

o/c

SO no: 11000112518010 dt 15.05.2018; M/s BTL EPC Ltd



WESTERN COALFIELDS LIMITED
 (A SUBSISIARY OF Coal India Limited)
 CIN U10100MH1975GOI018626

MATERIALS MANAGEMENT WING, COAL ESTATE, CIVIL LINES,
NAGPUR - 440 001.

PHONE : PBX : 0712-2611381, 2510691 Extn : 5606, 5861, Fax : 0712-2510284

Supply Order no: 11000112518010

Dated: 15.05.2018

SUPPLY ORDER

To

M/s BTL EPC Ltd
2, Jessore Road, Dum Dum, Kolkata 700 028

Vendor Code : 129091
Vendor Category: Manufacturer
Email: bndas@shrachi.com, enquiry@shrachi.com

Dear Sir,

Sub: Formal Order for supply of Troughed Belt Conveyor complete with electrical and structure 1000mm x 600 mtr x 120 kw x 2 for Nehariya mine

- Ref: 1. WCL's Tender no WCL_hq-pur-sp:e028-2017-18 (Tender id: 2016_WCL_51838_1), opened on 21.11.2016
2. Your bid no 150631
 3. Your letter no BTL/EPC/WCL_e075/CD/17/2343/3109 dt 19.05.2017
Your letter no BTL/EPC/WCL_e075/CD/17/3915 dt 05.09.2017
 4. Your letter no BTL/EPC/WCL_e075/CD/17/4195 dt 18.10.2017
 5. Your letter no BTL/EPC/WCL_e075/CD/17/4514 dt 01.12.2017
 6. Our letter no NGP/WCL/MMW/17-18/Belt Conv/e075/1909 dt 15/16.02.2018
 7. Your Anti Profiteering Declaration submitted duly certified by CA by you vide letter no BTL/EPC/MH-2307WCL_e075/DOC/5197 dt 05.03.2018
 8. Your letter no BTL/EPC/MH-2307/WCL_e075/VE/18/5370 dt 03.04.2018
 9. Your letter no BTL/EPC/MH-2307WCL_e075/VE/18 dt 11.05.2018

With reference to above, we are pleased to place Formal Order on you for the supply of Troughed Belt Conveyor complete with electrical and structure 1000mm x 600 mtr x 120 kw x 2 for Nehariya mine, at the rates and as per terms and conditions stipulated below and general terms and conditions enclosed:-

NIT s.no	Description	Qty	Unit basic rate (Rs.)	Extended value (Rs.)
3	Supply of Troughed Belt Conveyor complete with electrical & structure 1000mm x 600 mtr x 120 kw x 2 for Nehariya mine of Pench area as per Technical specifications enclosed as Annexure A	1 set	77,40,156.00	77,40,156.00
	Freight charges			2,10,666.00
	Sub-total of Equipment + Freight charges			79,54,822.00
	GST @ 18% on equipment & freight charges			14,31,867.96
	Total value of equipment before ITC on GST			93,86,689.96
	Pre-despatch inspection charges (1% on FOR destination value)			93,866.90
	Total value of value of equipment including Pre-despatch inspection charges before ITC on GST			94,80,556.86

Total Value: Rs.94,80,556.86 (Ninety four lakhs eighty thousand five hundred fifty six and eighty six paisa only).

Other Terms and conditions :

1. Prices: The above prices are FIRM on F.O.R. destination basis inclusive of Packing, forwarding & Insurance charges. However, for FOR destination delivery freight charges upto destination shall be paid extra at actual against documentary evidence subject to a ceiling of Rs.2,10,666.00. Safe arrival of the consignment shall be your responsibility.

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2. GST: GST shall be paid at actual against documentary evidence as applicable at the time of Dispatch within the stipulated delivery period. The current rate of GST on materials, Installation and Commissioning charges is 18%. Input Tax Credit on GST shall be availed by the consignee, for which you shall submit GST compliant Invoice as per GST provision along with the supplies.

3. Security Deposit: You shall furnish the security deposit amount in the form of Demand Draft or Bank Guarantee of any scheduled bank for 10% (ten percent) value of the awarded contract i.e. for Rs. 9,48,056.00 (Rupees nine lakhs forty eight thousand fifty six only), within 15 days time from the date of supply order to this office. The Bank Guarantee issued by the banker of the firm shall be operational for all purposes at Nagpur branch (Maharashtra). The banker of the firm shall issue Bank Guarantee on SFMS (Structured Finance Message Service) platform. The security deposit may be covered into performance bank guarantee as per NIT provisions. However in such case the validity of bank guarantee to be as per PBG clause and your request must be specific for the said conversion.

4. GUARANTEE / WARRANTY: You shall warrant that the equipment to be supplied under the contract (a) is new, unused and are of the current design not likely to be discontinued or become obsolete within the life span of the equipment (b) is in accordance with the contract specifications (c) shall have no defects arising out of design, materials or workmanship (d) shall perform the functions (for which it is designed) satisfactorily (e) to keep and supply essential spares at free of cost, which are required during warranty at site to reduce down time. The Guarantee / Warranty shall be valid for a period of 12 months from the date of commissioning of the equipment or 18 months from the date of receipt of the equipment at consignee's premises, whichever is earlier. Complete roller shall also be guarantee for a working life not less than 15000 hours.

5. Performance Bank Guarantee: You will have to furnish performance bank guarantee for satisfactory operation and performance valid for 18 months from the date of supply of equipment, equivalent to 10% of the value of the contract including GST to the FOR destination price of the equipment on order for Rs.9,48,056.00 (Rupees nine lakhs forty eight thousand fifty six only), covering the warranty period. The Bank Guarantee shall be released after successful completion of the guarantee / Warranty period after confirmation from GM(E&M) HOD, WCL Hq. Any short fall of performance availability, deduction shall be made as per technical specification. The PBG must be submitted within 15 days from the date of receipt and acceptance of the equipment. No payment shall be made without submission of PBG.

The banker of the firm shall issue Bank Guarantee on SFMS (Structured Finance Message Service) platform. The beneficiary details are as under:

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".

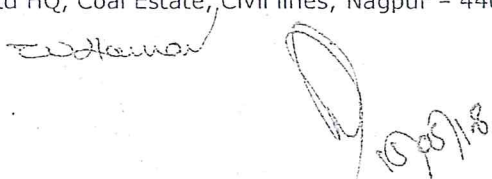
The details of beneficiary for issue of BG under SFMS platform is furnished below:

Name of beneficiary and details	
Name	Western Coalfields Ltd
Area	Head Quarter
Bank A/c No: / Cust ID	Current Account no: 005905018053 Customer id: 556096497 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

BG advising message - 760COV / 767 COV via SFMS

Field number	Particulars
7035	ICICI0000059
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 /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.

6. Inspection: a. Pre-despatch Inspection: The belt conveyor will be inspected by CMPDIL at manufacturer's works before despatch of the equipment to ascertain the conformity of the conveyors to supply order specifications, relevant ISS, and type test certificates.

The inspection fee as applicable at the time of inspection (presently @ 1% on the FOR destination price, inclusive of all charges & GST) shall be initially paid by you to the inspecting agency, which shall be subsequently reimbursed by the paying authority to you along with the payment against documentary evidence. Minimum 10 days advance notice shall be given by the vendor to the inspecting agency to carry out Pre-despatch inspection. Necessary tools and tackles etc to carry out pre despatch inspection shall be provided by the vendor. IN case of any defect in the material supplied is noticed later, pre-despatch inspection shall not entitle the vendor to plead that inspection has been done by WCL before despatch and shall not absolve the vendor from the contractual obligation.

b. Final Inspection : Final Inspection of the equipment and materials supplied shall be carried out at the site by SO(E&M) of the Area concerned and the same shall be final. The stores found defective or not in accordance with the supply order specifications will be rejected and intimated, for free replacement within 30 days from the date of intimation.

7. Payment Terms: Payment for 80% value of the equipment and accessories and 100% GST and other charges shall be made within 21 days of receipt and acceptance of the materials at site by the consignee or from the date of submission of the 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 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 of at consignee's end, the balance 20% shall be released.

8. Delivery: Delivery of the complete equipment to be completed, within six months from date of supply order, which shall be reckoned from 7th day of the order date.

9. Consignee & Allocation:-

Project	Area	POSTAL ADDRESS OF THE CONSIGNEE
Nehariya	Pench	The Depot Officer, Regional Stores, Western Coalfields Limited, Pench area, PO: Chandameta, Dist. Chindwara (M.P.) Pin: 480447

10. Paying Authority: General Manager (Fin.), Western Coalfields Limited, Coal Estate, Civil Lines, Nagpur-1

11. EFT Details :-

Name of the Payee	BTL EPC LTD
Name of the Bank, Branch & Location	State Bank of India, RIM-IV, Commercial, 24, Park Street, Kolkata 700016
Account Number, Nature of Account	30997439620, Cash / Credit
IFSC Code	SBIN0007503

12. Mode of dispatch: All the stores surely packed are to be dispatched by road transport to the consignee on Freight paid basis.

13. Liquidated Damages clause :- In the event of failure to deliver or dispatch the stores within the stipulated date / period in accordance with the specification mentioned in the supply order, and in event of breach of any terms and conditions mentioned in the supply order, WCL shall have the right,

- To recover from the successful bidder as agreed liquidated damages, a sum not less than 0.5%(half percent) of the price of any stores which successful bidder has not been able to supply as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears limited to 10% can be increased to 15% at the discretion of Head of MM division.
- To purchase elsewhere, after due notice to the successful bidder 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 the consignment not yet due for supply, or
- To cancel the supply order or a portion thereof, and if so desired to purchase the stores at the risk and cost of the defaulting supplier and also-

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- d. To extend the period of delivery with or without penalty as may be considered fit and proper, the penalty, if imposed shall not be more than the agreed Liquidated Damages referred to in clause (a) above.
- e. To forfeit the security deposit full or in part.
- f. Whenever under this contract a sum of money is recoverable from any payable by the supplier, Coal India Limited and its subsidiary companies shall be entitled to recover such sum by appropriating, in part or in whole by deducting any sum from any other contract should this sum be not sufficient to cover the full amount recoverable. The successful bidder shall pay Coal India Limited and its subsidiary companies on demand the remaining balance. The supplier shall not be entitled to any gain on any such purchase.

14. SUBMISSION OF BILLS:

For Claiming 80% Payment for Equipment & 100% payment for Spares :

- a. For claiming payment, following documents are to be submitted along with original bills as per terms of the supply order to the consignee.
- (i) Pre-receipted and stamped Invoice in compliance with GST Act 2017
- (ii) Packing list in original list giving details of bill of materials, if applicable.
- (iii) Consignment note / RR/ LR in original.
- (iv) Warranty / Guarantee certificate, if applicable.
- (v) Manufacturer's test certificate, if applicable.
- (vi) DGMS / BIS / Pre dispatch inspection certificates / any other document indicated else where in the order, if required as per the contract.
- b. For Claiming 20% payment of Equipment :
- (i) Pre-receipted and stamped Invoice for 20%.
- (ii) Commissioning Certificate from respective AGM of Areas or his authorized Representative.

15. Force Majeure Clause: 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, floods, acts of nature or 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 consider to be justified by the circumstances of the case and its decision shall be final. If and when additional time is granted by Western Coalfields Limited, the contract / supply order shall be read and understood as if it had contained from its inception the delivery date as extended.

16. Manufacturing certificate: As the order is being placed on the basis of consideration that you are a manufacturer of the ordered material, you will have to provide a certificate to the following effect on the body of each bill.
"Certified that the items supplied and included in this bill/ invoice are our own make and have been actually manufactured in pur works situated at _____ (address of the factory)

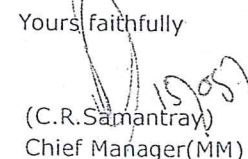
17. Price Certificate: You have undertaken in your offer that you have not offered the same products at a price lower than that offered in the present bid in respect of any other ministry/ department of the Govt. of India or a PSU. In case you offer the lower prices for same items under similar terms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

18. Integrity Pact : Integrity Pact as per format (Annexure F of the NIT) signed and furnished by you along with the offer shall remain valid and applicable for this contract. IEMs against the tender / Order are:
Shri A.K.BAJAJ, Ex-Chairman, CWC, A-167, Defence Colony, New Delhi 110024
Shri A.K.Mohapatra, Qrs no B-5/9, Unit - 9, Bhoi Nagar, Bhubaneswar 751022

Unless otherwise specified above, the purchase order shall also be governed by the terms and conditions given in the General terms and conditions enclosed.

This order is issued with this acceptance. Kindly acknowledge the receipt of this order.


(Y. Venkata Ramana)
Sr. Manager (MM)

Yours faithfully

(C.R.Samantray)
Chief Manager(MM)

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Enclosures:-

Annexure-A : Detailed Technical specifications

Annexure-I & II: Dimensional details of Rollers

Annexure-C : General Terms & Conditions

Annexure-D : PBG format

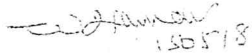
Copy to :

1. GM(E&M) HOD / GM(P&P)/ GM(Fin.) I/c - I, GM(Fin) I/c - II, WCL(HQ), Nagpur
3. AGM/SO(E&M)/SO(MM)/AFM/Depot Officer, WCL, Pench Area.
4. GM(MM), SECL, MCL, CCL, BCCL, ECL, NCL
5. GM(E&M), CMPDIL, Gondwana Place, Kanke Road, Ranchi / RD, CMPDIL, RI IV, Nagpur
6. TS to DT(P&P), WCL, Nagpur
7. Sr. Manager(MM/Admn.), WCL(HQ) - The Landed value of the order is Rs. 94,80,556.86
8. IEM, Shri A.K.BAJAJ, Ex-Chairman, CWC, A-167, Defence Colony, New Delhi 110024
9. IEM, Shri A.K.Mohapatra, Qrs no B-5/9, Unit - 9, Bhoi Nagar, Bhubaneswar 751022

Indent details: Indent No. A4612 dt 23.05.2016

BC Reference: Capital Budget : FA/CAP/BC/OPM/16 dated 30.04.2018 for Rs.107.12 lakhs

This issues with the approval of CMD, WCL.


Sr. Manager (MM)


Chief Manager(MM)

TECHNICAL SPECIFICATION

Specification Parameter *
NIT item sl. No 3: Troughed Belt Conveyor complete for use in coal mines. 3-A-1000mm, 600 Mtrs: 1 set
B-Total length of conveyor in Mtrs :600
C-Belt speed in M/Sec.: 2.25
D-Power Rating in K.W.: 2x120
E-Take up travel in Mtrs: 10
F-Spacing between two Pullcord switches; 50 Mtrs
G-Spacing between two sway switches switches: 100 Mtrs
H-Conveyor width in mm (Belt width): 1000
I-Drive configuration: DOUBLE TANDAM with equilizing gears
J-Type of enclosure for Motor , Starter, Pull cord switch. Sways witch and Pre start alarm : FLP
K-Drum width : 1150mm
L-PARAMETERS :
1-Make of motor: Marathon
2-Motor K.W. Rating: 120 KW
3-Frame size of motor: KF-315M
4-Make of starter: Mine Line
5-Make of contactors : Government/Government approved test house tested make : Andrew Yule ; PAK 225 US
6-K.W. Rating of starter: 120 kw
7-Make of Pull cord switches: Mineline
8-Make of Belt Sway switches: Mine Line
9-Make of Pre-start Audio-visual warning alarm: Safex
10-K.W. Rating of Gearbox: 120 KW
11-No. of stages in Gearbox : 3 Stage
12-Make of gearbox: BTL make
13-Model of gearbox: TSH - 1090 / 120
14-Type of anti roll back device: Sprag type
15-Make of Fluid coupling: Premium
16-Model of Fluid coupling: AFC 80
17-Make of Output coupling : Fenner / eqv

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18-Model of Output coupling: FGC - 9
N-SCOPE OF SUPPLY: FOR EACH SET OF CONVEYOR
N.1-DRIVE HEAD ASSEMBLY consisting of below mentioned components as per specification provided.
i-Drive head frame; 1 No.
ii-Drive Pulley with shaft, Bearings and Bearing Blocks :2 Set.
iv-Gear Box; 2No.
v-Motor: 2 No.
vi-Fluid coupling: 2No.
vii-Out put coupling: 2No.
viii--Anti roll back device: 2 No.
ix-Starter : 2No.
x-Belt scraper: 1No.
N.2-TAIL END ASSEMBLY consisting of below mentioned components .
a-Return Pulley with shaft, Bearings and Bearing Blocks :1 Set.
b-Tail end structure: 1 Set
c-V-type plough scraper return belt: 1 No.
N.3-(HORIZONTALAL) TAKE UP ASSEMBLY consisting of below mentioned components .
a-Take up Pulley with shaft, Bearings and Bearing Blocks :1 Set.
b-Bend/diversion Pulley with shaft, Bearings and Bearing Blocks :2 Sets.
c-Take up trolley: 1 Set
d-Take up structure: 1 Set
e-Hand operated winches: 2 Nos.
f-V-type plough scraper on return belt before take up : 1 No.
N.4-INTERMEDIATE STRUCTURE consisting of below mentioned components
a-Stringers: 386 nos.
b-Brackets for carrying idlers; 392 Nos.
c- Brackets for impact idlers; 4 Nos.
d- Brackets for transition idlers: 6 Nos.
e-Stools cum Idler brackets for return idlers: 194 Nos.
f-Carrying idlers;1194 Nos.
g-Return idlers: 197 Nos.
h-Impact idlers: 12 Nos.
i-Decking plates as specified at Sr.No.7.7; 15 Mtrs.(in pcs of 1.5 mtrs each)
j-Skirt plates as specified at Sr.No.7.8: 1 set of 2 Nos(1 left and 1 right).

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k-Protective guards/fences as specified at Sr.No.7.9: i- Couping guards.: 2 nos ii-Tail end drum fencing covering all sides except belt entry side; 1 set, iii-Take up drum fencing covering all sides except belt entry side; 1 set,
N.5-ACCESSORIES
a-Pull cord switches in Nos:13
b-Belt Sway switches in Nos. : 6
c-Pre-start Audio-visual warning alarm in Nos : 5
5.A-SERVICE CONDITIONS :
i-Place of installation: coal mines. Under Ground
ii-Duty: Continuous (24 hrs/day)
iii-Maximum ambient air temperature: 45 deg.C.
iv-Relative humidity (max): 98.00%
vi-Environment: Dusty (mostly coal dust)
5.B-GENERAL REQUIREMENTS :
i-Flexibility -The design of the drive head and other equipment shall be flexible so that they can be adopted to different mine conditions.
ii-High reliability -The conveyors will have to be well designed and precision manufactured so that a trouble free service with a minimum of maintenance is guaranteed.
6.0-DETAILED SPECIFICATIONS :
6.1-DRIVE HEAD ASSEMBLY :
a-Drive Head Frame: Shall be made of heavy structural steel sections
6.2-DRIVE, TAILEND, DISCHARGE PULLEY & SHAFT :
A-Drum Dia: 800 mm
C-Shell thickness: 16 mm
D-Dia of Shaft at bearing seating: 140mm
E-Shaft material; C-40 as per IS:1570
6.3-SNUB PULLEY & SHAFT :
A-Drum dia: 630mm
C-Shell thickness: 12 mm
D-Dia of shaft at bearing seating: 120 mm
E-Wrap angle for snub drive: Not less than 210 deg.
6.4-BEARING BLOCKS :
A-Material of construction: Cast steel

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B-Type: Heavy duty
C-Bearings: Heavy duty self aligning spherical roller bearings.
6.5-GEAR BOXES :
A-Type of gear box: Helical
B-Mounting: Foot mounted
C-Service factor : 1.6 over motor rating
D-Cooling: Natural
6.6-FLUID COUPLING :
A-Type of fluid coupling: Suitable for use in Coal Mines
B-Material of Body: Full steel Body fluid coupling
C-Operating fluid: Fire resistant fluid
6.7-OUT PUT COUPLING :
A-Type of coupling: Geared or Resilient
B-Service factor for selection: 1.25 over motor rating
6.8-MOTORS :
A--Type: Sq. Cage Induction
B-Operating voltage system: 550V, $\pm 6\%$, 3 Ph, 50 Hz
C-Minimum starting torque: 2 times full load torque
D-Motor RPM (Syn.): 1500
E-Continuous duty as per IS:325-1996
F-Type of starting: STAR-DELTA
G-Class of insulation: Class F, temp. rise limited to Class B
H-Type of Enclosure: T E F C, FLP
J- Mounting of motor: Foot mounted (B3 as per IS:2253-74)
K-Cable Entry: Suitable for PVCDWA mining cable of required size.
6.9-STARTER :
A-Type: STAR-DELTA

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B-Voltage system: 550V, \pm 6%, 3 Ph, 50 Hz
D-Mounting: Skid mounted
E-Utilization category: AC3 of IS:13947 (Part 4/Sec.1)-1993
G-Nominal current rating of contactors (for AC-3 duty): Not less than 2.0 times the full load current of motor.
H-Operating limits of contactor: as per IS:13947. However, the drop out voltage shall not be more than 50% of rated control voltage.
I-Type of Enclosure :FLP
J-Starter construction shall be in two compartments
(i) -One shall house through going bus bars and off load isolator of minimum rating 300 Amp.
(ii) -Second shall house contactors and protective device
(iii)-Door of Second compartment shall be interlocked with isolator in such a way that the door can be opened only when the isolator is in 'OFF' position.
(iv)-Cable terminal boxes with sealing boxes shall be provided for both incoming and out going terminals suitable for PVC DWA mining cables of required size.
(v)-Through going terminals of bus bar shall be provided with bus trunking box with blanking cover.
(vi)-Four nos. auxiliary terminals (4x2) with terminals box and cable sealing boxes suitable for Twin core 2.5 Sq.mm PVC SWA cable shall be provided for sequence starting, pull cord switch and pre-start alarm circuits.
(vii)-Over load protection:
a-Magnetic overload relay with oil dash pot type time lag in combination with thermal relay
b-Range of current adjustment: 75% to 100%
(viii)- Earth leakage protection:
(a) -CBCT operated, non self resetting type sensitive earth leakage relay with test/reset and indication facility.
(b)- Current setting range: Dual range, with following ranges (a) 50mA - 300mA In steps of 50 mA (b) 0.5 A - 2 A in steps of 0.5 A with provision to block range (b) when the range is not required.
(c) -Time delay setting range: 0-1 Sec. In steps of 0.1 Sec.
(ix)-Short circuit protection: HRC fuses of suitable rating
(x)-Instruments: Amp. Meter of suitable range
(xi)-Standard specifications : IS:13947 (Part 4/Sec.1)-1993
(xii)-Suitable provision shall be made in the starter for sequence starting interlock with other starter with timer
(xiii)-The starter shall have provision for interlocking with pull cord switches, belt sway switches , Audio-Visual alarm and limit switches at tail end .

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6.10-DELIVERY JIB ASSEMBLY :
A-STRUCTURE Made of heavy structural sections, cantilever supported, bolted to Drive head fram e.
B-Length of Jib: 3 Mtrs
C-Discharge pulley and shaft: Same as drive pulley specified at cl.no.6.2
D-Bearing blocks Same as cl.no.6.4
6.11-BELT SCRAPER :
A-Type of belt scraper: Counterweighed/spring loaded.
B-Rubber strip dimensions: 10mm thick x 100 mm wide
C-Rubber strip shall be fixed to the scraper by means of slotted holes to facilitate easy adjustment.
6.12-TAIL END ASSEMBLY :
A-Structure: Shall be made of heavy structural sections
B-Tail pulley and shafts: Same as clause No.6.2
C-Bearing blocks: Same as clause No. 6.4
D-Minimum ground clearance below tail pulley: 300 mm
6.13-BELT SCRAPER ON RETURN BELT BEFORE TAIL DRUM :
A-Type of Belt Scraper: V-type plough scraper
B-Angle of V: 60 deg.
6.14-WIPER CUM DUST COLLECTOR : A wiper cum dust collector trolley shall be provided at the tail end as per DGMS(Tech) Circular No.4 dated 11.05.2004
6.15-TAKE UP ASSEMBLY :
A-Type of Take up: Horizontal, winch operated
B-Structure of trolley and trolley guide: Suitable structural sections
C-Take up Pulley, diversion pulley and shafts: Same as clause No.6.3
D-Bearing blocks: Same as clause No. 6.4
E-Operation: Manual
7.0-INTERMEDIATE STRUCTURES :
7.1-STRINGERS:

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A-Stringer length: 3 meters
B-Stringer section: ISMC 125 x 65
C-Connecting bracing: Not required
D-Size of fasteners: M-16
7.2-STOOLS :
A-Height of stool: 600 mm
B-Stool section: ISMC 125 x 65
C-Steel section to be used for bracing for stools: ISA 50 x 50 x 6
D-Size of fasteners: M-16
E-Thickness of base plate: 10 mm
7.3-CARRYING IDLER SETS :
A-Spacing: 1.5 M
B-Troughing angle: 30 deg.
C-Forward tilt of side idlers: 2 deg (max.)
D-Steel section to be used for idler frame (transome): ISA 75 x 75 x 8
E-Steel section to be used for idler brackets: M.S. flat 65 x 10 or ISLC 75 x 40
F-Carrying idler: as per Specification 139071 given at clause 11.0 below
G-Thickness of mounting base plate: 10 mm
H-Provision for belt Alignment: Mounting base plates shall be provided with slotted holes to facilitate belt Alignment.
I-Size of fasteners: M-16
7.4-RETURN IDLERS :
A-Spacing: 3 M
B-Brackets: Shall be welded to stools or stringers
C-Thickness of plate used for brackets: 10 mm
E-Return idler: as per Specification 139071 given at clause 11.0 below

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Handwritten signature and date: 15/05/18

7.5-IMPACT IDLER SETS :
A-Location: In the loading section at tail end
B-Spacing: 0.5 M
C-No. of idler Sets: 4 sets
D-Impact idler roller: as per Specification 139071 given at clause 11.0 below
7.6-TRANSITION IDLER SETS :
A-Location: At delivery jib and Tail end
B-No. of idler Sets: 3 Sets
C-Troughing angles: 5 deg., 10 deg., 20 deg.
7.7-DECKING PLATES :
A-Thickness of plate: Not less than 2.5 mm
B-Location: At drive head, loop take up and loading section
Total length: Sufficient to cover the above sections
7.8-SKIRT PLATES :
A-Location: For loading section on both sides of belt
B-Thickness of plate: Not less than 6 mm 3 Meters (Min.)
C-Length: 3 Meters (Min.)
D-Height of plate: Not less than 450 mm above belt
E-Rubber strip dimensions: 10mm thick x 100 mm wide
F-Rubber strips shall be fixed to the skirt plate by means of slotted holes to facilitate easy adjustment
7.9-PROTECTIVE GUARDS/FENCES : Suitable protective guards/Fencing shall be provided at all rotating parts at drive head, discharge point, tail end etc.
7.10-ACCESSORIES :
A-PULL CORD SWITCHES :
I-Type of switch: Manual reset type
II-Enclosure: FLP

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III-Pull rope: Stranded and PVC sheathed
B-BELT SWAY SWITCHES :
I-Type of switch: Auto reset type
II-Enclosure: FLP
C-AUDIO-VISUAL ALARM :
I-Type: Audio Visual alarm with pre-start warning (compact unit)
II-Enclosure: FLP
8.0-PRE-DESPATCH INSPECTION AND TESTS :
8.1-The belt conveyors will be inspected by WCL's representative/third party inspection agency at manufacturer's works before dispatch of the equipment to ascertain the conformity of the conveyors to supply order specifications, relevant ISS, and type test certificates.
8.2-Testing of assemblies/components, wherever required will be carried out by the inspector as per the relevant standards and supply order. The manufacturer shall make available to the inspector, the required test facilities with necessary support for conducting the tests.
8.3-The manufacturer shall make available to the inspector the following documents during the inspection.
(a) Copies of relevant ISS.
(b) All records of quality checks as per QAP.
(c) Dimensional/manufacturing drawings of different assemblies/components of the conveyors.
(d) Invoices in respect of purchase of raw-materials viz. steel, bearings, tubes (for rollers) etc, and bought out items.
(e) Manufacturer's test certificates in respect of raw-materials and bought out items.
F-Copies of type test certificates from Govt./Govt. approved test house, for contactors used in the starters as per IS:13947(Part-4/Sec.1)-1993.
10.0-DOCUMENTS TO BE SUBMITTED ALONG WITH SUPPLY :
10.1-Self attested copy of valid DGMS approval for the offered All FLP electricals
10.2-Self attested copy of valid BIS Licence IS/IEC-60079-11:2006 for FLP Electricals.
10.3-Notary attested copies of type test certificates from Govt./Govt. Approved test house, for contactors used in the starters.

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10.4-Self attested copy of IS:325-1996 for the motors supplied with conveyor.
10.5-General arrangement/assembly drawings of Belt Conveyor showing all the dimensions and weights.
10.6-General arrangement/ assembly drawing of the roller showing distinctly the tube, shaft, bearing housing, bearing seals etc.
10.7-Maintenance and parts catalogues of the equipment and including all the bought-outs.
10.8-Pre-despatch inspection report.
10.9-Technical leaflets/literature in respect of all the equipment including all the bought-outs.
11.0- SPECIFICATION OF ROLLERS/ IDLERS FOR THE CONVEYOR ; No. 139071
A-BASIC PARAMETER :
1-Type of roller: Drop in type, greased for life (Maintenance free)
2-Friction co-efficient: Not more than 0.015
3-Run out/Eccentricity: As per clause 4.5 of IS:8598
B-DIMENSIONAL DETAILS :
1-Top Roller (Troughing roller): As per the drawing given in Annexure-I.
2-Bottom Roller (Return roller): As per the drawing given in Annexure-I.
3-Impact roller: As per the drawing given in Annexure-II.
C-MATERIALS & CONSTRUCTIONAL DETAILS :
1-Barrel/ Tube: Material of barrel: Steel tube conforming to grade yst 210 of IS:9295-1983.
2-Boring of the pipe: The pipe shall be bored on double ended boring machine, capable of simultaneous boring of both ends in a single setting to maintain coaxiality.
3-Bearing housing: Material of bearing: housing Pressed sheet metal housing drawn in CRCA sheets of extra deep drawing quality.
4-Nominal thickness of CRCA sheet: 3.15 mm (Min)
5-Wall thickness of housing after stamping and machining: Not less than 2.5 mm
6-Machining Tolerance for housing: The housing shall be finished to M7 (Min.) as per IS:919 for accommodating the outer race of the bearing.
7-Welding of bearing housing: The bearing housings shall be welded to the pipe by twin head MIG/MAG (CO2) welding machine capable of welding the housing at both ends simultaneously in a single setting.
8-Shaft

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a-Material of shaft: Carbon steel conforming to C-40 of IS:1570 or En-8A of BS:970.
b-Machining tolerance of shaft: The shaft shall be machined and ground to J6 (Min.) as per IS:919 at bearing seatings, maintaining co-axiality of both ends.
c-Shaft ends: Type 'A' as per IS:8598-1987.
9-Bearings/Type of bearings: Seize resistant ball bearing. Note : For rollers of shaft dia above 30 mm, single row deep groove ball bearing of C3 clearance is also acceptable.
10-Lubrication: Lithium based grease with a worked penetration of 220-250, class 3.
11-Sealing Note : The sealing is to be done for the life time of the bearing.:
a-Type of seal Non contact, Multi Lip labyrinth seal
b-Material of seal Neoprene, Nylon-6 or any other better material
c-Back / Inner seal Nilon-6 or any other suitable material
d-Dust seal and rain cap Suitable material
e-Assembly of roller The bearings and seals shall be press fitted on the roller.
f-Rubber rings for impact roller: Shore hardness of rubber 50-60 deg. on shore 'A' scale.
D-PAINTING :The surface of the rollers shall be cleaned properly, removing rust, oil film etc. and one coat of anti rust paint to be given. Over this another coat of good quality paint of smoke grey colour shall be given.
E-IDENTIFICATION MARKING :Manufacturer's name/trade mark, month and year of manufacturer shall be permanently and legibly marked on the roller, by etching/ embossing which should last for the life of roller.
F-TESTING :
1-The tests shall be conducted on completed rollers at appropriate frequencies in the production batch.
2-Friction co-efficient test
3-Dimensional check up and Run out / eccentricity test
4-Dust sealing test
5-Water proofness test
G-GUARANTEE :Complete roller shall be guaranteed for a working life not less than 15000 hours.
H-PRE-DESPATCH INSPECTION :
1-The rollers will be inspected by WCL's representative/third party inspection agency at the manufacturer's works before dispatch of the consignments to ascertain the conformity of the rollers to supply order specifications and relevant ISS.
2-The manufacturer shall make available to the inspector, the required test facilities with necessary support for conducting the inspection and tests as per the order specifications and relevant ISS.
3-Samples for the tests will be drawn from the lots (size wise) by random sampling methods. The sample size for the tests will be as follows :-

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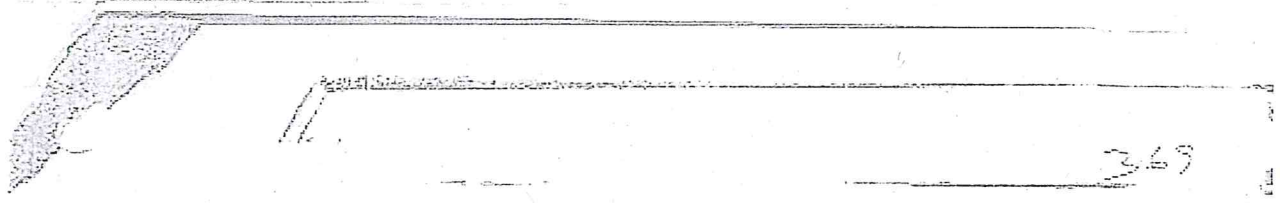
I-TESTS SAMPLES
1-Dimensional check up including measurement & run out/eccentricity: 8 Nos. rollers to be tested.
2-Friction co-efficient: Not more than 0.015: 2 Nos. rollers to be tested.
3-Dust penetration and measurement of dia of shaft (at middle) and thickness of tube and bearing housing etc.: 4 Nos. rollers to be tested.
4-Water penetration: 3 Nos. rollers to be tested.
5-The manufacturer shall make available to the inspector the following documents during the inspection :-
I-Copy of supply order
II-Copies of relevant ISS
III-Test methods
IV-Works test certificate's
V-Invoices in respect of purchase of bearings, tubes and bars (for shaft) etc.
VI-Manufacturer's test certificates in respect of raw materials.
J-Performance Bank Guarantee: Performance bank guarantee to the extent of 10% of the value of the equipment which shall be kept valid for a period of 18 months from the date of supply of the equipment. The bank guarantee shall be initially valid for 18 months from the date of the supply and will be released or extended on the merit of the case. PBG shall be released after expiry of warranty period and receipt of NO CLAIM certificate from the user i.e. GM(E&M)/HOD WCL.
K-GUARANTEE/WARRANTY: You shall give a warranty of satisfactory performance of the complete conveyor set for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance of material by the WCL, whichever is earlier
L-DOCUMENTS TO BE SUBMITTED WITH CONSIGNMENT :
1-Pre-despatch inspection and test report.
2-General arrangement/assembly drawing of the roller showing distinctly the tube, shaft, bearing housing, bearings, seals etc.

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15/5/18
Sr. Manager (MM)

[Signature]
15/5/18
Chief Manager (MM)

Annexure I

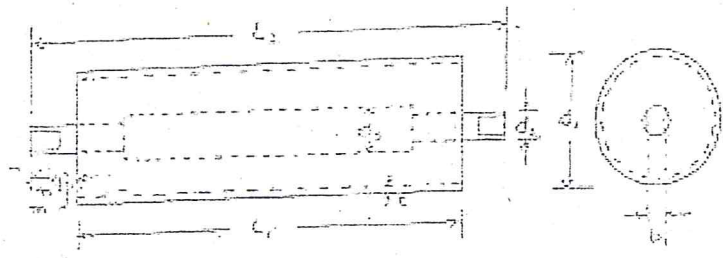
Tender No.hq-pur-ra-sp-e075-2016-17 for Procurement of Troughed Belt Conveyor Complete



SPCIFICATION NO. 13021/2011


ANNEXURE - I

DIMENSIONAL DETAILS OF TOP AND BOTTOM ROLLERS



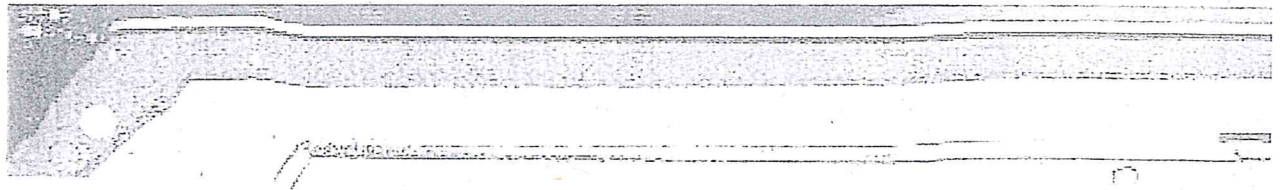
All dimensions are in mm.

Roller	Belt width	Roller length L1	Roller length L2	Tube thickness t	Nominal dia of tube d1	Dia of shaft at bearing casting d2 (Min)	Dia of shaft at outside d3 (Min)	m	n	BT
Troughing roller	300	315	341	5.4	114.3	20	25	4	9	14
do	600	350	385	5.4	114.3	25	28	4	12	16
do	900	380	412	5.4	114.3	25	28	4	12	16
do	1200	466	497	5.4	114.3	25	28	4	12	16
do	1500	530	560	5.4	152.4	30	36	4	12	22
Return roller	300	900	1002	5.4	114.3	20	25	4	22	24
do	600	1050	1162	5.4	114.3	25	28	4	22	16
do	900	1150	1262	5.4	114.3	25	28	4	22	16
do	1200	1400	1552	5.4	114.3	25	30	4	27	22
do	1500	1650	1852	5.4	152.4	30	40	4	27	22

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ANNEX-II

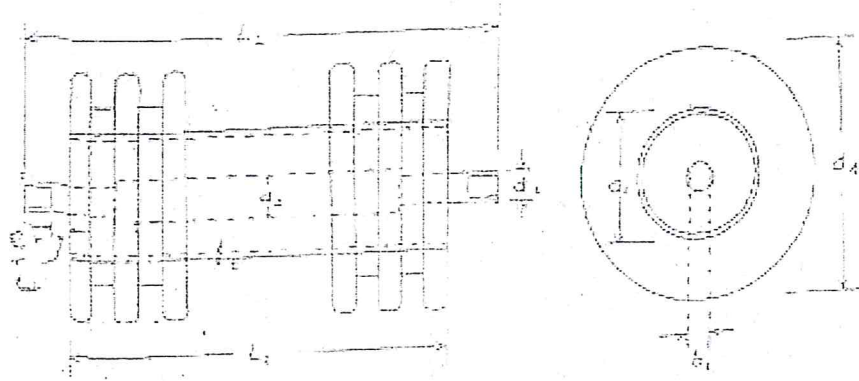
Tender No.hq-pur-ra-sp-e075-2016-17 for Procurement of Troughed Belt Conveyor Complete



SPECIFICATION NO. 13007/03/04

ANNEXURE-I

TRANSITIONAL ULTARS OF IMPACT ROLLERS



All dimensions are in mm.

Belt width	Roller length L1	Shaft length L2	Tube thickness t	Nominal dia of tube d1	Dia of shaft at bearing seating d2 (mm)	Dia of shaft at middle d3 (mm)	Dia of rubber disc d4	m	n	z1
800	315	301	4.85	88.9	70	70	180	4	9	14
900	350	337	4.85	95.0	75	75	180	4	12	13
1000	380	372	4.85	101.6	80	78	180	4	12	15
1200	450	437	5.4	114.3	90	88	180	4	12	18
1400	530	503	5.4	133.0	100	100	200	4	12	22

attama

18/07/18

