



BHARAT COKING COAL LIMITED
(A Miniratna company)(A Subsidiary of Coal India Limited)
Office of the General Manager(MM)
Materials Management Department
Commercial Block L-III , KoylaBhawan,
Dhanbad : 826005(Fax No- 0326-2230183)
CIN No:U10101H1972GO1000918

Ref no:- BCCL/PUR/714121/Belt Conveyor Complete / 14-15/ 250

dt. 16.03.2015

To

M/s Bengal Tools Ltd
2, Jessore Road , Dum Dum
Kolkata -700028

Purchase order by Speed post

Fax no. 033-25519953

Vendor Code:- New-1/12/M/S/117

E-Mail:- bndas@bengaltools.com

Sub:- Order for supply of Belt Conveyor Complete, Size 1200 mm x 500 mtrs long (without belting), 550 V NFLP electrical, lift 100 mtrs, TPS 400, Speed 2.5 mtr/sec, intermediate structure, rollers, drive head Assly and all safety features etc

Ref :Our e- Tender Enquiry no. BCCL/PUR/714121/Belt conveyor complete /Re/ 14-15/ 92 opened on 10.12.2014 on line under e- procurement, e-Price Bid opened on 16.02.2015 and your on line offer against our above tender and all subsequent correspondences last being letter/Fax no BTL/MHD-20009/14-15/QTN-1640/15 dtd 03.03.2015 under tender id no.2014_BCCL_5417_1.

Dear Sir,

With reference to the above, we for and on behalf of BCCL hereby place PURCHASE ORDER on you for supply of following items as per technical specification ,price, terms and conditions:

Scope of Supply

SN	Description	Qty. (Nos)	Unit Basic Rate in Rs.	Extended Value in Rs.
1	Belt Conveyor Complete Size 1200 mm x 500 mtrs long without belting, 550 V NFLP electrical, lift 100 mtrs, TPS 400, Speed 2.5 mtr/sec, intermediate structure, rollers, drive head Assly and all safety features (Detail enclosed at Annexure-A) Mat code-22837990103	1set	7689824.00	7689824.00
	Extra Ex. Duty @ 12.50%		961228.00	961228.00
	Sub Total		8651052.00	8651052.00
	Extra CST @ 2%		173021.04	173021.04
	Packing , Forwarding & Transit Insurance		Included	Included
	Freight in Rs.		120000.00	120000.00
	Landed Rate in Rs.		8944073.04	8944073.04
	CMPDIL Inspection charge @ 1.00%		89440.73	89440.73
	Service Tax on Ins. Charge @ 14%		12521.70	12521.70
	Total Contractual Value in Rs.		90,46,035.47	90,46,035.47 Round off-Rs 90,46,035.00

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Total contractual value -Rs Ninety lakh forty six thousand and thirty five only)

TERMS & CONDITIONS:

1. **Payment Terms:** 100% within 21 days of receipt and acceptance of the materials by the consignee or from the date of receipt of Bills, whichever is later.

Bank Details:

VENDOR/SUPPLIER/CONTRACTOR/CUSTOMER'S NAME & ADDRESS: (With Telephone No. & Fax No.)	M/s Bengal Tools Ltd 2, Jessore Road , Dum Dum Kolkata -700028
PARTICULARS OF BANK ACCOUNT:	
A. BANK NAME:	State Bank of India
B. BRANCH NAME (Including RTGS Code)	RM-IV , Commercial Branch , SBIN0007502
ADDRESS:	24 Park Street, Kolkata 700016
C. 9-DIGIT CODE NUMBER OF THE BANK & BRANCH (Appearing on MICR Cheque issued on the Bank) Or 5-DIGIT Code Number of SBI	700002120
D. ACCOUNT TYPE: (S.B. Account/Current Account Or Cash Credit with Code 10/11/13)	Cash Credit
E. LEDGER NO./LEDGER FOLIO NUMBER:	
F. ACCOUNT NUMBER (CORE BANKING) & STYLE OF ACCOUNT (As appearing on the Cheque Book)	30997439620
PAN no.	AADCS7466G

2. **PRICE:** FIRM & On F.O.R. Destination basis
3. **E.D and cess.:** Excise duty will be paid extra at the rate applicable at the time of supply against documentary evidence required as per Excise rule for getting CENVAT credit . Quoted rate indicated above.
4. **CST:** CST will be paid extra at the rate applicable at the time of supply against declaration form to be issued by consignee. Quoted rate indicated above.

5. Submission of Bills:

- a) Supplier shall have to submit (100% value of bill duly stamped & pre-receipted) bills (six copies) to the consignee along with the consignment and challan with the requisite documents, if any.
- b) The consignee shall then send SR notes ,challan, Inspection note ,warranty/guarantee certificate and five copies of bills (including the original) and any other requisite documents to the paying authority as specified in the order.

(Signature)

(Signature)

c) The following additional information should be incorporated in your invoice as per Central Excise Duty Act in respect of both the supplier and consignee so that BCCL may avail CEVAT credit under Central Excise rule.

i) **General:**

- Serial No. of Invoice
- Description of the goods
- Classification of the goods
- Time and date of removal
- Mode of Transport and vehicle registration
- Rate of duty
- Quantity and value of goods and Duty payable thereon

ii) Statutory particulars in respect of both the supplier and Consignee.

THE DESIRED INFORMATION FOR RAISING CENVAT INVOICE		
	SUPPLIER	CONSIGNEE
Name & Address Of Area:		Depot Officer , Barora regional Stores, Barora Area, BCCL, Nawagarh, Dhanbad, Jharkhand – 828306
Tin No.:		20121500733
JST No.:		KT – 1 (R)
CST No:		KT – 82 (C)
Circle / Sub		Katras Circle Katras
Service Tax Regd. No:		AAACB7934MST 018
Central Excise Duty Regd. No:		AAACB7934MEM 003
Range (Code):		Dhanbad - Code - 02
Division (Code)		Dhanbad - Code - 02
Commissionerate (Code):		Ranchi - Code - 87

6. **Packing Forwarding, & Insurance:** Included

7. **Freight:** @ Rs. 120000.00 against documentary evidence as indicated above.

8. **DELIVERY SCHEDULE:** Within 6 months from the date of receipt of supply order. Delivery schedule shall be reckoned from the 10 th day from the date of order and the date of receipt of material at our stores shall be treated as the date of delivery.

NOTE: Safe arrival of materials shall be your responsibility.

Any increase in the rate of taxes & duties beyond delivery period will be to your account.

9. **Performance Bank Guarantee** – You shall furnish a Performance Bank Guarantee (PBG) equivalent to 10 % of the order value (order value means FOR destination price including taxes, duties, transportation & insurance charges & other charges if any). The performance guarantee shall be submitted in the form of Bank Guarantee issued by a scheduled Bank / Nationalised Bank on non judicial Stamp paper valuing Rs. 250.00. The Bank Guarantee shall be valid for three months beyond the expiry of Guarantee/Warranty period. It shall have to be submitted to MM Division, BCCL, Koyla Bhawan on or before commencement of supply. No payment will be made without submission of PBG.

10. **Inspection:** Pre-dispatch inspection of each consignment shall be carried out by M/s. Central Mine Planning & Design Institute Ltd (CMPDIL), Ranchi/their Regional Office as per the terms and conditions indicated here under:

Pre-dispatch inspection shall be carried out by M/s. CMPDIL (the above firm) as per their methodology. The third Party Inspection shall include examination of raw material, test certificate verification, continuous monitoring of quality assurance by manufacturer which will include regular and surprise visits. In brief, the scope and condition of inspection by M/s. CMPDIL will be as follows:

Checking and approval of test procedures/quality assurance plans. Verification of records and documents of your works. Verification of documents and test certificate of bought out items and cross checks. You shall provide facilities for carrying out all necessary tests as required in the specification at your works else these will be carried out at an independent test house at your cost. Final testing and checking of materials as per specifications. M/s. CMPDIL will have full and free access to the premises of manufacturer during the process of manufacturing and during inspection activities.

Inspection fee @ 1.00% of total F.O.R. Destination price with service Tax of 14% is to be paid to M/s. CMPDIL along with inspection call letter payable by DD which will be reimbursed subsequently by BCCL together with consignment billing. Minimum 7 calendar days notice shall be given by you to M/s. CMPDIL for arranging inspection within valid delivery period as per contract.

The ultimate responsibility for supply of correct materials as per requirement of relevant specification lies solely with you in spite of clearance/acceptance by inspection authority i.e. M/s. CMPDIL. The manufacturer will be required to replace the material free of cost if found defective/unserviceable/not according to relevant specifications.

The charges for third party inspection and the cost of materials that would be required for destructive tests, if any, shall be reimbursed by BCCL together with the consignment billing. Such cost shall be reimbursed only if it is duly certified by M/s. CMPDIL.

Please send inspection call to M/s. CMPDIL, Ranchi/ their Regional Office as indicated above. Final inspection shall be arranged by the consignee after receipt of the material at our destination. The purchaser shall, at its discretion, have the right to test the ordered material in a Government Test House or in a test house nominated by the purchaser. In case of failure of the material after testing the cost of tests as well as of the material shall have to be borne by the supplier.

Final Inspection shall be carried out at the consignee end by authorised representative of GM (E&M) after receipt of materials.

11. Transit Insurance - Shall be arranged and covered by you for safe arrival of the materials to the consignee end at your cost and risk.

12. PENALTY FOR FAILURE TO SUPPLY IN TIME: The delivery of stores stipulated in Purchase order shall be deemed to be of the essence of the contract and delivery of the stores must be completed by the date specified. No materials should be supplied beyond the specified delivery period, unless specific approval has been obtained from the purchaser. In the event of failure to deliver the stores within the stipulated date/ period in accordance with the samples and/or specification mentioned in the supply order, and in the event of breach of any terms and conditions mentioned in the supply order. Bharat Coking Coal Limited reserves the right:

a) To recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% (half percentage) of the price of the stores 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 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 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 encash any Bank guarantee which is available for recovery of the penalty or

f) To forfeit the security deposit full or in part.

g) Whenever under the contract a sum of money is recoverable from and payable by the supplier, BCCL shall be entitled to recover such sum by appropriating, in part or whole by deducting any sum or which at any time thereafter may be due to the successful tenderer in this or any other contract with Bharat Coking Coal Ltd. or any subsidiary of Coal India Ltd. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay BCCL on demand the remaining amount. The supplier shall not be entitled to any gain under this clause.

13. PRICE FALL CLAUSE.i)The prices charged for the stores supplied under the contract by the supplier shall in no event exceed the lowest price at which the supplier offer to sell the stores of identical description to any other organization from date of offer till completion of supply under the contract.

ii) If at any time during the said period the supplier offers lower sale price of such stores to any other organization at a price lower than the price chargeable under this contract, the supplier shall forthwith notify such reduction or sale to the consignee concerned under intimation to CGM(MM),Bharat Coking Coal Limited , Commercial Block , Level -III , KoylaBhawan , Koyla Nagar , Dhanbad and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale, shall stand correspondingly reduced. The above stipulated will not, however apply to exports by the supplier.

14. Guarantee /Warranty: Materials supplied should be guaranteed for a period of 12(twelve) months from the date of fitment or 18 months from the date of receipt and acceptance at consignee end whichever is earlier against any manufacturing defects / workmanship / inferior quality. Any defect observed on this account shall be attended within 07 days from the date of receipt of report and replace the materials within 21 days free of cost.

15. Packing:Consignment shall be supplied in suitable standard proper packing.

16. 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 out-break of hostilities, declaration of an embargo / curfew or blockade or fire , flood, acts of nature or any other contingency beyond the supplier's control due to act of God then BCCL 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 BCCL the contract/supply order shall be read and understood as if it had contained from its inception the delivery date as extended. Further this clause state that:
a) The successful bidder will , 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 authority , 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

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Majeure , BCCL will reserve the right to cancel the contract and provisions governing termination of contract , as stated in the bid documents will apply.

b) For delays arising out of Force Majeure , the bidder will not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither BCCL nor the bidder shall be liable to pay extra costs provided it is mutually established that Force Majeure Conditions did actually exists.

c) If any of the force majeure conditions exists in the place of operation of the bidder even at the time of submission of bid, he will categorically specify them in his bid and state whether they have been taken into consideration in their quotations.

17. **Paying Authority:** HOD (F) MM Div, KoylaBhawan, Koyla Nagar, Dhanbad.

18. **Consignee:** Depot Officer, Barora Area., P.O:- Nawagarh, Dhanbad,- 828306 Jharkhand, India
(Phone NO:-0326-2330350)

19. **Issue of Road Permit:** Road Permit if required may be obtained directly from the Consignee under intimation to this office.

20. You have signed Integrity pact issued with NIT .Prof (Dr.) LC Singhi, IAS (Retired) ,L-31, Third Floor Kailash Colony, New Delhi-110048, is independent external monitor against this tender/ contract.

21. **Price certificate:** You will certify on their bills that the prices charged to BCCL is not higher than that applicable to all your customers including coal companies and other Govt. Under Taking /DGS&D/CIL and its subsidiaries.

22. **Security Deposit :** Exempted as being NSIC registred.

23. All disputes are subject to Dhanbad Court and Jharkhand High Court only

24. **Manufacturer-** Bengal Tools Ltd (BTL)


ALL OTHER REMAINING COMMERCIAL TERMS & CONDITIONS AND TECHNICAL SPECIFICATIONS ALONG WITH SCOPE OF SUPPLY WILL STRICTLY BE AS PER OUR NOTICE INVITING TENDER AS CONFIRMED IN YOUR OFFER AND YOUR SUBSEQUENT LETTERS.

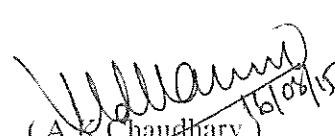
N.B:- This issues with the approval of competent authority and concurrence of associate finance. This contract is concluded with the issuance of this order. You are requested to kindly acknowledge receipt and acceptance of order within 15 days from date of issue of order. In case no reply is received, it will be presumed that the order has been accepted by you for execution.

Encl : Annexure-A (Technical details with other parameters)&PBG Format

Yours faithfully,

For & on behalf of Bharat Coking Coal Ltd.


(A K Sinha)
Sr. Manager (MM)Pur

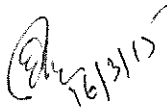

(A K Chaudhary)
GM (MM)Pur

INDENT REFERENCE:-This order is placed against Indent given below:

Indent nos. and Date	Budget Certification Details.
i) GM /AR-1/AM(E&M)/Belt conveyor/311/14 dtd 28.02.2014 and Barora Area Phularitand indent Ref no. :Nil, dtd 14.03.2014 Qty-01 set (conveyor belt complete size-1200mm : 500 mtrs long) IR Ref No: 714121(14-15) dtd19.08.2014	i) e-BC No: BCCL/C & B/ CAP/ Reg. PN-07/SN13/eBC no. 26 (Cap 14-15) dated 29.05.2014 head P&M unit code _GM , Barora Area-1(HQ) for Rs1,23,00,000.00 (Rupees one crore twenty three lakh only) e-FC No: 329 dated 16.03.2015(HQ) for Rs 90,46,035.00 (Rupees Ninety Lakh forty six thousand and thirty five only only)

Copy to:

1. Depot Officer, Barora Area,Area-1, BCCL Dhanbad
2. HOD (F) MM Div, KoylaBhawan.
3. GM ,Barora Area, AFM BaroraArtea
4. GM (E & M)I/C , KoylaBhawan , Dhanbad
5. GM(E&M), CMPDIL, Gondwana Place, Kanke Road, Ranchi
- ✓ 6. SM (Tech Cell), MM Div, KoylaBhawan.
7. Master File/Office Copy.
8. GM (MM), CCL / NCL / WCL/ SECL / MCL / ECL /CMPDIL.
9. Prof (Dr.) LC Singhi, IAS (Retired) ,L-31, Third Floor Kailash Colony, New Delhi-110048


SM (MM)


GM (MM) Pur

FORMAT OF PERFORMANCE BANK GUARANTEE
(RS.250 non-judicial stamp paper)

1. Messers ----- a company having its office at -----
-----hereinafter called the Seller has entered into a Contract No.-----
dt.----- (hereinafter called the said Contract) with Bharat Coking Coal Limited (hereinafter called , the Purchaser) to
supply equipment/accessories on the terms and conditions in the said Contract.

It has been agreed that hundred percentage(100%) payment of the value of the equipment will be made to the seller in
the terms of the said Contract on the seller furnishing to the Purchaser a Bank Guarantee for the sum of ----- equivalent
to 10 % of the value of each equipment and accessories dispatched by the seller as security for the due and faithful performance
of the terms of the said contract and against any loss or damage caused to or would be caused to or suffered by the purchaser by
reason of any of the terms or conditions contained in the said contract.

The ----- Bank having its office at ----- has at the request of seller agreed to give the guarantee
herein after contained.

2. We, ----- Bank Ltd. do hereby undertake to pay the amounts due and payable under this guarantee without
any demur merely on a demand from the purchaser stating that the amount claimed is due by way of loss or damage caused to or
would be caused to or suffered by the purchaser by reason of any breach by the said seller of any of the terms or conditions
contained in the said contract or by reason of the seller's failure to perform the said contract. Any such demand made on the Bank
shall be conclusive as regards the amount due and payable by the Bank under this guarantee. We shall not withhold the payment
on the ground that the seller has disputed its liability to pay or has disputed the quantum of the amount or that any arbitration
proceeding or legal proceeding is pending between purchase and the seller regarding the claim. However , our liability under this
guarantee shall be restricted to an amount not exceeding -----.

3. We, ----- Bank Ltd., further agree that the guarantee herein contained shall come into force from the date
hereof and shall remain in full force and effect during the period that would be taken for the performance of the said contract and
that it shall continue to be enforceable till all the dues of the purchase under or by virtue of the said contract have been fully paid
and its claim satisfied or purchase certified that the terms and conditions of the said contract have been fully and properly carried
out by the said seller and accordingly discharged the guarantee .Unless a demand or claim under this guarantee is made on us in
writing on or before the ----- (date to be given ----- months from the date of Bank Guarantee) we shall be
discharged from all liability under this guarantee thereafter.

4. We., Bank Ltd. further agree with the purchaser ,that the purchaser , shall have the fullest liberty without our consent and
without affecting in any manner no obligations hereunder to vary any of the terms and conditions of the said contract or to
extend time of performance by the said seller(s) from time to time or to postpone for any time or from time to time any of the
powers exercisable by the purchaser , against the said seller and to forbear or enforce any of the terms and conditions relating to
the said contract and we shall not be relieved from our liability by reason or any such variation or extension being granted to the
said seller or for any forbearance act or omission on the part of the purchaser , or any indulgence by the purchaser to the said
seller by any such matter or thing whatsoever which under the law relating to sureties would be for this provision have effect of
an relieving us. The Bank further agrees that in case this guarantee is required for a longer period and it is not extended by the
bank beyond the period specified above , the bank shall pay to this purchaser the said sum of ----- or such lesser sum
as may than be due the purchaser and as the purchaser may demand.

5. We , ----- Bank Ltd. lastly undertake not to revoke this guarantee during its currency except with the previous consent
of the purchaser , in writing.

6. The Bank has under its constitution power to give this guarantee and Mr. ----- Manager , who has signed it on
behalf of the Bank has authority to do so.

7. This Bank Guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
[In case the BGs are from outstation branch of Dhanbad then BG shall be encashable at Dhanbad/Kolkata branch of issuing bank
with address and location of the said branch at Dhanbad/Kolkata will be as under :

Name of the Bank :
Name of the Branch :
Location & address :

The BG shall be subject to the jurisdiction of the Civil courts Dhanbad District only.]

Date ----- Day of ----- 20
For ----- Bank Limited
Signature of the authorised person
for and on behalf of the Bank

- 4.1.0.0 Modular construction –
- 4.1.1.0 The various components/ assemblies have to be capable of dismantling transport in U.G. and easy reassembly.
- 4.1.2.0 It should be possible to take out and refit the components/assemblies with out dismantling adjacent unit.
- 4.2.0.0 Flexibility

4.2.1.0 The design of the drive head and other equipment shall be flexible so that they can be adopted to different mine conditions.

4.2.2.0 The motor/gear boxes shall be capable of being mounted on either the LH side or RH side depending upon the space available in underground.

4.3.0.0 High reliability -

4.3.1.0 The conveyors will have to be designed and precision manufactured so that a trouble free service with a minimum of maintenance is guaranteed.

5.0.0.0 **DETAILED SPECIFICATION:-**

5.1.0.0 **DRIVE HEAD ASSEMBLY:-**

5.1.1.0 Design configuration : As per standard practice for CHP.

5.1.2.0 Drive Head Frame : Shall be made of heavy structural steel sections.

5.1.3.0 **DRIVE PULLEYS & SHAFT** :

5.1.3.1 Drum dia : 650 mm

5.1.3.2 Drum width : for 1200mm Belt : 1400 mm.

5.1.3.3 Shell thickness : 16 mm.

5.1.3.4 Dia of Shaft at bearing seating :- bidder to confirm

5.1.3.5 Shaft material : C-40 as per IS: 1570.

5.1.4.0 **SNUB PULLEY & SHAFT** : (Applicable in case the drive configuration (Clause No.2.5.0) is Snub")

5.1.4.1 Drum dia : 550 mm.

5.1.4.2 Drum width: -for 1200 mm Belt : 1400 mm.




- 5.1.4.3 Shell thickness : 12 mm.
- 5.1.4.4 Dia of shaft at bearing seating : bidder to confirm
- 5.1.4.5 Wrap angle for snub drive : Not less than 210 deg.

5.1.5.0 **BEARING BLOCKS:-**

- 5.1.5.1 Material of construction : Cast Steel.
- 5.1.5.2 Type : Heavy duty.
- 5.1.5.3 Bearings : Heavy duty self aligning spherical roller bearings.

EQUALIZING GEARS:-

(For Dual-tandem/tandem drive)

- 5.1.6.1 Material of construction : Cast Steel/Alloy Steel.
- 5.1.6.2 Type of gear : Spur.
- 5.1.7.0 **GEAR BOXES** :
- 5.1.7.1 Type of gear box : Helical.
- 5.1.7.2 Mounting : Foot mounted.
- 5.1.7.3 Service factor to be considered : 1.6 over motor rating.
for selection.
- 5.1.7.4 Cooling : Oil cooled (Natural)
- 5.1.7.5 No. of stages : 3 Stage reduction
- 5.1.7.6 Make(Acceptable makes) : BTL make ,approved one CIL
Elecon/Greaves/FMC/New Allenbury, Works/Any other Proven make in CIL/
other PSUs/Govt.departments (see cl.7.4.0)
- 5.1.7.7 Type of anti roll back device : thyristor brake agreed
- 5.1.8.0 **FLUID COUPLING** :
- 5.1.8.1 Type of fluid coupling : Suitable for use in Coal mines.
- 5.1.8.2 Material of Body. : Steel/Iron Body.
- 5.1.8.3 Operating fluid : Fire resistant fluid/acqua filled fluid coupling
one side of fluid coupling should be of spline type suited to gear box input shaft and other
side should be of jaw type or pin/bush type coupling with rubber spider (without multi disc
and resilient plate)

Rm *Wdlaya*

5.1.8.4 Make & Model : Prembrill (Acceptable makes) :
Pembriil/Fluidomat/Voith/Any other proven. In CIL/other PSUs/Govt. departments(See
CI.7.4.0)

5.1.9.0 **OUT PUT COUPLING** :

5.1.9.1 Type of coupling : Geared.

5.1.9.2 Service factor to considered for : 1.25 over motor rating
Selection.

5.1.9.3 Make and Model : AFC-70-Prembrill

5.1.10.0 **MOTORS :**

5.1.10.1 Type(Suitable for S/D start) : Sq.Cage Induction.

5.1.10.2 Operating voltage system : 550V \pm 10% 3 Ph,50 Hz

5.1.10.3 K.W. rating : 2x110 KW

5.1.10.4 Minimum starting torque : 2 times full load torque.

5.1.10.5 Motor RPM(Syn.) : 1500

5.1.10.6 Class of duty : S-1 as per IS:325/1996

5.1.10.7 Type of starting : S/D

5.1.10.8 Class of insulation : Class F with temp. rise limited to class B.

5.1.10.9 Type of Enclosure. : T E F C

5.1.10.10 NFLP

5.1.10.11 Degree of protection(for NFLP): IP-55 of IS: 4691-1985

5.1.10.12 Frame size :- For 110KW Motor :- 315 M

As per IS:1231-74

5.1.10.13 Mounting of Motor : Floor mounted(B3 as per IS:2253-74)

5.1.10.14 Cable Entry : Suitable for DVC DWA Mining Cable of
required size.

5.1.10.15 Standard specifications

For NFLP-IS:325-1996.

5.1.10.16 Make : Marathon. (Acceptable makes):
Marathon/KEC/BB/ABB/Crompton/

Siemens/NGEF/BHEL/Any other proven make in CIL/other PSUs/Govt. department
(see Cl.7.4.0)

5.2.0.0 **STARTER**

5.2.1.0 Type : S/D ,NFLP

5.2.2.0 Voltage System : 550V \pm 10% 3 Ph 50 Hz.

5.2.3.0 K.W. rating : suitable for the motors

5.2.4.0 **CONSTRUCTION :**

5.2.4.1 In two compartments

5.2.4.2 One shall house through going Bus bars and off load isolator

Ratings of bus bar and isolator : 400A.

5.2.4.3 2nd shall house contactors and protective device.

5.2.4.4 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.

5.2.4.5 Cable terminal boxes with sealing boxes shall be provided for both incoming and outgoing terminals suitable for PVC DWA mining cables of required size.

5.2.4.6 Through going terminals of bus bar shall be provided with bus trunking box with blanking cover.

5.2.4.7 Four nos.auxiliary terminals(4x2) with terminals box and Cable sealing boxes suitable for Twin core 2.5 Sq.mm.PVC SWA Cable

5.2.4.8 Type of Enclosure(NFLP) : NFLP

5.2.4.9 Degree of protection(for NFLP) : IP-54 of IS: 13947(part-I)

5.2.4.10 Mounting : Skid mounted

5.2.5.0 **Utilisation category** : AC3 of IS: 1394(Part 4/sec.1)-1993

5.2.6.0 Nominal current rating of contactors (for Ac-3 duty) : Not less than 2.0 times the full load current of motor.

5.2.7.0 Operating limits of contactor : Shall be as per IS:13947. However, the drop out voltage shall not be more than 50% if rated control supply voltage.

5.2.8.0 **PROTECTIONS** :

5.2.8.1 Over load protection : Magnetic overload relay with oil dash

pot type time lag.

Range of current adjustment: 75% to 125%

5.2.8.2 Earth leakage protection : CBCT operated, non self resetting type
Type sensitive earth leakage relay with
Test/reset and indication facility.

Current setting range : Dual range, with following ranges(a)
50mA
300mA in steps of 50 MA. (b) 0.5A-2A in
Steps of 0.5A with provision to block
angle 2.7.0
(b)when the range is not required.

Time delay setting range : 0-1 Sec.In steps of 0.1 Sec. or 0.2 Sec.

5.2.8.3 Short circuit protection : HRC fuses of suitable rating

5.2.8.4 Suitable provision shall be made in the starter for sequence starting
interlock with other starter with timer.

5.2.8.5 The starter shall have provision for interlocking with pull cord
switches(Sr.No.5.7.1.0),belt sway switches(Sr.No.5.7.2.0),Audio visual
alarm(Sr.No.5.7.3.0) and limit switches at tail end(sr.No. 5.4.6.1)

5.2.9.0 Instruments : Amp. Meter of suitable range.

5.2.10.0 Standard specifications for starter : IS:13947(Part 4/Sec.1)-1993
IS:2148-1981

5.2.11.0 Make of Starter : Mine line (Acceptable makes) : Macneill
Engg./Yule/Mine Line/ABC/ Protection India/Volga/Reyrolle Burn/
Prabhu/Any other make proven in CIL/
Other PSUs/Govt.Deptt.(Sec Cl.7.4.0)

5.2.12.1 Make of contactors : Andrew Yule.

(Acceptable makes) : Any CPRI tested make(A copy of TC to
be submitted)

5.2.12.2 RATING OF CONTACTORS :- at least twice the full load current

5.3.0.0 **DELIVERY JIB ASSEMBLY** :

5.3.1.0 Structure : Made of heavy structural sections,
cantilever supported, bolted to drive
head frame.

5.3.2.0 Length of Jib : 3 Mtrs.

5.3.3.0 Discharge Pulley and shaft : Same as drive pulley specified at Cl.
No.5.1.5.0.

5.3.4.0 Bearing blocks : Same as Cl.No.5.1.5.0

5.3.5.0 **BELT SCRAPER** :

5.3.5.1 Type of belt scraper : Counter weighed/spring loaded.

5.3.5.2 Rubber strip dimensions : 10 mm thick x 100 mm wide

5.3.5.3 Rubber strip shall be fixed to scraper by means of slotted holes to facilitate easy
adjustment

5.4.0.0 **TAIL END ASSEMBLY** :

5.4.1.0 Structure : Shall be made of heavy structural
sections.

5.4.2.0 Tail Pulley and shafts : Same as clause No.5.1.4.0

5.4.3.0 Bearing blocks : Same as clause No.5.1.4.0

5.4.4.0 Minimum ground clearance below: 300 mm
tail pulley.

5.4.5.0 **BELT SCRAPER ON RETURN BELT BEFORE TAILS DRUM.**

5.4.5.1 Type of Belt Scraper : V-type plough scraper.

5.4.5.2 Angle of V : 60 Deg.

5.4.6.0 **WIPER CUM DUST COLLECTOR:**

5.4.6.1 A wiper cum dust collector trolley shall be provided at the tail end
as per DGMS (Tech.)Circular No.4 dated 11.05.04,

5.5.0.0 **TAKE UP ASSEMBLY** : length :- 18 meter

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5.5.1.0 Type of Take up :- Horizontal, motorized Winch for tensioning of belt with automatic brake system provided with 5/8" flexible rope and drum capacity of 50 mtr rope length =18 mtr

5.5.2.0 Structure of trolley and trolley guide : Suitable structural sections.

5.5.3.0 Take up pulley, diversion pulley : Same as clause No.5.1.4.0

5.5.4.0 Bearing blocks : Same as clause No.5.1.5.0

5.5.5.0 Operational : motorized with suitable starter

5.5.6.0 A suitable motor with operating 550V system provided with plug & socket system cable entry box.

5.6.0.0 INTERMEDIATE STRUCTURES :

5.6.1.0 Stringers :

5.6.1.1 Stringer length : 3 Meters

5.6.1.2 Stringer section : ISMC 125 x 65

5.6.1.3 Connecting bracing : Not required

5.6.1.4 Size of fasteners : M-16

5.6.2.0 Stools

5.6.2.1 Height of stool : 600 mm

5.6.2.2 Stool Section : ISMC 125 x 65

5.6.2.3 Steel section to be used for bracing for stools : ISA 50 x 50 x 6

5.6.2.4 Size of fasteners : M-16

5.6.2.5 Thickness of base plate : 10 mm.

5.6.3.0 CARRYING IDLER SETS :

5.6.3.1 Spacing : 1.00 M

5.6.3.2 Troughing angle : 30 deg.

5.6.3.3 Forward tilt of side idlers : 2 deg(Max)

5.6.3.4 Steel section to be used for idler: M.S.Angle 75x75x8
frame (transom)

5.6.3.5 steel section to be used for idler brackets :- M.S. flat 65x10 or ISLC 75 40

5.6.3.6 Carrying idler : Shall conform to enclosed specification



No.139071-2004.

- 5.6.3.7 Thickness of mounting base plate: 10 mm.
- 5.6.3.8 Provision for belt trailing : Mounting base plates shall be provided
With slotted holes to facilitate belt training.
- 5.6.3.9 Size of fasteners : M-16
- 5.6.4.0 **RETURN IDLERS** :
- 5.6.4.1 Spacing : 3 M
- 5.6.4.2 Brackets : Shall be bolted to stools or stringers.
- 5.6.4.3 Thickness of plate used for : 10 mm brackets.
- 5.6.4.4 Size of fasteners to be used : M-16
- 5.6.4.5 Return idler : Shall conform to enclose specification No:
139071-2004.
- 5.6.5.0 **IMPACT IDLER SETS** :
- 5.6.5.1 Location : In the loading section at tail end.
- 5.6.5.2 Spacing : 0.5 M
- 5.6.5.3 No.of idler Sets : 6 Sets.
- 5.6.5.4 Impact idler roller : Shall conform to enclose specification
No:139071-2004.
- 5.6.6.0 **TRANSITION IDLER SETS** :
- 5.6.6.1 Location : At delivery jib and Tail end.
- 5.6.6.2 No.of idler sets : 4 Sets.
- 5.6.6.3 Troughing angles : 5 deg. 10 deg. 20 deg.
- 5.7.0.0 **DECKING PLATES** :
- 5.7.1.0 Thickness of plate : Not less than 1.5 mm.
- 5.7.2.0 Location : At drive head, loop take up and loading
section.
- 5.7.3.0 Total length : Sufficient to cover the above sections.
- 5.8.0.0 **SKIRT PLATES** :

- 5.8.1.0 Location : For loading section on both sides of belt.
- 5.8.2.0 Thickness of plate : Not less than 6 mm.
- 5.8.3.0 Length : 3 Meters(Min)
- 5.8.4.0 Height of plate : Not less than 450 mm above belt.
- 5.8.5.0 Rubber strip dimensions : 10 mm thick x 100 mm wide.
- 5.8.6.0 Rubber strips shall be fixed to : Bidder to confirm.
the skirt plate by means of
slotted holes to facilitate easy
adjustment.

5.9.0.0 **PROTECTIVE GUARDS/FENCES:**

Suitable protective guards/Fencing shall be provided at all rotating parts at drive head, discharge point, tail end etc.

5.10.0.0 **ACCESSORIES** :

5.10.1.0 **PULL CORD SWITCHES** :

- 5.10.1.1 Type of switch : Manual reset type.
- 5.10.1.2 Enclosure : FLP, DGMS approved.
- 5.10.1.3 Spacing : 30 m on one side (Approx.)
- 5.10.1.4 Required Nos. : 17
- 5.10.1.5 Pull rope : Stranded and PVC sheathed.
- 5.10.1.6 Make : Mine line
(Acceptable makes) : Any DGMS approved make.

5.10.2.0 **BELT SWAY SWITCHES:**

- 5.10.2.1 Type of switch : Auto reset type.
- 5.10.2.2 Enclosure : FLP, DGMS approved.
- 5.10.2.3 Spacing : 30 m on both sides.
- 5.10.2.4 Required Nos. : 17 sets
- 5.10.2.5 Make : Mineline
(Acceptable makes : Any DGMS approved make)



5.10.3.0 **AUDIO-VISUAL ALARM** :

5.10.3.1 Type : Intrinsically safe Audio Visual alarm
with pre-start warning(compact unit)

5.10.3.2 Enclosure : FLP,DGMS, approved

5.10.3.3 Spacing : 50 M.

5.10.3.4 No.of units required : 10 nos

5.10.3.5 Make : Safex

(Acceptable makes : Any DGMS approved make)

5.10.4.0 Zero Speed Switch(FLP) :- 1 No.

6.0.0 **PRE-DESPATCH INSPECTION AND TESTS :**

6.1.0 The belt conveyors will be inspected by BCCL'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, statutory regulations(DGMS approvals for FLP electricals) and type test certificates.

6.1.0 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.

6.2.0 The manufacturer shall make4 available to be 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 valid DGMS approvals for the FLP Electricals (Pull Card Switch, Belt sway switch & Audio-visual alarms)
- g) Copies of type test certificates from CPRI for contactors used in the starters as per IS: 13947(Part-4/Sec.1)-1993.

~~7.0.0 **DOCUMENTS TO BE SUBMITTED WITH THE OFFER :**~~

~~7.1.0 Self certified copies of G.A. drawings (Ammonia Prints / computer generated) with Dimensions and weights for.....~~

~~7.1.1 Complete conveyor.~~

~~7.1.2 Drive Unit Assembly.~~

~~7.1.3 Delivery jib Assembly~~



~~7.1.4 Take-up Assembly.~~

~~7.1.5 Tail end Assembly.~~

~~7.1.6 Intermediate structures and idler Sets.~~

~~7.1.7 Assembly drawing of idler showing the internals.~~

~~7.2.0 Self certified copies of supply orders received for underground belt conveyors of tendered and higher capacity from CIL/subsidiaries of CIL/ other PSUs/Govt. departments.~~

~~7.3.0 Technical leaflets/literature in respect of all the bought outs.~~

~~7.4.0 Self certified copies of past supply orders from CIL/Subsidiaries of CIL/other PSUs/Govt. departments for gear boxes, fluid couplings, Motors and Starters in support of their proneness' in CIL, in case any make other than those specified at relevant clauses(Sr.No.5.1.7.6,5.1.8.4,5.1.10.17 and 5.2.11.0) are offered.~~

8.0.0 DOCUMENT TO BE SUBMITTED ALONG WITH EQUIPEMNT.

8.1.0 Certified copies of valid DGMS approval letters for Motor, Starter, Pull Card Switch, Belt Sway Switch and Audio-Visual alarm.

8.2.0 Maintenance and parts catalogues of the equipment and all the bought outs.

8.3.0 Assembly drawings showing all the dimensions and weights.

8.4.0 Self certified copies of type test certificates from CPRI for contactors used in the Starters.

SPECIFICATION FOR CONVEYOR ROLLERS

1.0 Environmental / operating conditions :

1.1 Place of use : Coal Mines(Both at Surface & U/G)

1.2 Temperature(Max.) : 50 deg. C

1.3 Humidity(Max.) : 98%

1.4 Atmosphere : Dusty(Mostly coal dust) and watery

1.5 Conveyor speed(Max.) : 2.5M/Sec

2.0 BASIC PARAMETERS



- | | | |
|-----|------------------------|---|
| 2.1 | <u>Type of roller</u> | : Drop in type ,greased for life (Maintenance free) |
| 2.2 | Friction co-efficient | : Not more than 0.015 |
| 2.3 | Run out / Eccentricity | : As per clause 4.5 of IS:8598 |

2.4.0 Dimensional / Details :

2.4.1 Top roller (Troughing roller): As per the drawing enclosed.

2.4.2 Bottom roller (Return roller) : As per the drawing enclosed

2.4.3 Impact roller :- : As per the drawing enclosed

MATERIALS AND CONSTRUCTIONAL DETAILS :-

3.1.0 Barrel / Tube :

3.1.1 Material of barrel : Steel tube conforming to Grade yst 210 of IS:9295- 1983.

3.1.2 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.

3.2.0 BEARING HOUSING :-

3.2.1 Material of bearing : Pressed sheet metal housing drawn in CRCA Sheets of extra deep drawing quality.

3.2.2 Nominal thickness of : 3.15 mm (Min.)

3.2.3 CRCA Sheet Wall thickness of : Not less than 2.5 mm housing after stamping & machining

3.2.4 Machining Tolerance : The housing shall be finished to

- for housing M7(Min) as per IS : 919 for accommodating the outer race of the bearing.
- 3.2.5 Welding of bearing housing The bearing housings shall be welded to the pipe by Twin bead MIG/MAC (CO) welding machine capable of welding the housing at both ends simultaneously in a single setting.
- 3.3.0 SHAFT :
- 3.3.1 Material of shaft : Carbon steel conforming to C-40 of IS : 1570 of En-8A of BS : 970
- 3.3.2 Machining tolerance of shaft : The shaft shall be machined and ground to J6(Min.) as per IS : 919 at bearing seatings, maintaining coaxiality of both ends.
- 3.3.3 Shaft ends : Type 'A' as per IS: 8598-1987
- 3.4.0 BEARINGS :
- 3.4.1 Type of bearings : Seize resistant ball bearings.
- NOTE : For rollers of shaft dia above 30 mm, single row deep groove ball bearing of C3 clearance is also acceptable.
- 3.4.2 Acceptable make of bearings :SKF/NBC/ABL/FAG/GRB/JBL -FAG
- 3.5.0 LUBRICATION :
- 4.5.1 Lubricant : Lithium based grease with a worked penetration of 220-

250, class 3.

- 3.5.2 Make / brand of grease : HPCL
- 3.5.3 Quantity of grease : Adequate quantity to fill up the cavity

3.6.0 SEALING :

- 3.6.1 Type of seal Non contact, Multi Lip labyrinth seal(Fire resistant)certificate
- 3.6.2 Material of seal : Neoprene, Nylon-6 or any other better material
- 3.6.3 Back / Inner seal : Nylon – 6
- 3.6.4 Dust seal and rain cap : CRCA
- 3.6.5 The sealing is to be done for the life time of the bearing : agreed
- 3.7.0 Assembly of roller : The bearings and seals shall be press fitted on the roller

3.8.0 RUBBER RINGS

FOR IMPACT ROLLER

- 3.8.1 Shore hardness of rubber : 50 – 60 deg. On shore 'A' scale
- 3.8.2 Thickness and No. rings :20mm-13 nos

4.0 PAINTING- Agreed :

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.

IDENTIFICATION MARKING : Agreed

Manufacturer's name/trade mark, month and year of manufacturer shall be permanently and legible marked on the roller, by etching/ embossing which should last for the life of roller

6.0 TESTING : Agreed

The following tests shall be conducted on completed rollers at appropriate frequencies in the production batch

- a) Friction co-efficient test
- b) Dimensional check up and Run out/essentricity test.
- c) Dust sealing test.
- d) Water proofness test
- e) Fire Resistent test of seal

7.0

GUARANTEE-agreed

Complete roller shall be guaranteed for a working life not less than 25000 hours.

8.0 PRE-DESPATCH INSPECTION-CMPDI inspection

8.1 The rollers will be inspected by BCCL'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.

8.2 The manufacturer shall make available to the inspector, the required test facilities with necessary support for conducting the inspection and test as per the order specifications and relevant ISS.

8.3 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.

TEST SAMPLE SIZE

Lot size: upto 1000 above 1000 upto 2000

1.	Dimensional check up including measurement & run out / eccentricity	5 Nos	8 Nos.
2.	Friction co-efficient	2 Nos.	4 Nos.



3. Dust penetration and measurement of 2 Nos. 3 Nos.
dia of shaft (at middle) and thickness
of tube and bearing housing etc.

4. Water penetration 2 Nos. 3 Nos.

For lot sizes above 2000, the sample size will be decided on pro-rata basis.

8.4 The manufacturer shall make available to the inspector the following documents during the inspection.

a) Copy of supply order

b) Copies of relevant ISS.

c) Test methods.

d) Works test certificates.

e) Invoices in respect of purchase of bearings, tubes and bars (for shaft) etc.

f) Manufacturer's test certificates in respect of raw materials.

~~9.0 DOCUMENTS TO BE SUBMITTED WITH THE OFFER~~

~~9.1 Self attested copies of supply orders received in the past from CIL/Subsidiaries of CIL/other PSUs/Govt. Depts for conveyer rollers of similar or higher sizes.~~

~~9.2 Self attested copies of test certificates for the tests specified at clause No.6.0 conducted on the rollers manufactured and supplied in the past.~~

~~9.3 Technical leaflets if any.~~

~~9.4 General arrangement/assembly drawing of the roller showing distinctly the tube, shaft, bearing housing, bearings, and seals etc.~~

10.0 DOCUMENTS TO BE SUBMITTED WITH CONSIGNMENTS:

10.1 Pre- despatch inspection and test report.

10.2 General arrangement /assembly drawing of the roller showing distinctly the tube, shaft, bearing housing, bearings, seals etc.

10.3 Technical leaflets if any.

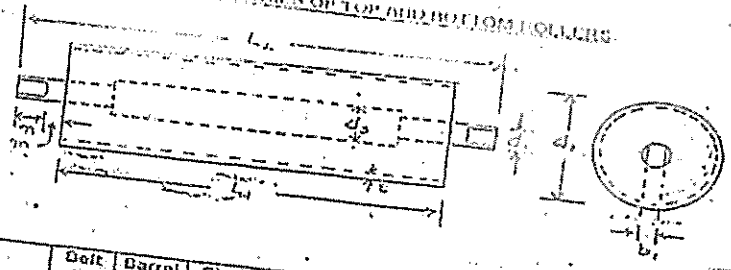
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Annex - B
 SCALAR INDUSTRIES CORPORATION

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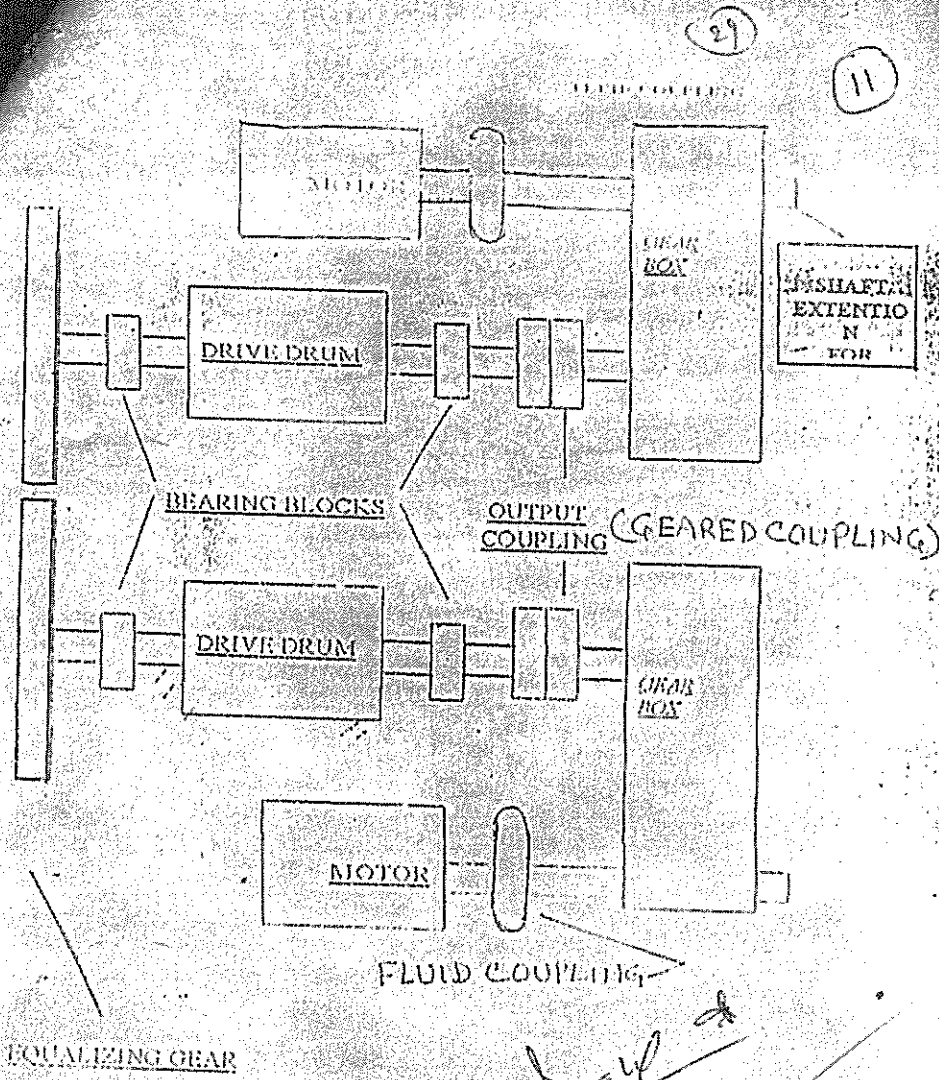
APPENDIX I
 DIMENSIONS OF MAIN AND TOP AND BOTTOM ROLLERS



Item	Oelt width	Barrel length L1	Shaft length L2	Tube thickness t	Nominal dia of tube d1	Dia of shaft at bearing seating d2 (Min.)	All dimensions are in mm.			
							Dia of shaft at middle d3 (Min.)		m	n
Troughing roller	800	315	341	5.4	114.3	20	25	4	9	14
-do-	900	350	382	5.4	114.3	25	28	4	12	16
-do-	1000	390	412	5.4	114.3	25	28	4	12	16
-do-	1200	463	497	5.4	114.3	25	28	4	12	16
-do-	1400	530	562	5.4	152.4	30	36	4	12	18
Return roller	800	900	1002	5.4	114.3	25	28	4	22	22
-do-	900	1050	1102	5.4	114.3	25	28	4	22	14
-do-	1000	1150	1202	5.4	114.3	25	28	4	22	18
-do-	1200	1300	1452	5.4	114.3	25	28	4	22	18
-do-	1400	1600	1852	5.4	152.4	30	36	4	22	22

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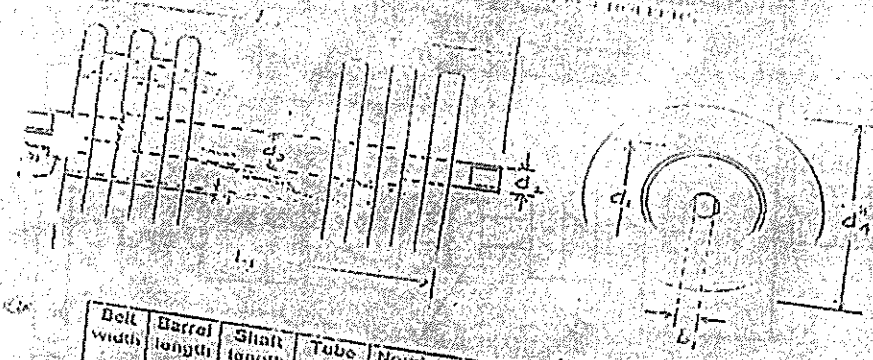
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All dimensions are in mm.

Belt width	Barral length L1	Shaft length L2	Tube thickness	Nominal dia of tube d1	Dia of shaft at bearing seating d2 (Min)	Dia of shaft at middle d3 (Min)	Dia of rubber disc			
							d4	m	n	b1
800	315	341	4.05	88.9	20	25	180	4	9	14
900	350	382	4.85	88.9	25	28	180	4	12	18
1000	380	412	4.85	88.9	25	28	180	4	12	18
1100	405	427	5.4	114.3	30	36	180	4	12	18
1200	550	562	5.4	114.3	35	40	200	4	12	22

Joban
Ref
12/15

SM (MM)
 16/3/15

William
 GM (MM) Pur 16/07/14

