



WESTERN COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

MATERIALS MANAGEMENT WING

COAL ESTATE, CIVIL LINES, NAGPUR-440001

CIN : U10100MH1975GO1018626

Phone : (0712) 2510501, 2510691 [EPBAX, Extn :5587] Fax : 0712 - 2510284

सामग्री प्रबन्धन विभाग

Department of Material Management

Website : www.westerncoal.gov.in

SO NO. 11000112919050

DT : 13 .06.2019

SUPPLY ORDER

To.
M/s Maxflow Pumps India Pvt Ltd
Plot No 306-307, Sector-7,
IMT Manesar-122050

BY REGISTERED POST
Vendor Code : 506185
Vendor Type: NON MSE
Tel No.-0124-4031087,
Mobile: 9810320345

Dear Sir,

Sub : Supply of Centrifugal Pumps.

Ref : 1. Our Tender No. WCL-hq-pur-sp-ra-e001-2019-20 (Tender Id : 2019_WCL_135558_1)
opened on 29.04.2019 and Reverse Auction conducted on 29.04.2019

2. Your offer against the tender and subsequent correspondences on Portal
(Bid Id : 397452 dated 27.04.2019).

With reference to above, we are pleased to place FORMAL ORDER on you for Supply of the Complete Centrifugal Pump set with S.S. construction with NFLP Electricals as per the rates, terms and conditions stipulated hereunder and technical specifications and General terms & conditions of supply of stores enclosed :-

NIT SN	Item description	Unit	Quantity	Unit basic rate in Rs.	Extended Value in Rs
1	Centrifugal Pump, 80LPS x 200 Mtr Head, S.S. construction with NFLP Electricals complete. (Technical specification as per Annexure A) (ITEM CODE: 26416990019)	Set	2	20,95,000.00	41,90,000.00
Total Value					41,90,000.00
GST: Extra @ 12 %					5,02,800.00
Sub Total					46,92,800.00
Pre dispatch Inspection Charges @ 1% on Total amount					46,928.00
Total Value of Order (in Rs.)					47,39,728.00

[Rupees Fourty Seven lakhs Thirty Nine Thousand Seven Hundred Twenty eight Only.]

TERMS & CONDITIONS

- PRICES** :The above prices are firm and on F.O.R. destination supply basis inclusive of Packing & forwarding freight charges and insurance. Safe arrival of the consignment at destination shall be your responsibility.
- Goods & Service Tax** : GST shall be paid extra on the basic price, as applicable on the date of supply. The present rate of GST is @ 12%

You shall submit the GST compliant Invoice as per the GST rules, indicating all the details as required as per the GST rules, including the HSN code, components of CGST / SGST / IGST(as applicable) etc, which shall enable WCL to avail the Input Tax Credit Set off as per the GST rules. The ITC set off against the GST shall be availed by the Paying Authority, as per the GST rules.

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You shall upload the Tax Invoices/Debit Note/Credit Note in GST Portal, make payment of GST and file returns in time, as prescribed under GST Act and Rule to facilitate WCL to avail Input Tax Credit (ITC) as per eligibility under GST. In case WCL is unable to avail ITC or any liability arises to WCL due to failure on the part of supplier to comply the above provisions, the entire amount including Interest (If any) borne by WCL shall be recovered from you.

3. **Delivery** :Delivery of the complete pump set shall be completed within Four(04) months. The delivery period shall be reckoned from 7th (Seven) day of the order date.
4. **Transportation & e-way Bill**: By road on freight paid basis. As the delivery of goods by you is on F.O.R. Destination basis, the movement of the goods is to be initiated by you and issue e-Way Bill.

5.Pre-dispatch Inspection & Test :Inspection Clause : (a) The Pumps complete will be inspected by CMPDI at manufacturer's works before dispatch of the same to ascertain the conformity of the ordered pumps with electricals to supply order specifications, relevant ISS, latest (including amendment), statutory regulations (DGMS) and type test certificates. Such inspestions shall not, in case of any defect noticed later, entitle the supplier to plead that inspection has been done by the purchaser and absolve them of the obligation.

Pre-dispatch inspection including stage inspection of the ordered material shall be carried out by CMPDIL or it's authorized representatives. The inspection fee @ 1% on FOR destination price plus all applicable GST shall be paid by you along with inspection call to inspecting authority GM(E&M) I/C Central Mining, Planning & Design Institute Ltd, Gondwana palace, Kanke Road, Ranchi-834008, FAX-0651-231851/231447 ph no. 0651-230876/422245 which will be subsequently reimbursed by the paying authority on production of documentry evidence. Minimum 10 days advance notice shall be given to inspecting agency/ CMPDIL.

GST on pre-dispatch inspection charges will not be reimbursement by WCL since you are eligible for ITC on GST.

The Payment of pre-dispatch inspection shall be made by you online through State Bank collect hyperlink available on CMPLI website i.e. www.cmpdi.co.in

- b) **FINAL INSPECTION**: Final Inspection of the consignment shall be carried out at the destination stores, which will be arranged by the consignee on receipt of stores.

6. **Consignee** :Depot Officer, WCL Central Stores, Tadali,

Urjagram, PO: Tadali, Dist: Chandrapur

Pin: 442406 – Phone / Fax no: 07172-237295 /237076

GSTIN : 27AAACW1578L1ZW

7. **Payment Terms** : 80% value of the equipment and accessories and 100% taxes and duties and other charges shall be made within 21 days after receipt and acceptance of material at site by the consignee or from the date of submission of bill whichever is later.

Balance 20% payment shall be made after successful completion of erection, testing, commissioning and final acceptance of the equipment (along with the accessories) upon presentation of certificates from the Area GM/HOD(Tech) of WCL HQ to the effect that the equipment has been erected and commissioned to their entire satisfaction. However, if the equipment is not put to use by the project within 120 days from the date of receipt and acceptance at consignee's end, the balance 20% shall be released.

8. **Bank Account details** : As confirmed by you in your offer.

Name of Bank	INDIAN BANK
Branch Name & Location	IMT Branch, MANESAR
Account Number	6685105466
Type of Account	Current
IFS Code of the Branch	IDBI000I014

9. **Paying Authority** : General Manager(Finance), Western Coalfields Limited, Coal Estate, Civil Lines, Nagpur – 440 001 (M.S.)

Checked:  13/6/19

10. Submission of Bills :For 80% Payment.

- (i) GST complied Invoice enabling WCL to avail ITC on GST paid.
- (ii) Packing list in original giving details of bill of materials, if applicable.
- (iii) Consignment note / RR/ LR in original (if applicable).
- (iv) E-Way Bill (if applicable) as per the GST rules
- (v) Warranty / Guarantee certificate.
- (vi) Manufacturer's test certificate as per technical specification.
- (vii) Pre dispatch inspection certificates
- (viii) Performance Bank Guarantee
- (ix) Lowest Price Certificate and Undertaking as per Price Fall Certificate
- (x) Any other document indicated elsewhere in the order/technical specification.

For 20% payment:

Balance 20% payment shall be made after successful completion of erection, testing, commissioning and final acceptance of the equipment (along with the accessories) upon presentation of certificates from the Area GM/HOD(Tech) of WCL HQ to the effect that the equipment has been erected and commissioned to their entire satisfaction. However, if the equipment is not put to use by the project within 120 days from the date of receipt and acceptance at consignee's end, the balance 20% shall be released.

11. Guarantee/Warranty : You shall give a warranty of satisfactory operation and performance of the items supplied by you for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance of materials whichever is earlier, at the consignee end by WCL. You shall be responsible for any defects that they develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship and shall remedy such defects at his own cost when called upon to do so, If it become necessary for you to replace or renew any defective portion of the goods, such replacement or renewal should be made by you without any extra cost to WCL. Warranty replacement should be completed within one month from the date of claim. All cases of warranty will be decided on the basis of joint inspection of the failed item held between user representative and the manufacturer representative.

12. Security Deposit : You shall furnish a security deposit in the form of Demand Draft or Bank Guarantee of any scheduled bank as per format enclosed at Annexure 'C' for 10% value of the awarded contract(Landed value before ITC) Rs. 4,73,972.00 (Rs. Four Lakhs Seventy Three Thousand Nine Hundred Seventy Two Only) within 15 days time from the date of supply order. Security deposit money will be refunded to you within 30 days from the date of satisfactory execution of the contract. Security deposit may be converted into Performance Bank Guarantee (PBG) as per NIT provisions.

The bank guarantee issued by the banker of the firm shall be operational for all purposes at Nagpur branch (Maharashtra).

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

Name of beneficiary and details

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

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

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

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

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13. Performance Bank Guarantee : You shall furnish PBG as per enclosed format at Annexure 'C' valid for 18 months from the date of receipt and acceptance of the materials to cover the Guarantee / Warranty period for 10% of the order value of the equipment (along with accessories) i.e., FOR destination price of the materials on the order, i.e., for Rs. 4,73,972.00 (Rs. Four Lakhs Seventy Three Thousand Nine Hundred Seventy Two Only) to this office.

No payment will be made without submission of the confirmed performance bank Guarantee.

The Performance Bank Guarantee shall be released after receipt of satisfactory performance and no claim certificate from the user department.

The bank guarantee issued by the banker of the firm shall be operational for all purposes at Nagpur branch (Maharashtra).

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

Name of beneficiary and details

Name	Western Coalfields Ltd
Area	Head Quarter
Bank A/c No: / Cust ID of beneficiary/Address of the Bank	Current Account No. : 0059018053
	Cust.ID : 556096497

	ICICI Bank Ltd, Vishnu Vaibhav, 222, Palm Road, Civil Lines, Nagpur
IFSC code	ICIC0000059
Bank Manager Name & Ph no:	Hrushikesh Sakalkale Ph : +91-9923202096
BG Advising Message – 760COV / 767COV via SFMS	

Field Number	Particulars
7035	ICIC0000059
7037	WCL556096497

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

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

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

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

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

14. Liquidated Damages Clause :

In the event of failure to deliver the stores within the stipulated date / period in accordance with the samples and / or specifications mentioned in the supply order and in the event of breach of any of the terms and conditions mentioned in the supply order, Coal India Limited and / or its subsidiary Companies should have the right :-

Handwritten signature and date:
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- a. To recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% of the price of the store which successful tenderer has not been able to supply (for this purpose part of a unit supplied will not be considered) as aforesaid for each week or part of a week during which the delivery of such stores may be in Arrears limited to 10 %. Where felt necessary the limit of 10% can be increased to 15% at the discretion of Head of the Materials Management Division.
- b. To purchase from elsewhere, after due notice to the successful tenderer, on the account and at the risk of the defaulting supplier the stores not supplied or others of a similar description without canceling the supply order in respect of consignment not yet due for supply or
- c. To cancel the supply order or a portion thereof, and if so desired, to purchase the store at the risk and cost of the defaulting supplier and also-
- d. To extend the delivery period with or without imposition of Liquidated Damages as may be considered fit and proper. The penalty if imposed shall not be more than the agreed liquidated damages referred to clause a above.
- e. To forfeit security deposit in full or part.
- f. Whenever under the contract a sum of money is recoverable from and payable by the supplier, Western Coalfields Limited, shall be entitled to recover such sum by appropriating, in part or in whole by deducting any sum or which at any time thereafter, may become due to the successful tenderer in this or any other contract, with Western Coalfields Limited. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay to Western Coalfields Limited, on demand the remaining balance. The supplier shall not be entitled to any gain on any such purchase.

15. Risk Purchase Clause:

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

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

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

16. Price Certificate: You shall certify in your invoice in the following format;

As undertaken by you in your offer you have to certify on the supplies bill that *"we have not offered the same products at a price lower than that offered in the present bid in respect of any other ministry/ department of the Govt. of India or a PSU. In case we offer the lower prices for same items under similar terms within the validity of this offer to ministry/department of the Govt. of India or a PSU, we undertake to notify such reduction to the buyer and the same will also be applicable against this offer."*

17. PRICE FALL CLAUSE: You have undertaken in your offer that you have not supplied / is not supplying similar product/systems or subsystems at a price lower than that offer in the present bid in respect of any other Ministry/Department of Govt. of India or PSU and if found at any stage that similar product/systems or subsystems was supplied by the bidder to any other Ministry/Department of the Govt. of India or PSU at a lower price than that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in cost would be refunded by the bidder to buyer, if the contract has already been concluded. A certificate to this effect shall be submitted by you along with supply bill.

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18. Force Majeure Condition

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

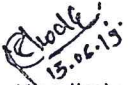
- a) The successful bidder will advise, in the event of his having to resort to this clause, by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the causes of the delay, within fifteen days of the occurrence and cessation of such force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

19. Jurisdiction: All disputes shall be subject to the jurisdiction of Nagpur court only.

20. General Terms and Conditions: This order shall also be governed by the General Terms and conditions of supply of stores attached as Annexure-B, unless and otherwise specified above.

This order is being placed on the basis of terms and conditions already accepted by you as per the NIT terms. You may acknowledge the receipt of this order within 15 days from the date of receipt of this order.

Yours faithfully


(S.P. Khodke)
Asst. Manager (MM)



(KSR Divakar)
Chief Manager(MM)

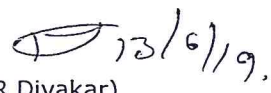
- Encl :** 1. Technical Specification. - Annexure - "A"
2. General Terms & Conditions of Supply of Stores- Annexure - "B"
3. Security Deposit /Performance Bank Guarantee format - Annexure - "C"

Budget Certification No. FAWCL/CAP/BC/OPM/12/19/40 dtd.10.06.2019 for Rs.47,39,728.00
Indent Ref: IND/17-18/4460/00836 (Indent reg. no C18901D004) of Majri Area

Copy to :

1. GM(E&M)HOD, / GM(Finance)I/C, WCL(HQ), Nagpur.
2. Depot Officer, Central Stores Tadali.
3. CGM(P&P), WCL(HQ), Majri Area.
4. SO(E&M) Majri Area
5. Sr. Manager (Finance)CB, WCL(HQ), Nagpur.
6. Chief Manager(Finance)Exp. , WCL(HQ), Nagpur
7. Sr. Manager(Cash/CP), WCL(HQ), Nagpur
8. GM(E&M)HOD, CMPDIL Ranchi - with a request to inspect the items as per Pre dispatch Inspection clause.
9. Sr. Manager(MM/Admn.), WCL(HQ), Nagpur - The total value of the order is Rs. 47,39,728.00


(S.P. Khodke)
Asst. Manager (MM)


(KSR Divakar)
Chief Manager(MM)

Technical Specification. - Annexure - "A"

Title/Head	Details (if any)
1.1-0-PUMP CONSTRUCTION MATERIAL	
a-Pump casing /body	SS, AISI 316
b-Impeller	-SS, AISI 316
c-Pump Shaft	-SS, AISI 316
d-Shaft sleeve	-SS, AISI 316
e-Neck Ring	- SS, AISI 316
f-Lantern Ring	-SS, AISI 316
g-Gland and bush	-SS, AISI 316
h- Foot valve, Sluice valve & Non-return valve	-SS, AISI 316
1.1.1-PUMP DETAILS TO BE INDICATED BY BIDDER :	
a-Make of the pump	MAXFLOW PUMPS INDIA PVT. LTD.,
b-Model of the pump	149 HPB5
c-Type of arrangement provided for neutralizing axial hydraulic thrust.	BALANCING VALVE
d-Efficiency at duty point	80 %
e-Maximum efficiency	80 %
f-Power in KW required at duty point	200 KW
g-Discharge at duty point	80 LPS
h-NPSHR at duty point	4.5 Mtrs
1.1.2-MOTOR DETAILS :	
a-Operating voltage system:	3.3 kV,3 ph,50 Hz
b-Kilo Watt Rating	240 kW(Min)
c-Motor RPM (Syn.)	1500 RPM
d-Type of starting	DOL
1.1.3-MOTOR DETAILS TO BE INDICATED BY BIDDER :	
a-Make of the motor	MARATHON / KIRLOSKAR
b-Starting & Full load current	600(+TOL.) & 52.2 AMPS
c-Full Load RPM	1487 RPM
d-Power factor & Efficiency at $\frac{1}{2}$, $\frac{3}{4}$ and full load	0.85/0.82/0.72 & 94.0/93.0/92.0
e-Temperature rise on continuous Operation in Stator and rotor	50 degree C
(i) In core by thermometer.	To be provide ^d at the time of supply
(ii) In winding by resistance	To be provide ^d at the time of supply
f-Pull out torque	220%
g-Insulation resistance.	To be provide ^d at the time of supply
1.1.4-STARTER DETAILS :	
a-Type of Starter	DOL
b-Voltage system	3.3 kV,3 ph,50 Hz
c-Kilo Watt Rating	250 kW (Min)
1.1.5-STARTER DETAILS TO BE INDICATED BY BIDDER :	
a-Starter make and Model	SAIT MINE LINES PVT. LTD./PRABHU
b-Make and Nominal current rating of contactors	To be provide ^d at the time of supply
c-Operating voltage of relay	To be provide ^d at the time of supply
1.1.6- STANDARDS TO BE CONFORMED	
a - Pumps	IS: 5120-1977
b- Motors	IS :325-1996

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c- Starters	IS : 12661-1988
2.0-DUTY PARAMETERS	
2.1-Application	Mine dewatering
2.2-Altitude of working site	300 M
2.3-Relative humidity	Upto 100%
2.4-Ambient temperature	50 deg.C.maximum
2.5-Sp. Gravity of liquid	1.03
2.6-Working Hrs./day	24 Hrs.
2.7-NPSHA	5.0 Mtrs
3.0-MANDATORY CONSIDERATIONS :	
a-Since the required pump is meant for mine dewatering application, the offered pumps should have wider operating head range with minimum variation in discharge, i.e. the pumps must have continuously descending H-Q curve.	
b-The shut off head of the pump should be 10% more than the duty point head.	
4.0-SCOPE OF SUPPLY: Each pump set will consists of	
a- Pump with accessories	1 Nos
b-Motor with coupling	1 Nos
c-Starter	1 Nos
d-Base plate fabricated from structural steel with coupling guard	1 Nos
e-Foot valve , suitable for suction of the pump	1 Nos
f- Seluice valve suitable for delivery size of the pump	1 Nos
g-Non Return Valve ,suitable for delivery size of the pump	1 Nos
5.0-PUMP DETAILS :	
5.1-Type	Centrifugal
5.2-RPM	1480 (Nominal) RPM
5.3-Impeller Dynamically balanced (Note : Drilling of holes on impeller for balancing the hydraulic axial thrust is not acceptable).	
5.4-Pump bearing	Deep groove ball / roller bearing/ Bush bearing..
5.5-Working life of bearing	Not less than 10,000 hrs.
5.6-Construction	SPLIT CASING
6.0-MOTOR SPECIFICATIONS	
6.1-Type of motor	Squirrel Cage Induction
6.2-Class of duty	CONTINUOUS
6.3-Class of insulation	Class 'F' with temperature rise limited to Class 'B'.
6.4-Winding material	Copper
6.5-Direction of rotation	Bi-directional
6.6-Shaft extension	Standard
6.7-Starting torque	120% of normal torque
6.8-No. of hot starts per hour	2
6.9-Type of enclosure	TEFC
6.10-Degree of protection of	IP 55
6.11-No. of earthing points	Two
6.12-Cable entry: Suitable for PVC DWA mining cable of required size	
6.13-Terminals:All winding leads shall be terminated in terminal box	
6.14-Type coupling (To be used with motor):Direct flexible coupling	

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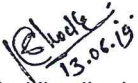
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6.15-Name Plate: Non fading type, properly secured till the life of the motor. In addition to the information as per IS:325, the name plate shall also carry the bearing details.	
6.16-Type of construction and mounting: Horizontal, Foot mounted	
7.0-STARTER SPECIFICATION :	
7.1-Degree of protection	IPH-6
7.2-Utilization category of Starter	AC-3
7.3-Type of enclosure	NFLP
7.4-CONSTRUCTION :	
a-Shall be in two compartments.	
b-One shall house through going bus bars and off load isolator.	
c-2nd compartment shall house contactors and protective devices.	
d-In case of auto transformer starter, the auto transformer shall also be accommodated in 2nd compartment and shall be accessible from rear side of the enclosure for maintenance.	
e-Door of 2nd compartment shall be interlocked with isolator in such a way that the door can be opened only when the isolator is in 'OFF' position.	
f-Cable terminal boxes with sealing boxes shall be provided for both incoming and out going terminals suitable for PVCDWA mining cables of required size.	
g-Through going terminals of bus bar shall be provided with bus trunking box with blanking cover.	
h-Mounting - Skid mounted	
7.5-BUS BAR & ISOLATOR :	
a- BUS BAR REQUIREMENT: Made of Electrolytic copper of cross section not less than 240 Sq.mm covered with heat shrunk PVC sleeves.	
b-ISOLATOR REQUIREMENT: Off load, triple pole reversing type	
c-Rating of Isolator	Not less than 300 A
7.6-CONTACTORS (ONLY Govt./Govt. test house tested make contactors shall be used) :	
a-Operation: Electromagnetic	
b-OPERATING LIMITS OF CONTACTOR: As per IS:13947 (Part 4/Sec.I)/IS:9046. However the drop out voltage shall not be more than 50% of rated control supply voltage	
NOMINAL CURRENT RATING OF CONTACTORS (FOR AC-3 DUTY): Not less than 2.0 times the full load current. Note : In case of star/delta starters, all the three contactors shall be of same rating.	
c-Type of contactor	Air break or vacuum break
7.7-PROTECTIONS :	
a-OVER LOAD PROTECTION: Thermal Over Load relay with. Range of current adjustment :	75% to 100%
b-E L protection Type of E.L. Relay. The relay shall be as per the relevant Indian Standard or IEC.:CBCT operated E.L. Relay	
c-Minimum value of leakage current (on primary) to operate	0.5 A – 2 A (Max.) in steps of 0.5 A
d-Time delay setting range for Earth leakage protection	0 – 1 Sec in steps or 0.1 Sec
e-Testing and resetting of the relay:By means of push buttons on front cover of the panel.	
f-Indication of E.L. trip:By means of indicating lamps on front cover.	
g-P.T. and coils of the relay:Epoxy resin sealed	

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h-Short circuit:Through back up HRC fuses	
i-Instruments:Amp. Meter of suitable range	
j-Printed circuit diagram:On a brass plate shall be affixed on inside the cover.	
8.0-PRE-DESPATCH INSPECTION & TESTS :	
8.1-The pump set will be inspected and tested by WCL's representative/third party inspection agency at manufacturer's works before dispatch of the equipment to ascertain the conformity of the pump set to order specifications, relevant ISS. The pump will be tested as per IS:9137-1978 and IS:5120.	
8.2-The manufacturer shall make available to the inspector, the required test facilities with necessary support for conducting the tests as per the ISSs and supply order.	
8.3-The manufacturer shall make available to the inspector the following during the inspection.	
(a) Copies of relevant ISSs.	
(b)Material test certificate of the pump.	
(c) All records of quality checks under QAP	
(d) Manufacturers test certificates for bought-out items.	
10.0-DOCUMENTS TO BE SUBMITTED WITH SUPPLY	
10.1-Dimensional drawing of offered pump indicating total weight in KG.	
10.2-Assly drawings of the offered model pumps showing all the parts.	
10.3-Characteristic curves of the offered pump at 1480 RPM between.	
(i) discharge Vs head	
(ii) discharge Vs KW absorbed	
(iii) discharge Vs efficiency	
(iv) discharge Vs NPSH	
10.4-Technical leaflets	
10.5-Material test certificate of the pump.	
10.6-Performance test report/pre-dispatch inspection report of the pump set.	
10.7-Installation, operation and maintenance instructions and spare parts catalogue.	
10.8- General arrangement drawing of the offered starter showing overall dimensions.	


 (Sachin Khodke)
 Asst. Manager(MM)


 (KSR Divakar)
 Chief Manager (MM)