

ODISHA CONSTRUCTION CORPORATION LTD.
(A GOVT. OF ODISHA UNDERTAKING)
CENTRAL WORKSHOP, RASULGARH,
BHUBANESWAR-751010 (ODISHA)

TENDER DOCUMENT FOR

“DESIGN, MANUFACTURING, SUPPLY, TRANSPORTATION, TESTING AND COMMISSIONING OF 12.5T CAPACITY MONORAIL CRANE FOR OPERATION OF HALADIA SPILLWAY STOPLOGS FOR SUBARNAREKHA IRRIGATION PROJECT AND 20T CAPACITY MONORAIL CRANE FOR OPERATION OF RIGHT BANK ADIT POINT OF HIRAKUD DAM”

The tender document comprises of the following:

- | | | |
|----|---|------------------|
| 1) | Tender call notice No.OCC/CWS/PROC/HDP-01/
22/21-22 dated.17.08.2021 | 01 (One) sheet |
| 2) | Terms and conditions | 04 (Four) sheets |
| 3) | Technical Specifications | 06 (Six) sheets |
| 4) | Price schedule | 01 (One) sheet |

Total : 12 (Twelve) sheets

Signature of the Tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

ODISHA CONSTRUCTION CORPORATION LTD.
(A GOVT. OF ODISHA UNDERTAKING)
CENTRAL WORKSHOP, RASULGARH,
BHUBANESWAR-751010 (ODISHA)

TENDER CALL NOTICE No. OCC/CWS/PROC/HDP-01/ 22 /21-22 Dated. 17.08.2021

Sealed tenders in conformity with the terms, conditions and specifications in tender documents are invited from reputed manufacturers / contractor for **“DESIGN, MANUFACTURING, SUPPLY, TRANSPORTATION, TESTING AND COMMISSIONING OF 12.5T CAPACITY MONORAIL CRANE FOR OPERATION OF HALADIA SPILLWAY STOPLOGS FOR SUBARNAREKHA IRRIGATION PROJECT AND 20T CAPACITY MONORAIL CRANE FOR OPERATION OF RIGHT BANK ADIT POINT OF HIRAKUD DAM”** as per details below:

Cost of tender document (Non-refundable)	Sale of tender document		Receipt & opening of technical bid & Price Schedule of tender
Rs. 6,000/- plus GST @ 18% Rs. 1080/- by hand & Rs. 7180/- by Regd. Post / courier	From 18.08.2021	To 02.09.2021 up to 1.00 P.M	Up to 3.30 PM & 4.00P.M. on 02.09.2021

The tender document can be purchased by the interested reputed manufacturers / contractor by hand from the office of the undersigned on deposit of cost of tender document i.e. **Rs. 6000/-** plus GST @ 18% amounting to **Rs.7080/-** in cash or in shape of A/c. payee demand draft drawn in favour of “Odisha Construction Corporation Limited- Project Account” on any Nationalised Bank/ Scheduled Bank payable at Bhubaneswar (Non-refundable) and production of attested copies of the following documents and verification thereof by the undersigned. The tender document can also be obtained by the interested reputed manufacturers / contractor by registered post, speed post/ courier on sending the cost of tender document i.e. **Rs.6000/-** plus GST @ 18% and postage charges of **Rs.100/-** amounting to **Rs.7180/-** in shape of A/c. payee demand draft drawn as stated above and attested copies of the following documents and verification thereof by the undersigned. The undersigned will not be responsible for any kind of delay by the postal/courier authorities.

1. Valid GST Registration certificate.
2. PAN Card.
3. Authorised distributorship/stockist/dealership certificate, if not a manufacturer.
4. Tenderer should submit format of Bid Security Declaration from Bidder in lieu of EMD.

The tender document can also be downloaded from our Website www.odishaconstruction.com or Govt. of Odisha website www.odishagov.nic.in to submit the tender (**Bidders are requested to visit our website regularly for any changes**). However, the cost of tender document i.e. **Rs.6000/-** plus GST @ 18% amounting to **Rs.7080/-** in shape of A/c payee demand draft as stated above in favour of “Odisha Construction Corporation Limited- Project Account” on any Nationalised Bank/ Scheduled Bank payable at Bhubaneswar (Non-refundable) along with attested photo copies of all above documents should be submitted while submitting the tender in Envelope-I. Otherwise, the tender will be cancelled. OCCL will not be responsible for missing of any page while downloading. If there will be a public holiday on the last date of sale of tender document and receipt & opening of the tender as specified above, the tender document will be sold and tender will be received & opened on the next working day at the same time and venue.

The SSI/NSIC/MSME units participating in tender are not entitled for exemption from payment of Tender Paper costs as communicated vide DOWR Letter No. IIM-24/2018-14318/WR dated 24.05.2018 & Head Office, OCCL Letter No.5502/OCC/CW-02/ 09(Vol-V)(WE) dated 30.05.2018.

The tenders will be opened in the presence of the tenderers or their authorised representatives. Tender through Fax / E-mail will not be accepted

The undersigned reserves the right to accept or reject any or all quotations without assigning any reason thereof.

Signature of the Tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

ODISHA CONSTRUCTION CORPORATION LTD.
(A GOVT. OF ODISHA UNDERTAKING)
CENTRAL WORKSHOP,RASULGARH,
BHUBANESWAR-751010 (ODISHA)

TERMS AND CONDITIONS OF TENDER FOR
“DESIGN, MANUFACTURING, SUPPLY, TRANSPORTATION, TESTING AND COMMISSIONING OF 12.5T
CAPACITY MONORAIL CRANE FOR OPERATION OF HALADIA SPILLWAY STOPLOGS FOR
SUBARNAREKHA IRRIGATION PROJECT AND 20T CAPACITY MONORAIL CRANE FOR OPERATION OF
RIGHT BANK ADIT POINT OF HIRAKUD DAM”

1. Reputed manufacturers / contractor having supplied and executed similar works of similar magnitude and satisfactorily accepted by the clients will be eligible to participate in the tender. The copies of purchase orders, credentials, certificates etc. in support of supply and execution of similar Crane and satisfactory completion thereof will be furnished along with the tender.
2. Tender should be submitted in two bid system in two separate sealed covers and both will be submitted in a single sealed outer cover subscribing in bold letters as **“DESIGN, MANUFACTURING, SUPPLY, TRANSPORTATION, TESTING AND COMMISSIONING OF 12.5T CAPACITY MONORAIL CRANE FOR OPERATION OF HALADIA SPILLWAY STOPLOGS FOR SUBARNAREKHA IRRIGATION PROJECT AND 20T CAPACITY MONORAIL CRANE FOR OPERATION OF RIGHT BANK ADIT POINT OF HIRAKUD DAM”** and also date of opening of tender. The name and address of the tenderer should not be written on outer cover. Only the name and address of the purchaser should be written on the outer cover.
3. i) The first envelope super scribing in bold letters as **“TECHNICAL BID”** should contain the following:
 - a. Attested copy of valid GST registration certificate. The tenderer will mention his GST Regn. No. in his tender clearly without, which the tender will not be taken into consideration.
 - b. Attested copy of PAN Card.
 - c. Attested copies of purchase orders, work orders, credentials, certificates in support of similar supply and satisfactory execution of the similar work on turnkey basis.
 - d. Complete tender document in original including terms and conditions, technical specifications but without price schedule duly signed on each page by the tenderer or his/their power of attorney holder. In case of power of attorney holder, an attested copy of power of attorney should be furnished.
- ii) Second envelope subscribing in bold letters **“PRICE SCHEDULE”** should contain price schedule format in original only duly filled in without leaving any column and line blank and signed on each page by the tenderer or his/their power of attorney holder.

Signature of the Tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

4. The tender document can be purchased by the interested reputed manufacturers / contractor by hand from the office of the undersigned from **18.08.2021** to **02.09.2021** (up to **1.00 PM**) during office hours on deposit of cost of tender document i.e. **Rs.6000/-** plus GST @ 18% amounting to **Rs.7080/-** in cash or in shape of A/c. payee demand draft drawn in favour of "Odisha Construction Corporation Limited- Project Account "on any Nationalized Bank/Scheduled Bank payable at Bhubaneswar (non-refundable) and production of attested copies of the following documents and verification thereof by the undersigned. The tender document can also be obtained by the interested reputed manufacturers / contractor by registered post/speed post/courier on sending the cost of tender document i.e. **Rs.6000/-** plus GST @ 18% plus postage charges of **Rs.100/-** amounting to **Rs.7180/-** in total in shape of A/c. payee demand draft drawn in favour of "Odisha Construction Corporation Limited - Project Account" on any Nationalized Bank/Scheduled Bank payable at Bhubaneswar (non-refundable) and sending attested copies of the following documents and verification thereof by the undersigned.
 1. Valid GST Registration certificate.
 2. PAN Card.
 3. Authorised distributorship/stockist/dealership certificate, if not a manufacturer.
 4. Tenderer should submit format of Bid Security Declaration from Bidder in lieu of EMD.
5. The tender document can also be downloaded from our Website www.odishaconstruction.com or Govt. of Odisha website www.odishagov.nic.in to submit the tender (**Bidders are requested to visit our website regularly for any changes**). However the cost of tender document i.e. **Rs.6000/-** plus GST @ 18% amounting to **Rs.7080/-** in cash or in shape of A/c. payee demand draft as stated above in favour of "Odisha Construction Corporation Limited - Project Account" on any Nationalized Bank/ Scheduled Bank payable at Bhubaneswar (non-refundable) along with attested photo copies of all the above documents should be submitted, while submitting tender in Envelope-I, otherwise, the tender will be cancelled. OCCL will not be responsible for missing of any page while downloading.
6. If there will be a public holiday on the last date of sale of tender document and receipt & opening of the tenders as specified above, the tender document will be sold and tenders will be received & opened on the next working day at the same time and venue.
7. The undersigned will not be responsible for any kind of delay in receipt of tenders by the postal/courier authorities.
8. The **TECHNICAL BID & PRICE SCHEDULE BID** will be opened on **02.09.2021** at **4.00 PM**. Then the documents in the first envelope submitted by the tenderers will be scrutinized preliminarily on the spot. The second envelope of the valid eligible tenders after preliminary scrutiny of the documents in the first envelope will be opened on the same day immediately subject to fulfilling the requirements mentioned in the tender schedule.
9. The monorail cranes and accessories should strictly confirm to relevant I.S: specifications as per technical specification enclosed and make of the different components should be mentioned in offer. The tenderer shall furnish technical specification and clearance diagram along with the offer.
10. The successful bidder shall have to furnish detailed design & drawings of the monorail hoists for acceptance of OCCL. Work order for the monorail hoist shall be placed only after acceptance of design & drawings.

Signature of the Tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

11. Manufacturer's test certificate for independent components shall be provided by the successful tenderer along with supply. Inspection and testing of the components shall be made by the purchaser's representative before despatch and the materials shall be despatched after getting written confirmation of purchaser.
12. Pre-delivery inspection (P.D.I) before despatch of the equipments will be made at the manufacturer's works by the authorized representative of the purchaser for which the manufacturer should intimate in writing for P.D.I. 10 days in advance regarding readiness for P.D.I.
13. The monorail cranes and its accessories will be guaranteed against any defect/ bad works for a period of 18 months from the date of testing & commissioning at workshop. Guarantee certificate in this regard will accompany with supply. In case of any defects found within the guarantee period, the same will have to be replaced free of cost by the supplier.
14. The successful tenderer will have to furnish a performance bank guarantee (B.G) for 10% gross value of the supply items within 30 days from the date of issue of purchase order, failing which the EMD shall be forfeited. The performance bank guarantee should be valid for a period of 18 months from the date of supply and shall be released after completion of the guarantee period.
15. The purchaser reserves the right to forfeit and encash the performance bank guarantee in full in case any item is found defective and not replaced by the tenderer/supplier within a suitable time fixed by the purchaser.
16. Bidders are requested to quote the rate for delivery of the monorail hoist at Central Workshop, OCC Ltd, Rasulgarh, Bhubaneswar-10 indicating separately basic price, packing, forwarding, transportation, transit insurance, handling charges, GST etc. in the original format.
The monorail hoist assembly shall be transported by OCCL to the site of erection i.e. at Hirakud Dam site, Sambalpur & Haladia Spillway site, Mayurbhanj around 640 KM away from Central Workshop, Rasulgarh at the cost of OCCL. However the bidder shall test & commission the unit at the site with all tools & tackles, handling equipments if required at his own cost & the rate should be quoted accordingly.
17. The tenderer should quote appropriate GST with the offer.
18. The rates and amounts should be quoted both in figures and words in the price schedule format. Any correction or overwriting in the specification and price schedule should be duly certified by the tenderer or his power of attorney holder. In case of any mismatch in figures and words, the rates in words will be considered. In case of any mismatch in rates and amount, the rate will be considered.
19. A) For item No.1 & 2 of the price schedule, 80% payment shall be released on supply of the monorail hoist at Central Workshop, Rasulgarh within 30 (thirty) days after receipt, verification and acceptance of the complete equipment along with bill in duplicate, test certificate, guarantee certificate and other documents. Balance 20% shall be released after 18 months from the date of supply or else within 30 (thirty) days from receipt of bank guarantee of equal amount from a nationalized / scheduled bank in the form of bank guarantee in accordance with the proforma attached herewith.

B) For item No.1 & 2 of the price schedule, 100% payment shall be made after successful testing & commission of the monorail hoist at site after due verification and certification of the site in-charge of OCCL.
20. The lowest price shall be calculated considering cumulative price of A & B for each item (i.e., 1 & 2) of the price bid.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

21. Price escalation will not be allowed under any circumstances. The quoted rates should be firm till execution of the entire work.
22. The validity of the offer should be for a period of 120 days from the date of opening of the bid.
23. The monorail cranes with accessories completed in every respect is to be supplied and erected by the successful tenderer within 60 days from the date of issue of the purchase order and work order, failing which the order is liable for cancellation without assigning any reason thereof by the purchaser. In case of cancellation of the order the EMD will be forfeited.
24. Conditional offers with deviations will not be accepted. Those, who do not agree to the terms and conditions regarding payments, delivery and others, need not quote.
25. The authority reserves the right to accept/reject any or all tenders without assigning any reason thereof.
26. Tender through fax / E-mail will not be accepted.
27. Any dispute arising out of this tender or order thereof is to be settled in proper court under the jurisdiction of Odisha High Court at Cuttack or courts under the jurisdiction of Odisha High Court at Bhubaneswar only.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

**TECHNICAL SPECIFICATIONS FOR
12.5T CAPACITY MONORAIL CRANE FOR OPERATION
OF HALADIA SPILLWAY STOPLOGS FOR SUBARNAREKHA IRRIGATION PROJECT**

a) **GENERAL:**

The reputed manufacturers / contractor shall provide the electrically operated monorail crane of 12.5 Ton capacity complete in every respect that would be required for satisfactory operation of the crane for performing duties.

Suitable steel structure has been erected to hold the monorail girder for the entire length of travel for the crane. The reputed manufacturers / contractor shall quote for design, fabrication, transportation, testing and commissioning at site of monorail crane hoist and accessories. The crane shall be designed to raise and lower the load for the total lift specified. The monorail crane shall be operated from Barrage top with the help of pendant push button station.

HOIST DATA

Hoist capacity	-	12.5 T.
Lift of crane	-	8.6 m.
Lifting speed	-	1.5 m/Min.
Travel speed	-	3.0 m/Min.
Length of Travel	-	55 m.
Design standard	-	IS: 3938.

b) **REQUIREMENTS:**

The reputed manufacturers / contractor shall quote for the monorail cranes with pendant push button arrangement must be suitable to move on rail girder for the required length of travel as per relevant Indian Standard Specification or equivalent or equivalent International Standard.

The monorail crane shall be out door duty type. Hence necessary protection shall be provided for Motor, brakes, limit switches, control panels etc. against outside weather, rain etc. and such conditions as they have to work in.

The gear train and control gears shall be attached to side plates and to be used in a fiber glass or any other suitable material covers. The runners wheels shall be of cast iron or cast steel mounted on ball bearings. The hoist brake shall be of Electro-magnetic type designed and built to arrest and hold safely the full load capacity of the hoist.

All gears shall be of machine cut spur type made from high grade cast steel and designed as per IS:4460. The gear shall run in a totally enclosed oil bath, gear box giving positive and constant splash lubrication to all gear parts and bearings. The gears should be easily accessible by removing few bolts from a light but strong gear cover.

The diameter of rope drum shall not be less than 20 times the diameter of rope and the length of drum shall be suitable for total lift specified. The length of rope drum will be such that each lead of rope has minimum of two full turns on the drum when the hook is in the lowest position and one spare groove when the hook is in the highest position. Normal breaking strength shall be allowed for the selection of rope size with appropriate safety factor of not less than six for normal operating condition. The rope fall / arrangements shall be such that rope shall not bundle up together causing rope jam when the hook at its lowest point with or without load. The wire rope shall conform to IS:2266.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

c) **LIMIT SWITCHES:**

Suitable limit switches shall be provided to limit each operation of the crane to the predetermined zone of operation. The limit switches shall be totally enclosed, quick break, automatic reset type and suitable for satisfactory operation under humid climatic conditions.

d) **SHEAVES AND BLOCK:**

Bottom blocks shall also be of suitable type. The sheaves in block shall be totally enclosed with proper cut to guide the ropes. These sheaves shall be supported on suitable heavy duty bearings. The load hook shall be of forged high tensile steel supported on thrust bearings so that the hook may freely swing. The hook shall be designed as per IS: 3815 with positive locking device to prevent accidental unhooking. The locking device shall be such that this will allow entry of a 100mm. diameter lifting pin and also lock effectively.

e) **CONTROL EQUIPMENT:**

Control shall be heavy duty magnetic reversible controller or any other such suitable and reliable control arrangement.

The manufacturer shall be responsible for the supply of all accessories and control necessary for the satisfactory operation of the crane. The power to the crab shall be supplied through flexible trailer cables which shall be supported in loops from bearing mounted trolleys running along a track parallel to the crab travel. The movement of the cable supporting trolleys shall be made independent of the cable by means of inter-linked chain or wire rope. The quotation shall include the complete power supply system to the crane including 'T' track for the entire length of the travel. Only copper cables shall be used in the entire equipment. All cable shall be protected against mechanical damage wherever necessary. The connection / support of the cable supporting 'T' track with the monorail girder shall be made by the purchaser as per drawing furnished by the supplier. The pendant switch shall be capable of withstanding rough handling without being damaged and the covers shall be supported independent of the electric cable by means of chain or wire rope. The manufacturer shall be mechanically or electrically interlocked. Push button control voltage shall be not more than 110 volts for AC. The push buttons shall be spring loaded. The push button station shall be clearly marked for function of each button i.e. "OFF / ON", Hoisting – "UP", "DOWN .", Crab Travel- "LEFT", "RIGHT". Indicating lamps shall also be provided to indicate operation of each push button. The pendant unit shall be fully protected from climatic weather condition.

f) **MONORAIL:**

The monorail girder for crane is a I-Section of depth of 0.8 m flange width 0.250 m and thickness 0.025 m approximately. The detail drawing will be submitted at the time of final specification. The crane manufacture has to co-ordinate with purchaser before manufacture of the crane for its suitability.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

- g) **ELECTRICAL EQUIPMENT:**
All electrical items such as motor conductors, switches shall be as per relevant Indian Standard specifications.
The hoist and crane travel motors shall be of 40% CDF, 150 starts per hour crane duty type suitable for outdoor climatic conditions and from reputed manufacturers such as Siemens, G.E.C., N.G.E.F., Crompton Greaves & Kirloskar. Motor chosen shall have rated speed not more than 1000 R.P.M. The motors shall have minimum Class 'B' insulation and IP-55 protection. Motor rating and enclosure should be as per IS:325-1978.
- h) **BRAKE:**
Electro-mechanical brakes shall be provided for both Hoist and Crane Travel motion. The brake shall apply automatically when the power supply fails or from the respective motors and shall be electrically released when the current is applied to the motor.
The brake shall be effective in both direction of motion and shall be capable of overcoming at least 150% of the full load torque exerted by the motor. The brake shall be continuous rated.
- i) **ACCESSORIES:**
All works, materials and service not expressly called for in these specifications but which are necessary for complete and proper operation of the crane shall be performed and furnished by the manufacturer at no extra cost to the purchaser.
- j) **BOUNDARY REQUIREMENTS :**
The head room i.e. bottom of monorail girder to center of hook at its max. Lifted condition shall not exceed 1200mm. The crab outstand beyond the Monorail axis and below bottom flange shall not exceed 600 mm and 350 mm above the bottom flange in downstream side and upstream side so as to provide minimum clearance with the supporting columns during its travel.
- k) **TESTS:**
The crane shall be tested in accordance with IS: 3938 at the manufacturer's premises at his cost and the test certificates shall be furnished by the manufacturer. The hoist shall be tested with 125% safe working load and shall be capable of lifting the test load from mid air. The tests shall be conducted in presence of the representative of the purchaser.
- l) **OTHER REQUIREMENTS:**
The reputed manufacturers / contractor shall furnish technical specifications and drawings indicating overall dimensions and operating parameters of the crane, detail dimension of the bottom sheave block & hook and particulars of the major components such as Rope, Motor, Brake etc. supported by design calculations along with the offer. The reputed manufacturers / contractor shall also furnish the list of clients with details of similar hoist supplied during last ten years along with the offer. For any more clarification, the reputed manufacturers / contractor may contact the undersigned before quoting their offer.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

TECHNICAL SPECIFICATIONS FOR 20T CAPACITY MONORAIL CRANE FOR OPERATION OF RIGHT BANK ADIT POINT OF HIRAKUD DAM

a) GENERAL:

The reputed manufacturers / contractor shall provide the electrically operated monorail crane of 20 Ton capacity complete in every respect that would be required for satisfactory operation of the crane for performing duties.

Suitable steel structure has been erected to hold the monorail girder for the entire length of travel for the crane. The reputed manufacturers / contractor shall quote for design, fabrication, transportation, testing and commissioning at site of monorail crane hoist and accessories. The crane shall be designed to raise and lower the load for the total lift specified. The monorail crane shall be operated from Dam top with the help of pendant push button station.

HOIST DATA

Hoist capacity	-	20 T.
Lift of crane	-	6.5 m.
Lifting speed	-	1.5 m/Min.
Travel speed	-	3.0 m/Min.
Length of Travel	-	6.4 m.
Design standard	-	IS: 3938.

b) REQUIREMENTS:

The reputed manufacturers / contractor shall quote for the monorail cranes with pendant push button arrangement must be suitable to move on rail girder for the required length of travel as per relevant Indian Standard Specification or equivalent or equivalent International Standard.

The monorail crane shall be out door duty type. Hence necessary protection shall be provided for Motor, brakes, limit switches, control panels etc. against outside weather, rain etc. and such conditions as they have to work in.

The gear train and control gears shall be attached to side plates and to be used in a fiber glass or any other suitable material covers. The runners wheels shall be of cast iron or cast steel mounted on ball bearings. The hoist brake shall be of Electro-magnetic type designed and built to arrest and hold safely the full load capacity of the hoist.

All gears shall be of machine cut spur type made from high grade cast steel and designed as per IS:4460. The gear shall run in a totally enclosed oil bath, gear box giving positive and constant splash lubrication to all gear parts and bearings. The gears should be easily accessible by removing few bolts from a light but strong gear cover.

The diameter of rope drum shall not be less than 20 times the diameter of rope and the length of drum shall be suitable for total lift specified. The length of rope drum will be such that each lead of rope has minimum of two full turns on the drum when the hook is in the lowest position and one spare groove when the hook is in the highest position. Normal breaking strength shall be allowed for the selection of rope size with appropriate safety factor of nor less than six for normal operating condition. The rope fall / arrangements shall be such that rope shall not bundle up together causing rope jam when the hook at it's lowest point with or without load. The wire rope shall confirm to IS:2266.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

c) LIMIT SWITCHES:

Suitable limit switches shall be provided to limit each operation of the crane to the predetermined zone of operation. The limit switches shall be totally enclosed, quick break, automatic reset type and suitable for satisfactory operation under humid climatic conditions.

d) SHEAVES AND BLOCK:

Bottom blocks shall also be of suitable type. The sheaves in block shall be totally enclosed with proper cut to guide the ropes. These sheaves shall be supported on suitable heavy duty bearings. The load hook shall be of forged high tensile steel supported on thrust bearings so that the hook may freely swing. The hook shall be designed as per IS: 3815 with positive locking device to prevent accidental unhooking. The locking device shall be such that this will allow entry of a 50 mm. diameter lifting pin and also lock effectively.

e) CONTROL EQUIPMENT:

Control shall be heavy duty magnetic reversible controller or any other such suitable and reliable control arrangement.

The manufacturer shall be responsible for the supply of all accessories and control necessary for the satisfactory operation of the crane. The power to the crab shall be supplied through flexible trailer cables which shall be supported in loops from bearing mounted trolleys running along a track parallel to the crab travel. The movement of the cable supporting trolleys shall be made independent of the cable by means of inter-linked chain or wire rope. The quotation shall include the complete power supply system to the crane including 'T' track for the entire length of the travel. Only copper cables shall be used in the entire equipment. All cable shall be protected against mechanical damage wherever necessary. The connection / support of the cable supporting 'T' track with the monorail girder shall be made by the purchaser as per drawing furnished by the supplier. The pendant switch shall be capable of withstanding rough handling without being damaged and the covers shall be supported independent of the electric cable by means of chain or wire rope. The manufacturer shall be mechanically or electrically interlocked. Push button control voltage shall be not more than 110 volts for AC. The push buttons shall be spring loaded. The push button station shall be clearly marked for function of each button i.e. "OFF / ON", Hoisting – "UP", "DOWN", Crab Travel- "LEFT", "RIGHT". Indicating lamps shall also be provided to indicate operation of each push button. The pendant unit shall be fully protected from climatic weather condition.

f) MONORAIL:

The monorail girder for crane is fabricated I-Section of depth of 0.75 m, flange width 0.25 m and thickness of flange is 0.025 m and web thickness 0.016m . A cover plate of 0.016 m thickness & width 0.23 mtr. is provided in the bottom flange throughout its travelling length. The crane manufacture has to co-ordinate with purchaser before manufacture of the crane for its suitability.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

g) ELECTRICAL EQUIPMENT:

All electrical items such as motor conductors, switches shall be as per relevant Indian Standard specifications.

The hoist and crane travel motors shall be of 40% CDF, 150 starts per hour crane duty type suitable for outdoor climatic conditions and from reputed manufacturers such as Siemens, G.E.C., N.G.E.F., Crompton Greaves & Kirloskar. Motor chosen shall have rated speed not more than 1000 R.P.M. The motors shall have minimum Class 'B' insulation and IP-55 protection. Motor rating and enclosure should be as per IS:325-1978.

h) BRAKE:

Electro-mechanical brakes shall be provided for both Hoist and Crane Travel motion. The brake shall apply automatically when the power supply fails or from the respective motors and shall be electrically released when the current is applied to the motor.

The brake shall be effective in both direction of motion and shall be capable of overcoming at least 150% of the full load torque exerted by the motor. The brake shall be continuous rated.

i) ACCESSORIES:

All works, materials and service not expressly called for in these specifications but which are necessary for complete and proper operation of the crane shall be performed and furnished by the manufacturer at no extra cost to the purchaser.

j) BOUNDARY REQUIREMENTS :

The head room i.e. bottom of monorail girder to center of hook at its max. Lifted condition shall not exceed 2000 mm. The crab outstand beyond the Monorail axis from the bottom flange shall be provided such that it will not exceed the clearance between the monorail and column structure as provided in the drawing and maintain its stability on the monorail.

k) TESTS:

The crane shall be tested in accordance with IS: 3938 at the manufacturer's premises at his cost and the test certificates shall be furnished by the manufacturer. The hoist shall be tested with 125% safe working load and shall be capable of lifting the test load from mid air. The tests shall be conducted in presence of the representative of the purchaser.

l) OTHER REQUIREMENTS:

The reputed manufacturers / contractor shall furnish technical specifications and drawings indicating overall dimensions and operating parameters of the crane, detail dimension of the bottom sheave block & hook and particulars of the major components such as Rope, Motor, Brake etc. supported by design calculations along with the offer. The reputed manufacturers / contractor shall also furnish the list of clients with details of similar hoist supplied during last ten years along with the offer. For any more clarification, the reputed manufacturers / contractor may contact the undersigned before quoting their offer.

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010

ODISHA CONSTRUCTION CORPORATION LTD.

(A GOVT. OF ODISHA UNDERTAKING)

CENTRAL WORKSHOP, RASULGARH,

BHUBANESWAR-751010 (ODISHA)

PRICE SCHEDULE FOR

“DESIGN, MANUFACTURING, SUPPLY, TRANSPORTATION, TESTING AND COMMISSIONING OF 12.5T CAPACITY MONORAIL CRANE FOR OPERATION OF HALADIA SPILLWAY STOPLOGS FOR SUBARNAREKHA IRRIGATION PROJECT AND 20T CAPACITY MONORAIL CRANE FOR OPERATION OF RIGHT BANK ADIT POINT OF HIRAKUD DAM”

VIDE TENDER CALL NOTICE No.OCC/CWS/PROC/HDP-01/ 22 / 2021-22 Dated. 17.08.2021 DUE ON 02.09.2021.

Sl. No	Description	Quantity	Rate per each set in Rupees			Total amount in	
			Basic price per set	Packing, forwarding, transportation, Transit Insurance & handling charges	GST as applicable	In figures	In words
1 SUBARNAREKHA IRRIGATION PROJECT							
A	Design, manufacturing, supply, transportation of 12.5 Ton capacity monorail crane hoist and accessories to operate Haladia spillway stoplogs for Subarnarekha Irrigation Project as per details technical specifications, terms and conditions enclosed (For materials).	01 set (One)					
B	Testing and commissioning charges at sites	01 set(One)					
2 HIRAKUD DAM							
A	Design, manufacturing, supply, transportation of 20 Ton capacity monorail crane hoist and accessories to operate Right bank Adit Point of Hirakud Dam as per details technical specifications, terms and conditions enclosed (For materials).	01 set (One)					
B	Testing and commissioning charges at site	01 set (One)					

Signature of the tenderer or his/their
Power of attorney holder
with designation & seal.

Senior Manager (Mech.)-I
OCC Ltd, Central Workshop,
Rasulgarh, Bhubaneswar-751010