



Bharat Coking Coal Limited
(A Subsidiary of Coal India Limited)
(A GOVT. OF INDIA UNDERTAKING)
Koyla Bhawan, Koyla Nagar, Post- B.C.C.L. Township,
DHANBAD-826005 (Jharkhand)
OFFICE OF THE GENERAL MANAGER (MM)
Phone No. 0326-2230181 Fax No. 0326-2230183
(UNDER JURISDICTION OF DHANBAD/JARKHAND COURT ONLY)

Purchase Order

Ref: BCCL/PUR/416112 (16-17) /TYRE HANDLER//GLOBAL/16-17/74/85

Dated 25.11.17

To,
M/s BEML Limited,
KANGALO, AMAGHATA
PO- GOVINDPUR
DHANBAD, JHARKHAND - 828109

Vendor Code-1/22/M/P/011
Vendor Type- OEM

Ph No-0326 2227038/85/89

FAX NO-0326-2227082

EMAIL- bemldha@rediffmail.com, ghanbad@rm.beml.co.in

Sub: Supply of Tyre Handler with Filters/Consumables for 3000Hrs Operation.

Ref: 1.Your online offer No. 160908 dtd. 30.12.2016 read with subsequent clarifications last being BEML/MFM/16XBL15TH/16-17/1721 dated 15.02.17 against this office Global E-Tender No BCCL/PUR/416112(16-17)/Tyre Handler/Global/16-17/74 dtd.24.11.2016 for procurement of 6 nos. Tyre Handler with Consumables.

Dear Sirs,

Your above referred offer for supply of Tyre Handler with Filters/Consumables for 3000Hrs Operation has been accepted to the extent as indicated hereunder:-

1. SCOPE OF SUPPLY

A. Equipment:

DESCRIPTION	Particulars	Value (Rs)	Qty	Extended Value
EQUIPMENT- Diesel Powered, Self-propelled earthmover, loader based TYRE HANDLER model BL14TH.	Unit Ex-Works Price of Equipment	10520000.00	4	42080000.00
	84291120, GST @ 28%	2945600		11782400.00
	Freight Charge	116913.00	4	467652.00
	84291120, GST @ 28%	32735.64		130942.56
	Transit Insurance	2104.00	4	8416.00
	84291120, GST @ 28%	589.12		2356.48
	Equipment Sub-Total	13617941.76		54471767.04
Filters/Consumables for 3000Hrs Operation	Filters/Consumables for 3000Hrs Operation	139407.00	4	557628.00
	GST as per Annexure	34390.26		137561.04
	Spares Sub Total	173797.26		695189.04
Total Purchase Value	Landed Value of Equipment with Consumables	13791739.02	4	55166956.08

Material Code; 17503000016

Supply Point:

Equipment: Supply and billing will be from BEML Limited, Kolar Gold Field, Karnataka 596 115.

Spares: Supply and billing will be from BEML Limited, Dhanbad, Jharkhand-828109.

2. TOTAL PURCHASE VALUE (Equipment & Filters/Consumables for 3000Hrs Operation):

Rs 5, 51, 66,956.00

(Rs FIVE CRORE FIFTY ONE LAKH SIXTY SIX THOUSAND NINE HUNDRED AND FIFTY SIX ONLY.) The above price is on Ex- works KGF basis (for Equipment) and Ex-Depot Dhanbad basis (For Spares) & firm till completion

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of order; however the contract is concluded on F.O.R. destination basis. **Duties & taxes and other charges are payable extra at the rate prevailing at the time of delivery as indicated in the scope of supply.**

3. GST:

- (a) GST shall be paid extra as legally applicable during the scheduled delivery period. Present rate for equipment is 28 %. GST for spares is as per attached Annexure-B.
- (b) The invoice shall be raised by you should contain following elements as per Section 31 of CGST ACT, 2017 and GST Invoice, Credit and Debit Note Rules, 2017.
- name, address and GSTIN of the supplier;
 - a serial number of Invoice (should not be hand-written)
 - date of its issue;
 - name, address and GSTIN or UIN;
 - name and address of the recipient and the address of delivery, along with the name of State and its code;
 - HSN code of goods or Accounting Code of services;
 - Description and quantity of goods or services; ☐ total value of supply of goods or services or both;
 - taxable value of supply of goods or services or both taking into account discount or abatement, if any;
 - rate of tax as well as amount of tax; (central tax, State tax, integrated tax, Union territory tax or cess)
 - place of supply along with the name of State, in case of a supply in the course of inter-State trade or commerce;
 - address of delivery where the same is different from the place of supply;
 - whether the tax is payable on reverse charge basis; and
 - Signature or digital signature of the supplier or his authorized representative
- (c) You have to ensure proper uploading in your return so that BCCL may be able to avail Input Tax Credit.
- (d) You have to ensure that if BCCL does not be able to avail Input Credit due to your fault then the loss amount shall be recovered from your bill.
- (e) The benefit of any extra input tax credit earned by you, if any, in future shall be passed on to BCCL.
- (f) E-Way bill, if required, shall be arranged by you.
- (g) GSTIN and other details of BCCL are furnished below for your ready reference.

Particulars	Jharkhand	West Bengal
Name	Bharat Coking	Coal Limited
PAN	AAACB7934M	
Constitution	COMPANY	
Address of principal place of business	Bharat Coking Coal Ltd. Koyla Bhawan, Koyla Nagar Dhanbad, Jharkhand-826005	Bharat Coking Coal Ltd. 6, Lyons Range, Kolkata West Bengal-700001
Provisional ID	20AAACB7934MFZB	19AAACB7934M2Z7
Application Reference no.(ARN)	AA200417004532W	AA190417020182I

HSN codes and GST rates of the items covered in the above supply order placed will be as under:

Sl no.	Item	HSN code	GST rate
1	Tyre Handler	8423	28 % [14% CGST+14% SGST].
2	Filters/Consumables for 3000Hrs Operation	As per Annexure B	As per Annexure B

NB: Taxes & Duties shall be extra at the rate prevailing at the time of delivery. However any increase in taxes & duties after expiry of delivery period shall be to your account.

5. PACKING & FORWARDING CHARGES: NIL.

6. FREIGHT/TRANSPORTATION CHARGES WITH GST: To be paid extra at actual subject to a maximum of **Rs. 1,49,648.64** (Rupees One lakh Forty Nine Thousand Six Hundred and Forty Eight and Sixty Four Paise only) per equipment

subject to production of documentary evidence. The transport charge is inclusive of GST at legally applicable rate. Freight/Transportation Charges are not applicable for spares.

7. **TRANSIT INSURANCE INCLUSIVE OF SERVICE TAX:** To be paid extra at actual subject to a maximum of Rs. 2693.12 (Rupees Two Thousand Six Hundred and Ninety Three and paise Twelve only) per Equipment subject to production of documentary evidence. The transit insurance charge is inclusive of GST at legally applicable rate. Transit Insurance Charges are not applicable for spares.

8. **TERMS OF PAYMENT:
FOR EQUIPMENT:**

(a) 80% value of each equipment and the accessories and 100% GST along with 100% transportation & Insurance charges will be paid within 21 days after delivery of the equipment and receipt and acceptance of performance bank guarantee. The equipment should be accompanied with relevant dispatch documents like Challan, Maker's Test Cum Inspection Certificate Warranty Certificate, Pre dispatch inspection certificate wherever applicable etc.

(b) Balance 20% payment shall be made within 21 days of successful completion of erection testing, commissioning and final acceptance of the equipment (along with accessories) at site upon presentation of a certificate from the project Officer the effect that the equipment has been erected and commissioned to their entire satisfaction.

FOR SPARES

(c) 100% payment of the spares shall be released within 21 days of receipt and acceptance of the spares.

BCCL is making payment of supplier's bills through Electronic Fund Transfer (EFT). Bidders are therefore, advised to indicate their Bank Account number and other Bank Details in their Invoice.

Name of the Bank.

Name of the Branch with complete address.

Party's Account Style.

Party's nature of Account.

Party's Account Number.

Your E-Payment mandate is enclosed at **ANNEXURE-N**

9. **DELIVERY:** Supply of the Dozer should commence within 3 months from the date of receipt of purchase order and supply to be completed 6 months from the date of receipt of purchase of order. Delivery schedule shall be reckoned from the 10TH day from the date of order and the date of receipt of materials at our stores shall be treated as the date of delivery. Early delivery shall be accepted.

Each machine (Machines to be supplied in each project) shall be delivered with spares parts and consumables adequate, initially, for twelve (12) months operation.

10. **LIQUIDATED DAMAGES CLAUSE:** The bidders will confirm their acceptance of the following:

In the event of failure to deliver/dispatch the equipment/stores within the stipulated date/period to effect supply 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, Bharat Coking Coal Ltd., shall be entitled at its option either to enforce the following:

- 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 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) and where felt necessary by BCCL, it may be increased up to 15 %.
- b. To cancel the supply order or a portion thereof, and if so desired to purchase the stores at the risk and expenses of the defaulting supplier and also/or
- c. To purchase elsewhere after 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
- d. To extend the period of delivery with or without liquidated damages as may be considered fit and proper. The liquidated damages if imposed, shall not be more than the agreed liquidated damages referred to in CLAUSE 9 (a) above except in case of force majeure condition
- e. Whenever under this contract any sum of money is recoverable from and payable by the supplier, Bharat Coking Coal Limited, 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. Bharat Coking Coal Limited, the balance amount on demand the remaining balance. The supplier shall not be entitled to any gain on any such purchase.
- f. To forfeit the security deposit fully or in part.



11. **CONSIGNEE:**

The equipment allocated to the mine /projects/ areas as follows which is subject to change as per the requirement of purchaser:

Sl No.	Area/Project	Company	Total Requirement	
			Under NCD	Under PCD
1	The Depot Officer, Regional Stores, Block II Bharat Coking Coal Limited Nawagarh,,Dhanbad -828 306 TIN No-20121500736	BCCL	01 Nos	-
2	The Depot Officer, Regional Stores, Bastacolla , Area -IX Bharat Coking Coal Limited Dhanbad TIN No- 20711800090	do	01 Nos	
3	The Depot Officer, Regional Stores, Lodna , Area -X Bharat Coking Coal Limited Khasjeenagora, Dhanbad-828115. TIN No- 20801800089	do	01 No	
4	The Depot Officer, Regional Stores, CV Area -XII Bharat Coking Coal Limited Begunna Colly Road, Begunia, Barakar, Burdman West Bengal-713324. TIN No- 20672000902	do	01 No	
	TOTAL		4 Nos	NIL

12. **PAYING AUTHORITY:** The Chief Manager (Finance)/MM/HOD, Koyla Bhawan: Koyla Nagar, Dhanbad

13. **SECURITY DEPOSIT:** Exempted being a CPSU under the Ministry of Defence; Govt of India.

14. **COMPOSITE GUARANTEE / WARRANTY:** as indicated in Technical Specification (ANNEXURE-A)

15. **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 85% (eighty five per cent) for a period of 12 months from the accepted date of commissioning. You shall furnish a Performance Guarantee equivalent to 10% of the total value of the supply order /contract (by adding GST to the FOR destination price of the equipment ordered). The performance guarantee shall be submitted in the form of a Bank Guarantee issued by a scheduled bank in the format attached as **ANNEXURE-C** (on a non-judicial stamp paper of value Rs.250.00 only). This Bank Guarantee shall be initially valid for a period of 30 months from the date of receipt and acceptance of equipment and the same shall either be released or extended depending upon the merit of the case. This Performance Guarantee shall be for the performance of the Supply Order.

Submission of Bank Guarantee: The Bank Guarantee issued by the Issuing Bank on behalf of contractor/supplier in favor of "Bharat Coking Coal Limited" 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 & his details	Name	Bharat Coking Coal Ltd.
	Area	*
	Bank A/c No.	**
	Department	***
Beneficiary bank, Branch & Address	State bank of India	
	Main Branch, Dhanbad	
IFSC Code	IFSC Code : SBIN0000066	

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 Copy of the bank Guarantee issued by the issuing bank shall be sent by the issuing Bank/applicant to concerned Department and Area of BCCL.

The total value of **PERFORMANCE BANK GUARANTEE** is **Rs 55, 16,696.00 or**

Rs 13, 79,173.90/Equipment

16. **INTEGRITY PACT):** The **Integrity Pact** document has been signed by you and the same is deemed to have been signed by BCCL authorities.
17. **PRICE FALL CLAUSE** – The price charged for the Stores / Equipment supplied against the order, if placed, shall in no event exceed the lowest price at which the bidder shall sell or offer to sell the Stores / Equipment of identical description to its any customer during the pendency of the Contract / Supply Order. If the successful tenderer at any time during the pendency of the Contract / Supply Order sells or offers to sell such stores to any customer, at a price lower than the price stipulated in the Contract / Supply Order placed by BCCL, the successful tenderer shall forthwith notify to BCCL such reduction in sale price of stores / equipment supplied after such reduction coming into force shall stand correspondingly reduced.
18. **INSPECTION AND TESTS:**
- a) 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 the supplier in writing of the identity of any representative retained for these purposes.
 - b) The inspections and tests may be conducted on the premises of the supplier or its subcontractors), at point of delivery and/or at the goods final destination when conducted on the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production date, shall be furnished to the inspectors at no charge to the purchaser.
 - c) Should any inspected or tested Goods fail to conform to the specifications, the purchaser may reject them and the supplier shall both replace the rejected goods and make all alternatives necessary to meet specification requirements free of cost to the Purchaser.
 - d) The Purchaser's right to inspect, test and, where necessary, reject the goods after the Goods arrival in the Purchaser's country 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 Goods shipment from the country of origin.
 - e) Materials are subject to inspection by the purchaser before dispatch. The materials may also be subject to stage inspection by a third party nominated by BCCL for the purpose. Final inspection shall, however, be carried out at the consignee's end by GM(Excv);BCCL or his authorized representative
 - f) Nothing in these documents shall in any way release the supplier from any warranty or other obligations under this contract.
 - g) The purchaser shall, at its discretion, have the right to test the ordered material in a Government Test House or in a test house nominated by the purchaser. In case of failure of the material after testing, the cost of tests as well as of the material shall have to be borne by the supplier.
 - h) Pre-dispatch inspection by CM (Excv)/EED, 40 Kempe Gowda Road, 4th Floor, Geetha Mansion, Coal India Ltd., Bangalore – 560 009, under intimation to General Manager (Excavation), CIL HQ.
19. **GENERAL TERMS AND CONDITIONS:** Unless otherwise specified in the purchase order, the Purchase order shall be subject to the General Terms and Conditions of Supply of Stores given as ANNEXURE –D. In case there is a conflict in any particular term of the NIT with the General Terms, the terms of the NIT will prevail.
20. **JURISDICTION:** Any dispute arising out of this enquiry shall come under the sole jurisdiction of the Dhanbad/Jharkhand High Court, (INDIA).

The contract is concluded with the issuance of this order. We are enclosing 2 copies of the Purchase Order, one of which should be returned to us duly stamped and signed.

Yours faithfully,
For & on behalf of Bharat Coking Coal Limited


(Shivam Pandey)
AM (MM)


(A R Chaudhary)
General Manager (MM)

Enclosures:

SL	ANNEXURE	DESCRIPTION
1	ANNEXURE - A	<u>TECHNICAL SPECIFICATIONS</u> SCHEDULE OF REQUIREMENT, SCHEDULE OF REQUIREMENTS OF SERVICES, TECHNICAL SPECIFICATIONS, SCOPE OF SUPPLY, EQUIPMENT SPECIFICATION OF EARTH MOVER TYRE HANDLER
2	ANNEXURE B	List of Consumables for 3000Hrs Operation.
4	ANNEXURE-C	Proforma of Performance Bank Guarantee.
5	ANNEXURE -D	General Terms and Conditions of supply of stores.
6	ANNEXURE - E	Major Depot/Warehouse & Service Facility
7	ANNEXURE - F	List of Standard Tools
8	ANNEXURE - G	Quality Assurance Plan
9	ANNEXURE - H	Leaflet of Tyre Handler
10	ANNEXURE - I	Engine performance curves.
11	ANNEXURE - J	Technical description of Tyre Handler.
12	ANNEXURE – K	List of major bought-out items for Tyre Handler.
13	ANNEXURE – L	Erection Program for Tyre Handler.
14	ANNEXURE – M	Maintenance schedule for Tyre Handler.
15	ANNEXURE – N	Authorization for E-Payment.


Copy to:

- GM(Excv), Koyla Bhawan : Koyla Nagar, Dhanbad
- The Chief Manager (Finance)/MM/HOD, Koyla Bhawan : Koyla Nagar, Dhanbad.
- The GM(Areas), Bastacolla Area/Lodna Area/CV Area, /Block-II Area.
- GM (Company Secretary), BCCL, Koyla Bhawan : Koyla Nagar, Dhanbad – in ref. to agenda no 334.5A of the 334th Board meeting of BCCL Board of Directors held on 01.08.2017 and minutes communicated by Co. secy vide no. BCCL: CS: F-1(A):571 dated 27.10.2017.
- GM(MM/Stores), Koyla Bhawan : Koyla Nagar, Dhanbad: in ref. to Indent Registration No 416112 dtd 14.10.16
- GM(UMD), CMPDI Ltd, Gondwana Place, Kanke Road, Ranchi-8
- GM / GM (MM), ECL/ CCL/WCL/SECL/NCL/MCL
- CM (Excv), 40 Kempe Gowda Road, 4th Floor, Geetha Mansion, Coal India Ltd., Bangalore – 560 009
- The Depot Officer, RS/ Bastacolla Area/Lodna Area/CV Area, /Block-II Area..
- AM, Tech Cell, MM Divn, Koyla Bhawan : Koyla Nagar, Dhanbad
- The Independent External Monitor for Integrity Pact:-
Prof (Dr) L.C.Singhi, IAS(Retd)
L-31, Third Floor Kailash Colony, New Delhi – 110048

This issues with approval of BCCL Board of Directors 334th meeting held on 01.08.2017 and minutes communicated by C. secy vide no. BCCL: CS: F-1(A):571 dated 27.10.2017.

Budget Certification

eBC no BCCL/C&B/CAP/Reg.PN-171/SN-01/ eBC No 365 dated 21.11.17 for Rs 5,51,66,596.08 & eFC No 230 Dated 21.11.17 for Rs 5,51,66,596.08


(Shivam Pandey)
AM (MM)


(A R Chaudhary)
General Manager (MM)

Schedule of Requirements**Part I**

S.No	Brief Description of Goods & Services	Quantity	Expected Delivery Schedule at Site
1	TYRE HANDLER	04 No's	Commencing within 3 months from the date of receipt of purchase orders and supply to be completed within 6 months from the date of receipt of purchase orders.
2	<i>Ancillary Equipment and other requirements for each of Item no.1 as specified in Technical Specifications.</i>	<i>In accordance with item 1</i>	<i>Delivery to be made with Equipment</i>

The quantities of equipment against which this procurement is being made are as follows:

Sl No.	Project with Consignee Address	Company	Total Requirement	
			Under NCD	Under PCD
1	Block-II	BCCL	01 Nos	Nil
2	Rajapur OCP, Bastacolla area	BCCL	01 Nos	Nil
3	Lodna	BCCL	01 Nos.	Nil
4	CV	BCCL	01 No.	Nil
TOTAL		BCCL	04 NOS.	




Part II

Sl. No	Brief Description of Services	Period/Quantum
1	Training of Purchaser's Personnel at the manufacturer's works or elsewhere outside India.	Please refer to Schedule of Requirements of Services later in this Section and to the Technical Specifications.
2	Training of Purchaser's Personnel on Site.	Please refer to Schedule of Requirements of Services later in this Section and to the Technical Specifications.
3	Assembly and erection of equipment at Site in accordance with the Technical Specification and Conditions of Contract.	To be specified by the Bidder to comply with the Technical Specifications and the terms and Conditions of Contract.

Note:

- Price for the equipment along with accessories should be quoted with Normal Custom Duty (NCD) for 06 nos. and Project Concessional Duty (PCD) for NIL nos. applicable for the imported contents.
- The bidder has to quote for full quantity of the tender as given above, otherwise their offer will not be considered.

Schedule of Requirements of Services

The Supplier's scope of the Contract will include the following

- Type test on each equipment included in the technical specification and offered in the bid.
- Providing Services of Supplier's qualified engineer(s)/personnel for:
 - unloading, transportation to site, storage at site and/or
 - transportation from storage to erection site, installation, testing and commissioning.
- Training of Purchaser's Personnel:
The Purchaser's estimates of the minimum training requirements (in terms of Purchaser's personnel, periods and locations) are given in the following table. These estimates relate to the total number of items of equipment specified in Part I

Type of Personnel	At Manufacturer's Works			At Site		
	No	Period	Total	No	Period	Total
Mech Engineer		weeks	weeks		1 Week	Week
Mech Supervisor		weeks	weeks		1 Week	Week
Elec Supervisor		weeks	weeks		1 Week	Week
Mech Fitter					1 Week	Week
Electrician					1 Week	Week
Operator					1 Week	Week
Total			weeks			weeks

Definitions:

Mech/Elect Engineer-
Elect/Mech Supervisor -

Graduate Engineer having basic knowledge of the equipment
Diploma Holder Engineer having basic knowledge of the equipment

Mech
Fitters/Electricians/Operators -

Un-skilled, semi-skilled and skilled.

Technical Specifications

ITEM DETAILS: Tyre Handler

Preface - Instructions to Bidders

1. Introduction

These Technical Specifications identify the technical requirements of the Goods and Services which are the subject of this Tender.

The Technical Specifications are presented in four parts as follows:

- A. Scope of Supply
- B. General Requirements
 - 1) 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

1. 2. Conformity with Specifications

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

Part A followed by

Part B followed by

Part C

Site Visits

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

Technical Response

Bidders shall provide a Clause by Clause commentary demonstrating compliance with the Purchaser's Technical Specifications, identifying any deviations thereto, together with full supporting technical literature and data sheets. The Equipment offered by Bidders will be evaluated technically based on the information presented in the bid without reference to extrinsic evidence.

Additionally Bidders shall provide the information specifically requested in the Attachment to the Technical Specifications.

Failure to provide any information requested in any part of this specification may deem the bid non-responsive.

A. Scope of Supply

A.1 Equipment Package

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

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 including standard engine filters required for first 3000 working hours.

A.3 Information and Drawings

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

- (a) One suitably illustrated copy of Operating, Repair and Maintenance Instructions for all the equipment, written in the English language, substantially bound in book form;
- (b) One suitably illustrated copy of detailed Spares Parts Manuals covering all plant, Equipment and accessories substantially bound in book form;

The Supplier shall also submit the data identified in the specifications for each item of Equipment proposed. In addition to the Equipment drawings requested, where appropriate the Supplier shall supply detailed drawings illustrating erection/assembly site(s), foundation and accommodation requirements for such items as drive motors, switch installations etc.

A.4 Erection/Assembly, Commissioning and Performance Testing

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

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

A.5 Training

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



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 0° C
			Maximum 50o 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 Part D of this section.

In general, all items shall be:

new, unused and of the current design (incorporating latest proven features) and not likely to be discontinued or become obsolete in near future

designed and constructed to handle without overload and for the working hours stated, the maximum volumes/rates specified;

designed to facilitate ready access, cleaning, inspection, maintenance and repair of component parts;

designed to facilitate rapid changeover of consumable items.

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

The Equipment and accessories shall be physically robust and where necessary capable of dismantling for transportation and ready re-assembly using simple tools. All Equipment items provided shall be designed to be compatible within the proposed overall Scope of Supply.

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

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

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

B.3 Standards



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

The system of units for all measurements shall be the **Système International d'Unités (S.I.).**

B.4 Suppliers Responsibility

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

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

The Supplier shall be responsible for the testing and commissioning of the Equipment and ensure that it meets the requirements as specified. The commissioning and setting to work of the whole Equipment Supply package shall be carried out under the supervision of the Supplier in conjunction with the Purchaser's nominated personnel

B.5 Spare Parts Provisions

B.5.1 Availability of Spare Parts.

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

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.

The Bidder 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

The Bidder 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

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



- (a) give not less than six months' notice in writing of 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, the Supplier 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

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

B.5.6 General

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

B.6 Composite Warranty / Guarantee

The Bidder shall warrant that the equipment supplied under this contract is:--

- a) In accordance with the contract specifications.
- b) The equipment will be warranted against any manufacturing defects/workmanship for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance. Any defect observed on this account shall be attended to immediately and in no case beyond a period of one month.

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

B.7 Performance Guarantee

B.7.1 Introduction

B.7.1.1 The Supplier 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, the Supplier shall, at its 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 The Supplier 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 The Supplier 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 The Supplier 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 programmes;

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, its Agents or Representatives.

Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures.

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

1. Providing normal and proper maintenance, including preventative maintenance in accordance with the Supplier's standard/published recommendations, and making all necessary repairs using only genuine manufacturer's spares.
2. Providing co-operation to all Supplier's authorised representatives, complying with all reasonable procedural suggestions to improve efficiency of machine operation or reduce downtime.
3. Where appropriate, providing and maintaining such conditions as:
 - Proper electrical Supply
 - Terrain Area
 - Bench preparation
 - Reasonable floor conditions
4. Providing all Supplier's authorised representatives access at all reasonable times to the machine service and repair facilities.

Maintaining a log-book 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 the Supplier's 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, the Supplier 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.
- The Supplier has 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 the supplier is 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 the supplier replaces the part under warranty shall be treated as **"Deemed Breakdown"** (the credit for keeping machine available shall not be given to the supplier).
- B.7.3.5 SPECIAL CONDITION The machines under supply against this tender should have the same major assys. / sub assys. which were fitted on the machines supplied against CIL's last supply order. In case any change is contemplated prior clearance of BCCL will be necessary.

B.8 Quality Assurance

- B.8.1 The Supplier should furnish in detail its quality assurance plan for various stages of manufacture. The Quality Assurance plan shall comply with an internationally recognized quality assurance standard such as ISO 9000.
- B.8.2 The Supplier shall provide facilities to Purchaser or their authorized representatives for progress inspection during manufacture at his works and furnish all test data available in this regard for quality control, both for bought out items and his own manufactured items.
- 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.

B.9 After Sales Service / Product Support.

The supplier must have adequate facility for product support for such machines in India with nearest Depot / Warehouse, Service facility and Personnel. Details of such facilities are to be mentioned as at clause 9 of Equipment Specification.

Technical Specifications

Equipment Specification of Earth Mover Tyre Handler

1. This specification is intended to cover the technical requirement for the design, manufacture, testing, delivery, on site erection and commissioning of a diesel powered, self-propelled earthmover, and loader based tyre handler

Suitable for tyre stockpile, removal and installation.

2. References

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

ISO 2867	Earth-moving machinery - Access systems
ISO 3449	Earth-moving machinery - Falling-object protective structures - Laboratory tests and performance requirements
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 5998	Earth-moving machinery - Rated operating load for crawler and wheel loaders
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 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 7131	Earth-moving machinery - Loaders - 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 10968	Earth-moving machinery - Operator's controls

3. The tyre handler shall meet all operational safety norms, environmental protection norms. Any other statutory requirement & norms and details of such norms followed, should be mentioned in the offer.

Design Criteria

The tyre handler shall be capable of operating for protracted periods on a system of 3 shifts each of 8 hours duration per day throughout the year.

The handler shall be capable for changing the tyre assembly in workshop and holding & carrying the inflated tyre assembly to the coal mine area, which normally have rough terrain, for change of tyre on the equipment gone under breakdown during operation on account of OTR Tyre. It shall also facilitate removal and installation of inner tyre of the dual tyres fitted in respective earth movers.

The tyre handler shall have suitable attachment for handling earth mover tyres size ranging from 18.00 x 25 to 36.00 x 51 with rim including wide base tyres such as 23.50x25, 21.00 x 25, 29.50 x 29 etc. The capacity of equipment shall match with the requirement of tyre handling i.e. lifting and carrying to the site with max weight of assembled tyre (about 3500 kgs).

The tyre handler shall have the following minimum working ranges

- i. Clamping span - 1450 mm to 3350 mm
- ii) Lift height - Minimum 3200 mm

4. Technical Requirement

4.1 Engine

The tyre handler shall be powered by a direct injection 4 stroke diesel engine with a continuous output rating compatible with the tyre handling requirement. The engine shall be provided with 24V electric starting, dry type 2 stage air cleaner and fuel filter with water separator.

The engine shall have a water jacket cooling system, thermostatically controlled using an engine driven water pump, with cooling water re-circulated through a heavy duty radiator. The system shall be capable of

providing sufficient cooling to allow the tyre handler to operate continuously at the full rated output and at the maximum ambient temperature of 50° (approx.)

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

4.2 **Transmission**

The tyre handler shall be provided with a full power shift hydraulic transmission and suitable torque converter. The transmission shall be provided with a heavy duty guard designed to protect transmission & minimize the accumulation of dirt and debris on the bottom of transmission assembly.

4.3 **Differential & Final Drives-**

Suitable all-wheel drive differential and final drive shall be provided to meet the requirement of operating parameters given in the design criteria.

4.4 **Steering**

Articulated, Full power Hydraulic steering shall be provided. The minimum articulation angle should be about 25° each side and Turning radius about 7.0 to 7.5 Meters.

4.5 **Hydraulic**

i. **For Steering, Lift & Dump** – Suitable capacity gear pumps for steering, lift & dump and control valve double spool type having positions for Lift system- Raise, Hold, Lower and Float and dump system – Roll Back, Hold & Dump. Lift & dump action shall be through suitable capacity double acting hydraulic cylinders.

ii. **For Tyre Handler** – Tyre handler shall be provided with suitable gear pump and hydraulic control valve having controlled from the operator's Cab. Clamping circuit should be independently controlled with provision of locking valve to ensure safe and positive clamping.

4.6 **Tyre handling attachment**

The head assembly and clamping pads should be provided with spur driven. Head assy should have rotation of 350° & 360° continuous rotation for clamping pad for maneuverability and tyre fitting. Lateral side shifting of 100mm minimum either side should be provided to allow precise alignment during tyre mounting. The contact pads shall be designed to grip a wide range of tyre tread profiles. The clamping force of tyre handler shall be independent of clamping span and suitable to match with the requirement. However it shall not be less than 19000 Kgs.

4.7 **Brakes**

Suitable reliable fail safe service and parking brakes shall be provided. The brakes should be air/air over hydraulic actuated type with provision to prevent entry of dust and water and designed for low maintenance.

4.8 **Hoses**

All hoses and piping should be as per relevant SAE/DIN Specification and shall be grouped as far as possible and suitably clipped to reduce damage from scuffing.

4.9 **Tyres**

Suitable size tyres shall be provided to meet the requirement of operating parameters given in the design criteria. Technical Details of tyre to be fitted with tyre handler shall be furnished by the bidder.

4.10 **Fuel Tank**

The fuel tank shall be of sufficient capacity and be provided with a level indicator and a lockable hinged filler cap. The construction of the tank should be such that it provided for easy accumulation and drainage of water with minimum loss of fuel and arrangement of man hole for cleaning the tank from inside.

4.11 **Operator's Canopy**

An operator's canopy with fully adjustable suspension seat and a cooling fan shall be provided.

All operating controls, monitoring and working signals should be conveniently located in consoles within easy reach of the operator and shall comply with ISO6405-1 and ISO 6405-2.

Steps, walkways and handrails which comply with ISO 2867 shall be provided for access to the operator's cab and service points.

4.12 **Gauges & Indicators**

The following shall be provided as a minimum:

- a) Water temperature
- b) Engine oil pressure
- c) Transmission oil / Converter oil pressure
- d) Transmission oil / Converter oil temperature
- e) Fuel capacity
- f) Engine tachometer
- g) Engine hour-meter
- h) Air pressure (if applicable)

4.13 **Warning Alarms/Lights**

Audio/visual warning alarms shall be provided for Reversing

4.14 Electrical Equipment

The tyre handler shall be provided with the following –

- i) 24 DC electrical system with suitably rated alternator of reputed make.
- ii) Electric starter of reputed make.
- iii) Voltage regulator of reputed make
- iv) Battery of 12 Volts of suitable Ah rating – 2 Nos. of reputed make.
- v) Battery isolation switch.

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

4.15 Lights

The following lights shall be provided

- i) Front and rear light.
- ii) Stop & tail lights
- iii) Instrument panel
- iv) Working light.
- v) Socket with switch for pendent light with minimum 5 Meter cable

4.16 Guards and Shields –

Adequate guards and shields shall be provided throughout the tyre handler.

4.17 Fire fighting and fire suppression system

Minimum two numbers of fire extinguishers shall be provide at strategic points on the excavator, suitably mounted in heavy duty brackets for ease of removal. The extinguishers shall be of with a minimum capacity of 5 kg and shall comply with relevant IS. The materials and chemicals to be used in all the fire fighting and fire suppression system to be supplied with equipment must be of a type and make approved in writing from DGMS.

4.18 Gradeability – 25 %

4.19 Automatic fire detection and supression system.:- Equipment shall be provided with automatic fire detection and suppression system of standard and reputed make.

5. Auxiliary equipment and other requirement -

The following shall also be provided on the tyre handler

- i) Towing hook.
- ii) Horn
- iii) General Tool kit for repair and maintenance with list & quantity.
- iv) Tyre inflation kit.
- v) Any other item, if any, specifically not mentioned above, but essential for satisfactory working of tyre handler shall be quoted.

6. 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 85% (eighty five per cent) for a period of 12 months from the accepted date of commissioning.

7. Special Guarantees

The following guarantee will apply for the different components

- i) Body chassis & differential - 10,000 hours or 1000 calendar days (whichever is earlier)
- ii) Complete engine system - 24 months or 6000 hours (whichever is earlier) In case of
failure of engine system within 6000 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 6000 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 6000 hrs. (whichever is earlier)
- iv) Electrical Items - 6 months or 1000 hrs. (whichever is earlier)
- v) Engine Hour Meter - 12 months & 3000 hrs. (whichever is earlier)

In case of any guarantee failure intimated reasonably in time to the bidder, the replacement or repair job (as per guarantee settlement) must be completed within 30 days at site by the bidder at no cost to the purchaser

8. Information To Be Provided By The Supplier

The Supplier shall furnish the following information. All technical information shall be in SI units.

General

a) Number of offered model supplied during the last ten years.

The information shall be given in the following format.						
Company	Mine Name	Mine	Mine	No. of	Model	Commissioning
		Location	Type	machines		date

b) Details of nearest Depot/Warehouse and Service Facility available for the present offer, in the following format.					
Major Depot / Warehouse			Service Facility		
Location	Contact Nos.	Inventory Value (Approx.)	Location	Type of facility available	No. of Engineers *

* Engineers / Technicians employed to service the equipment either at the facility or on site.

c) Details of special tools to be provided with the equipment.

d) Details of erection programmes for the bid.

9. Technical Details

- Rated operating load according to ISO 5998.
- Latest engine performance curves showing net power, net torque and specific fuel consumption of the installed engine, measured according to ISO 9249.
- Maximum travel speed determined according to ISO 6014.:
- Turning diameter as defined in clause 4.2 of ISO 7457.
- Detailed technical descriptions of the tyre handler.
- Layout drawings and detailed descriptions of all hydraulic systems and components.
- Details of Firefighting and fire suppression system, its make, type, IS confirmation with copy of approval of DGMS.
- Details of Comprehensive commercial literature specifications, the content of which must comply with ISO 7131.
- Detailed list of instrumentation, monitoring and alarm systems.
- Details of major bought-out assemblies and sub-assemblies including manufacturer, type, etc.
- Operation and maintenance manuals in accordance with ISO 6750.

10.1 Dimensions, Weights and Performance Details

10.1.1 Dimensions

- Maximum overall length
- Maximum overall width
- Maximum height
- Loading height
- Wheel base

10.1.2 Weights

- Handling attachment weight
- Operating weight - front wheels
- Operating weight - rear wheels
- Total operating weight

10.1.3 Engine

- Manufacturer and model
- Number of cylinders
- Bore
- Stroke
- Displacement
- ISO net power at.....r/min
- Maximum torque

10.1.4 Transmission

- a) Make and model
- b) Type
- c) Number of gear speeds - forward and reverse
- d) Travel speeds - forward and reverse

10.1.5 Final Drive

- a) Type and make
- b) Differential ratio
- c) Planetary ratio

10.1.6 Steering

- a) Type and make
- b) Minimum turning radius (over tyres)
- c) Steering angle (each direction)

10.1.7 Brakes

10.1.7.1 Service brakes

10.1.7.2 Front

- a) Type
- b) Actuating system

10.1.7.3 Rear

- a) Type
- b) Actuating system

10.1.7.4 Parking brake

- a) Type
- b) Actuating system

10.1.8 Tyres

- a) Make
- b) Size and type
- c) Tread
- d) Ply rating
- e) Rim size

10.1.9 Hydraulic System

- a) Number, flow rates, operating pressures and Make & type of pumps
- b) Number, piston diameters, stroke lengths and make & model of cylinders
- c) Relief valve operating pressures

10.1.10 Electrical System

- a) Starter make and model
- b) Starter control make and model
- c) Alternator make and model
- d) Batteries - numbers and rating
- e) Lighting details

10.1.11 Clamping Arm

- a) **Capacity (Tyre size Minimum Thru)**
- b) Maximum Lift Capacity (Kg)
- c) Body Rotation (Degrees)
- d) Clamping Span (MM)
- e) Side shifting (MM)
- f) Lifting Height (MM)
- g) Rotation System
- h) Lifting Capacity at Tyre Clamp (Kg)
- i) Static Tipping Load

10.1.12 Automatic fire detection and suppression system

- a. Specify make of AFDSS.
- b. Model of AFDSS.

Technical Parameter Sheet :

(To be down loaded from e-Procurement portal and to be submitted as part of Bid)

The materials to be offered by the bidder must confirm to the technical specification parameters given in Technical Parameter Sheet (TPS) made available on the portal.

Note: The status of Overall Compliance or Non-Compliance of the eligibility under Technical Specification, on the basis of information submitted by the bidder for individual items, shall be shown in the Technical Parameter Sheet of TPS.XLS file down loaded from e-Procurement portal.

