



BHARAT COKING COAL LIMITED
(A Subsidiary of Coal India Limited)
Office of the General Manager(MM)
Materials Management Department
Commercial Block L-III , Koyla Bhawan : Koyla Nagar
Dhanbad : 826005(Fax No- 0326-2230183)
WEBSITE:bccl.gov.in

By Regd Post

PURCHASE ORDER NO:
PUR/412022 (12-13) /Crane 30T/12-13/ 199

Dated 24.01.2013

To,
M/s ESCORTS CONSTRUCTION EQUIPMENT LTD,
R.O/H.O PLOT NO 219, SECTOR 58,
BALLABHGARH-121004,
DISTRICT-FARIDABAD,
HARYANA, INDIA

Fax No :(0129) 2306572 / 2306566

Sub: This office Domestic E-Tender No BCCL/PUR/412022(12-13)/Crane 30T/12-13/16 Dated 01/02.06.2012 due on 11.07.12 (offline)/ 12.07.12 (online) read with subsequent letters last being dated 10.11.12

Ref: Your offer No ECEL/BCCL/30T/12-13 Dated 06.07.2012 with subsequent clarifications last being ECEL/BCCL/30T/12-13 Dated 18.01.2013

Dear Sirs,

Your above referred offer for supply of 30Te Diesel Powered Hydraulic Rough Terrain Mobile Crane has been accepted to the extent as indicated hereunder:-

1. SCOPE OF SUPPLY

Description	Qty-(Nos)	Basic Ex-Works unit price (Rs)	Extended value (Rs)
Design, manufacture, testing, delivery, on-site erection and commissioning of a diesel powered 30 tonne hydraulic rough terrain mobile crane, Make-Escorts Construction Equipment Ltd, Model ESCORTS RT 30 with Ancillary Equipment and other requirements for each crane as specified in scope of supply & Technical Specifications enclosed as per Annexure-A,B & E.	2	94,00,000.00	1,88,00,000.00
Excise Duty including education cess extra as applicable. Present rate is @ 12.36%	2	11,61,840.00	23,23,680.00
CST extra as applicable. Present rate is @2%	2	2,11,236.80	4,22,473.60
Freight inclusive of Service Tax	2	2,50,000.00	5,00,000.00
Insurance Inclusive of service tax to be borne by M/s Escorts	2	NIL	NIL
Total Purchase Value	2	1,10,23,076.80	2,20,46,153.60

2. **TOTAL PURCHASE VALUE: Rs 2,20,46,153.60** (Rupees TWO CRORE TWENTY LAKHS FORTY SIX THOUSAND ONE HUNDRED FIFTY THREE & PAISA SIXTY) only. The above price is on Ex-works, Faridabad & firm till completion of order; however the contract is concluded on F.O.R. destination basis. Duties & taxes and other charges are payable extra as indicated in the scope of supply above.

3. **EXCISE DUTY WITH EDUCATION CESS:** shall be paid extra at legally applicable rates at the time of delivery, subject to production of documentary evidence. Present rate is @ 12.36% on basic price of equipment

Refund/Credit, if any, obtained shall be passed on to the buyer which shall be certified by your auditor ad to be submitted along with your bill.

BCCL is entitled to avail CENVAT credit on account of Excise duty for Indigenous products and Countervailing Duty and Special additional duty for imported products. The invoice issued by the supplier should contain the following element as per Central excise rule:-

- *Name and address of assessee*
 - *Serial No. of Invoice (should not be hand written)*
 - *Central excise duty Registration No.(assessee & consignee)*
 - *Address of the concerned Central Excise Division*
 - *Range and commissionerate.(assessee & consignee)*
 - *Name and address of the consignee*
 - *Description and Classification of the goods*
 - *Time and date of removal*
 - *Mode of Transport and vehicle registration number*
 - *Rate of duty*
 - *Quantity and value of goods and the Duty payable thereon.*
 - *Education Cess and Higher Education Cess to be shown separately for complying with CENVAT Credit rules.*
 - *Five copies of invoice are to be submitted among those original copies being marked as the "original for buyer", duplicate as "duplicate for transporter".*
- Invoice issued by input service providers should contain the Following information:*
- *Serial No. of invoice(should not be hand written)*
 - *Name, address and registration no. of person providing taxable service.*
 - *Name and address of the person receiving taxable service.*
 - *Description, classification and value of taxable service provided or to be provided*
 - *Service tax payable thereon*
 - *Education Cess and Higher Education Cess to be shown separately for complying with CENVAT Credit rules.*

4. **SALES TAX:** CST shall be paid extra at legally applicable rates at the time of delivery. Present rate is @ 2% on Ex-works price of equipment plus ED with Education Cess against declaration form "C". Concessional form is to be collected from respective consignees.

NB: Any increase in duties & taxes after expiry of delivery period shall be to your account. Road permit, if required, shall be obtained from the consignees.

5. **PACKING & FORWARDING CHARGES:** NIL.

6. **FREIGHT/TRANSPORTATION CHARGES INCLUSIVE OF SERVICE TAX:** to be paid extra at actual subject to a maximum of Rs. 2,50,000.00 (Rupees Two lakh fifty thousand only) per equipment subject to production of documentary evidence. The transport charge is inclusive of service tax at legally applicable rate.

7. **TRANSIT INSURANCE INCLUSIVE OF SERVICE TAX:** is to be borne by you.

8. **TERMS OF PAYMENT:**

(a) 80% value of each equipment and the accessories and 100% Excise duty and full concessional ST/CST 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, CIL's Inspection Certificate 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 necessities) as site upon presentation of a certificate from the project Officer the effect that the equipment has been erected and commissioned to their entire satisfaction. No payment will be made for supply of incomplete equipment.

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

- a. Name of the Bank.
- b. Name of the Branch with complete address.
- c. Party's Account Style.
- d. Party's nature of Account.
- e. Party's Account Number.

Your E-Payment mandate is enclosed as **ANNEXURE-J**

9. **DELIVERY:** 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 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.

10. **CONSIGNEE:** The Depot Officer, Central Stores, JEALGORA, Distt. Dhanbad (Jharkhand).
Distribution: 1 No- Dahibari OCP/CV Area & 1 No-Ghanoodih OCP/Bastacolla Area

11. **PAYING AUTHORITY:** The General Manager (Finance)/MM, Koyla Bhawan : Koyla Nagar, Dhanbad

12. **SECURITY DEPOSIT:** The firm will be required to deposit as security money 10% of the value of the contract (including Taxes, duties, and other charges to the FOR Destination prices) without having any ceiling in the form of Cash/ Bank Draft / Bank Guarantee within 15 days from the date of order. If the successful tenderer fails to deposit the security deposit within 15(fifteen) days from the date of order, the same shall be recorded as unsatisfactory performance for future dealings apart from taking any other penal action as may be deemed fit by BCCL. For successful tenderers, the Security Money shall be refunded within 30 days of satisfactory execution of contract. For unsatisfactory execution of contract and / or failure of execution of contract, the security money shall be forfeited. The Bank Guarantee should be submitted on Rs.250/- non-judicial stamp paper as per the format Annexure-C of NIT.

For orders with Performance Bank Guarantee Clause, the Security Deposit shall be refunded after successful completion of the supply/commissioning (wherever applicable) and against receipt of the acceptable performance Bank Guarantee.

The Value of BG as Security Deposit to be submitted by M/s Escorts is Rs 22,04,616/- for the total order value..

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

14. **PERFORMANCE GUARANTEE:** In accordance with the provisions of clauses B.7.2.2 and B.7.3.2 of the Technical Specifications, you 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.

The successful tenderer shall furnish a Performance Guarantee equivalent to 10% of the total value of the supply order / contract (by adding Excise Duty and Sales Tax etc to the FOR destination price of the equipment ordered, in case of suppliers from purchaser's country and the estimated Marine Freight & Insurance, port charges and Customs Duty etc., in case of imported items). 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-I (on a non judicial stamp paper of value Rs.250.00 only). This Bank Guarantee shall be initially valid for a period of 21 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 Contract / Supply Order.

The Value of PBG to be submitted by M/s Escorts is Rs 22,04,616/- for the total order value or Rs 11,02,313/Crane

Submission of Bank Guarantee: The original Bank Guarantee should be sent to the beneficiary directly by the issuing Bank under Registered Post (A.D.).

However, in exceptional cases, where the Bank Guarantee is handed over to the customer for any genuine reasons, the issuing branch should immediately send by Registered Post (A.D.) an unstamped duplicate copy of the guarantee directly to the beneficiary with a covering letter requesting them to compare with the original received from supplier and confirm that it is in order. The A.D. card should be kept with the loan papers of the relevant guarantee.

15. **INTEGRITY PACT) :** The **Integrity Pact** document signed by you is is deemed to have been signed by BCCL Authorities

Name of Independent External Monitor is:

Justice Ashok Kumar Chakra borty (Retd)
BB-69, Sector-I, Salt Lake
Kolkata-700064

16. 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.

17. 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 either 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 authorized representative of GM(Excv)/BCCL or CM (Excv), 40 Kempe Gowda Road, 4th Floor, Geetha Mansion, Coal India Ltd., Bangalore – 560 009

18. 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.

19. 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

(S.P.Narayan)
Chief Manager (MM)IV

Enclosures:

SL	ANNEXURE	DESCRIPTION
1	ANNEXURE - A	Part A - Scope of Supply Part B – General requirements. Part C - Equipment specifications.
4	ANNEXURE - B	List of Filters recommended for initial 3000 Hours for Escorts RT 30 Crane
5	ANNEXURE - E	List of Tools –Escort RT 30 Crane
6	ANNEXURE - F	Quality Assurance Plan
7	ANNEXURE - G	Leaflet of Escort RT 30 Crane
8	ANNEXURE - H	Performance of equipment under performance guarantee during warranty period
10	ANNEXURE- C	Performa of Bank Guarantee for Security Deposit.
10	ANNEXURE- C-I	Performa of Performance Bank Guarantee.
13	ANNEXURE - I	List of bought-out/ items-Escorts RT 30 Crane
17	ANNEXURE - D	General Terms and Conditions of supply of stores.
18	ANNEXURE - J	Authorization for E-Payment

Copy to :

1. GM(Excv) , Koyla Bhawan : Koyla Nagar,Dhanbad
2. The General Manager (Finance)/MM, Koyla Bhawan : Koyla Nagar,Dhanbad.
3. GM(MM/Stores), Koyla Bhawan : Koyla Nagar,Dhanbad: in ref. to Indent Registration No 412022(12-13) Dtd 05.05.12
4. GM(UMD),CMPDI Ltd,Gondwana Place,Kanke Road,Ranchi-8 (OO of DT;CIL 172/09 dtd 12.08.09)
5. GM / GM (MM), ECL/ CCL/WCL/SECL/NCL/MCL
6. CM (Excv), 40 Kempe Gowda Road, 4th Floor, Geetha Mansion, Coal India Ltd., Bangalore – 560 009
7. The Depot Officer, Central Stores, JEALGORA, Distt. Dhanbad (Jharkhand).
8. M/s ITI Ltd.,Regional Office,F-29,Ground Floor,Doorvani Nagar,Bangalore-560016
9. MT,Tech Cell,MM Divn, Koyla Bhawan : Koyla Nagar,Dhanbad
10. The Independent External Monitor for Integrity Pact:-
Justice Ashok Kumar Chakraborty (Retd)
BB-69, Sector-I, Salt Lake
Kolkata-700064

This issues with concurrence of D(F) vide DY No2/955 Dated 19.12.12 & approval of CMD vide DY No 1190/F Dated 24.12.12.

BC & FC No provided by GM(F)(C&B)

eBC has been recorded as HQ/HEMM/98 Dated 31.07.12 for Rs 2,60,84,864.57.

FC No 158 Dated 15.01.13

(S.P.Narayan)
Chief Manager (MM)IV

ANNEXURE - 'I'

Performance of equipment under performance guarantee during warranty period

Suppliers Name
M/c Model
M/cv No
D.O.C.
S.O.No.

Project
Area

Month	W/Hrs	M/Hrs	B/Dn Hrs		I/D Hrs	Shf Hrs	% AV	Remarks
			Users	Suppliers				

Certificate

1. The deemed breakdown has been considered for calculating availability of Dumper during warranty period as above
2. Warranty claim, if any, is detailed below:-

GM/CGM(Area)

SO(Excv)

Project Officer

PE(Excv)

Service
Engineer
(Escorts
Construction
Equipment Ltd)

TECHNICAL SPECIFICATIONS									
ANNEXURE-A									
NAME OF THE BIDDER								Escorts Construction Equipment Ltd.	
SL. No	Description							Bidder to Agree	
	Provenness Criteria								
	PROVEN MEANS THOSE MANUFACTURERS OR THE FIRM EXCLUSIVELY AUTHORISED BY THE PROVEN MANUFACTURER TO QUOTE AGAINST THIS TENDER WHO HAVE SUPPLIED TENDERED ITEM (S) IN PAST TO THE MINING INDUSTRY AND/OR TO THE OTHER INDUSTRIES (PRIVATE OR GOVERNMENT /PUBLIC SECTOR UNDERTAKING – INDIGENOUS OR GLOBAL) AGAINST REGULAR (FIRM) ORDER (NOT TRIAL ORDER) PLACED BY COMPANY’S HQ. FOR THIS PURPOSE THE FIRM SHOULD SUBMIT AUTHENTICATED COPY OF SUCH PURCHASE ORDERS RECEIVED BY THEM. HOWEVER TRIAL ORDER PLACED BY BCCL CO. HQ MAY BE CONSIDERED IF THE FIRM OBTAINS PROVEN STATUS ON PERFORMANCE BASIS AGAINST SUCH TRIAL ORDERS.							AGREED	Copy of Purchase order submitted off-line.
	V- Schedule of Requirements								
Part I									
S.No	Brief Description of Goods & Services	Quantity	Expected Delivery Schedule at Site						
1	30T Crane	02 Nos	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.					AGREED	
2	Ancillary Equipment and other requirements for each of Item no.1 as specified in Technical Specifications.	In accordance with item 1	Delivery to be made with crane.					AGREED	Not applicable. The crane shall be supplied in fully assembled ready to use condition.
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	C V Area	BCCL	01 No	Nil		AGREED			
2	Bastacolla Area	BCCL	01 No	Nil		AGREED			
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.				AGREED		
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.				AGREED		
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.				AGREED		
Note:									
1	Price for the equipment along with accessories should be quoted with Normal Custom Duty (NCD) for 02 nos. and Project Concessional Duty (PCD) for NIL nos. applicable for the imported contents.						AGREED		
2	The bidder has to quote for full quantity of the tender as given above; otherwise their offer will not be considered.						AGREED		
Schedule of Requirements of Services									
The Supplier’s scope of the Contract will include the following									
I. Type test on each equipment included in the technical specification and offered in the bid.								AGREED	
II. Providing Services of Supplier's qualified engineer(s)/personnel for: A. unloading, transportation to site, storage at site and/or B. Transportation from storage to erection site, installation, testing and commissioning.								AGREED	
III. 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								AGREED	
	Type of Personnel		At Manufacturer’s Works		At Site				
		No	Period	Total	No	Period	Total	AGREED	
	Mech Engineer		weeks	weeks		1	Week	Week	AGREED
	Elec Engineer		weeks	weeks		1	Week	Week	AGREED
	Mech Supervisor		weeks	weeks		1	Week	Week	AGREED

	Elec Supervisor		weeks	weeks		1	Week	Week	AGREED	
	Mech Fitter					1	Week	Week	AGREED	
	Electrician					1	Week	Week	AGREED	
	Operator					1	Week	Week	AGREED	
	Total			weeks				weeks	AGREED	
Definitions:										
	Mech/Elect Engineer-				Graduate Engineer having basic knowledge of the equipment				AGREED	
	Elect/Mech Supervisor -				Diploma Holder Engineer having basic knowledge of the equipment				AGREED	
	Mech. Fitters/ Electricians/Operators -				Un-skilled, semi-skilled and skilled.				AGREED	
Section VI - Technical Specifications										
Preface - Instructions to Bidders										
	Introduction These Technical Specifications identify the technical requirements of the Goods and Services which are the subject of this IFB. The Technical Specifications are presented in four parts as follows: A. Scope of Supply B. Specific Project Requirements C. General Requirements 1) Geography and Climatic Conditions 2) Goods (Equipment and Machinery) 3) Services 4) Standards 5) Supplier's Responsibility 6) Spare Parts Provisions 7) Availability Provisions 8) Deemed Breakdown 9) Composite Warranty / Guarantee 10) Special Conditions 11) Quality Assurance E. Equipment Specifications								AGREED	
	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. Wherever graphical representation of data (e.g load, power, performance curve) is required, the grid axis and data shall be properly and clearly labelled for ready comprehension. Additionally, Bidders shall provide the information specifically requested in the Attachment to the Technical Specifications. Failure to demonstrate compliance in all respects with the requirements of the Technical Specifications may render the bid non-responsive. Failure to provide any information requested in any part of this specification may deem the bid non-responsive.								AGREED	
	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. A Bidder may visit the Site(s) by prior appointment with the purchaser. The number of Bidder's representatives permitted to make visits to the Site(s) shall be limited to a maximum of two. Bidders wishing to make appointments for Site Visits should do so in writing or by facsimile direct with BCCL and concerned officer as detailed in the following schedule. Copies of all such communications should be transmitted by facsimile to:								AGREED	
	General Manager (MM) Bharat Coking Coal Limited Koyla Bhawan, Koyla Nagar Commercial Building (Level-III) Dhanbad-826005 (Jharkhand), India, Fax- 91 (0) 326 2230183			Subsidiary Company Bharat Coking Coal Limited Koyla Bhawan, Koyla Nagar Commercial Building (Level-III) Dhanbad-826005, Fax- 91 (0) 326 2230177 Tel- 91 (0) 326 2230177 Attention: General Manager (Excv)		Project All Projects		AGREED		

	Part A. Scope of Supply A.1 Equipment Package The Supplier is required to provide a complete package of equipment for the supply of 30T Crane to open cast (surface) coal mining projects: The supplier is required to bid for the Equipment; including accessories, consumables, training, installation, commissioning and testing at the coal mining project. The Scope and Phasing of supply for the Cranes is given in Sec. V. A.2 Supplementary Items First fill of all oils, grease and lubricants needed for test and commissioning of equipment.	AGREED	
	A.3 Information and Drawings At least one month before the scheduled installation date, the Supplier shall provide not less than: (a) Suitably illustrated copies of Operating, Repair and Maintenance Manuals for each type/model of equipment and accessories, written in the English language, substantially bound in book form; Three (3) copies to each project site; and One (1) copy along with soft copy to the General Manager(Excv.), BCCL Hqrs. Koyla Bhawan; (b) Suitably illustrated copies of detailed Spares Parts Manuals for each type/model of equipment and accessories, written in the English language, substantially bound in book form; Three (3) copies to each project site; and One (1) copy along with soft copy to the General Manager (Excv.), BCCL Hqrs. Koyla Bhawan; The Supplier shall also submit (in the same number of copies) 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.	AGREED	
	A.4 Erection/Assembly, Commissioning and Performance Testing The Supplier shall provide the Services of Specialist Technicians (refer Part-C3) and labour to undertake 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.	AGREED	
	A.5 Training The supplier in consultation with the project in-charge / HOD [Excavation] of the respective site shall make available experienced personnel to conduct training of engineers, supervisors, technicians and operation personnel for suitable period from the date of issue of acceptance certificate of the equipment. The training shall cover the following: a) Equipment system, safety and risk assessment b) Equipment operation and maintenance c) Trouble shooting, localization of fault and their remedies covering: 1. Electrical and electronics 2. Mechanical 3. Hydraulic system 4. Lubrication system 5. Pneumatic system etc. Comprehensive training manuals with clear illustration shall be provided to each participant in English language. The training courses shall be conducted in both English and Hindi language.	AGREED	
	Part B. Specific Site Requirements B.1 Project Specific Requirements The equipment shall be suitable for use at the specific site projects under the conditions detailed below. B.1.1 Opencast Projects All the Opencast Project is owned by the Bharat Coking Coal Limited, a wholly owned subsidiary of Coal India Limited (the "Purchaser"). The mine is located partly in the Dhanbad District of Jharkhand approximately 30 Km from Dhanbad railway station.	AGREED	
	Part C. General Requirements C.1 Geography and Climatic Conditions Elevation:- The natural surface varies from 100 to 1000 m 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.	AGREED	
	Ambient Conditions: - Relative Humidity - Maximum 98% Temperature - Minimum 0o C Maximum 50o C Rainfall:- The mean annual rainfall is 1,000mm, 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	AGREED	

	<p>C.2 Goods (Equipment and Machinery) Detailed specifications of the Equipment to be supplied are given in Part E of this section. In general, all items shall be: 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 environment, shall be suitably protected to prevent any effects of corrosion or erosion.</p>	AGREED	
	<p>C.3 Services The supplier shall be responsible for the erection and commissioning of the equipment at site. The supplier shall depute qualified and competent Engineer(s) and specialist technicians to supervise the entire assembly, erection and commissioning of equipment free of cost.</p>	AGREED	
	<p>C.4 Standards The design supply, erection, testing and commissioning of all Equipment under this Contract shall in all respects comply with the requirement of this specification and with the appropriate current Indian standards and codes, or relevant Standards issued by the International Standards Organisation or any other equivalent international standards, which corresponds to specific ISO/Indian standards indicated in the technical specification. Such equivalent international standards are to be supported by documentary evidence certifying that offered standards are identical to the corresponding ISO/Indian standards. The equipment shall be to the 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 System'e International d'Unites (S.I.)</p>	AGREED	
	<p>C.5 Suppliers Responsibility The Purchaser requires that the Supplier shall accept responsibility for the provision of complete operable and compatible Equipment and systems within the Scope of Supply. This document identifies only the major items required for the installation and the Supplier shall ensure that the total supply includes all necessary Equipment for it to function effectively, safely and efficiently. 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 but not later than 15 days prior to the due date of opening. 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</p>	AGREED	
	<p>C.6 Spare Parts Provisions C.6.1.a. 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. C.6.1.b Bought-out assemblies and sub-assemblies The supplier is required to furnish the details of all bought-out items as indicated in the technical specification against "Information to be provided by the bidder". The bidder has to furnish a certificate indicating therein that " All other components not identified/ mentioned herein are manufactured by the bidder at their works exclusively i.e. the components are propriety of bidder's firm."</p>	AGREED	List of major bought out items submitted off-line.
	<p>C.6.2 Provision of Spare Parts C.6.2.1 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 C.6.3. 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.</p>	AGREED	List of all filters and 'O' rings including standard engine filters required for first 3000 hours submitted off-line.

	<p>C.6.3.1 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 equipment throughout its working life. In the event that the Supplier wishes to terminate production of such Spare Parts, the Supplier shall:</p> <p>(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</p> <p>(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.</p> <p>(c) Any change in part number or superseded part number should be informed to the HOD of Excavation department / MM department of BCCL hqrs. and the project site wherever the equipment is operating.</p> <p>In any event, the Supplier shall not seek to terminate manufacture of spare parts for a period of not less than (15) years from the date of completion of warranty period</p>	AGREED	
	<p>C.6.4 Oils, Lubricants and Fluids Not less than three (3) months before the scheduled date for Acceptance, the Supplier shall provide to the Purchaser a detailed schedule 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 the Supplier.</p> <p>C.6.5 General C.6.5.1 Nothing in this Clause C.6 shall relieve the Supplier of any Guarantee, Availability, Performance or other obligations or liabilities under this Contract.</p>	AGREED	
	<p>C 7 Availability Provisions C.7.1 Introduction C.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.</p> <p>C7.1.2 Where Equipment supplied under the Contract fails to meet the criteria of the Availability Guarantee, the Supplier shall, at its own 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.</p> <p>C.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 have not been met in any one (1) month.</p>	AGREED	
	<p>C.7.2 Guarantee C.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.</p> <p>C.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.</p> <p>The method of assessment applied shall be as follows:</p>	AGREED	
	<p>Method of Assessment: The following calculation shall determine the availability of the Equipment:</p> $\% \text{ Availability} = \frac{\text{Scheduled Available Time} - \text{Downtime}}{\text{Scheduled Available Time}} \times 100$	AGREED	
	<p>Scheduled Available Time shall equate to 24 hours daily.</p> <p>Downtime:- Downtime shall mean all hours of work lost due to mechanical, electrical or other failure, including:</p> <p>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.</p> <p>b) planned preventative maintenance programmes;</p> <p>It shall not however include:</p> <p>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.</p>	AGREED	

	<p>Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures.</p> <p>The Supplier shall provide a schedule of maintenance required to carry out (a) and (b) above for the first three years of operation and shall state the number of hours required to carry out each maintenance task. The time stated shall, with the agreement of the Purchaser, form the basis of the assessment of the availability.</p> <p>This schedule of tasks and time will be reviewed periodically by the Purchaser and the Supplier, jointly, to monitor the practicality of the schedule.</p> <p>The Purchaser will assist the Supplier, without relieving the Supplier of any other obligations under the Contract, to achieve the guaranteed availability by:</p> <ol style="list-style-type: none"> 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 spare parts provided by the Supplier in accordance with the requirements specified in part B6. 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. 	AGREED	
	<ol style="list-style-type: none"> 3. Where appropriate, providing and maintaining such conditions as: <ul style="list-style-type: none"> • 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. <p>Maintaining a logbook for each shift wherein the working hours, breakdown hours, maintenance hours, idle hours, etc. shall be recorded. This record will be available for examination and signature by the Supplier's representative.</p>	AGREED	
	<p>C.7.3 Effect and Duration of Guarantee</p> <p>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.</p> <p>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.</p> <p>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 : -</p> <ol style="list-style-type: none"> 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 . <p>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 .</p>	AGREED	
	<p>C.8 Deemed Breakdown</p> <p>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).</p> <p>C.9 Composite-warranty/guarantee:</p> <p>The Bidder shall warrant that the equipment supplied under this contract is :--</p> <ol style="list-style-type: none"> 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. <p>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 .</p>	AGREED	
	<p>C.10 Special Condition</p> <p>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.</p>	AGREED	
	<p>C.11 Quality Assurance</p> <p>C.10.1 The Supplier should furnish in detail its quality assurance plan for various stages of manufacture. The Quality Assurance plan shall comply with an internationally recognised quality assurance standard such as ISO 9000 or of equivalent merit acceptable to BCCL.</p> <p>C.10.2 The Supplier shall provide facilities to Purchaser or their authorised 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.</p> <p>C.10.3 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.</p>	AGREED	<p>Quality assurance plan alongwith ISO certificate submitted off-line.</p>

<p>Part E:- EQUIPMENT SPECIFICATIONS.</p> <p>TECHNICAL SPECIFICATION OF 30 tonne HYDRAULIC ROUGH TERRAIN MOBILE CRANE</p>		
<p>1. Scope of Specification This specification is intended to cover the technical requirements for the design, manufacture, testing, delivery, on-site erection and commissioning of a diesel powered 30 tonne hydraulic rough terrain mobile crane.</p> <p>2. References The following International Standards are referred to in, and form part of, the Specification. The equivalent standards, if any, to any of the following ISO standards if offered are to be supported by documentary evidence in form of copies of the equivalent standards certifying that offered standards are identical to the corresponding ISO standards of NIT. The following International Standards are referred to in, and form part of, the Specification: ISO 4305 Mobile cranes - Determination of stability ISO 7363 Cranes and lifting appliances - Technical characteristics and acceptance documents ISO 7752-1 Lifting appliances - Controls - Layout and characteristics - Part 1: General principles ISO 7752-2 Lifting appliances - Controls - Layout and characteristics - Part 2: Basic arrangement and requirements for mobile cranes ISO 8087 Mobile cranes - Drum and sheave sizes ISO 4573-1982 Specification for power drive mobile crane Any other ISO specifications as may be applicable</p>	<p>AGREED</p>	<p>The offered crane conforms to IS 4573-1982 and other related IS specifications</p>
<p>3. Design Criteria The crane shall be designed for heavy duty application and be capable of operating for protracted periods on a system of 3 shifts each of 8 hours duration per day throughout the year. The crane should have a lifting capacity, with fully extended outriggers, of not less than 30 tonne at a radius of 3 m and a basic boom length of 8.0 to 10.0 m. The fully extended boom length should be not less than 25m. The lifting capacity shall be in accordance with American Standard CS 90-58 and should not exceed 85% of the tipping load in accordance with ISO 4305. The crane should be capable of 360-degree rotation with all rated loads. The crane should be capable of lowering the rated loads a minimum of 4 m below ground level and should have adequate pick up and carry capacity over the front. The crane shall have a gradeability of not less than 45%.</p>	<p>AGREED</p>	
<p>4. Technical Requirements</p> <p>4.1. Engine The crane shall be powered by a direct injection 4-stroke diesel engine of adequate power. The engine shall be provided with 24V electric starting, dry type 2- stage air-cleaner with automatic dust evacuator and dust level indicator and 2-stage fuel filter with water separator.</p> <p>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 crane 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 environment certified for minimum BS-II or its equivalent.</p>	<p>AGREED</p>	
<p>4.2. Transmission The crane shall be provided with power shift hydraulic transmission having a sufficient number of speeds to enable it to travel in rugged mining conditions. Suitable protection of the transmission pan from external damage should be provided. The pan guard should be designed to minimise accumulation of dirt and debris.</p> <p>4.3. Drive System 4 x 4 wheel drive-steer with differential and planetary reduction hubs shall be provided.</p> <p>4.4. Steering Full hydraulic power steering shall be provided, which should have the capability of normalising steering control when the machine is slewed to the rear of the chassis.</p> <p>4.5. Hoses All hoses shall be grouped as far as possible and suitably clipped to reduce damage from Scuffing and it shall be heat resistant.</p>	<p>AGREED</p>	

<p>4.6. Brakes Suitable & reliable air/ air over oil/ oil assisted foot operated service brakes acting on all wheels shall be provided. The braking system should be failsafe. Parking and emergency brakes for locking the wheels during operation of the crane should also be provided.</p> <p>4.7. Tyres Suitable tubeless, rock duty, cut-resistant earthmover tyres shall be provided, preferably selected from the ranges of Indian manufacturers.</p> <p>4.8. Frame The frame should be a rugged, durable construction of high strength steel, free from any stress concentration, with integral outrigger housings. The design must take care of all forces encountered during the operation of the crane.</p>	AGREED	
<p>4.9. Outriggers An adequate number of hydraulically operated outriggers with integral check valves on each extension cylinder shall be provided. The outriggers shall be controlled from the operator's cab.</p> <p>4.10. Boom The boom shall be provided with full power synchronized hydraulic telescoping sections.</p> <p>4.11. Lifting Block A hook block suitable for the maximum designed lifting capacity of the crane shall be provided.</p> <p>4.12. Hoist System A multiple speed hoist system shall be provided with a counter-balance valve for controlled load lowering. Limit switches for over hoist and over lowering and an adequate capacity fail-safe braking system shall be provided.</p>	AGREED	
<p>4.13. Safe Load Indicator The crane shall be fitted with an electronic safe load indicator to indicate the hook load and provide audio-visual warning of overload. Digital indication of net/gross load, boom inclination, boom length and radius shall also be provided.</p> <p>4.14. Derricking and Slewing High-speed derricking and slewing motions with sensitive fail-safe controls and brakes shall be provided. Full 3600 continuous rotations shall be provided.</p> <p>4.15. Drums and sheaves The diameters of the drums and sheaves used for hoisting and derricking shall be in accordance with ISO 8087.</p>	AGREED	
<p>4.16. Fuel Tank The fuel tank shall be of sufficient capacity to allow 16 hours operation without re-fuelling 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.</p> <p>4.17. Operator's Cab A fully insulated, sound suppressed Air conditioned lockable operator's cab with tinted safety glass should have adequate window area to provide full vision in all directions. A rear-view mirror, windshield wipers and washers, a fully adjustable operator's seat, floor mat and a cooling fan 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 and comply with ISO 7752-1 and ISO 7752-2. Steps and handrails shall be provided for access to the operator's cab.</p>	AGREED	
<p>4.18. Warning Alarms/Lights Audio/visual warning alarm systems shall be provided for the following: a) Parking brake actuation b) High torque converter oil temperature c) Low engine oil pressure d) High coolant temperature e) Low air pressure (if applicable)</p>	AGREED	
<p>4.19. Electrical Equipment The crane shall be provided with the following: a) 24V DC electrical system with suitably rated alternator of reputable make b) Electric start c) Reputable make high capacity batteries d) Battery isolation switch All electrical circuits shall be protected by adequately rated fuses/ MCBs which shall be easily accessible for maintenance. In case of fuses, at least two spare fuses of each size/ratings shall be provided in each fuse box.</p>	AGREED	

<p>4.20. Lighting Adequate lighting shall be provided for safe nightshift operation. The lighting system should include the following: a) Headlights b) Brake, tail and parking lights c) Front and rear turn indicators d) Hazard warning lights e) Working lights</p> <p>4.21. Guards and Shields Adequate guards and shields shall be provided on the crane.</p>								AGREED	
<p>4.22. Fire Extinguisher A fire extinguisher shall be provided on the crane, suitably mounted in a heavy duty bracket for ease of removal. The extinguisher shall be dry powder (cartridge type) with a minimum capacity of 5 kg and shall comply with Indian Standard IS : 2171.</p> <p>5. Ancillary Equipment And Other Requirements The following shall be provided on the crane: a) Front and rear tow hooks and two lifting loops b) Tyre inflation kit</p>								AGREED	
<p>6. Special Guarantee The following guarantee will apply for the different components from the accepted date of commissioning i) Complete engine system - 24 months or 5000 hours (whichever is earlier) In case of failure of engine system within 5000 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. ii) Transmission Assy. - 24 months or 5000 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 21 days at site by the bidder at no cost to the purchaser.</p>								AGREED	
<p>7. Performance Guarantee In accordance with the provisions of clauses C.7.2.2 and C.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.</p> <p>8. Information To be Provided By The Supplier The Supplier shall furnish the following information which will be used for the assessment of bids and as guaranteed technical particulars in any subsequent contract. All technical information shall be in SI units.</p> <p>8.1. General a. Number of similar model supplied during the last five years. The information shall be given in the following format and in the order of most recent first:</p>								AGREED	
Company Name	Mine Name	Mine Location	Mine type	Number of Machines	Model	Commissioned date		AGREED	List of customer submitted off-line.
b. Details of nearest existing Depot, Warehouse and Service Facility available with manufacturer or their exclusively authorized dealer & after sales service provider for the present offer, in the format given below:								AGREED	Details submitted off-line.
Major Depot Warehouse				Service Facility				AGREED	Details submitted off-line.
Location	Contact Numbers	Inventory value (Approx.)	Location	Type of facility available	Number of Engineers*			AGREED	Details submitted off-line.
<p>* 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.</p>								AGREED	Details submitted off-line.
<p>8.2. Technical Details a) Technical characteristics and acceptance documents in accordance with ISO 7363. b) Lifting capacity range diagrams and tables. c) Detailed technical descriptions of the crane. d) Layout drawings and detailed technical descriptions of hydraulic systems and components. e) Details of major bought-out assemblies and sub-assemblies including manufacturer, type, etc. f) Comprehensive commercial literature specifications. g) Operation and maintenance manuals.</p>								AGREED	<p>a. Meets as per ISO 7363 b&c)</p> <p>Technical leaflet submitted off-line</p> <p>d) Details of hydraulic system and components enclosed</p>

			e) List of major bought out items enclosed f&g) Shall be supplied alongwith the equipment.
	8.3. Dimensions, Weights and Performance Details 8.3.1. Dimensions a) Maximum overall length b) Maximum overall width c) Maximum overall height d) Tail radius e) Wheelbase f) Ground clearance	AGREED	a) 12745 mm b) 3000 mm c) 3500 mm d) 3305 mm e) 3800 mm f) 485 mm
	8.3.2. Weight Distribution a) Front axle b) Rear axle c) Total	AGREED	a) 13500 kg approx. b) 14800 kg approx. c) 28300 kg approx.
	8.3.3. Lifting capacity a) At 3 m radius b) At 4 m radius c) 3600 clear outreach: at 0 m at 1 m at 1.5 m d) On wheels: at 3 m radius at 4 m radius at 5 m radius	AGREED	a) 32 MT b) 23.3 MT c) 20.0 MT 16.5 MT 15.0 MT d) 14.85 MT 11.55 MT 9.30 MT
	e) On wheel clear outreach: at 0 m at 1 m at 1.5 m f) Pick and carry capacity at 5 km/h: at 3 m radius at 4 m radius at 5 m radius g) Lift of rated load at minimum radius in meters : Below ground level Above ground level	AGREED	e) 10 MT 9 MT 7.3 MT f) 20.9 MT 17.05 MT 14.35 MT g) below ground level 4 m 10 m approx
	8.3.4. Operating speeds a) Hoist b) Slewing RPM c) Derricking d) Travelling		a) 65m/min b)0-3 Rpm c)-1 to 83 degree in 45 sec d)30 kmph
	8.3.5. Engine a) Manufacturer and model b) Number of cylinders c) Bore d) Stroke e) Displacement f) Net power at.....r/min g) Maximum torque		a) KOEL 6R1080T b) 6 c) 105 mm dia d) 125 mm e) 6525 cc f) 169 hp @ 2300 rpm g) 487 Nm @ 1963

			rpm
	<p>8.3.6. Transmission</p> <p>a) Type</p> <p>b) Number of gear speeds - forward and reverse</p> <p>c) Travel speeds - forward and reverse</p> <p>8.3.7. Final Drive</p> <p>a) Type</p> <p>b) Ratio</p>		<p>a) Power shift torque convertor</p> <p>b) 6 forward 3 reverse</p> <p>c) Forward-30kmph, reverse-18kmph</p> <p>a) Drive-steer axle with planetary hub reduction</p> <p>b) 24.60:1</p>
	<p>8.3.8. Steering</p> <p>a) Type</p> <p>b) Emergency steer method</p> <p>c) Turning circle:</p> <p style="padding-left: 40px;">All wheel steer</p> <p style="padding-left: 40px;">Front wheel steer</p> <p>d) Clearance circle:</p> <p style="padding-left: 40px;">All wheel steer</p> <p style="padding-left: 40px;">Front wheel steer</p>	AGREED	<p>a) Hydraulic</p> <p>b) Manual</p> <p>c) all wheel steer-14 m front wheel-21.4 m</p> <p>d) all wheel steer-20.6 m front wheel-27.3 m</p>
	<p>8.3.9. Brakes</p> <p>8.3.9.1. Service brakes</p> <p>a) Type</p> <p>b) Actuating system</p> <p>8.3.9.2. Parking brake</p> <p>a) Type</p> <p>b) Actuating system</p> <p>8.3.9.3. Emergency brakes</p> <p>a) Type</p> <p>b) Actuating system</p>	AGREED	<p>Service Brakes:</p> <p>a) Hydraulic Caliper</p> <p>b) Hydraulic Parking Brakes</p> <p>a) Hand operated, fail safe air brake on front wheel</p> <p>Emergency Brake:</p> <p>a) Hand operated, fail safe air brake on front wheel</p>
	<p>8.3.10. Derricking System</p> <p>a) Derricking</p> <p>b) Max. to Min. radius in secs.</p> <p>c) Min. to max. radius in secs.</p> <p>8.3.11. a) Slew System</p> <p style="padding-left: 40px;">b) Slewing RPM</p>	AGREED	<p>a) Hydraulic Cylinder (-1 to 83 degree)</p> <p>b) 45 Sec</p> <p>c) 45 Sec</p> <p>Slew System: Hydraulic Slewing RPM: 0-2 rpm</p>
	<p>8.3.12. Tyres</p> <p>a) Make, Size and type</p> <p>b) Tread</p> <p>c) Ply rating</p> <p>d) Rim size</p>	AGREED	<p>a) 18.00X25-32 PR earthmover type</p> <p>b) Hard rock lug pattern</p> <p>c) 32PR</p> <p>d) 13.00X2.5</p>
	<p>8.3.13. Hydraulic System</p> <p>a) Make, Number, flow rates and operating pressures of pumps</p> <p>b) Make, Number, piston diameters and stroke lengths of cylinders</p> <p>c) Relief valve operating pressures</p> <p>8.3.14. Outriggers</p> <p>a) Horizontal stroke</p> <p>b) Vertical stroke</p>	AGREED	<p>Hydraulic Sytem</p> <p>a) Crane: 225 lpm at 260 bar b) Steering: 50 lpm at 150 bar c) Outriggers: 35 lpm at</p>

			175 bar
8.3.15 Axles a) Front Axle b) Rear Axle 8.3.16. Boom a) Basic length b) Fully retracted length c) Intermediate position length d) Fully extended length	AGREED		
8.3.17. Boom telescoping a) Normal speed b) Fast speed 8.3.18 With Derrick down a) Overall length b) Overall height c) Overall width	AGREED	a) Max speed: 0-5.3 sec/mtr b) Max speed: 0-5.3 sec/mtr a) 12745 m b) 3500 m a) 3000 m	
8.3.19 a) Tail radius (m) b) Wheel base (m) c) Ground clearance (mm) d) Angle of approach	AGREED	a) 3305 mm b) 3800 mm c) 485 mm d) 23 degree	
8.3.20. 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 f) Gradient (unladen and at max. rated load) g) Max. travel speed	AGREED	a) Lucas make 7 m 14, 24V, 48 KW b) Lucas make 7 m 14, 24V, 48 KW c) Lucas make 7 m 14, 24V, 48 KW d) 2 batteries 180 AH e) All lights shall be provided f) 50% unladen 10% laden g) 30 kmph	
8.3.21. Turning Circle a) 4 wheel steer (m) b) front wheel steer (m)	AGREED	a) 14m	