have to furnish the security deposit amount of **Rs. 318600/-** (Rupees Three Lakh Eighteen thousand Five hundred Sixty only) in the form of Demand Draft or Bank Guarantee of any scheduled bank as per format at Annexure III for 10% (ten percent) value of the awarded contract without having any ceiling, within 15 days time from the date of supply order to the Direct Demanding Officer.

The Bank Guarantee issued by the banker of the firm shall be operational for all purposes at Nagpur branch (Maharashtra)

The Bank Guarantee issued by the issuing bank on behalf of the supplier in the favour of Western Coalfields Ltd shall be in paper form as well as issued under "Structured financial

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messaging system". The details of beneficiary for issue of BG under SFMS platform is furnished below:

Name of beneficiary and details	
Name	Western Coalfields Ltd
Area	Head Quarter
Bank A/c No: / Cust ID of beneficiary	ICICI Bank Ltd, Vishnu Vaibhav, 222, Palm Road, Civil Lines, Nagpur
IFSC code	ICIC0000059
Bank Manager Name & Ph no:	U Kati Ph n: +91-9923202096/0712-6627389

BG advising message - 760COV / 767 COV via SFMS

Field number	Particulars
7035	ICICI0000059
7037	WCL556096497

The original bank guarantee issued by the issuing bank shall be sent by the issuing bank to the following address by Registered post /AD.

General Manager(MM)I/c Materials Management Wing Western coalfields Ltd HQ Coal Estate, Civil lines Nagpur - 440001 Maharashtra

Any extension/amendments to the BG shall be done following the same procedure as above.

In case the successful tenderer fails to deposit the security money, the order shall be cancelled and the case shall be processed to order elsewhere and the firm's performance is to be kept recorded for future dealings with them.

Security deposit money will be refunded to the firm within 30 days from the date of satisfactory execution of the contract. For unsatisfactory performance and / or contractual failure, the security money shall be forfeited.

Handwritten signatures and dates:
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Handwritten signatures and date:
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Security Money may be converted into performance bank guarantee (PBG) (wherever PBG is required as per the contract). However, in such case the amount of PBG should not be less than 10% (ten percent) of the landed value of the order.

10 Performance Bank Guarantee Availability guarantee shall be backed by a bank guarantee of 10% of the value of the equipment which shall be kept valid for a period of 18 months from the date of supply of the equipment.

The Bank Guarantee issued by the banker of the firm shall be operational for all purposes at Nagpur branch (Maharashtra)

The Bank Guarantee issued by the issuing bank on behalf of the supplier in the favour of Western Coalfields ltd shall be in paper form as well as issued under "Structured financial messaging system". The details of beneficiary for issue of BG under SFMS platform is furnished below:

Name of beneficiary and details	
Name	Western Coalfields Ltd
Area	Head Quarter
Bank A/c No: / Cust ID of beneficiary	ICICI Bank Ltd, Vishnu Vaibhav, 222, Palm Road, Civil Lines, Nagpur
IFSC code	ICIC0000059
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General Manager (MM) I/c Materials Management Wing Western coalfields ltd HQ

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Coal Estate, Civil lines Nagpur – 440001 Maharashtra

Any extension / amendments to the BG shall be done following the same procedure as above.

In case the successful tenderer fails to deposit the security money, the order shall be cancelled and the case shall be processed to order elsewhere and the firm's performance is to be kept recorded for future dealings with them.

Security deposit money will be refunded to the firm within 30 days from the date of satisfactory execution of the contract. For unsatisfactory performance and / or contractual failure, the security money shall be forfeited.

Security Money may be converted into performance bank guarantee (PBG) (wherever PBG is required as per the contract). However, in such case the amount of PBG should not be less than 10% (ten percent) of the landed value of the order.

The supplier shall ensure that the availability of the equipment over a period of 12 months after commissioning does not fall below 75%.

For every one percent fall in availability below 75%, 1% value of the equipment will be deducted (encashed) from the bank guarantee).

In case the fall in % availability below 75% exceeds 10%, the equipment will be rejected out-right and the supplier will have to refund the full amount i.e. the cost of the equipment as per the supply order.

11. GUARANTEE/WARRANTY: You shall give a warranty of satisfactory performance of the unit offered by them for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance by WCL.

You shall be responsible for any defects that they develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship and shall remedy such defects at his own cost when called upon to do so. If it becomes necessary for the supplier to replace or renew any defective portion of the goods, such replacement or renewal should be made by the supplier without any extra cost to Coal India Limited and / or its subsidiary company.

12 Availability Guarantee: (As per clause No 7.3.1 of Annexure I enclosed)

1) The Roof bolting machine shall have guaranteed availability of not less than 75% over a period of 12 months after commissioning

2) The availability will be calculated as follows :

8760 – Down Time

Percentage Availability = ----- x 100

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Where Down Time = Maintenance hours + Breakdown hour

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13 Training of operators and Maintenance Personnel: (As per clause No 8 of Annexure I enclosed)

1 You shall be required to depute qualified and trained service engineers for field testing, commissioning and trial runs of the machines in the Mines, where the machines will be deployed.

2 The service engineers will be required to impart the necessary training to the operators and maintenance personnel of WCL for proper and safe operation and in maintenance and repairs of the machines.

14 After Sales Service: (As per clause No 9 of Annexure A enclosed)

1) You should be in a position to offer efficient and prompt after sales service and to ensure the availability of the spare parts and consumables through out the life of the equipment.

2) Apart from need based service, the after sales service shall also include periodic visits of service engineers to the Mines of WCL where the Roof bolting machines are deployed, to check the health of the equipment to ensure their performance/availability.

15. SUBMISSION OF BILLS:- For claiming payment, following documents are to be submitted along with original bills as per terms of the supply order to the consignee.

i). Pre-receipted and stamped Invoice (and/ or Original Buyer's copy of invoice as per GST laws).

ii) Packing list in original list giving details of bill of materials, if applicable. (Invoice should be strictly as per GST laws 2017)

iii) Consignment note / RR/ LR in original, if applicable.

iv) Warranty / Guarantee certificate, if applicable.

v) Manufacturers test certificate, if applicable.

vi) DGMS / BIS / Pre dispatch inspection certificates / any other document, if required as per the contract.

vii) Any other document as specified in the Order.

viii) Price certificate and price fall certificate

16. LIQUIDATED DAMAGES:- In the event of failure to execute the contract within the stipulated period mentioned in the order and in the event of breach of any of the terms and conditions in the order WCL has the right :-

a) To recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% of the contract value for delay in execution of the contract beyond the delivery schedule (for this purpose part of a unit supplied will not be considered) as aforesaid for each week or part of a week during which the execution may be in arrears limited to 10 %. Where felt necessary the limit of 10% can be increased to 15% at the discretion of buyer

b) To purchase from elsewhere, after due notice to the successful tenderer, on the account and at the risk of the defaulting supplier the stores not supplied or others of a similar description without cancelling the supply order in respect of consignment not yet due for supply or

c) To cancel the supply order or a portion thereof, and if so desired, to purchase the store at the risk and cost of the supplier and also

d) To extend the delivery period with or without imposition of Liquidated Damages as

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may be considered fit and proper. The penalty if imposed shall not be more than the agreed liquidated damages referred to clause (a) above.

- e) To encash any available Bank Guarantee / security deposit for recovery of the penalty.
- f) Whenever under the contract a sum of money is recoverable from and payable by the supplier, Western Coalfields Limited, shall be entitled to recover such sum by appropriating, in part or whole by deducting any sum or which at any time thereafter, may be due to the successful tenderer in this or any other contract, with Western Coalfields Limited or any of its Subsidiary Company. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay to Western Coalfields Limited, on demand the remaining amount.
- g) The supplier shall not be entitled to any gain under this clause.

17. FORCE MAJEURE CLAUSE:- If the execution of the contract/supply order is delayed beyond the period stipulated in the contract/supply order as a result of outbreak of hostilities, declaration of an embargo or blockade, or fire, flood, acts of nature or any other contingency beyond the supplier's control due to act of God then Coal India Limited or its subsidiary companies any allow such additional time by extending the delivery period, as it considers to be justified by the circumstances of the case and its decision shall be final. If and when additional time is granted by the Coal India Limited and its subsidiary companies, the contract/supply order shall be read and understood as if it had contained from its inception the delivery date as extended.

- a) The successful bidder will advise, in the event of his having to resort to this clause, by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the causes of the delay, within fifteen days of the occurrence and cession of such force majeure conditions. In the event of delay lasting out of force majeure, WCL will reserve the right to cancel the contract, and provisions governing termination of contract as stated in the bid documents will apply.
- b) For delay arising out of Force majeure, the bidder will not claim the extension in completion date for a period exceeding the period of delay attributable to the causes of force majeure and neither WCL nor the bidder shall be liable to pay extra cost provided it is mutually established that the force majeure conditions did actually exist.

18 Price Certificate: A Price Certificate shall be submitted on the body of the invoice as under: "Certified that we have not offered the same products at a price lower than that offered in the present bid in respect of any other ministry/ department of the Govt. of India or a PSU. In case we offer the lower prices for same items under similar terms within the validity of this offer to ministry/department of the Govt. of India or a PSU, we undertake to notify such reduction to the buyer and the same will also be applicable against this offer."

19. Price fall Clause: You shall undertakes that you have not supplied/is not supplying similar product/systems or subsystems at a price lower than that offer in the present bid in respect of any other Ministry/Department of Govt. of India or PSU and if found at any stage that similar product/systems or subsystems was supplied by the bidder to any other Ministry/Department of the Govt.of India or PSU at a lower price than that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in cost would be refunded by the bidder to buyer, if the contract has already been concluded

20: Risk Purchase Clause:

In the event of failure of the supplier to deliver or dispatch within the stipulated date/period of the supply order or in the event of breach of any of the terms and

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conditions mentioned in the supply order, Coal India Ltd. or its Subsidiary Companies have the right to purchase the stores from elsewhere after due notice to the defaulting supplier at the risk and cost of the defaulting supplier. In the event of failure of the supplier as detailed above, the cost as per risk purchase exercise may be recovered from the bills against any other supplies pending in the same Subsidiary Co. and also in any other Subsidiary Companies/CIL.

Risk purchase action may be initiated under any of the following conditions:

- i. When the supplier fails to deliver the materials even after the delivery period is extended on several occasions, on request from the supplier.
- ii. When the supplier fails to respond to purchaser's request for supply of the materials and fails to provide any reason which is considered to be genuine, for the delay in supply.
- iii. When in the judgment of the purchaser the supplier is unable to execute the order due to various reasons.
- iv. When the materials are urgently required and the supplier fails to deliver the materials within the extended/original delivery schedule.
- v. When the supplier breaches any of the terms and conditions of the supply order and as a result fails to execute the order satisfactorily.

21 GENERAL TERMS & CONDITIONS: Unless otherwise specified in the order, the order shall be subject to General terms & conditions as per Annexure-II

This order is being placed on the basis of the terms and conditions already accepted by you. Two copies of this supply order are being sent to you. You may acknowledge receipt of the order by sending one copy duly signed and stamped with seal of your company.

All other terms and condition shall be as per NIT

Encl: 1. Detailed Technical Specification. Annexure - ' I ' (Seven pages)

2. General Terms and Conditions of the supply order Annexure -II (five pages)

3. Format of BG for Security cum Performance Bank Guarantee - Annexure-III (One page)

Yours Faithfully,

For & on behalf of Western Coalfields Ltd.




(S S Bhal)
Sr Manager(MM)P


(K S R Diwakar)
Chief Manager(MM)P

Indent Reference and BC reference: Indent no. IND/18-19/3560/00177 dt. 11.03.2019 of Pathakhera Area and BC No i) FA/WCL/CAP/BC/OPM/12/53/48 dated 06.0..2020 for Rs. 3185993.00

COPY TO:

1. GM(E&M)HOD,
- 2 AGM- Pathakhera Area
3. SO(MM)/Depot Officer/SO(E&M), WCL Pathakhera Area
4. GM(Fin)I/c-I & II, WCL Hqrs, Nagpur
5. Chief Mnager(Fin)/Estb, WCL, HQ Nagpur.

 
Sr Manager(MM)P

 
Chief Manager(MM)P

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Annexure-A

1.1 Item description: Hydraulic Roof drilling and bolting machine complete with hydraulic power pack, wet drilling arrangement for dust suppression and accessories for use in below ground coal mines-As per details given below.

2.0 Make and model of Equipment Offered :Radiant Model: RM 1300

2.1 Quantity Required: 06 Nos

2.2 Technical Specification : a) Closed/collapsed height of the machine: 880 mm to 900 mm
b) Extended height of the machine : 1600 mm to 1700 mm
c) Extension of leg : 800mm to 900 mm

3.0) SERVICE CONDITIONS :

3.1) Place of use : UG Coal Mine near coal face.

3.2) Max. ambient air temperature: 48 Deg.C.

3.3) Relative humidity: 98%

3.4) Altitude (From MSL): Within 1000 M

3.5) Environment: Dusty (mostly Coal dust)

4.0) SCOPE OF SUPPLY (For each machine)

4.1) Hydraulic mechanized drilling and Roof Bolting machine complete with control arms and legs, hydraulic power pack, wet drilling arrangement for dust suppression, water hoses, required accessories, with DGMS approved electrical motor and starter, The machine shall comply with DGMS Tech. Circular (Electrical),(Approval) No. 23 Dhanbad dated 21.12.2015.

4.2) Hydraulic hose assemblies with end fittings (quick release couplings) and isolating valve at 25 M from both ends, 75 M long- 2 nos.(one pressure and one return)

4.3) Water hose with quick release couplings 75 M long- 1 No.

4.4) Initial consumables: Drill bits and drill rods to be supplied along with each machine:

1) HEXAGONAL Drill Rods, 22mm dia, 900 mm long: 8 Nos.

2) HEXAGONAL Drill Rods, 22 mm dia 1500 mm long: 8 Nos.

3) Drill bits, nominal size 27 mm, : 25 Nos.

4.5) Tool kit for maintenance and repairs - 1 Set

4.6) Operation & maintenance manual which shall include clear instructions regarding safe use, repairs and schedule maintenance, check lists and other relevant information.- 2 Sets

4.7) Spare part catalogue - 2 sets

4.8) Any item(s), which is (are) not specified above, but required for the completeness of the equipment for commissioning and smooth operation is (are) also included in the scope of supply.

5) BASIC DESIGN / CONSTRUCTION

5.1) The Roof Bolter shall be light weight, portable, single man operated and shall consist of hydraulic motor driven rotary drill with arrangement for water flushing. As per DGMS Tech. circular (Electrical),(Approval) No.23 Dhanbad, dated 21.12.2015.

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5.2) The drive head assembly shall be mounted on hydraulically extendable, multistage legs

5.3) The machine shall be provided with a control arm for holding and operation of the machine by the operator standing approx. one meter away

5.4) All the necessary control valves for operation of the drill, leg and water flow shall be ergonomically located on the control arm.

5.5) Only flame retardant and anti static materials shall be used for construction of the machine

5.6) All hydraulic components shall be compatible HFDU68 hydraulic fluid (Hydraulic fluid shall be provided by WCL)

5.7) Manufacturing number of product with date of manufacture along with DGMS approval number shall be embossed on the product on DGMS approved items.

6) COMMON TECHNICAL PARAMETERS :

6.1) Torque at stall : 150 Nm to 160 Nm

6.2) Maximum speed: 750 RPM-800 RPM

6.3) Operating Pressure: 100 bar – 175 bar

6.4) Flow rate: 60LPM to 75 LPM

6.5) Nos of stages (of leg): 2 to 3

6.6) Flushing water pressure :15bar-20 bar

6.7) Flushing water flow rate : 50LPM to 60 LPM

6.8) The machine should be able to drill vertical holes of the following dimension in sand stone and hard rocks having compressive strength upto 600 kg/sqcm to 650 kg/sqcm.

6.9) Diameter of hole : 27 mm to 43 mm

6.10) Length of hole : 0.900 Mtr to 2.8 Mtr

6.11) Chuck suitable for: Hexagonal, 22mm size drill rod

6.12) Machine should be supplied with a conditioning block to ensure correct flow rate and pressure to the roof bolter.

6.14) Hydraulic Hoses :

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6.14.1) Type/construction of hoses : Two-wire-braid Reinforced rubber hose conforming to BCS:174-1992

6.14.2) The hoses shall be provided with quick release type couplings on both the ends.

6.14.3) Length of hose assembly : Not less than 75 Mtrs.

6.14.4) Size/Nominal bore of the hose : 3/4"

6.15.0) Water Hose :

6.15.1) Type/construction of hose : Textile reinforced rubber water hose conforming to type 3 of IS:444 (Latest)

6.15.2) Working pressure : Not less than 20Kgt/sq.cm.

6.15.3) Size/Nominal bore of hose : 3/4"

6.15.4) The hose shall be with quick release couplings on both ends.

6.15.5) Length of the hose : 75 Mtrs.

6.16.0) Drill rods and Drill bits

6.16.1) Size of drill rods: 22 mm dia. With M16 thread for drill bit fixing

6.16.2) Type of drill rod: Hexagonal section

6.16.3) Length of rods: 900 mm, 1500 mm

6.16.4) Central hole for water flushing: Required.

6.16.5) Size of drill bit: 27 mm dia. With M16 thread for fixing with Drill rod

6.16.6) Type of drill bit: Tungston carbide tipped Rotary drill bits with center hole.

6.17) HYDRAULIC POWER PACK :

6.17.1) Hydraulic Power pack with all accessories and suitable for the above mentioned Roof Bolting machine

6.17.2) KW of FLP Electric motor : 11kw

6.17.3) Available system voltage: 550 V \pm 6%, 3 Ph, 50 Hz \pm 3%

6.17.4) The motor of the machine shall always be operated from a Starter and a separate start stop push button station shall be provided near to the Roof bolting machine to facilitate remote operation.

6.18-Testing of Portable hydraulic mechanized drilling machine with associated flameproof, intrinsically safe electrical apparatus:

1- The flameproof and intrinsically safe equipment associated with the hydraulic mechanized drilling machine shall be tested in accordance with the requirements for type tests of the standard mentioned below and of the specific standards for the types of protection concerned.

The type test of the associated flameproof and intrinsically safe equipment conforming to the prescribed standards shall be conducted at a laboratory as mentioned in the DGMS approval policy 2015 (First Revision - 10th April, 2015) or its revised version

6.18.1. IS/IEC 60079-0: 2004 Electrical apparatus for explosive gas Atmospheres Part 0 general

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requirements

6.18.2. IS/IEC 60079-1:2007-(for enclosure of the power supply unit) Explosive atmospheres Part 1 Equipment protection by flameproof enclosures "d"

6.18.3. IS/IEC 60079-11:2006 -Explosive atmospheres Part 11 equipment protection by intrinsic safety "I"

6.18.4. IEC 60529-2004- Degrees of Protection Provided by Enclosures (IP Code) IP54 or above (It may vary according to the intended use)

NB: Latest Standards will prevail over the above.

7. MARKING :-

7.1: The Portable Hydraulic drilling machines with associated Flameproof/Intrinsically safe electrical apparatus shall be conspicuously marked on the main part of apparatus, which shall include the following:

- a- The name of the manufacturer or registered trade mark;
- b- The manufacturer's type identification; the type of protection as granted by the testing laboratory
- c- The symbol of the gas group : I for mines susceptible to firedamp;
- d- Temperature class of the FLP equipment
- e-WARNING Marking : - The warning as recommended in the test report by the testing Lab shall be marked on the equipment. Multiple warnings may be combined into one equivalent warning.

Additional marking that may be required by the applicable industrial safety standards for construction of the electrical equipment.

f-Direction of rotation shall be marked near electric motor and hydraulic motor/ rotor.

7.2-The manufacturer shall:

a. Have reliable and adequate facility for manufacturing & quality testing of the machine as a whole.

b- Take a note of the relevant standards amended from time to time, provisions of the Central Electricity Authority (measures relating to safety and electric supply), Regulation, 2010 and any other instructions / circulars issued from DGMS in respect of manufacturing of Portable Hydraulic mechanized drilling machines with associated flameproof/intrinsically safe electrical equipment.

c-Provide operation and maintenance manual, trouble shooting, do & don'ts, copy of valid certificates and test report(s), entity parameters as recommended in the test report for connection of the Flameproof/Intrinsically safe electrical equipment etc.

d-Specify the parameters of the machine such as rated torque, pressure, flow, rotation speed, leg power, leg extension, minimum height' maximum height, water flushing pressure, weight, setting of relief valve

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etc. Provided electrical parameters, maximum surface temperature and other limit values; special conditions of use including particulars of possible misuse, which experience has shown, might occur;

e- Shall provide following safety features/ devices near power pack pump:

- i. an adjustable and reliable pressure relief valve and pressure gauge.
- ii. Hydraulic tank shall be provided with breather cum filter, oil level indicator, drain plug, suction strainer and return filter with condition monitoring.
- iii. A suitable accumulator, where ever required.
- iv. Guarding near rotating parts.

f- Provide following safety features/ devices near drilling machine:

- i. A suitable ON/OFF valve in pressure line near drill machine.
- ii. Separate relief valves for drilling and lifting circuits in the drill machine.

g- Provide a remote push button station for controlling supply of the main hydraulic motor to be placed suitably near to drilling operation. The power supply to the above push button station shall be intrinsically safe.

h- Shall use/install DGMS approved flameproof and intrinsically safe equipment in the portable Hydraulic mechanized drilling machines

i- Ensure that the fire resistant Hydraulic high pressure hoses and fire resistant hydraulic fluid used in the equipment shall conform to DGMS general approval orders No. DGMS/ Mech/ Tech. Cir (Approval) No..4 dated 13.02.2015 and DGMS/ Mech/ Tech. Clr (Approval) No.2 dated 13.02.2015 respectively.

j- Ensure that the frame, tank and cylinders shall be metallic, No Exposed component shall have content of light metal/Aluminum exceeding the percentage as recommended in IS/IEC 60079-0:2004 for gas group-I. The operators handle shall be of adequate length for safe and convenient operation.

7.3) PERFORMANCE BANK GUARANTEE:

7.3.1) Availability Guarantee:

7.3.2) The Roof bolting machine shall have guaranteed availability of not less than 75% over a period of 12 months after commissioning

7.3.3) The availability will be calculated as follows :

8760 – Down Time

Percentage Availability = ----- x 100

8760

Where Down Time = Maintenance hours + Breakdown hours

7.4.0) Performance Bank Guarantee: Availability guarantee shall be backed by a bank guarantee of 10% of

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the value of the equipment which shall be kept valid for a period of 18 months from the date of supply of the equipment.

The supplier shall ensure that the availability of the equipment over a period of 12 months after commissioning does not fall below 75%.

For every one percent fall in availability below 75%, 1% value of the equipment will be deducted (encashed) from the bank guarantee).

In case the fall in % availability below 75% exceeds 10%, the equipment will be rejected out-right and the supplier will have to refund the full amount i.e. the cost of the equipment as per the supply order.

8.0) TRAINING OF OPERATORS & MAINTENANCE PERSONNEL :

8.1) The suppliers shall be required to depute qualified and trained service engineers for field testing, commissioning and trial runs of the machines in the Mines, where the machines will be deployed.

8.2) The service engineers will be required to impart the necessary training to the operators and maintenance personnel of WCL for proper and safe operation and in maintenance and repairs of the machines.

9.0) AFTER SALES SERVICES:

9.1) You should offer efficient and prompt after sales service and to ensure the availability of the spare parts and consumables through out the life of the equipment.

9.2) Apart from need based service, the after sales service shall also include periodic visits of service engineers to the Mines of WCL where the Roof bolting machines are deployed, to check the health of the equipment to ensure their performance/availability.

10.A) DOCUMENTS TO BE FURNISHED WITH THE CONSIGNMENT (For Roof Bolting Machine):

10.A.1) The manufacturer/supplier shall arrange to provide clear instructions for use, safety data sheet, codes of safe practices for use of the machine

10.A.2) Self attested copy of factory test reports along with drawings.

10.A.3) Operation & maintenance manual which shall include clear instructions regarding safe use, repairs and maintenance, schedule of checking, check lists and other relevant information etc.– 2 Sets with each machine

10.A.4) Spare part catalog – 2 sets with each machine

10.A.5) Self attested copy of valid DGMS approval for electric motor / any other item requiring DGMS approval, for its use in underground Coal Mines.

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11) SPECIFICATION OF STARTER(FLP)

11.1) Starter Shall be FLP Type. The starter shall have the provision of remote control operation and it shall be provided by the bidder with suitable type, size and grade flexible cable 100 Mtrs and FLP remote ON - OFF switch. The control voltage shall be 110V.

11.1.1) Make(s) of Starter OFFERED

11.2) APPLICATION: To be use with Hydraulic Roof Bolter in under ground mine

11.3) SERVICE CONDITIONS :

11.3.1) Place of use: Underground Coal Mines

11.3.2) Ambient temperature (Max.): 45° C

11.3.3) Relative humidity (Max.): 98%

11.3.4) Environment: Dusty (Coal dust)

11.4) STANDARD SPECIFICATION :

11.4.1) Starter: IS:13947 Latest

11.4.2) Flame proof enclosure: IS/IEC 60079-1:2007

11.4.3) Contactor: IS:13947(Part-4/Sec.1) Latest

11.5) GENERAL SPECIFICATIONS :

11.5.1) System voltage: 530 V, ± 6%, 3 Ph, 50± 3 % Hz

11.5.2) Rated KW 15 kw

11.5.3) Type of Starter: DOL

11.5.4) Type of enclosure: Flame proof, DGMS approved and shall carry BIS certification mark2

11.6) Construction:

11.6.1) Type of construction: Shall be built in two compartments.

11.6.2) Mounting: Skid mounted.

11.6.3) One compartment shall house through-going bus bars and off load isolator.

11.6.4) The second compartment shall house contactors, protective devices and other accessories.

11.6.5) Door of second compartment shall be interlocked with isolator in such a way that the door can be opened only when the isolator is in 'OFF' position.

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11.6.6) Incoming / outgoing terminals : Cable terminal box with sealing box shall be provided for cable terminals suitable for PVC DWA mining cables of required size. (25Sqmm, 3 Ph)

11.6.7) Through-going terminals : Through-going terminals of the bus bar shall be provided with bus trunking box with blanking cover.

11.6.8) Bus bars details - Shall be made from Electrolytic copper for a continuous rating of 300 Amps and shall be covered with heat shrunk PVC sleeves.

11.6.9) Isolator details - Off load, triple pole reversing type.

11.7) Contactor details :

11.7.1) Type of contactor: Triple pole, air break

11.7.2) Operation: Electro-magnetic

11.7.3) Utilisation category: AC 4

11.7.4) Operating limits of contactor: Shall be as per IS:13947 (Part 4/Sec.1) Latest. However, the dropout voltage shall not be more than 50% of rated control supply voltage.

11.7.5) Make and Model of contactor: Govt. /Govt. approved test house tested make

11.8) Protections :

11.8.1a) Overload protection: Electromagnetically operated over current relay with thermal overload .

11.8.1b) Current setting range: 50% to 120%

11.8.2) Earth Leakage Protection - Type of E.L. Relay: CBCT operated non-self resetting type, sensitive earth leakage relay with test, reset and indication facility.

11.8.3a) Minimum value of leakage current (on primary) to operate: 50 mA - 250 mA (Max.) in step of 50 mA, 80mA, 100mA, 200mA and 250mA.

11.8.3b) Time delay setting range: 0 – 1 Sec. in steps of 0.1 Sec

11.8.4) Testing and resetting of the relay: By means of push buttons on front cover of the panel

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11.8.4) Indication of E.L. trip: By means of indicating lamps

11.8.5) Short Circuit Protection: Through HRC fuses

11.8.6) P.T. and coils of the relay shall be epoxy resin sealed.

11.9) Control of the panel :

11.9.1) Start and stop push buttons shall be placed on the front door of main chamber

11.9.2a) Provision shall be made to operate the Starter either in local control mode or remote control mode.

11.9.2b) The stop button on the Starter shall however be effective in both the modes

11.9.3) Control circuit shall be intrinsically safe

11.10.4) Instruments : The Starter shall be provided with ampere meter and voltmeter of suitable range.

11.10.5) Circuit Diagram : Printed circuit diagram on a brass plate shall be affixed on inside the front cover.

11.12) **DOCUMENTS TO BE SUBMITTED ALONG WITH THE SUPPLY** (For the Starter to be supplied with the Machine):

11.12.1) Self attested copy of valid DGMS approval for the offered Starter for its use in underground Coal Mines.

11.12.2) Self attested copies of valid Govt./Govt. approved Test house tested reports for FLP enclosure of starter.

11.12.3) Self attested copy of valid BIS license (complete license) for IS/IEC 60079-1:2007 .

11.12.4) Self attested copies of type test certificate from Govt./Govt. approved test house for Starter

11.12.5) General arrangement drawing of the offered Starter showing over all dimensions and schematic circuit diagram.

11.12.6) Installation, operation and maintenance instruction/manual for the Starter.

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INSPECTION CLAUSE : Final Inspection of the consignment shall be carried out at the destination stores, which will be arranged by the consignee on receipt of stores

12. **GUARANTEE / WARRANTY:** The tenderers shall give a warranty of satisfactory performance of the unit offered by them for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance by WCL. The supplier shall be responsible for any defects that they develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship and shall remedy such defects at his own cost when called upon to do so. If it becomes necessary for the supplier to replace or renew any defective portion of the goods, such replacement or renewal should be made by the supplier without any extra cost to Coal India Limited and / or its subsidiary company.

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