



WESTERN COALFIELDS LIMITED
(A SUBSIDIARY OF Coal India Limited)
CIN U10100MH1975GOI018626

MATERIALS MANAGEMENT WING, COAL ESTATE, CIVIL LINES, NAGPUR - 440 001.
PHONE : PBX : 0712-2611381, 2510691 Extn : 5606, 5861, Fax : 0712-2510284

M/F
Recd
27/10/2020

Supply Order NO. 12000110920148

DT: 22.10.2020

SUPPLY ORDER

To
M/s. BEML Limited
Vth Floor, Unity Building,
J C Road, Bangalore - 560 002

Vendor Code: 416002
Vendor Category : Manufacturer
Fax: 0712-224 9997

Dear Sir,

- Sub : Formal Order for Supply of 28KL Water Sprinklers
Ref : i. WCL's Tender enquiry no WCL-hq-pur-yvr-ra-e051-2020-21 opened on 20.08.2020 (tender id 2020_WCL_177885_1) (E:268884).; Price bid opening followed by Reverse Auction held on 09.09.2020
ii. Your offer / Bid id number 544254 and subsequent correspondence on portal and submission of shortfall / confirmatory documents.
Your letter no BEML/MN/209/BG825/587 dt 04.09.2020,

This has reference to above. We are pleased to place FORMAL ORDER on you for the supply of 7 nos of 28 KL Water Sprinklers on the rates, following salient terms and conditions given and general terms and conditions enclosed: -

| Description | Ordered qty (nos) | Unit Basic Price Rs. | Extended value Rs. |
|--|-------------------|----------------------|--------------------|
| BEML make, model WS28-2 Water Sprinklers 28KL including necessary Filters and O-Rings for initial 3,000 working Hours. (Replacement requirement: 3 nos; Additional Requirement: 4 nos); Detailed technical specifications as per Annexure "A"; Item Code:15803990385 | 7 | 1,40,00,000.00 | 9,80,00,000.00 |
| Freight & Insurance charges | | | Inclusive |
| GST @ 18% on FOR Destination price | | | 1,76,40,000.00 |
| Total value of order before availing ITC | | | 11,56,40,000.00 |

Total Value: Rs.11,56,40,000.00 (Eleven crores fifty six lakhs forty thousand only).

Terms and conditions :

- Prices: The prices are FIRM on F.O.R. destination basis inclusive of Packing, forwarding, freight and insurance charges upto destination.
- GST: GST shall be paid at actual against documentary evidence as applicable at the time of Dispatch within the stipulated delivery period. The current rate of GST is 18%. Input Tax Credit benefit shall be availed by the consignee, for which you should submit GST Complaint Invoice. You have to comply with the terms and conditions of GST Act/ Rules such as issuance of Tax Invoices, ensure payment of GST and enabling mechanism to facilitate Input Tax credit by WCL. You should upload the Tax Invoices/ Debit Note/ Credit Note in GST Portal, make payment of GST and file returns in time, as prescribed under GST Act and Rule to facilitate WCL to avail Input Tax Credit (ITC) as per eligibility under GST. In case WCL is unable to avail ITC or any liability arises to WCL due to failure on the part of you to comply the above provisions, the entire amount including Interest (If any) borne by WCL shall be recovered from you.
- Security Deposit: Exempted being PSU
- Guarantee / Warranty: i) The equipment will be warranted against any manufacturing defects/ workmanship for a period of 12 months from the accepted date of commissioning. Any defect observed on this account shall be attended to immediately and in no case beyond a period of one month. For specific warranty on assemblies and sub-assemblies, details given in Technical Specification may be referred to.

Signature

Signature
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ii) You should confirm against the clause that "in the event of any breakdown or failure of performance due to defects in materials, design, workmanship, spare parts etc., WCL shall promptly notify the supplier in writing of any claims arising under this warranty.

The repairs, replacement or rectification work shall be carried out by the supplier at site at NO COST to the purchaser, within 21 days of settlement of warranty claims. The supplier will be required to stock spare parts to take care of warranty period breakdown. Spares should be available within three weeks from the date of intimation of breakdown.

iii. The suppliers must ensure that there is no major breakdown due to manufacturing/ design defect during the warranty period. In case such breakdown occurs, the purchaser will reserve the right to extend the warranty period suitably.

iv) The supplier will have to furnish the following Performance Bank Guarantee on scheduled / Nationalised Bank in India as a coverage towards the supplier's performance against the Contract, in the standard format (which shall be enclosed with the supply order. No other format will be accepted

4B. Special Guarantees

The following guarantee will apply for the different components:

- Body, chassis, differential & final drive - 10,000 hours or 1000 calendar days from the date of commissioning (whichever is earlier).
 - Complete engine system - 24 months or 6500 hours from the date of commissioning (whichever is earlier).
In case of failure of engine system within 6500 hrs. The failed components of the engine system will have to be replaced / repaired depending on the merit of the case, free of cost by you.
In case of failure of engine system beyond 6500 hrs. The system will have to be replaced on pro-rata payment basis taking the life of the engine system as 7550 W/hrs.
 - Transmission Assy. - 24 months or 6500 hrs from the date of commissioning (Whichever is earlier).
 - Auto Electricals - 12 months or 3000 hrs from the date of commissioning - (Whichever is earlier)
 - Engine hour meter & Audio visual Alarm - 12 months or 3000 hrs (Whichever is earlier) From the date of commissioning
 - Caliper and Disc Brake - 24 months or 6500 hours from the date of commissioning (whichever is earlier).
- Against Guarantee failures, intimated to supplier reasonably in time, necessary Replacement/ Repair job (as per Guarantee settlement) must be completed within 21 days at site by the bidder, at no cost to the purchaser.

5. Performance Bank Guarantee (PBG): You have to submit performance bank guarantee for 10% of the order value (landed cost) i.e. Rs.1,15,64,000.00 (rupees One crore fifteen lakhs sixty four thousand only) valid for a period of 15 months of from the accepted date of commissioning of materials to cover the guarantee period and the same shall be released on receipt of satisfactory performance throughout the guarantee period (BG may be submitted for individual equipments). PBG may be submitted equipment-wise also.

The release of the Performance Bank guarantee(s) after above indicated period, shall be subject to satisfactory performance of the equipment/ items during the warranty period and fulfilment of contractual obligations failing which, action for further extension or encashment of PBG, as deemed suitable shall be taken. The Performance Bank Guarantee shall be released after expiry of validity period if no claim is pending. No payment shall be made without submission of Performance Bank Guarantee.

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 | Current Account no: 005905018053; Customer Id: 556096497 ; ICICI Bank Ltd, Commercial Banking, 9C/A& 9C/B, Ground Floor, Shriram Towers, LIC Square, Nagpur - 440001, Maharashtra |
| IFSC code | ICIC0000059 |
| Bank Manager Name & Ph no: | UJJWAL KITE: Ph n: 0712-6627389 |
| BG ADVISING MESSAGE - 760COV / 767COV via SFMS | |

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| 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 / Speed Post to " General Manager (MM) I/c, Materials Management Wing, Western Coalfields Limited, HQ, Coal Estate, Civil Lines, Nagpur - 440001, Maharashtra" by Registered Post/AD.

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

For ready reference and updation of BG in WCL portal, it is necessary that BG issuing / amending bank send the BG advise in the form of message format 760COV /767COV via SFMS (Structured Financial Messaging System) as provided by RBI.

In the event of BG issuing / amending bank not sending the message 760COV /767COV or committing any error while capturing the details at least in the above mentioned field, BG confirmation through online portal would not be updated if issuing bank does not adhere to advisory, WCL will not be responsible

The above particulars are to be incorporated by the issuing bank properly while issuing BG under SFMS mode to avoid any problem in future.

Original bank Guarantee issued by the Issuing Bank shall be sent by the Issuing Bank to concerned Department/Area by Registered/ Speed Post.

The beneficiary's bank/advising bank shall send a copy of advice received under SFMS mode to concerned Area/HQ through e-mail at their e-mail id and provide print out of the said message from advising bank with seal and signature, to the Finance Dept, of concerned Area/HQ. For this purpose, each Area/HQ shall provide their e-mail ID to the Advising/Beneficiary Bank.

Under SFMS, extension/subsequent amendments to the BG can be done following the same procedure as stated above.

For encashment, the BG shall be placed directly before the issuing bank at Nagpur Branch.

6. Inspection: Final Inspection shall be carried by Consignee at Site. However, WCL reserves its right to get the Equipment inspected before despatch by representatives of GM(Excv) HOD, WCL Hqrs or any other agency appointed by WCL. In case it is decided to carry out pre-despatch inspection by WCL's representative then equipment has to be delivered at Consignee project within 15 days or earlier from the date of inspection and clearance by WCL's representative. Further, firm will be required to give pre dispatch inspection call sufficiently in advance so as to ensure that all the equipments are delivered within the scheduled delivery period.

7. Payment Terms:

i) 80% value of the equipment and consumable spares and consumables for first 12 months of warranty period from the date of commissioning of the equipment and 100% taxes and duties and other charges excluding erection & commissioning charges shall be made within 21 days after receipt and acceptance of materials at site at the consignee's end and submission and Acceptance of Performance Bank Guarantee valid till 3 months after the completion of 12 months period from the date of commissioning of the equipment covered in the contract.

Balance 20% payment including erection & commissioning charges shall be made after successful completion of erection, testing, commissioning and final acceptance of the equipment (along with the accessories) upon presentation of successful commissioning certificate, signed by Staff Officer of the technical department of the area / Area General Manager of WCL, where the equipment has been deployed and confirmation of receipt of DRR in respect of spares and consumables for first 12 months of warranty period from the date of commissioning of the equipment by the paying authority.

8. Delivery: Commencing within four months (minimum four machines) & further supplies @ 3 machines / month thereafter, which shall be reckoned from 7th day of the order date. Early supplies are acceptable.

No material to be supplied without delivery extension. Request for extension of delivery period to be made within the schedule delivery period. Even if the materials are unloaded at the Stores, the same shall be at the risk and cost of the supplier and shall not be accepted unless the supplier has obtained the extension of delivery period.

Grace Period : A grace period of 25% of original delivery period or 21 days, whichever is earlier, unless specifically disallowed will be applicable

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Where supplies are made within the grace period, there is no necessity for any extension in delivery period and the paying authorities shall make payment without any amendment to the contract delivery period. No liquidated damages are leviable in respect of supplies made within the grace period. The extra expenditure, the purchaser may have to incur on account of increase/fresh imposition of GST/CST/VAT, Excise/Customs Duty etc. which takes place within the above grace period will also not be recoverable from the suppliers. The grace period is allowed as a matter of grace and is not intended to operate as extension of the delivery period and the same will be available only for deliveries and not for offering stores for inspection (in cases of pre-dispatch inspections) which should be made within the original delivery period or the re-fixed date of delivery.

If the stores are tendered for pre-dispatch inspection within the original delivery period stipulated in the contract and the firm delivers the stores within the grace period, the purchaser is bound to accept the stores even though the inspection was completed after the delivery date.

The grace period will only apply to the original contract delivery period/re-fixed delivery period and will not be applicable once an extension of delivery has been granted.

Transportation & e-way Bill: By road on freight paid basis. As the delivery of goods by you is on F.O. Destination basis, the movement of the goods is to be initiated by you and issue e-Way Bill.

9. Consignee & Allocation:- WCL's GSTIN no : 27AAACW1578L1ZW

| Qty | Area | Project | POSTAL ADDRESS OF THE CONSIGNEE |
|-------|--------------|---|--|
| 1 no | Wani (North) | Ukni deep OCM - 1 no (Replacement) | The Depot Officer, Regional Stores, Western Coalfields Limited, Wani North Area, PO : Ukni Distt Yavatmal (M.S) 445 304 |
| 1 no | Majri | New Majri Sec-I & II - 1 no; (additional) | The Depot Officer, Regional Stores, Western Coalfields Limited, Majri Area, PO : Shivaji Nagar, Distt:-Chandrapur (M.S) Pin: - 442 603 |
| 1 no | Nagpur | Adasa UG to OC - 1 no (additional) | The Depot Officer, Regional Stores, Western Coalfields Limited, Nagpur area, PO : Sitewara Colliery, Distt:-Nagpur (M.S) 441109 |
| 3 nos | Chandrapur | H Lalpeth - 1 no (additional); Durgapur deep - 2 nos (Replacement); | The Depot Officer, Regional Stores, Western Coalfields Limited, Chandrapur Area, PO : Durgapur, Distt:-Chandrapur (M.S) Pin: - 442 403 |
| 1 no | Umrer | Umrer Expansion - 1. no (Additional) | The Depot Officer, Regional Stores, Western Coalfields Limited, Umrer area, PO :Umrer Colliery, Distt:-Nagpur (M.S) 441204 |

10. Paying Authority: General Manager (Finance), Western Coalfields Limited, Coal Estate, Civil Lines, Nagpur - 440 001.

11. EFT Details (as confirmed in your offer):-

| | |
|------------------------|---------------------|
| Name of the Bank | State Bank of India |
| Branch & Location | Kingsway, Nagpur |
| Account Number | 11172255258 |
| Nature of Account | Current Account |
| IFS CODE of the Branch | SBIN000432 |

12. Mode of dispatch: All the stores surely packed are to be dispatched by road transport to the consignee on Freight paid basis.

13. Guaranteed Availability: M/s BEML Ltd shall guarantee that the availability of the equipment shall be not less than 72% (seventy two per cent) for a period of 12 months from the accepted date of commissioning.

14. Liquidated Damages Clause:

(A) In the event of failure to deliver or dispatch the equipment/stores within the stipulated date/period in accordance with the terms and conditions and the specifications mentioned in the supply order and in the event of breach of any of the terms and conditions mentioned in the supply order, the Purchaser shall have the right:

(a) To recover from the successful bidder as agreed liquidated damages, a sum not less than 0.5% (Half Percent) of the price of any equipment/ stores which the successful tenderer has not been able to supply as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears limited to 10% (Ten Percent) of the total contract value, or

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- (b) To purchase elsewhere after due notice to the successful tenderer on the account and at the risk of the defaulting supplier, the equipment/stores not supplied or others of similar description without cancelling the supply order in respect of the consignment not yet due for supply, or
- (c) To cancel the supply order or a portion thereof, and if so desired to purchase the equipment/ stores at the risk and cost of the defaulting supplier and also,
- (d) To extend the period of delivery with or without penalty as may be considered fit and proper. The penalty, if imposed, shall not be more than the agreed liquidated damages referred to in clause (a) above.
- (e) To forfeit the security deposit full or in part.
- (f) Whenever under this contract any sum of money is recoverable from and payable by the supplier, the Purchaser shall be entitled to recover such sum by appropriating in part or in whole by deducting any sum or which at any time thereafter may become due to the successful tenderer in this or any other contract. Should this sum be not sufficient to recover the full amount recoverable, the successful tenderer shall pay the Purchaser on demand the remaining balance. The supplier shall not be entitled to any gain on any such purchase.

For the purpose of the calculation of the liquidated damages amount, the basic Free Delivery at Site(FOR Destination).price shall be considered. For direct imports, the CIP price at Final Place of destination will be considered. Taxes and duties shall not be taken into account for calculation of LD. However, when prices indicated in the order are inclusive of taxes and duties, such prices will be taken for calculation of LD

(B) Denial Clause:

In case of extension of delivery period, any increase in statutory duties and/or upward rise in prices due to price variation clause and/or exchange rate variation clause, is to be borne by the seller during the extended delivery period, while purchaser reserves its right to get any benefit of downward revisions in statutory duties, PVC and exchange rate variation clause.

14. Risk Purchase Clause:

In the event of failure of the supplier to deliver or dispatch the stores within the stipulated date/period of the supply order or in the event of breach of any of the terms and conditions mentioned in the supply order/ contract, WCL shall 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. The cost as per risk purchase exercise shall be recovered from the Earnest Money Deposit/ Security Deposit/ Performance Security of the supplier and/or bills submitted by the supplier against the same contract or any other contract pending in the same Subsidiary Co. and/or in any other Subsidiary Companies / CIL.

Risk Purchase Action shall be initiated as a last resort, if the supplier has failed to deliver despite having been given adequate and proper notice to discharge its obligations and under any of the following conditions:

- a) When the supplier fails to deliver the materials even after extending the delivery period.
- b) When the supplier fails to respond to purchaser's request for supply of the materials and fails to provide any genuine and bonafide reason for the delay in supply.
- c) When the supplier breaches any of the terms and conditions of the supply order/ contract and as a result fails to execute the order satisfactorily.

15. SUBMISSION OF BILLS:

- a. For claiming 80% payment, following documents are to be submitted along with original bills as per terms of the supply order to the consignee.
 - a. Four copies of the Supplier's invoice, Pre-Receipted and Stamped showing Contract Number, Goods description, quantity, unit price, total amount and GST No. of Ultimate Consignee.
 - b. Receipted Challan/ Consignment Note of all the consignments.
 - c. Manufacturer's Test & Inspection Certificate.
 - d. Manufacturer's Warranty /Guarantee Certificate.
 - e. Lowest Price Certificate.
 - f. Copy of Performance Bank Guarantee .
 - g. Documentary evidence for freight and transit insurance charges up to the destination.
 - h. Copy of Certificate of Insurance.
 - i. Any other document(s) required as per contract.

- b. For Claiming 20% payment, the following documents are to be submitted

(i) Pre-receipted and stamped bill for 20% payment.

(ii) Commissioning Certificate from the respective Area General-Manager / Staff Officer (Excv)

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16. Force Majeure Clause: If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, freight embargoes or act of God (hereinafter referred to "events") provided, notice of the happening of any such event is given by either party to the other within 21 days from the date of occurrence thereof neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, provide further that if the performance in whole or part or any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract provided also that if the contract is terminated under this clause, the purchaser shall be at liberty to take over from the contractor at a price to be fixed by the CIL / Subsidiary Company, which shall be final, all unused, un damaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contractor at the time of such termination or such portion thereof as the purchaser may deem fit excepting such materials, bought out components and stores as the contractor may with the concurrence of the purchaser elect to retain."

17. Manufacturing certificate: As the order is being placed on the basis of consideration that you are manufacturer of the ordered material, you will have to provide a certificate to the following effect on the body of each bill.

"Certified that the items supplied and included in this bill/ invoice are our own make and have been actually manufactured in our works situated at _____ (address of the factory)

18. Integrity Pact: Integrity Pact as per format (Annexure 5 of the NIT) signed and furnished by you along with the offer shall remain valid and applicable for this contract. The name of the IEMs for this order are

Dr. (Ms) Nivedita Haran, 23, IFS Vilas, P-6, Builders Area, Greater Noida 201310
Shri A.K.Mohapatra, Qrs no B-5/9, Unit - 9, Bhoi Nagar, Bhubaneswar 751022

19. Arbitration Clause: "In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts inter se and also between CPSEs and Government Departments / Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE-OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22.05.2018."

20. Lowest Price Certificate: As undertaken by you in your offer, you have undertaken that the price quoted by them for the offered items are the lowest prices as applicable to any other Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization and also to submit the certificate as under:

This is to certify that the prices quoted by us for the offered items are the lowest prices as applicable to any other Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization.

21. Price Fall Clause:

"The Bidder undertakes that it has not offered to supply / supplied / is not supplying same or similar product / systems or sub systems at a price lower than that offered in the present bid in respect of any Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other P S U or any other private organization during the currency of the contract and if it is found at any stage that same or similar product / systems or sub systems was supplied by the bidder to any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization at a lower price during the currency of the contract, then that very price will be applicable to the present case and the difference in the cost would be refunded by the bidder to buyer, if the contract has already been concluded .

(i) The currency of contract will mean the period till completion of supply.

(ii) It shall be responsibility of the supplier to inform the purchaser of offer to supply / supply of the similar /ordered item (s) at a lower rate to any Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization during the currency of the contract.

*Subhakar
S. Haran*

[Signature]

Prithvi Kumar

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(iii) The supplier shall submit a certificate along with the bill(s) that it has not offered to supply / supplied the similar /ordered item (s) at a lower rate to any Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization. "

You will furnish the following certificate to the Consignee / Paying authority along with the bills:

"I/We certify that I/We have not supplied / are not supplying similar product / systems or sub systems at a price lower than that ordered price in respect of any other Ministry / Department of the Government of India or PSU"

Failure in submission of aforesaid certificate by the contract holder, may result in with holding of the payment of their bills against supply.

22. Settlement of Disputes through Court of Law of Competent Jurisdiction:


The Courts in whose territorial jurisdiction the place from where Tenders / contract is being issued is located i.e. Nagpur shall be competent to deal with any matter arising out of this NIT / resultant purchase Order/Contract. Therefore any disputes/claims arising out of the NIT with bidders or arising out of the contract entered into with the suppliers will be subject to the jurisdiction of the Nagpur court of law

Unless otherwise specified above, the purchase order shall also be governed by the terms and conditions given in the General Conditions of the Contract enclosed and terms of Notice Inviting Tender.

This order is issued with this acceptance. Kindly acknowledge the receipt of this order.


22/10/20
(Dr. Y. Venkata Ramana)
Chief Manager (MM)

Yours faithfully


22/10/20
(K.S.R. Divakar)
Chief Manager (MM)

Enclosures: -

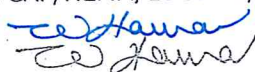
- | | | |
|------------|---|---|
| Annexure-A | : | Detailed technical Specification for Water Sprinklers |
| Annexure-B | : | List of Standard Tools |
| Annexure-C | : | Filters and consumables for 3000 Hours of operation |
| Annexure-D | : | Erection Chart of Water Sprinklers |
| Annexure-E | : | Major bought out items of Water Sprinklers |
| Annexure-F | : | Maintenance Schedule |
| Annexure-G | : | Oil & Lubricant chart |
| Annexure-H | : | Security Deposit Bank Guarantee format |
| Annexure-I | : | Performance Bank Guarantee format |
| Annexure-J | : | General Conditions of the Contract (GCC) |


Copy to :

1. GM(Excv) HOD / GM(Fin.) I/c / GM(P&P), WCL(HQ), Nagpur
2. AGM / SO(Excv) / SO(MM) / AFM / Depot Officer, WCL, Ballarpur / Chandrapur / Majri / Umrer Areas
3. TS to DT(P&P), WCL, Nagpur
4. RD, CMPDIL, RI IV, Nagpur
5. GM(MM), SECL, MCL, CCL, BCCL, ECL, NCL, CIL
6. Chief Manager (MM/Admn.), WCL(HQ) - The Landed value of the order is Rs. 15,29,28,000.00
7. Dr. (Ms) Nivedita Haran, 23, IFS Vilas, P-6, Builders Area, Greater Noida 201310
8. Shri A.K. Mohapatra, Qrs no B-5/9, Unit - 9, Bhoi Nagar, Bhubaneswar 751022
9. M/s BEML Ltd., 33, Cement Road, Shivaji Nagar, Nagpur 440 010
10. Chief Manager (Excv) EED, CIL, Regional Sales Officer, Geeta Mansion, 4th floor, KG Road, Bangalore

Indent details:

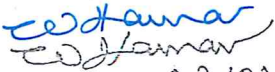
- i. Indent No. 1490 dt 04.08.2020 against approved Shopping List of HEMM for the FY 20-21
 - ii. Indent No. 1491 dt 27.08.2020 against approved Shopping List of HEMM for the FY 20-21
- BC Reference: WCL/CAP/HEMM/2020-21/ 12/02/37 dt 19.10. 2020 for Rs.11,56,40,000.00 Lacs




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Supply Order no 1200011120148 dt 22.10.2020, M/s BEML Ltd

This is issued with the concurrence of Dir(Fin) on 25.09.20 and approval of Board of Directors in their 325th meeting held on 30.09.2020, which was communicated by Company Secretary vide reference no WCL/Office of CS/BM-325/20-21/465 dt 08.10.2020


22/10/2020
(Dr. Y. Venkata Ramana)
Chief Manager (MM)


22/10/2020
(K.S.R. Divakar)
Chief Manager (MM)

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Detailed technical Specification for Water Sprinklers 28 KL (min).

1. Item description/ Schedule of requirement: The Specification is intended to cover the technical requirements for the design, manufacture, testing, delivery, on-site erection and commissioning of a diesel powered, self propelled, wheeled Water Sprinkler, of not less than 28KL capacity mounted on a 35Ton off the highway rear dump chassis for use in opencast mine in WCL. Water Sprinkler, Diesel Engine powered, Tyre mounted, as per the technical specifications indicated below, complete with standard accessories, standard Tools and Filters & O-rings for 3000 hrs of operation. :

2. Technical specification:

Introduction: The Technical Specifications are presented in following parts.

- A. Scope of Supply
- B. General Requirements
 - 1. Geography and Climatic Conditions
 - 2. Goods (Equipment and Machinery)
 - 3. Standards
 - 4. Supplier's Responsibility
 - 5. Spare Parts Provisions
 - 6. Composite Warranty / Guarantee
 - 7. Performance Guarantee
 - 8. Quality Assurance
- C. Equipment Specifications

2. 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

PART-A

A. Scope of Supply.

A.1 Equipment Package.

You are required to supply as per the equipment package detailed in the order.

A.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 each equipment.
- III. All filters & O-rings required for first 3000 working hours.

A.3 Information & Drawings

You shall provide for EACH Equipment

(a) Suitably illustrated Operating, Repair and Maintenance Instructions/ Manuals - One Set, written in the English language substantially bound in book form;

(b) Suitably illustrated, detailed Spares Parts Manuals covering all plant, Equipment and accessories - One Set, substantially bound in book form;

You shall also submit the data identified in the specifications for each item of Equipment proposed. In addition to the Equipment drawings requested, where-ever required, you shall supply detailed drawings illustrating erection/assembly site(s), foundation and accommodation requirements for items eg drive motors, switch installations etc (if applicable).

Besides the above, you shall also supply One complete Set of Spares Parts Manual along with Operating, Repair & Maintenance Manuals against each order of Equipments, irrespective of their quantities, to the office of GM (Excavation), WCL, Coal Estate Civil Lines , Nagpur.

A.4 Erection/Assembly, commissioning and Performance Testing: You shall provide the service of Specialist Technicians to supervise the installation/erection/assembly, commissioning and any performance testing of the plant, equipment and accessories supplied.

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

A-5 Training: You shall also be responsible for the provision and delivery content of any suitable training programmes necessary for operation and maintenance of the equipment.

PART-B

B. General Requirements

B.1 Geography and Climatic Conditions

Elevation :- The natural surface varies from 100 to 1000m. above mean sea level. Climate. The climate is sub-tropical to tropical, dusty, with a hot and humid atmosphere. Monsoon rains occur in the period from June to October.

Ambient Conditions

Relative Humidity- Maximum 98%

Temperature Minimum 5°C to Maximum 50°C

Rainfall : The mean annual rainfall is 1,000 mm, 90 to 95% of which may fall in rainy season from June to October.

| | | | |
|------------|--------------------|---|-----------------------------|
| Wind | April to September | - | South to South Westerly |
| | October to March | - | North Westerly |
| Speed | | - | 8 km per hr average |
| | | - | 100 km per hr maximum |
| Under foot | | | Slushy and highly abrasive. |

B.2 Goods (Equipment and Machinery)

Detailed specifications of the Equipment to be supplied are given in 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.

B.3 Standards

Beside conforming to the Standards specified in the Equipment Specification, the Equipment shall also have to meet approval of the Statutory Government Authorities including Director General of Mines Safety (DGMS) having jurisdiction over the Equipment and its use.

Compliance of Safety & functional aspect of dumpers and as per ARAI guidelines may be incorporated as under :-

1. All Water Sprinkler shall permanently carry a sign stating "NOT MEANT FOR RUNNING ON PUBLIC ROADS (Preferably White colour sheeting on Black Background) in retro reflective colour sheeting, which shall be visible from the front side and rear side of the vehicle.
2. All Water Sprinkler shall be fitted with White reflex Reflectors (Circular/ Rectangular) at front having

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- dimension More than 28.5 Sq. cms & distance between two Reflectors should be between 2.8 to 3.0 Mtrs.
- All Water Sprinkler shall be fitted with Red reflectors (Circular/ Rectangular) at Rear having dimension MORE THAN 28.5 SQ. CMS. And distance between two Reflectors should be between 2.8 to 3.0 Mtrs.
 - All Water Sprinklers shall be fitted with AMBER COLOUR REFLECTORS (Circular/ Rectangular) at LEAST THREE Nos ON EACH SIDE OF Water Sprinklers having dimension MORE THAN 28.5 Sq cm. and distance between two Reflectors should be between 2.8 to 3.0 Mtrs.
- The system of units for all measurements shall be the Système International d'Unités (S.I.).

B.4 Suppliers Responsibility

You 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 you shall ensure that the total supply includes all necessary Equipment for it to function effectively and safely. Any additional items you consider necessary to ensure compliance with such a requirement shall be identified and included.

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

You 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 your supervision in conjunction with the Purchaser's nominated personnel

B.5 Spare Parts Provisions

B.5.1 Availability of Spare Parts.

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

B.5.2 Provision of Spare Parts: Within the Contract Price, the Purchaser shall agree to purchase all filters and O-Rings, including standard Engine filters required for first 3000 hours of operation of each Equipment. You shall stock sufficient fast moving & maintenance and other spares in their Local Depots to ensure maximum availability of their equipment

B.5.3 Emergency Spare Parts: You shall ensure that Spare Parts required urgently by the Purchaser for repair of breakdown equipment are supplied at overriding priority.

B.5.4 Lifetime Spare Parts: You have undertaken and guaranteed 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 you wish to terminate production of such Spare Parts, you shall:

(a) give not less than six months notice in writing of its 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.

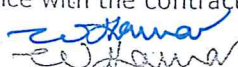
In any event, you shall not seek to terminate manufacture of spare parts for a period of not less than ten (10) years from taking-Over.

B.5.5 Oils, Lubricants and Fluids: You shall provide a detailed schedule requirement, sufficiently in advance, of all necessary oils, lubricants, fluids 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 you.

B.5.6 General: Nothing in this Clause B.5 shall relieve you of any Guarantee, Availability, Performance or other obligations or liabilities under the Contract.

B.6 Composite Warranty / Guarantee: You shall warrant that the equipment supplied under this contract is:---

- (a) In accordance with the contract specifications.





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(b) The equipment shall have no defects arising out of design; material or workmanship & the Complete Equipment shall be warranted for 12 months from the accepted date of commissioning.

The warranty shall cover for total equipment so that ultimate responsibility lies only with the Equipment supplier although components may be supplied by different suppliers to you.

B.7 Performance Guarantee

B.7.1 Introduction

B.7.1.1 You shall guarantee that the Equipment supplied pursuant to this Contract shall be available for use by the Purchaser and shall meet the performance criteria specifications at the level and in accordance with the terms and conditions of the Availability Guarantee herein contained.

B.7.1.2 Where Equipment supplied under the Contract fails to meet the criteria of the Availability Guarantee, you shall, at your own cost, provide suitably qualified and experienced personnel at Site to demonstrate to the Purchaser's satisfaction that the required level of availability can be achieved and maintained.

B.7.1.3 You shall provide the Services of such personnel at Site within seven (7) days of notification by the Purchaser that the availability criteria has not been met in any one (1) month.

B.7.2 Guarantee

B.7.2.1 You shall guarantee that the Equipment supplied pursuant to the Contract shall be available to the Purchaser at the level hereinafter defined to perform to criteria of not less than that defined in the Technical Specifications incorporated in the Contract.

B.7.2.2 You shall guarantee that the Equipment shall be available to perform its duty to minimum criteria and to the minimum availability percentage level as defined in the individual Equipment Specifications included as the Attachment to the Technical Specifications. The method of assessment applied shall be as follows:

Method of Assessment:

The following calculation shall determine the availability of the Equipment:

$$\% \text{ Availability} = \frac{\text{Scheduled Available Time} - \text{Downtime}}{\text{Scheduled Available Time}} \times 100$$

Scheduled Available Time shall equate to 24 hours.

Downtime shall mean all hours of work lost due to mechanical, electrical or other failure, including:

- a) routine servicing and maintenance in accordance with the manufacturer's published recommendations, including: changing oils, oil filters and air filters; lubrication; changing identified consumable or wear parts.
- b) planned preventative maintenance program;

It shall not however include:

- I. damage due to abusive use or incorrect operation methods by the Purchaser;
- II. accidents;
- III. strikes or stoppage of work by the Purchaser's personnel;
- IV. natural disaster;
- V. lack of Spare Parts not attributable to a failure of the Supplier, it's Agents or Representatives.

Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures. You shall state the number of hours per day required to carry out (a) and (b) above. The time stated shall, with the agreement of the Purchaser, form the basis of the assessment of the availability. The average maintenance hours shall not be more than 2 hours per day.

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In case the site personnel are unable to carry out the daily maintenance in two hours and train the project personnel to enable them carry out the normal routine maintenance within two hours everyday.

The Purchaser will assist you, without relieving you of any other obligations under the Contract, to achieve the guaranteed availability by:-

Providing normal and proper maintenance, including preventative maintenance in accordance with your standard/published recommendations, and making all necessary repairs using only genuine manufacturer's spares.

Providing co-operation to your authorised representatives, complying with all reasonable procedural suggestions to improve efficiency of machine operation or reduce downtime.

Where appropriate, providing and maintaining such conditions as:

- Proper electrical Supply
- Terrain Area
- Bench preparation
- Reasonable floor conditions

Providing all your authorized representatives access at all reasonable times to the machine service and repair facilities.

Maintaining a logbook for each shift wherein the working hours, breakdown times, maintenance hours, idle time, etc. shall be recorded. This record will be available for examination and signature by your representative.

B.7.3 Effect and Duration of Guarantee

B.7.3.1 This Guarantee shall become effective on the day on which the Equipment is commissioned at the Site. Commissioning shall be evidenced by the issue of the Purchaser's Acceptance Certificate.

B.7.3.2 This Guarantee shall remain effective for twelve (12) months from the date of commissioning, irrespective of the hours operated by the Equipment during the period of the guarantee.

B.7.3.3 In the event that the Equipment fails to achieve the Availability herein provided during this twelve (12) month period, you shall be liable to pay to the Purchaser, as Penalty, a sum equal to, as indicated hereunder for each equipment: -

- a) 1% of the delivered price of the equipment for every percentage reduction from the Guaranteed Availability for the first 5%
- b) 10% of the delivered price of the equipment for reduction beyond 5% from the Guaranteed Availability.

You, however the option to modify the equipment; if felt necessary, to bring its availability to the guaranteed level within three (3) months after expiry of initial guarantee period of twelve (12) months from the date of commissioning.

B.7.3.4 When you are unable to supply the replacement of a failed part under warranty within 21 days of giving intimation by the consignee and if the machine is commissioned by using the spare from the stock of the project the period (after 21 days) till you replace the part under warranty shall be treated as "Deemed Breakdown" (the credit for keeping machine available shall not be given to you).

B.8 Quality Assurance

B.8.1 You should furnish in detail its quality assurance plan for various stages of manufacture. The Quality Assurance plan shall comply with an internationally recognised quality assurance standard such as ISO 9000.

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B.8.2 You 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.

B.8.3 The Purchaser or his agent, when so required by him, shall also be provided with samples of "bought-out" materials for the purposes of undertaking independent tests which independent tests shall be at the expense of the Purchaser.

C Equipment Specifications:- The equipment shall comply with the following specifications, included as an attachment to this Section.

PART - C

EQUIPMENT SPECIFICATION OF WATER SPRINKLER 28 KL

1.0 Scope of Specifications: Water Sprinkler of 28 KL capacity, Powered by diesel engine developing 262 kW net (minimum) @ 1700 to 2200 rpm according to ISO 9249, for use in open cast mine in WCL.

a. References

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

| | |
|------------|---|
| ISO 2867 | Earth-moving machinery - Access systems |
| ISO 3450 | Earth-moving machinery - Wheeled machines - Performance requirements and test procedures for braking systems |
| ISO 3457 | Earth-moving machinery - Guards and shields - Definitions and specifications |
| ISO 3471 | Earth-moving machinery - Roll-over protective structures - Laboratory tests and performance requirements |
| ISO 5010 | Earth-moving machinery - Rubber-tyred machines - Steering requirements |
| ISO 6014 | Earth-moving machinery - Determination of ground speed |
| 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 6483 | Earth-moving machinery - Dumper bodies - Volumetric rating |
| ISO 6682 | Earth-moving machinery - Zones of comfort and reach for controls |
| ISO 6750 | Earth-moving machinery - Operation and maintenance - Format and content of manuals |
| ISO 7132 | Earth-moving machinery - Dumpers - Terminology and commercial specifications |
| ISO 7457 | Earth-moving machinery - Measurement of turning dimensions of wheeled machines |
| ISO 9249 | Earth-moving machinery - Engine test code - Net power |
| ISO 10268 | Earth-moving machinery - Retarders for dumpers and tractor-scrapers - Performance tests |
| ISO 10968 | Earth-moving machinery - Operator's controls |

3.0 Design Criteria: The Water Sprinkler, fitted with 28,000 Ltrs capacity Water Tank and pressurized spraying through nozzles for higher spreading width, and with suitable provision for Mist system for effective dust settling.

The Water Sprinkler (wheeled water sprinkler) with suitable OTR Tyres, shall be capable of continuous operation for protracted periods on a system of 3 shifts each of 8 hours duration per day throughout the year.

4. Technical Requirements

4.1 Engine

The Water Sprinkler is powered by a direct injection 4-stroke diesel engine not less than 262KW net Power measured between 1700 and 2200 r/min according to ISO 9249. The engine shall be provided with 24V electric starting, dry type 2-stage air-cleaner with manual dust evacuator and dust level indicator for easy maintenance. Two stage fuel filters with water separator is provided.

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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 sprinkler 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 pan guard.

4.2 Transmission: The Water Sprinkler shall be provided with an off-highway automatic power shift hydraulic transmission with lock-up clutch and downshift and reverse inhibitors. Suitable protection of the transmission pan from external damage should be provided. The pan guard should be designed to minimize accumulation of dirt and debris.

4.3 Drive System: A dynamically balanced propel shaft with universal joints at both ends should be utilized for transmission of power. Adequate means should be provided to prevent damage to other components in the event of failure of the universal joints.

The final drive shall comprise a heavy-duty differential with high quality spiral bevel gear and pinions, and a suitable heavy duty final drive system / heavy duty planetary gear system and drive axle.

4.4 Suspension: Front and rear suspension shall be hydra-air type, to absorb road shocks and prolong tyre life

4.5 Steering: Full hydraulic orbitrol power steering and emergency steering, which complies with ISO 5010, shall be provided.

4.6 Hoses: All hoses shall be grouped as far as possible and suitably clipped to reduce damage from scuffing.

4.7 Brakes: Suitable reliable service, secondary and parking brakes, which comply with ISO 3450 shall be provided.

4.7.1 Service brakes: The front service brakes shall be dry calliper disc type and actuated by air-over hydraulic system.

The rear service brakes shall be oil cooled multiple disc type and actuated by air - over hydraulic system. Operates automatically in the event of low air pressure.

They should be fully enclosed to prevent entry of dust and water, and designed for low maintenance.

4.7.2 Parking brakes: The parking brake shall be "fail safe", i.e. the spring applied- hydraulically released (SAHR) type or any other means/ dry caliper type and will be operated automatically at zero air pressure.

4.7.3 Retarder: Suitable retarding system to control speed while descending grades shall be provided.

4.8 Tyres: Tubeless, rock duty, cut-resistant E-4 type tyres size 18.00 - 25 (32PR) shall be provided.

4.9 Frame: The frame should be a rugged, durable construction of high strength steel and free from any stress concentration. The design must take care of all forces encountered during the operation of the water sprinkler.

4.10 Water Tank: The water tank should be of minimum 28KL capacity. Water tank should be welded and reinforced with suitable steel plate, cross-baffles should be provided to avoid heavy surging. Interior of the tank should be coated with special anti-corrosive paint. The design of water tank should be such that the stability of the machine is maintained in all operating conditions especially during turning.

4.11 Fuel Tank: The fuel tank shall be of sufficient capacity and be provided with a level indicator and a lockable, hinged filler cap. Construction of the tank should be such that it provides for easy accumulation and drainage of water with minimum loss of fuel.

4.12 Operator's Cab: Operator's cab shall be of sound construction, suitable material and adequate strength with safety glass, rear-view mirror, Operator's seat belt with reminder system, windshield wipers

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and washers and a ROPS (Roll Over Protective Structure), which complies, with ISO 3471 :2008 shall 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.

A fully adjustable operator's seat, one passenger seat, floor mat and a cooling fan shall be provided in the Air conditioned sound suppressed operator's cab. Steps and handrails shall be provided for access to the operators cab.

4.13 Gauges and Indicators

The following shall be provided as a minimum:

- a) Water temperature
- b) Engine oil pressure
- c) Transmission oil temperature gauge
- d) Fuel capacity
- e) Engine tachometer
- f) Engine hour-meter
- g) Speedometer
- h) Air pressure (if applicable)
- i) Air Cleaner restriction Gauge.
- j) Converter oil temperature / Converter / Transmission oil temperature

4.14 Warning Alarms/Lights

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

- a) AVA Reversing Alarm
- b) Parking brake actuation
- c) High Transmission / torque converter oil temperature
- d) Low engine oil pressure
- e) High coolant temperature
- f) Low air pressure (if applicable)
- g) Emergency steering
- h) Warning system for operators fatigue as per DGMS guidelines

4.15 Electrical Equipment

The Water Sprinkler shall be provided with the following:

- a) 24V DC electrical system with suitable alternator of reputable make
- b) 24V Electric Starting Motor
- c) Two numbers 12V, high capacity batteries (minimum 200 Ah capacity ratings) of reputed make, shall be provided
- d) Battery isolation switch
- e) Electrical wires shall pass through Flexible Conduit.

All electrical circuits shall be protected by adequately rated MCBs / fuses which shall be easily accessible for maintenance.

At least two spare fuses (if applicable) of each size, shall be provided in each fuse box.

4.16 Lighting

Adequate lighting shall be provided for safe night shift operation.

The lighting system should include the following, as minimum:

- a) 4 (no) Headlights
- b) Stop and tail LED lights
- c) Turn signal lights (left and right) on both front and rear
- d) Fog Lamps

Headlights and rear lights shall be fitted in steel protective enclosures / area.

4.17 Guards and Shields

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

4.18 Fire Extinguisher

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1 no. fire extinguisher shall be provided suitably mounted in a heavy duty bracket for ease of removal. The extinguisher shall be dry powder (cartridge type) with a capacity of 5 kg and shall comply with Indian Standard IS: 2171.

4.19 Water Sprinkling System

The water sprinkling system, with suitable provision for Mist system, should be provided with centrifugal water pump driven by hydraulic motor through flexible coupling. The suction & discharge pipes should be of adequate diameter with suitable valves.

The sprinkling should be pressurized and constant sprinkling velocity is to be maintained by centrifugal pump. In addition to pressurized sprinkling, provision of gravity sprinkling should also be provided through perforated manifold connected to tank bottom. Self-filling provision from outside reservoir or pond by connecting the pump suction through armoured hose with foot valve should be provided.

The system should be equipped with quick connecting adapter(s) & suitable nozzles and Hoses for fire fighting unit adoption.

4.20 Automatic Fire Detection and Suppression System:

Automatic Fire Detection and Suppression System suitable for protection from fire hazards, shall be provided on the Sprinkler. The system should be capable for efficient operation in the extreme mining conditions with dust, dirt, water & vibrations. The system shall be confirmed to the relevant IS/BS standards and shall be suitable mounted to cover all major points on the Equipment. The type and make of the system must be approved by DGMS.

4.21 Lubrication System: A centralized Automatic lubrication system of positive pressure type, positive displacement lubrication measurement for multiple lubrication points through injectors, should be provided. Alarms and/or indications in the operator's cabin for failure of lubrication system may be installed in the operator's cabin.

5. Ancillary Equipment And Other Requirements

The following shall be provided on the sprinkler:

- Front and rear tow hooks / two lifting loops.
- Pressurized radiator cap
- Head light high-beam indicator.
- Air Dryer Water separators in air lines.(If applicable)
- Rock ejector bars between each set of dual rear wheels
- Front pressurized sprinkling
- Tyre Inflator & tyre inflation kit(if applicable)
- Baffle plate (side of turbo charger & exhaust tubes for properly shielding from hot zone)

6. Safety Devices to be incorporated in the equipment: (All the safety features provided in the equipment must comply DGMS Regulation 216(2) of CMR (2017) :-

The following Safety devices shall be provided on the Sprinkler:

- Mechanical Steering Locking Device.
- Tail Lamp Guard Kit / Tail lamps with guard
- Retractable type seat belts with seat belt reminder system.
- Audio visual alarm in reverse with flasher, approved type conforming to specifications as- per DGMS (Approval) / AVA/ 01 dt.25-05-2010 of DGMS
- Alternative braking arrangement/Two brakes
- Blind Spot Mirror
- Emergency steering
- Fire /heat resistant hoses
- Fire Resistant sleeves & conduits on the cables/wires in the hot zone
- Propeller Shaft Guard.
- Turbo charger guard & exhaust tube treated with insulated paints.
- Battery cut-off switch

m) Rear Vision System: The system shall be provided with a Monitor, installed inside the Operators Cabin and Automatic Switch on the reverse gear actuates ultra low light camera with sufficient number of infra red LEDs installed at the rear of the Sprinkler which provides picture in nearly pitch dark and in poor weather conditions and a clear & sharp picture is displayed on the Monitor. The monitor and camera shall be

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connected by a suitable detachable cable with water proof joints and the system shall be suitable for operation in extreme climatic conditions in the Indian Open cast mines. The camera shall be housed in a fully water proof, dust proof and shock & vibration resistant case which is suitable for high pressure washing as per DGMS (Tech) Circular No. 6 of 2020 dated 27.02.200.

n) Proximity Warning Device: Proximity Warning Device / System with water proof Sensors, Joints & fittings, suitable for operation in extreme climatic conditions in the Indian Open Cast Mines shall be installed. The system shall be fully water proof, dust proof and shock & vibration resistant as per DGMS (Tech) Circular No. 6 of 2020 dated 27.02.200.

o) Retractable Seat Belts : Similar to the seat belts fitted on the front seats of the commercial passenger Cars with seat belt reminder system as per DGMS (Tech) Circular No. 6 of 2020 dated 27.02.200.

p) Operator's fatigue warning system should be provided in the operator's cabin as per DGMS (Tech) Circular No. 6 of 2020 dated 27.02.200.

7. Special Guarantees

The following guarantee will apply for the different components:

- j. Body, chassis, differential & final drive - 10,000 hours or 1000 calendar days from the date of commissioning (whichever is earlier).
- ii. Complete engine system - 24 months or 6500 hours from the date of commissioning (whichever is earlier).
In case of failure of engine system within 6500 hrs. The failed components of the engine system will have to be replaced / repaired depending on the merit of the case, free of cost by the supplier.
In case of failure of engine system beyond 6500 hrs. The system will have to be replaced on pro-rata payment basis taking the life of the engine system as 7550 W/hrs.
- iii) Transmission Assy. - 24 months or 6500 hrs from the date of commissioning (Whichever is earlier).
- iv) Auto Electricals- 12 months or 3000 hrs from the date of commissioning- (Whichever is earlier)
- v) Engine hour meter & Audio visual Alarm - 12 months or 3000 hrs (Whichever is earlier) from the date of commissioning
- vi) Caliper and Disc Brake - 24 months or 6500 hours from the date of commissioning (whichever is earlier).
Against Guarantee failures, intimated to supplier reasonably in time, necessary Replacement/ Repair job (as per Guarantee settlement) must be completed within 21 days at site by the bidder, at no cost to the purchaser.

8. Performance Guarantee" In accordance with the provisions of clauses B.7.2.2 and B.7.3.2 of the Technical Specifications, the Supplier shall guarantee that the availability of the equipment shall be not less than 72% (seventy two per cent) for a period of 12 months from the accepted date of commissioning.

9. Dimensions, weights and performance details:

| Specification Parameter | Bidder's value |
|---|----------------|
| 9.1.1 WATER SPRINKLER 28KL including necessary Filters and O-Rings for initial 3,000 working Hours. Replacement Requirement/ NCD : 3 nos | |
| 9.1.2. Make, Model and type of offered Equipment : Make : BEML Model:WS28-2 Water Sprinkler | |
| 9.2.1. WATER SPRINKLER 28KL including necessary Filters and O-Rings for initial 3,000 working Hours. :Additional Requirement/ PCD : 4 nos | |
| 9.2.2. Make, Model and type of offered Equipment : Make : BEML Model:WS28-2 Water Sprinkler | |
| 9.3 Dimensions, Weights, Technical & Performance Details | |
| 9.3.1. Dimensions : | |
| 9.3.1. a) Maximum overall length | 7995 mm |
| 9.3.1.b) Maximum overall width | 3824 mm |
| 9.3.1.c) Maximum height, without Tank | 3490 mm |
| 9.3.1.d) Maximum height, with Tank | 3946 mm |
| 9.3.1.e) Wheel base | 3600 mm |
| 9.3.2 Weight Distribution : | |

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| 9.3.2.a) Empty Vehicle | |
| 9.3.2.a.i. Front Axle | 12079 Kg |
| 9.3.2.a.ii Real Axle | 13621 Kg |
| 9.3.2.a.iii Total | 25700 Kg |
| 9.3.2.b) Loaded Vehicle | |
| 9.3.2.b.i. Front Axle | 17721 Kg |
| 9.3.2.b.ii. Real Axle | 35979 Kg |
| 9.3.2.b.iii. Total | 53700 Kg |
| 9.3.3. Engine : | |
| 9.3.3.a) Manufacturer Name & Model | BEML & BS6D140-1 |
| 9.3.3.b) Number of cylinders | 6 No's |
| 9.3.3.c) Bore | 140 mm |
| 9.3.3.d) Stroke | 165 mm |
| 9.3.3.e) Displacement | 15.24 Litres |
| 9.3.3.f) ISO Net Power and rated rpm | 280 kW@2100 rpm |
| 9.3.3.g) Maximum torque and rated rpm | 1627 Nm@1400 rpm |
| 9.3.4. Transmission : | |
| a) Manufacturer's Name & Model | AVTEC & CLT74 |
| b) Type | Power shift with automatic lockup clutch |
| c) Number of Gear speeds, (forward and reverse) | 05 Forward & 01 Reverse |
| d) Travel speeds, (forward and reverse) | Enclosed as annexure |
| 9.3.5. Differential : | |
| a) Make | Make : BEML |
| b) Type | Traction Sensing, Automatic |
| c) Ratio | 3.23:1 |
| 9.3.6. Final Drive : | |
| a) Make | Make: BEML |
| b) Type | Planetary Reduction Type |
| c) Ratio | 4.58:1 |
| 9.3.7. Suspension : | |
| 9.3.7.1. Front Suspension : | |
| a) Type & Make | Frame mounted, Hydro-pneumatic integral rebound control, Make : BEML |
| b) Stroke | 365 mm |

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|---|---|
| c) Load - deflection rate, loaded and empty | Loaded : 1132 kg/cm & Empty : 482 kg/cm |
| 9.3.7.2. Rear Suspension : | |
| a) Type & Make | Axle mounted, Inverted hydro-Pneumatic integral rebound control, BEML |
| b) Stroke | 170 mm |
| c) Load - deflection rate, loaded and empty | Loaded : 5504 kg/cm & Empty : 408 kg/cm |
| 9.3.8. Steering : | |
| a) Type & Make | Orbitrol, Full time power steering, BEML |
| b) Emergency Steer method | Details enclosed as annexure |
| 9.3.9.1. Service Brakes : | |
| 9.3.9.1.1. Front Service Brakes | |
| a) Type | Dry caliper disc |
| b) Actuating System | Air over hydraulically actuated |
| 9.3.9.1.2. Rear Service Brakes | |
| a) Type | Oil cooled wet multiple disc |
| b) Actuating System | Air over hydraulically actuated |
| 9.3.9.2. Secondary Brakes | |
| a) Type | Details enclosed as annexure |
| b) Actuating System | Details enclosed as annexure |
| 9.3.9.3. Parking Brakes | |
| a) Type | Dry caliper disc on axle input flange |
| b) Actuating System | Details enclosed as annexure |
| 9.3.9.4. Retarder | |
| a) Type | Oil cooled wet multiple disc |
| b) Actuating System | Details enclosed as annexure |
| 9.3.10. Tyres : | |
| a) Make | MRF / JK / BKT |
| b) Size & Type | 18.00X25, 32PR E-4 (Tubeless) |
| c) Tread | Deep tread rock type |
| d) Ply rating | 32PR |
| e) Rim size | 13.00X25 |
| 9.3.11. Hydraulic System : | |

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| a) Make & Model, number, flow rates, operating pressure of pumps | Details enclosed as annexure |
| b) Make & model, number, piston diameters, stroke lengths of cylinders. | Details enclosed as annexure |
| c) Relief valve operating pressures | Details enclosed as annexure |
| d) Make and model no and flow rates of motor | Details enclosed as annexure |
| 9.3.12. Electrical System : | |
| a) Starter make & model | Make: Delco Remy, Model: 42MT, 24V, 7.5KW |
| b) Alternator make & model | M/S. PRESTOLITE 24V 80 amp |
| c) Batteries, number of plates and ratings | 2 X 12V, 200Ah - Low maintenance |
| d) Lighting details | Details enclosed as Annexure |
| 9.3.13. Water System : | |
| 9.3.13.1. Water Pump | |
| a) Type of Pump | Centrifugal pump |
| b) Capacity of pump in CuM/Hour @ r/min & Head----- meter | 1833 ltr./min (110 cum/hr) at 55 meter head |
| c) Drive system to pump | Mechanical coupling |
| 9.3.13.2. Piping | |
| a) Suction Dia | 80 mm |
| b) Discharge Dia | 50 mm |
| c) Type of valve | Butterfly type valve |
| 9.3.13.3. Sprinkling | |
| a) Details of pressurized sprinkling system | Constant sprinkling velocity maintained by centrifugal pump |
| b) Spreading Width | Spreading width is 14 mts. |
| c) Details of Mist system | Details enclosed in annexure |
| d) Details of Gravity Sprinkling Arrangement | Details enclosed as annexure |
| e) Type of Nozzles | Fish tail type nozzle. |
| f) Details of Self filling system | Details enclosed as annexure |
| g) Details of firefighting unit adoption | Details enclosed as annexure |

10. GUARANTEE / WARRANTY / PERFORMANCE GUARANTEE

i) The equipment will be warranted against any manufacturing defects/ workmanship for a period of 12 months from date of commissioning from the date of commissioning. Any defect observed on this account shall be attended to immediately and in no case beyond a period of one month. For specific warranty on assemblies and sub-assemblies, details given in Technical Specification may be referred to.

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ii) In the event of any breakdown or failure of performance due to defects in materials, design, workmanship, spare parts etc., WCL shall promptly notify you in writing of any claims arising under this warranty, the repairs, replacement or rectification work shall be carried out by you at site at NO COST to the purchaser, within 21 days of settlement of warranty claims. You will be required to stock spares parts to take care of warranty period breakdown. Spares should be available within three weeks from the date of intimation of breakdown.

iii. You must ensure that there is no major breakdown due to manufacturing/ design defect during the warranty period. In case such breakdown occurs, the purchaser will reserve the right to extend the warranty period suitably.

iv) You will have to furnish the following Performance Bank Guarantee on scheduled / Nationalised Bank in India as a coverage towards the suppliers' performance against the Contract, in the standard format (which is enclosed with the supply order. No other format will be accepted

11. ERECTION & SUPERVISION: You shall be responsible for the erection and commissioning within 7 days of the receipt of complete equipment at site. However, the purchaser will assist in providing necessary erection tools & tackles etc. and unskilled manpower for this purpose.

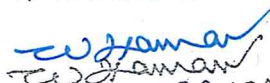
12. INSPECTION AND TESTS


- i. The purchaser or its authorized representative shall have the right to inspect and / or to test the goods to confirm their conformity to the contract. The purchaser shall notify you in writing of the identify of any representative retained for these purposes.
- ii. The inspections and tests may be conducted at your premises or your subcontractor(s), at point of delivery and/or at the goods final destination when conducted on your premises or your subcontractor(a), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the purchaser.
- iii. Should any inspected or tested Goods fail to conform to the specifications, the purchaser may reject them and you shall either replace the rejected goods or make all alternatives necessary to meet specification requirements free of cost to the Purchaser.
- iv. The materials will be inspected on arrival at site by the consignee, which will be considered as final. This shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the Purchaser or its representatives prior to the dispatch of the Goods.
- v. Nothing in these documents shall in any way release you from any warranty or other obligations under this contract.

13. FINAL INSPECTION CLAUSE:

Final Inspection shall be carried by the Consignee at Site. However, WCL reserves its right to get the Equipment inspected before despatch by the representative of GM(Excv) HOD, WCL Hqrs or any other agency, appointed by WCL.

In case it is decided to carry out pre despatch inspection by WCL's representative then equipment has to be delivered at Consignee project within 15 days or earlier from the date of inspection and clearance by WCL's representative.


22/10/2020
Chief Manager (MM)

 22/10/2020
Chief Manager (MM)

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