सेंट्रलकोलफील्ड्सलिमिटेड
CENTRAL COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
A Mini Ratna Cat-I Company
Office of the General Manager (E&M)
DARBHANGA HOUSE, RANCHI-834001,
JHARKHAND.
Phone:0651-2360788, FAX :0651-2360389.
E-mail : enmhod@gmail.com & gmenm.ccl@coalindia.in

Ref.: GM(E&M)/Pre-NIT/20/1810 Dated: 31.08.2020

NOTICE FOR PRE-NIT MEET

A pre-NIT meeting for "Supply, Installation And Commissioning Of (-)100 mm Output Size Mobile/Semi Mobile / Electro- Mechanical Feeder Breaker/Feeder Crusher/Back to Back Sizer with PLC Control With Capacity : 400 TPH (Rated) along with Consumable Spares and Consumables for 12 months of warranty period from the date of commissioning of the equipment and thereafter, Spares & Consumables for a period of 84 months", will be held on 15.09.2020 at 11.00 A.M in the Office of GM(E&M)/HOD, Darbhanga House, CCL, Ranchi, Pin- 834029.

Interested Bidders are requested to either visit the proposed venue of the meeting at their own cost or participate in the meeting through video conferencing. The link for video conferencing is as below:

Link: https://bluejeans.com/1380871749/1727?src=join_info

Participant passcode: 1727

Interested bidders are requested to go through the "draft technical specifications" before taking part in the Pre-NIT meeting. They are also requested to come prepared with list of their opinion /suggestions /views, if any, in writing for submission to CCL and seek clarification / information related to the Technical specifications in the meeting. The participants attending through VC shall send their opinion/suggestions /views, if any, through mail to the above-mentioned e-mail IDs. The draft Technical specifications are available in our website www.centralcoalfields.in from 01.09.2020 at 11:00 AM up to 15.09.2020 at 11:00AM for downloading, which shall form the basis of discussion. Necessary modification of the draft TS may be considered on the basis of written submission by Participating agencies during Pre-NIT meeting subject to acceptance.

Interested bidders are requested to attend the above Pre-NIT meeting physically or through Video conferencing so that the technical specifications/ parameters can be discussed.

Subsequent to Pre-NIT Meeting, fresh NIT shall be floated for submission of offer through on-line e-procurement system of CIL on the website www.coalindiatenders.nic.in. Participation in Pre- NIT Meeting shall not be criteria to participate in the tender for the subject work.

CCL is no way bound to accept/ include any/ all the suggestions/ comments offered by the prospective bidder in the final NIT.

Note: CCL reserves the right to change the scope of work indicated above at the time of actual tendering. CCL also reserves the right to change the terms & conditions in the final tender document at the time of actual tendering.

-S/d-

General Manager (E&M)/HOD

SUPPLY, INSTALLATION AND COMMISSIONING OF (-)100 mm OUTPUT SIZE MOBILE/SEMI MOBILE / ELECTRO- MECHANICAL FEEDER BREAKER/FEEDER CRUSHER/BACK TO BACK SIZER WITH PLC CONTROL WITH CAPACITY : 400 TPH (RATED) ALONGWITH Consumable Spares and Consumables for 12 months of warranty period from the date of commissioning of the equipment and thereafter Spares & Consumables for a period of 84 months

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 following parts :

(A) **SCOPE OF SUPPLY:** Heavy duty mobile /semi mobile Electro-mechanical, PLC controlled, Feeder Breaker/ Feeder Crusher / Back to Back Sizer of **400 TPH (rated)** capacity with dust suppression system, crawler mounted/skid mounted with provision of Single stage crushing (i.e. single pass) (there may be multi roll crushing in a single unit) with tramp iron relief system complete with electrical, gear box/suitable drive transmission system, coupling, starter unit, PLC control deck, feed arrangement-chain conveyor/apron feeder with drive etc to crush ROM Coal to (-) 100 mm output size. Any item, not specifically mentioned here but considered necessary for the safe and efficient operation of the Feeder Breaker/ Feeder Crusher / Back to Back Sizer will be deemed to be included to the scope of supply.

The package also includes Consumable Spares and Consumables for 12 months of warranty period from the date of commissioning of the equipment and thereafter Spares & Consumables for a period of 84 months.

(B) **GENERAL REQUIREMENTS:-**

(1) Geography and Climatic Conditions.
(2) Goods (Equipment and Machinery).
(3) Supervision of Erection and Commissioning.
(4) Standards.
(5) Bidder's/ Supplier's Responsibility.
(6) Spare Parts Provisions.
(7) Performance Guarantee.
(8) Deemed Breakdown.
(9) Composite Warranty / Guarantee.
(10) Provenness Criteria
(11) Quality Assurance.

(C) **EQUIPMENT SPECIFICATIONS**

2. **CONFORMITY WITH SPECIFICATIONS**: The Equipment to be provided shall conform to the requirements defined in these parts (Part A: Scope of Supply, Part B: General Requirement and Part C: Equipment Specification).
3. **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.

4. **TECHNICAL RESPONSE:** Bidders shall provide a Clause-by-Clause conformity demonstrating compliance with the Purchaser's Technical Specifications together with full supporting technical literature, data sheets, Quality Assurance plan, test certificates, certificates from statutory bodies as applicable. A separate Deviation Sheet in case of any non-conformity with the NIT technical specifications clause-wise is to be submitted by the bidder. 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. In case any of the parts specified is (are) redundant /not applicable for the system offered due to variation in design, the same shall be indicated by you which will be acceptable only if the absence of the part(s) do not adversely affect the functioning, performance and safety of the system.

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

5. **All offers and supporting documents should be in English only. Transcript certified by competent authority of supporting documents to be uploaded if any.**

PART A: SCOPE OF SUPPLY:-

(A.1) EQUIPMENT PACKAGE: The Supplier is required to provide a complete package of Equipment for the supply of Heavy duty Electro-mechanical Feeder Breaker/ Feeder Crusher / Back to Back Sizer of specified capacity. The supplier is required to supply the equipment along with accessories, Spare Parts, Training, Installation, Commissioning and Testing to coal mining projects. The package also includes Consumable Spares and Consumables for 12 months of warranty period from the date of commissioning of the equipment and thereafter Spares & Consumables for a period of 84 months. The purchaser will make available to the Supplier, at no cost, agreed areas within the site(s) boundaries as may reasonably be required by the Supplier for the purposes of erecting the equipment and for storage of Goods and Supplier's plant, tools etc. pending acceptance. Security, protection, lighting and any other facilities required by the supplier in such areas shall be the responsibilities of the Supplier.

(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. The following special tools generally required for repair, maintenance & troubleshooting / testing

of major subassemblies shall be provided in addition to any other special tools required for the offered equipment.

(a) Hydraulic pressure checking gauges of suitable range (if required for Auto lubrication system).
(b) Socket set with torque wrench of reputed make covering all sizes of high torque bolts.
(c) Dial Indicator Gauge with Magnetic base.
(d) Cartridge filter opening tool, if required.
(e) Digital multi-meter.

The bidder has to certify that any other tool if required over and above the list of comprehensive tool kit shall be provided by the bidder at no cost to purchaser during the contract period.

(A.3) **INFORMATION AND DRAWINGS:** At least two(02) months before scheduled installation date, the Supplier shall provide following for each equipment.

(A.3.A) Suitably illustrated Printed/Legible Xerox copies of
(i) Service/Shop Manual (ii) Parts Book and (iii) Operation & Maintenance Manuals for each type / model of equipment covering all Assemblies & Accessories, written in English language bound in book form. One set of Manuals & Part Books to be submitted to GM (E&M)/HOD office CCL Ranchi should be **Printed only.**

• 1 Printed set to project/each project site and
• 1 Printed set along with its soft copy preferably in CD / Pendrive, to GM (E&M)/HOD office CCL, Darbhanga House, Ranchi.

(A.3.B) PERT chart for erection & commissioning indicating erection site requirements and the capacity of Cranes or any other handling equipment to be provided by CCL during the course of erection, commissioning & final testing. The Supplier shall also submit the data identified in the specifications for major assemblies/items of Equipment proposed. The Supplier shall supply detailed Equipment's drawings illustrating major assemblies locations, foundation and placement for items such as prime mover, gear box, crusher roll, chain / apron conveyor as per the details required in Part C. In addition, the Hydraulic (for auto lubrication if any), Electrical & Pneumatic circuit drawings (not the block diagram) as applicable should be given in the offer. All the installation & circuit drawings should be legible preferably printed on adequate size drawing sheet for easy reference, interpretation & evaluation.

(A.4) **ERECTION/ASSEMBLY, COMMISSIONING AND PERFORMANCE TESTING**: The Supplier shall provide the Services of Specialist Technicians / Service Engineers to supervise the installation/erection/assembly, commissioning and any performance testing of the plant, Equipment and accessories supplied. The Service Personnel shall remain at site following commissioning until all necessary personnel are fully conversant with the maintenance and operation of the Equipment. Suitable accommodation for the service personnel shall be provided during Installation, Erection/Assembly, Commissioning and Performance Testing as per availability at site on chargeable basis.

(A.5) **TRAINING:** The Supplier shall also be responsible to impart adequate and proper training necessary for operation and maintenance of the Equipment. The supplier in consultation with the project in-charge / Staff Officer (E&M) of the respective Area/site shall make available experienced personnel to conduct training of Engineers, Supervisors, Technicians and Operators for

suitable period from the date of issue of acceptance certificate of the equipment. The training shall cover the following:
(A) Equipment Maintenance, Repair/Overhaul & Troubleshooting aspects.
(B) Equipment operation and safety aspects. Comprehensive training manuals with clear illustration shall be provided to each participant. The training courses shall be conducted in either English or Hindi languages as suitable to the site. The Supplier shall also be responsible to provide any specialized training related to equipment free of cost at site or at any Training centre / Workshops of CCL as per the directive of GM(E&M)/HOD, CCL during the warranty period of equipment.

PART – B: GENERAL REQUIREMENTS:-

(B.1) GEOGRAPHY AND CLIMATIC CONDITIONS ELEVATION: The natural surface varies from 100 to 1000 meters above mean sea level.

(i) **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.

(ii) **AMBIENT CONDITIONS RELATIVE HUMIDITY :** Maximum 98%.
Temperature – Minimum 0° C.
- Maximum 50°C.

(iii) **RAINFALL:** The mean annual rainfall is 1200 mm, 90 to 95% of which may fall in rainy season from June to October.

(iv) **WIND**: April to September - South to South Westerly.
October to March - North Westerly.

(v) **SPEED:** 8 Km per hr average : 100 km per hr maximum.

(vi) **UNDER FOOT:** Slushy and highly abrasive.

(B.2) GOODS (EQUIPMENT AND MACHINERY): Detailed specifications of the Equipment to be supplied are given in Part-C. 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 reputed manufacturers. The Equipment and accessories shall be 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) SUPERVISION OF ERECTION AND COMMISSIONING: The supplier shall be responsible for the erection and commissioning of the equipment at site. The supplier shall depute qualified and competent Engineer(s),Technician(s) to supervise the entire assembly, erection and commissioning of equipment free of cost for suitable man days including Sundays & Holidays if worked per machine for erection, commissioning and test running, as well as training in operation and maintenance of the equipment at site. Commissioning shall include testing of the equipment at maximum rating undermine operating conditions as specified to the satisfaction of the user. The project shall provide Cranes and handling equipment as well as Semi-skilled/unskilled manpower generally required for the assembly of such machine at site. The general tools & tackles as well as special tools supplied with the equipment for commissioning, maintenance & repair of machine shall also be available to the supplier. The technicians/ expert shall remain at site following commissioning until all necessary personnel of purchaser are fully conversant with the maintenance and operation of the equipment.

(B.4) STANDARDS: The design, supply, erection, commissioning and testing of all equipment shall in all respects comply with the requirements of this specification and with appropriate current International & Indian standards indicated in Equipment Specification or as applicable. The Equipment shall also meet approval of the Statutory Government Authorities 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.5) BIDDER/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 Bidder observes that this Specification document contains any anomalies, ambiguities, flaws, errors or omissions, the Bidder 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.6) SPARE PARTS PROVISIONS:-

(B.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.

(B.6.1.b) BOUGHT OUT ASSEMBLIES AND SUB-ASSEMBLIES : The supplier is required to furnish details such as make, model code and vital technical parameters of all major bought out assemblies/items

(B.6.2.1) PROVISION OF SPARE PARTS:

Within the Contract Price, the Purchaser shall agree to purchase all Operational, maintenance and standby/contingency spare parts, consumable items, wear materials, maintenance tools and special tools (hereinafter collectively referred to as "Spare Parts", unless the context requires otherwise) in accordance with the Supplier's recommendations for ninety six (96) months from the date of issue of the Commissioning Certificate. Similarly, within the Contract Price, the Purchaser shall also agree to purchase consumable items (hereinafter referred to as "Consumables") in accordance with the Supplier's recommendations for ninety-six (96) months from the date of issue of the Commissioning Certificate.

In addition the Supplier shall provide Spare Parts and Consumables for Commissioning. Consumables shall include items such as oils, lubricants and fluids also.

The supplier shall submit 8 (eight) separate schedules showing spare parts and consumables proposed to be supplied by them in each 12 (twelve) months period from the date of commissioning of equipment project-wise in order to comply with the provisions herein contained

(B.6.2.2) In the event that the Spare Parts and Consumables, as recommended by the Supplier, in any way fall short of actual requirements during the period for which they are said to be adequate, the supplier shall provide such additional Spare Parts and Consumables as are necessary at the final destination. Such additional Spare Parts and Consumables shall be provided by the Supplier to the Purchaser free of all cost and shall be transported to Site by air, rail or fast road transport.

(B.6.2.3) In the event that the operation of the plant is inhibited or frustrated as a direct result of lack of Spare parts and Consumables pursuant to clause B.6.2.2 hereof, then the period referred to in clause B.6.2.1 hereof shall be extended by a period of not less than the period during which operation as aforesaid was inhibited or frustrated.

(B.6.2.4) The supplier shall not be liable for the supply of additional Spare parts and Consumable, if these are required by reasons of unforeseen accidents, negligence or misuse on the part of the purchaser.

(B.6.2.5) The assessment of the Supplier of the spare parts requirements shall be based upon the expected working hours per year.

(B.6.2.6) In the event that the spare parts and consumables, as recommended by the supplier are in excess of the actual requirements. The purchaser at its option:

1. Retain such excess spares and consumables as, in discretion, it may elect to do so.
2. Require the supplier to reprocess or repatriate or otherwise dispose-off such excess spare parts in exchange for payment to the purchaser of the contract Price of the spare parts and consumables concerned.

The purchaser shall notify the supplier, in writing of its requirement under the clause within thirty (30) day after completion of the contact period of 96 months.

(B.6.3) EMERGENCY SPARE PARTS:-

(B.6.3.1) Emergency spare parts required by the purchaser to repair breakdowns shall be dispatched to the site by the supplier by the fastest, practicable means as directed from time to time by the purchaser.

(B.6.3.2) FOR THE PURPOSE OF THE CLAUSE B.6.3.1 "
Emergency spare parts" shall mean those spare parts or components required by the purchaser to repair any item of plant supplied pursuant to the contract in the event of a breakdown not attributable to a failure covered by the guarantee or a failure of the supplier to provide adequate warranty "spare parts or consumables".

(B.6.4) LIFETIME SPARES PARTS: The supplier has to undertake and guarantee 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 beyond 96 months. In the event that the supplier wishes to terminate production of such spare parts the supplier shall:

(B.6.4.A) Give not less than 6 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.6.4.B) Immediately following termination, provide to the purchaser at no cost manufacturing drawings, material specification and necessary permission to manufacture of the spare parts elsewhere.

(B.6.4.C) Any change in part number or supersede part number should be informed to the CCL headquarter – E&M Department, MM Department and the Incharge at project/site wherever the equipment is operating. In any event the supplier shall not seek to terminate manufacturer of spare parts for a period of not less than 10 years from taking over.

(B.6.5) OILS, LUBRICANTS AND FLUIDS: Not less than 1 month before the scheduled date for acceptance, the supplier shall provide to the purchaser a detail schedule of all necessary oils, lubricants, fluids for the operation and maintenance of the 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 being acceptable by the supplier.

(B.6.6) GENERAL: Nothing in this Clause B.6 shall relieve the Supplier of any Guarantee, Availability, Performance or other obligations or liabilities under the Contract.

(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 have not been met in any one (1) month.

(B.7.2) PERFORMANCE 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 Part C. The method of assessment applied shall be as follows:

Method of Assessment: The following calculation shall determine the availability of the Equipment:

The Feeder breaker should have following guaranteed output size (-) 100 mm X (–) 100 mm x (-) 100mm ≥ 90%.

The machine shall have guaranteed availability of 85% Availability will be calculated over 365 days of operation and following formula shall apply. The Supplier shall guarantee that the availability of the equipment shall not be less than **85% (eighty five percent) for a period of 8 years from the accepted date of commissioning measured over each twelve (12) month period**.

$$\% \text{ Availability} = \frac{\text{Production shift Hrs - Down time Hrs.}}{\text{Production shift Hrs - Maintenance hours.}} \times 100$$

WHERE
Production shift Hours = 24 Hours per day
Maintenance Hours = 4 Hours per day
Breakdown Hours = Actual number of hours and will include time spend on Waiting for spares, service experts etc.
Down time = Maintenance Hours + breakdown Hours

Down time shall not include:

(I) Damage due to abusive use or incorrect operation methods by the Purchaser,
(II) Accidents,

(III) Strikes or stoppage of work by the Purchaser's personnel,
(IV) Natural disaster,
(V) Lack of Spare Parts not attributable to a failure of the Supplier, it's Agents or Representatives. Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures. The supplier shall upload a schedule of maintenance required to carry out preventive maintenance and shall state the number of manpower and hours per day 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. The average maintenance hours shall not be more than 4 hours per day. In case the site personnel of CCL are unable to carry out the daily maintenance in four hours, the supplier will train the project personnel to enable them carry out the normal routine maintenance within four hours every day.

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 preventive maintenance in accordance with the Supplier's furnished standard/published recommendations, and making all necessary repairs using only genuine manufacturer's spares.
(2) Providing co-operation to all Supplier's authorized representatives.
(3) Where appropriate, providing and maintaining such conditions as:
• Proper electrical Supply.
• Terrain Area.
• Reasonable floor conditions.
(4) Providing all Supplier's authorized representatives access at all reasonable times to the machine service and repair facilities. Maintaining a logbook for each shift wherein the working hours, breakdown times, maintenance hours, idle time, etc. shall be recorded. This record will be available for examination and signature by the Supplier's representative.

(B.7.3) EFFECT AND DURATION OF PERFORMANCE GUARANTEE:-

(B.7.3.1) This Performance 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 Performance Guarantee shall remain effective for ninety six (96) months from the date of commissioning, irrespective of the hours operated by the Equipment during the period of the guarantee.
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(B.7.3.3) COMPENSATION FOR NOT ACHIEVING GUARANTEED AVAILABILITY:
In the event that Equipment fails to achieve the Availability herein provided, measured over each twelve (12) month period, the Supplier shall be liable for and pay to the Purchaser, as liquidated damages, a sum equal to as indicated hereunder for each equipment against the PBG submitted by the bidder as per clause of NIT.

(a) 1% of the delivered landed price of the equipment including the price of spares & consumables for ninety-six (96) months period for reduction in every percentage or part thereof from the Guaranteed Availability for the first 5%.

(b) 10% of the delivered landed price of the equipment including the price of spares & consumables for ninety-six (96) months period for reduction beyond 5% from the guaranteed availability.

(B.8) DEEMED BREAKDOWN: 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.9) COMPOSITE WARRANTY / GUARANTEE : The Supplier shall warrant that the equipment supplied under this contract is :

(a) In accordance with the contract specifications.

(b) The equipment shall have no defects arising out of design, material or workmanship & the complete equipment shall be warranted for 12 months from the accepted date of commissioning. Any defect arising observed on this account will have to be attended immediately. Any failed assembly/ sub assembly/ parts due to design, manufacturing or workmanship defect during this warranty period of 12 months shall be supplied by the supplier free of cost and shall not be drawn from the performance guarantee spares purchased by CCL.

(c) The supplier must ensure that there is no major breakdown due to manufacturing / design defects during the warranty period. In case such breakdown occurs the purchaser reserves the right to extend the warranty period suitably. The warranty shall cover for total equipment so that ultimate/ comprehensive responsibility lies only with the Equipment Supplier although components may be supplied by different suppliers to the Bidder.

(B.10) Provenness Criteria:

(A) Standard Proveness criteria (Applicable for other than MSEs/Startups):

(I) "The equipment offered by the tenderer shall be considered proven provided 01 (one) nos. of quoted model or similar equipment ,as defined below , must have been supplied by the bidder in India to mining industry and/or to the other Industries (Private or Government/ Public Sector Undertaking) and all of them performed satisfactorily for a minimum period of one year from the date of commissioning (window period : 05 (five) years). The performance of only those equipment would be considered for ascertaining provenness which have commissioned one year prior to the date of opening of tender but not prior to 5 years from the date of opening of tender.

{Note :-

- No new supply orders shall be accepted during recycling of shortfall documents. Therefore bidder must be careful while uploading supply order copies online.
- In case of Trial Orders placed by CIL and Subsidiaries, the Trial Order quantities will be considered for provenness.

- Tenderers will have to submit satisfactory performance report for quoted model or similar equipment issued by authorized representative of the company. However CCL reserves the right to verify the above or get the performance directly from the concerned buyers/customers /end users of the equipment (against past supplies) of the tenderer.
- Considering the practical difficulties in obtaining the performance reports in cases where provenness of the offered product is being ascertained on the basis of supply made in **other subsidiaries of CIL or other PSUs/ Govt. Departments**, the bidder shall submit a Self-Certificate in the following format:

  "***The items covered in the Purchase Order(s)/ Rate Contract(s) copies enclosed with our offer have been fully executed and have performed satisfactorily as per the provisions of respective Purchase Order(s)/ Rate Contract(s) and all the complaints/claim (s) lodged by the purchaser, if any, have been attended to and no complaints/ claims(s) are pending".***

  In case, any specific Purchase Order(s) has/ have not been fully executed and any complaint/ claim is pending, then details of such cases to be categorically mentioned with the reasons thereof so that decision making is in clear perspective without any hidden facts in the subject matter.
  The authenticity of the self-certificate as well as other documents submitted/uploaded by the bidder will solely be their responsibility and appropriate action will be taken by CIL/Subsidiary Company if it is subsequently found to be misleading/ false/ forged.
  However, the Purchaser reserves the right to obtain the performance directly from the end user of the item/product.}

(II) In case the quoted model or similar equipment has not been supplied by the bidder in India or if supplied and commissioned in India but the same has not completed required years of performance for provenness as mentioned above, the offered equipment will be considered proven if the minimum worldwide population is of 01 (one) nos. of offered or similar equipment or combination thereof which have been commissioned within 05(five) years prior to the date of opening of tender and all of them performed satisfactorily for a minimum period of 01 (one) year from the date of commissioning. The worldwide population of the bidder will be considered for provenness only when the bidder gives an undertaking that it has not supplied the quoted model or similar equipment in India or if supplied and commissioned in India, the same has not completed required years of performance for provenness as mentioned above at (A)(I).

(III) In case the indigenous manufacturer is quoting the same type & model of the equipment as supplied by their foreign collaborator worldwide in the past and the quoted model of indigenous manufacturer has either not been supplied in India or if supplied and commissioned in India, but the same has not completed the required years of performance for provenness as mentioned above, the quoted model will be considered proven if the minimum worldwide population is of 01(one) nos. of quoted model or similar equipment or combination thereof which have been commissioned within 05 (five) years prior to the date of opening of tender and all of them performed satisfactorily for a minimum period of (01) one year from the date

of commissioning. However, for worldwide population, foreign collaborator's experience of supplying the offered or similar equipment worldwide shall be considered only if the indigenous manufacturer submits notarized copy of their collaboration agreement with the foreign collaborator which should be valid as on the date of opening of the tender and should also remain valid at least upto supply and commissioning of the last equipment covered in the contract. However, the principal manufacturer will confirm to ensure supply of spares & consumables and service support for smooth running of the equipment throughout its life. Further, if any indigenous content is added by the indigenous manufacturer in the quoted model of the equipment, the foreign collaborator will give an undertaking for successful performance of the equipment with the indigenization carried out by the indigenous manufacturer during lifetime of the equipment.

(B)"Satisfactory Performance" means the supplied equipment must have achieved guaranteed annual availability, if any, as per the performance guarantee clause of the supply orders / contracts for a minimum of one year from the date of commissioning. In case supply orders/ contracts do not have provision for guaranteed annual availability, the bidder will submit satisfactory performance report issued by end users as per benchmark regarding performance of equipment, if any, incorporated in the supply orders /contracts against which these equipments were supplied. In case, the Performance Report(s) of the End-User(s) is not available, the bidder shall submit self-certification claiming satisfactory performance of the equipment supplied.

Note: - In case of performance for the equipment under trial the bidder has to submit the maintenance and operating cost involved during the trial period of the equipment, duly signed by end user, along with the performance report.

(C) Definition of "**Similar Equipment"-**

"Similar Equipment" shall be such equipment, which fulfills the following:

a) Performs almost identical operations as the quoted model.
b) Should be equal to or higher than the tendered capacity.
c) Uses sub-components , sub-systems and major assemblies of substantially similar design & construction to the model quoted –only ratings/specifications may differ (Lower or higher)

(D) "**Acceptance criteria for similar equipment"**

Acceptance Criteria for Similar Equipment:-

(I) If the bidder claims provenness of the quoted model based on similar equipment as per sub clause- (C) above, then the similar equipment should have performed satisfactorily for a minimum period of one (01) year from the date of commissioning along with satisfactory performance of quoted model for a minimum period of one (01) year from the date of commissioning within the window period of 05 (five) years.

(II) If the bidder claims provenness of the quoted model based on similar equipment as per sub clause- (C) above and the similar equipment has performed satisfactorily for a minimum period of one (01) year from the date of commissioning but quoted model has not worked for a minimum period of one (01) year from the date of commissioning within the window period of 05 (five) years, then the offer may be accepted subject to following conditions:

a. (i) The successful bidder will be allowed to supply the quantity of first lot as indicated in Schedule of Requirement.
(ii) The firm shall be required to furnish additional Performance Bank Guarantee of 100% of the total landed value of equipment along with spares & consumables for warranty period for the quantity of first lot.

b. (i) The firm will have the option to supply the second lot if they so desire.
(ii) They will submit the additional Performance Bank Guarantee of 100% of total landed value of equipment along with spares & consumables for warranty period for the quantity of second lot also.

c. On satisfactory performance of all the equipment of first lot for one year from the date of commissioning [to be certified by the General Manager (E&M) / HOD of the subsidiary company], clearance shall be obtained from the order issuing authority for supply of the remaining quantity, if any, as per Schedule of Requirement.

[The performance against supply of equipment of first lot only shall be considered for assessing the performance for issuing clearance to supply balance quantity covered in the contract. The performance of second lot (if any) shall not be considered for assessing the performance for issuing clearance to supply balance quantity covered in the contract.]

d. The additional 100% Performance Bank Guarantee shall be returned only after satisfactory performance of all the equipment supplied in first lot for one year from the date of commissioning. The additional 100% Performance Bank Guarantee submitted for the equipment supplied in the second lot, if any, shall be returned after satisfactory performance of all the equipment supplied in second lot for one year from the date of commissioning.

e. The original 10% PBG for the total contract value will be retained for entire contract period as per PBG clause of NIT.

Note:

A) In case of unsuccessful performance of the first lot of equipment supplied by the firms who qualify as per above sub clause (D) (II), the following shall be applicable:

i) The 100% Additional Performance Bank Guarantee for the first lot of equipment submitted as per sub clause (D) (II) (a) (ii) above shall be encashed by CIL. Consequent upon the encashment of the 100% Bank Guarantee due to non-achievement of stipulated minimum availability percentage, the Supplier shall take back the equipment at no cost to the Purchaser and the contract for the balance quantity shall be cancelled.
Further, in case of unsuccessful performance of the first lot of equipment, 100% Performance Bank Guarantee submitted for the second lot, if any, will also be encashed and the supplier will be advised to take back the equipment of second lot also.

ii) The original 10% performance bank guarantee shall be returned to the supplier after recovery of penalty for non-achievement of guaranteed availability in respect of both first and second lot of equipment.

iii) The performance of any individual equipment under this clause shall not be considered for provenness in future tenders of CIL & subsidiaries for any capacity of this type of equipment.

iv) In case of equipment imported under Project Concessional Duty (PCD), the amount of Customs Duty Concession i.e. the differential amount of Normal Customs Duty (NCD) and PCD availed during import shall be recovered from the supplier with interest for refund to the Customs Authorities. The supplier shall deposit such amount to the purchaser on demand else the same shall be recovered from the Security Deposit Bank Guarantee / Performance Bank Guarantee of the supplier.

B) In case of unsuccessful performance of any of the equipment supplied in the second lot, the 100% Performance Bank Guarantee submitted for second lot of the equipment shall be encashed and supplier will be advised to take back all the equipment of second lot. Further, recovery of penalty for non-achievement of guaranteed availability shall also be made. However, the clearance issued for supply of balance quantity of the contract based on satisfactory performance of the first lot, will remain valid. The provisions mentioned under Note (A) (iii) and (iv) above will also be applicable in this case.

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Provenness criteria For MSEs/ Startups:

As per CIL letter vide Ref: CIL/C2D/MSME/2017-18/Circular/1504 dt. 19.03.2018. Relaxation of Norms for Startup and Micro & Small Enterprises (MSEs) in Public Procurement Regarding prior Experience-Prior Turnover criteria.:-

1. Definition and Eligibility of Startup shall be in line with OM vide letter no. F-20/2/2014 PPD (pt.) dt.25.07.2016 of under Secretary, GOI, subsequent amendment, if any.
2. Definition of MSEs shall be as per Public Procurement 2012 with subsequent amendments, if any.

3. Further, vide Policy Circular No. 1(2)(1)/2016-MA dated 10.03.2016 of MoMSME:
Prior experience & turn over criteria is not applicable for startup/MSEs in the tender in respect of either of the following situation and no further documents regarding provenness will be required to be submitted by these category bidders subject to meeting of quality and technical specifications, i.e. these MSEs must have the technical capability to deliver the goods and services as per prescribed technical and quality specifications. Further, as per Department of Expenditure, Ministry of Finance OM No. F.20/2/2014/PPD-(Pt) dated 25.07.2016 circulated vide note F. No. 24/2/2013/Fin-l dated 02.08.2016, relaxation of the condition of prior turnover and prior experience in public procurement has been extended to all Startups (whether MSE or not) subject to meeting of quality and technical specifications in accordance with the relevant provisions [Rule 173(i)(b) of GFR, 2017].

However, If bidders have submitted documents to prove the Startup/MSE status for the tendered item without certificate towards quality, assurance and capability from some authority like MSME, NSIC etc., the tender inviting authority, if needed, may assess the techno-commercial capability of the vendors to manufacture and deliver goods as per the prescribed quality and technical specification before awarding contract to them. For this purpose, a 'Proforma for Equipment and Quality Control' (**as per Annexure-3**) has been enclosed in the tender documents and such MSEs/ Startups are required to submit the details of plant & machinery, quality control

arrangements, etc., in the above proforma along with their bids for verification of their technical capability.

After opening of bids, the verification of technical capability may be done by the concerned Technical Department immediately without any undue delay so that it is available for consideration at the time of evaluation/ processing of offers.

It should be ensured that the designated technical authority from whom the technical capability report is being called, is furnished with copy of the enquiry, the details of equipment, quality control, man-power availability, compliance/deviation statements and any other relevant particulars related to manufacturing/supply of the item as furnished by the firm(s) along with their tender.

If required, a techno-commercial team of the organization may visit the manufacturing unit of the vendor without any undue delay for quick finalization of the tenders

In case there is deficiency in technical capability of the firm, the same is to be communicated to them by TIA for improvement in the quality of their product for future tenders and clearly indicate that their offer cannot be considered for relaxation against the tender in question in order to avoid any future complications. The issues relating to Technical capability may be decided by the Head of the Technical Department.

If favorable technical capability reports obtained earlier on such firms for supply of the item in question as per the required specification is available, these may be considered, provided date of such reports are not more than one year from the date of opening of bids. In case there is deficiency in technical capability of the firm, the same is to be communicated to them by tender inviting authority for improvement in the quality of their product for future tenders and clearly indicating that their offer cannot be consider for relaxation against the tender in question and to avoid any future complications. The issues relating to technical capability may be decided by head of technical department.

If bidders have submitted documents to prove the startup/MSE status for the tendered item and Whose products are ISI marked/DGMS approved/covered under DGS&D rate contracts on them/current holding rate contracts with CIL or its subsidiaries for supply of tendered items/supplied And proven in CIL or its subsidiary companies /proven product of the ancillary unit of a subsidiary Company of CIL, they will be required to submit the applicable related documents duly notarized for relaxation:-

- Valid BIS marking license of the quoted items on them.

OR

- Rate contract as issued by CIL /Any other subsidiary for the quoted items on them.

OR

- Valid DGMS approval certificate for the quoted items on them.

OR

- Proven ancillary certificate issued by subsidiary companies for the quoted items on them.

The document(s) /certificate(s) by the bidders for ISI marking and DGMS approval for any relaxation
should be valid as on date of tender opening and a copy of such document/certificate valid as on date
of supply duly notarized must accompany their bills.

(B.11) QUALITY ASSURANCE:-

(B.11.1) The Supplier shall furnish legible (preferably printed) Quality Assurance Plan (QAP) details for various stages of manufacture duly authenticated by the Authorized Quality department personnel. The Quality Assurance plan shall comply with an internationally recognized quality assurance standard such as ISO 9001 or latest.

(B.11.2) 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.11.3) 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.

PART: C - EQUIPMENT SPECIFICATIONS:-

(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 Heavy duty mobile/semi mobile Electro-mechanical PLC controlled Feeder Breaker /Feeder Crusher / Back to Back Sizer of **400 TPH (rated)** capacity with dust suppression system, crawler mounted/skid mounted with provision of Single stage crushing (i.e. single pass) (there may be multi roll crushing in a single unit) with tramp iron relief system complete with electrical, gear box/suitable drive transmission system, coupling, starter unit, PLC control deck, feed arrangement-chain conveyor/apron feeder with drive etc to crush ROM Coal to (-) 100 mm output size.

(a) **CAPACITY :** 400 TPH (rated)
(b) **FEED SIZE :** ROM.
(c) **OUTPUT SIZE:** the Feeder breaker should have following guaranteed output size (-) 100 mm x (-) 100 mm x (-) 100 mm ≥ 90% (The equipment shall be capable of providing minimum 1.5MTY within minimum availability of equipment)
(d) **COAL CHARACTERISTICS:-**
(i) Bulk density : 1.1 MT / m³.
(ii) HGI of ROM coal : 45°H.
(iii) Percentage of Shale / Stone in ROM coal : 15% - 20%.
(iv) Overall moisture content : 10% to 15%.

(2) REFERENCES: The following International Standards are referred to in, and form part of, the Specification as applicable.

(a) **ISO: 7189:1983 :** Continuous mechanical handling equipment – Apron conveyors – Design rules.
(b) **ISO 1977:2006 :** Conveyor Chain, attachment and sprockets.
(c) **ISO 2140:1975 :** Continuous mechanical handling equipment for loose bulk materials – Apron conveyors.
(d) **ISO 4413:2010 :** Hydraulic Fluid power – General rules and safety requirements for system and their components.
(e) **ISO:12100:2010 :** Safety of machinery – General principles for design – Risk assessment and risk reduction.
(f) **IEC 60034-1 :** Rotating electrical machines – Rating and performance.
(g) **ISO: 4409 :** Hydraulic fluid power – Positive displacement pumps, motors and integral transmission – Determination of steady – State performance.
(h) **ISO 5598:2008 :** Fluid Power systems and components - Vocabulary
(i) **IEC 60050-411 :** International Electro technical Vocabulary – Chapter 411: Rotating machinery.

(3) DESIGN CRITERIA: The Feeder Breaker/ Feeder Crusher / Back to Back Sizer shall be capable of operation for protracted periods on a system 3 shifts each of 8 hrs duration per day throughout the year with feed size : ROM Coal and having coal characteristics

(a) Bulk density : 1.1 MT / m^3.
(b) HGI of ROM coal : 45°H.
(c) Percentage of Shale / Stone in ROM coal : 15% - 20%.
(d) Overall moisture content : 10% to 15%.

The machine shall be guaranteed to give the rated output within the parameters of input size, output size as indicated in the tender specification (The equipment shall be capable of providing minimum 1.5MTY within minimum availability of equipment). The equipment shall be of robust construction complete with all necessary features for safe and quiet operating conditions suiting the duty condition and performance requirements. The internal arrangement of the crusher casing shall be so designed that it shall remain free from clogging even at high moisture content the noise level shall not exceed 85 db at one meter distance.

(4)TECHNICAL REQUIREMENTS:-

(4.1) BREAKER/CRUSHER/SIZER: The Breaker/Crusher/Sizer should be designed for easy pick replacement/segment replacement. The picks shall be made of tungsten carbide 'point attack / suitable attack type giving maximum possible life while dealing with type of material indicated. The pick shall be mounted on the crusher drum through pick box or any other suitable arrangement at appropriate distances to meet the duty requirements. The Breaker shaft shall be made of alloy steel capable of transmitting high torque. The roll shall be supported on liberally dimensioned spherical roller bearings to sustain high shocks due to impact. The bearings should be in dust proof housing with adequate seals. The shaft shall be vertically adjustable through suitable positive arrangement to suit product size of (-) 100 mm (providing vertical adjustment arrangement of the shaft is optional for the manufacturer). The Breaker roll shall be so mounted that in case of any emergency, it could be lifted out from the equipment and the chain conveyor can run for emptying the material. The system shall have overload relief arrangement. In case of multi roll crusher the primary / secondary alloy steel segment should be easily replaceable type. In case of twin shaft sizers the segment/shaft should be easily replaceable type.

(4.2) HYDRAULIC SYSTEM (AUTO LUBRICATION ONLY):-

(a) The Hydraulic system shall be electrically driven, complete with all accessories and suitably sized oil reservoir with fluid level, sight gauges and breather. It shall be suitably designed for efficient operation and shall require minimum maintenance with relief valve protection. The hydraulic pump and motors shall be designed for longer service life.
(b) There shall be provision of overload protection like float control, temperature and pressure control, automatic stopping the machine if.
  (i) Hydraulic fluid drops to a low level.
  (ii) Pressure or temperature of oil is excessive.

(4.3) HOSES: All hoses shall be grouped as far as possible and suitably clipped to lessen damage from scuffing. Any hydraulic hoses located within the operator's cab should be guarded sufficiently to deflect fluid under pressure, should a leak develop. Hoses shall be Fire resistant / Fire retarded near hot zone.

(4.4) MAINTENANCE AND LUBRICATION: Different components of the machine shall be easily accessible for all maintenance works. The machine shall be provided with centralized auto lubrication system. PLC based troubleshooting should be provided for faster fault detection.

(4.5) CHAIN CONVEYOR/APRON FEEDER (ELECTRO-MECHANICAL DRIVE):-

(a) The conveyor shall be of heavy duty type and shall consist of link chain of high strength confirming to relevant IS / DIN connected by suitable solid alloy steel flight. The whole system shall be strong enough to take impact of falling Coal/ shale from dumpers.
(b) A suitable chain tensioning arrangement shall be provided so that both the strands are under the same tension and skew riding eliminated.
(c) The chain conveyor/apron feeder shall be able to start with 60 Ton material in receiving arrangement while crusher is running. The system shall have overload relief arrangement.
(d) The Chain Conveyor/Apron feeder should be suitable for specified capacity.

(4.6) DRIVE UNIT:-

(a) The Feeder Breaker/ Feeder Crusher / Back to Back Sizer roll shall be driven by an electric motor and gear box / suitable drive transmission. The Gear Box suitable/drive transmission shall be rated for service factor for continuous operation and heavy shock load. Motor of crusher drive should be coupled through coupling of suitable capacity. No open bearing will be allowed.
(b) The conveyor shall be driven by an independent Electro-mechanical drive of suitable capacity.
(c) The Induction motor shall be squirrel cage, totally enclosed, fan cooled and suitable for operation on 3 ph, 440 / 415 V, class "F" insulated, 50 Hz and to suit continuous working with shock loads of relevant IS.
(d) Speed control for conveyor should be provided by VFD.
(e) Motors should be provided with suitable starters of relevant IS.
(f) Conveyor drive shaft, chain sprocket and chain should be of replaceable type.
(g) The conveyor shaft should be supported with suitable antifriction bearings in dust proof housing with proper seals.
(h) All power contactors shall be in accordance with relevant IS codes.

(4.7) COAL RECEIVING ARRANGEMENT: Suitable Coal receiving arrangement from rear discharge Dumpers / tipping trucks or any other suitable loading equipment shall be provided with the equipment with provision of loading of coal to be there with suitable sliding arrangement of coal to Conveyor/Apron Feeder .

(4.8) DUTY CONDITION: The Feeder Breaker/ Feeder Crusher / Back to Back Sizer shall be required to receive ROM coal directly from rear discharge dumpers or any other means of loading equipment and break it down to (-) 100 mm output size to be discharged as per site requirement. The equipment shall be heavy duty type capable of continuous operation round the clock. It shall be robust enough to work in tropical conditions and of suitable height to suit the dumper discharge and to withstand the shock of dumper discharge. It shall be capable of starting in choke feed condition. It shall be able to deal with wet & sticky material in rainy season without adversely affecting its performance parameters. The feeder breaker should be suitable for shifting by pulling/pushing as

per the requirement of the mine/project throughout all season. Any minor foundation work required if any will be within the scope of supplier.

(4.9) CONTROL GEAR (MCC): The drive should have adequately rated control gear with an interlock with following provisions:

(a) Auto operation with integrated PLC.
(b) Manual operation.
(c) Sequence operation.
(d) Should have adequate protections like thermal overload, trip devices suitable devices to detect low voltage and single phase, reverse phase and ground fault sensing manual/ auto control switch shall be provided with solid state timing relays.
(e) All control gears should conform to relevant IS.

(4.10) ELECTRICAL MOTOR FOR CRUSHER DRIVE: The Induction motor shall be squirrel cage, totally enclosed, fan cooled and suitable for operation on 3 ph, 440 / 415 V, class "F" insulated, 50 Hz and to suit continuous working with shock loads. It should be as per **IEC 60034-1/ IS/IEC 60034-1 (2004)**.

(4.11) FAIL SAFE SYSTEM: The equipment shall be complete with necessary protective devices, so that in case of any emergency, it stops functioning to avoid any major breakdown. The protective devices, Inter-alia shall comprise of the following:

(i) **ELECTRICAL FAIL SAFE SYSTEM:-**

(a) A speed switch linked to the crusher roll which senses the roll speed and trips the motor of driving chain conveyor first when the roll speed falls below the designed minimum on encountering hard material and then with certain time lag trips the crusher motor.
(b) Provision shall be kept for N-C point in the contactor of the chain drive feeder breaker to incorporate speed monitoring switch for discharge belt conveyor to trip the chain conveyor motor in case the belt conveyor stops.

(ii) **MECHANICAL FAIL SAFE SYSTEM:** A shear pin/equivalent mechanical fuse or any other arrangement to ensure that the electric motor is not overloaded on encountering very hard material.

(4.12) MACHINERY DECK: The machinery deck shall be made of steel sheeting supported by a steel structure and shall cover the drive system. It shall be designed to give ready and safe access to personnel and equipment for maintenance. Non-slip type walkways and catwalks with handrails shall be provided in and around the machinery deck and service platforms and shall comply with ISO 2867. The space in and around the major assemblies housed in the machinery deck be sufficient to give ready and safe access to personnel and tools & tackles for maintenance.

(4.13) OPERATOR'S CABIN: A standard operator cabin should be provided along with the machine. The cabin should be of enclosed type and provided with a small fan and seat for operator's comfort. Suitable PLC control deck with suitable indicator mechanism to be provided with the system in that cabin.

(4.14) DUST SUPRESSION SYSTEM: A suitable Dust Suppression System shall be provided with independent facilities.

(4.15) AUTO LUBRICATION SYSTEM: Automatic lubrication of all bearing and chain points to be ensured by provision of the auto lubrication system. There shall be provision of protection like float control, temperature and pressure control, automatic stopping the machine if lubrication falls below certain level or temp exceeds maximum temp.

(4.16) LIGHTING: Adequate lighting and illumination at strategic points both outside and inside of the machine shall be provided for visual observation and night shift operation.

(4.17) GUARDS AND SHIELDS: Adequate guards and shields which comply with ISO 3457 shall be provided throughout the Feeder Breaker.

(4.18) FIRE EXTINGUISHER: Minimum 2 nos. of fire extinguishers shall be provided at strategic points on the Feeder Breaker, suitably mounted in heavy duty brackets for ease of removal. The extinguishers shall be dry powder (cartridge type) with a minimum capacity of 5 kg and shall comply with Indian Standard IS: 2171.

(4.19) RECEIPT & DISCHARGE ARRANGEMENT: The equipment shall receive coal from Rear Discharge dumper / tipping trucks directly or any other suitable loading equipment. Discharge of Coal shall be as per site requirement. The receipt & discharge arrangement shall be in line with actual requirement of the site installations.

(5) SAFETY FEATURES AND APPLIANCES:-

(i) Approved type of Dust Prevention or Suppression System.
(ii) Each moving part of the machinery shall be guarded/ fenced and also ensure its effectiveness all the time.
(iii) Fire resistant hydraulic hoses and wiring near hot zone for auto lubrication system (if any).
(iv) Lock out switches shall be provided on the machine that over rides all other for maintenance purpose/in case of emergency.

(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 96 months from the accepted date of commissioning. The machine shall be guaranteed to give the rated output within the parameters of input size, output size as indicated in the tender specification and the equipment shall be capable of providing minimum 1.5MTY within minimum availability of equipment.

(7) EQUIPMENT ACCEPTANCE: The equipment ordered will be finally accepted subject to the supplier demonstrating to the purchaser or its authorized representative (may be third party) that the equipment when tested as indicated below meets the performance data provided by the supplier. A detrimental deviation of up to 2.5% will be accepted.

(8) HOURLY RATED OUTPUT OF SPECIFIED SIZE: To be tested at site on 30 (thirty) operating days average immediately after commissioning under operating conditions as per verification calculation of capacity for 30 days of continuous operation uploaded by the bidder..The equipment may be operated at the supplier's discretion either by the supplier's personnel or by the Purchaser's personnel who are to be authorized by the supplier.

(9) SCHEDULE OF REQUIREMENT:-

(a) B&K area : 01 no.

(b) Kuju area : 02 nos.

(c) Kathara area : 01 no.

(10) (A) **DOCUMENTS TO BE UPLOADED (as per provenness criteria of NIT) BY BIDDER:**

Self attested and Notarized copy (ies) of past supply order(s) and their performance report/s as stipulated in provenness criteria of NIT. (Not applicable for Start ups/MSEs)

(Note: - In case of performance for the equipment under trial order, the bidder has to submit the maintenance and operating cost involved during the trial period of the equipment ,duly signed by end user, along with the performance report.)

OR

(Applicable for MSEs/Start ups) Self attested and Notarized copy (ies) of Documents (as applicable) mentioned in provenness criteria of NIT for MSEs/Startups.

(B) **OTHER TECHNICAL DOCUMENTS TO BE UPLOADED ALONG WITH THE OFFER -- Applicable for all bidders:**

(a) list of comprehensive tools & special tools with make and Model provided for maintenance & repair of offered Equipment as per NIT requirement & Undertaking in line with NIT

(b) An undertaking that Service/Shop Manual, Part Books & Maintenance Manuals as per clause-A.3.A of NIT will be supplied with the offered equipment.

(c) An undertaking that PERT chart & other technical data/ drawings and Performance Testing certificates as per clause-A.3.B and A.4 of NIT will be provided.

(d) Complete list of Consumable Spares and Consumables required for first 12 months of warranty period from the date of commissioning of the equipment.This list will consist of Consumable Spares and Consumables for one equipment only and will be applicable for all quoted equipments. This list is to be submitted without Price in Technical Bid.

(e) Complete list of Spares and Consumables required for 2nd, 3rd, 4th, 5th, 6th, 7th and 8th year of operation from the date of commissioning of the equipment. This list will consist of Spares and Consumables for one equipment only and will be applicable for all quoted equipments. These lists are to be submitted without Price in Technical Bid.

(f) An undertaking and guarantee 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 beyond 96 months.

(g) A schedule of maintenance required to carry out Routine Servicing & Maintenance & Planned Preventive maintenance Program as per NIT clause B.7.2.2 and shall state the number of manpower and hours per day required to carry out each maintenance task.

(h) A verification calculation of capacity for 30 days of continuous operation as per content of the clause C.8.
(i) Details of Equipment supplied earlier same as quoted model.
(j) Detailed technical descriptions covering technical specifications of all systems of the offered Feeder Breaker/ Feeder Crusher / Back to Back Sizer.
(k) Layout drawings and detailed descriptions of all machinery including method of power transmission, mounting details and method of alignment.
(l) Calculations and drawings verifying the rated capacity of offered equipment.
(m) Details of major bought-out assemblies and sub-assemblies incl. manufacture's address, types, model etc.
(n) Details and layout of automatic centralized lubrication system giving model of pump & its specification, capacity of reservoir, electrical control/ relay, detailed specification & number of injectors/ lubrication points, warning alarm and protection system.
(o) Details of Performance.
(p) Machine Weights**:** Assembly wise.
(q) Basic Dimensions:-
  (i) Assembly wise.
  (ii) Complete after installation.
(r) Description off Dust Suppression System.
(s) Details of Electrical System.
(t) Details of Automatic lubrication system.
(u) General:-
  (i) Details, number and location of fire extinguisher.
  (ii) Make Model and Operating range of all gauges/ indicators.
  (iii) Make Model of all Warning Alarms.
(v) Details of PLC control system including protection system.

(11) **TECHNICAL SPECIFICATION PARAMETERS:** All the following specified documents are to be uploaded by bidders):

Check list of other Technical Documents to be uploaded in Technical Bid

	Clause No.	**Details of Document**	
1	A.2.I: Supplementary item:	Bidder to upload list of comprehensive tools & special tools with make and Model provided for maintenance & repair of offered Equipment as per NIT requirement & Undertaking in line with NIT.	Scanned copy of Information & Documents (Self authentica
2	A.3.A: Information and Drawing:	Bidder shall upload an undertaking that Service/Shop Manual, Part Books & Maintenance Manuals as per clause-A.3.A of NIT will be supplied with the offered equipment.	

<table>
<tr><td>3</td><td>A.3.B & A4: Information and Drawings/Erection/Assembly/, Commissioning & Performance Testing:</td><td>Bidder shall upload an undertaking that PERT chart & other technical data/ drawings and Performance Testing certificates as per clause-A.3.B and A.4 of NIT will be provided.</td><td rowspan="11">ted)</td></tr>
<tr><td>4</td><td>B.6.2.1 Provision of spare parts</td><td>Complete list of Consumable Spares and Consumables required for first 12 months of warranty period from the date of commissioning of the equipment.This list will consist of Consumable Spares and Consumables for one equipment only and will be applicable for all quoted equipments. This list is to be submitted without Price in Technical Bid.</td></tr>
<tr><td>5</td><td>B.6.2.1 Provision of spare parts</td><td>Complete list of Spares and Consumables required for 2nd, 3rd, 4th, 5th, 6th, 7th and 8th year of operation from the date of commissioning of the equipment This list will consist of Spares and Consumables for one equipment only and will be applicable for all quoted equipments. These lists are to be submitted without Price in Technical Bid.</td></tr>
<tr><td>6</td><td>B.6.4: Lifetime Spares Parts:</td><td>The bidder has to upload undertaking and guarantee 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 beyond 96 months.</td></tr>
<tr><td>7</td><td>B.7.2:2:Performance Guarantee</td><td>The bidder shall upload a schedule of maintenance required to carry out Routine Servicing & Maintenance & Planned Preventive maintenance Program as per NIT clause B.7.2.2 and shall state the number of manpower and hours per day required to carry out each maintenance task.</td></tr>
<tr><td>8</td><td>Clause no. C.8:Hourly rated output of specified size</td><td>Bidder to upload verification calculation of capacity for 30 days of continuous operation as per content of this clause.</td></tr>
<tr><td>9</td><td>C.10.B(i)</td><td>Details of Equipment supplied earlier same as quoted model.
The information shall be given in the format as below and in the order
of most recent first in chronological order
<table><tr><th>Company</th><th>Mine Name</th><th>Mine Location</th><th>Mine Type</th><th>Number of machines</th><th>Model</th><th>Date of Commissioning</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>10</td><td>C.10.B.(j)</td><td>Detailed technical descriptions covering technical specifications of all systems of the offered Feeder Breaker/ Feeder Crusher / Back to Back Sizer</td></tr>
</table>

11	C.10.B. (k)	Layout drawings and detailed descriptions of all machinery including method of power transmission, mounting details and method of alignment.	
12	C.10.B.(l)	Calculations and drawings verifying the rated capacity of offered equipment.	
13	C.10.B.(m)	Details of major bought-out assemblies and sub-assemblies incl. manufacture's address, types, model etc.	
14	C.10.B.(n)	Details and layout of automatic centralized lubrication system giving model of pump & its specification, capacity of reservoir, electrical control/ relay, detailed specification & number of injectors/ lubrication points, warning alarm and protection system.	
15	C.10.B(o)	**Performance:-** i)Capacity(Rated) ii)Capacity(Max.) iii)Feed Size iv)Product Size v)Speed of crusher drive(In RPM) vi)Speed Range for conveyor drive. vii)Type of Drive transmission viii)Gearbox ratio(if any)	
16	C.10.B.(p)	**Machine Weights:-** Assembly wise	
17	C.10.B.(q)	**Basic Dimensions:-** a)Assembly wise b)Complete after installation	
18	C.10.B.(r)	**Description off Dust Suppression System.**	
19	C.10.B.(s)	**Electrical System** a)Starter make,, model and rating b) Starter control make and model c)Protection system details d)Lighting Details	
20	C.10.B.(t)	**Details of Automatic lubrication system** a) Manufacturer and model b) Discharge rate (m^3/min) c) Pressure (kPa) d) Reservoir Capacity e) Number of nozzles/ lubrication points f) Location of nozzles	
21	C.10.B(u)	**General** a) Details, number and location of fire extinguisher b) Make Model and Operating range of all gauges/ indicators c) Make Model of all Warning Alarms	
22	C.10.B.(v)	**Details of PLC control system including protection system**	