

# BANGLADESH CABLE SHILPA LIMITED, KHULNA

INTERNATIONAL RE-TENDER FOR SUPPLY, INSTALLATION, COMMISSIONING & TRIAL OPERATION OF 1(ONE) BRAND NEW HDPE SILICON CORE PIPE EXTRUSION LINE MACHINE FOR DUCT MANUFACTURING PLANT ON FULL TRUN-KEY BASIS IN BCSL, KHULNA, BANGLADSH.



INTERNATIONAL RE-TENDER NO. 14.37.0000.702.07.237.17.5595

DATED: 31-12-2017

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<b>Tender Receiving Date</b>	<b>: 31-01-2018 up to 11-00 Hours.</b>
<b>Tender Opening Date</b>	<b>: 31-01-2018 at 11-15 Hours.</b>
<b>Place of Receiving &amp; Opening of Tender</b>	<b>: Dhaka City Office, Bangladesh Cable Shilpa Limited, Nilkhet Telephone Exchange Building (1<sup>st</sup> Floor), Dhaka.</b>
<b>Date of Pre-bid Meeting</b>	<b>: 11-01-2018 at 10-30 Hours.</b>
<b>Place of Pre-bid Meeting</b>	<b>: Conference Room, BCSL, Khulna.</b>
<b>Cost of Tender Documents per set</b>	<b>: Tk. 2,000.00 (Two thousand) only (Non-refundable).</b>

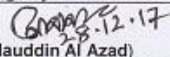
N.B: IN CASE OF ANY HOLIDAY DECLARED BY THE GOVT. OR ANY UNAVOIDABLE CIRCUMSTANCES THE TENDER WILL BE RECEIVED & OPENED ON NEXT WORKING DAY AS PER SCHEDULE TIME AS MENTIONED ABOVE.

BANGLADESH CABLE SHILPA LIMITED,  
SHIROMONI INDUSTRIAL AREA,  
KHULNA - 9206,  
FAX NO. 880-41-785375  
E-MAIL: dmpurbcs1702@gmail.com  
WEBSITE: www.bcs1.gov.bd



## Bangladesh Cable Shilpa Limited (BCSL), Khulna. Invitation Notice for International Tender.

1	Ministry/Division	Posts & Telecommunications Division				
2	Procuring Entity Name	Bangladesh Cable Shilpa Limited (BCSL).				
3	Procuring Entity District	Khulna				
4	Invitation for	1. Re-tender for Supply, Installation, Commissioning and Trial-run of 01 (One) Brand New HDPE Silicon Core Pipe Extrusion Line Machine for Duct Manufacturing Plant on full turn-key basis. 2. Tender for Procurement of Raw Materials for Manufacturing of Telecommunication Copper Cables.				
5	Tender Invitation Ref. No.	14.37.0000.702.07.237.17.5571				
6	Date	28-12-2017.				
<b>KEY INFORMATION</b>						
7	Procurement Method	One stage two envelops tendering method with international competition for Lot No. 1 and Open Tender Method with International Competition for Lot No. 2 & 3.				
<b>FUNDING INFORMATION</b>						
8	Budget and Source of Funds	BCSL's Own Fund.				
<b>PARTICULAR INFORMATION</b>						
9	Tender Publication Date	Within 31-12-2017				
10	Tender Last Selling Date	30-01-2018				
		<b>Date</b>	<b>Time</b>			
11	Tender Submission Date and Time	31-01-2018		11 : 00 hours		
12	Tender Opening Date and Time	31-01-2018		11 : 15 hours		
13	Name & Address of the office(s)	<b>Address</b>				
	(a) Selling Tender Document (Principal)	Office of the Liaison Officer, Dhaka City Office, Bangladesh Cable Shilpa Limited, Nilkhet Telephone Exchange Building (1 <sup>st</sup> Floor), Dhaka-1205, Phone No-02-9615501.				
	(b) Selling Tender Document (Others)	Cash Section, Accounts Dept., Bangladesh Cable Shilpa Ltd., Shiromoni Industrial Area, Khulna. Telephone No. 041-785603, 785236 Ext. 206				
	(c) Receiving Tender Document	Office of the Liaison Officer, Dhaka City Office, Bangladesh Cable Shilpa Limited, Nilkhet Telephone Exchange Building (1 <sup>st</sup> Floor), Dhaka-1205, Phone No-02-9615501.				
	(d) Opening -Tender Document	Office of the Liaison Officer, Dhaka City Office, Bangladesh Cable Shilpa Limited, Nilkhet Telephone Exchange Building (1 <sup>st</sup> Floor), Dhaka-1205, Phone No-02-9615501.				
14	Time, Date & Place of holding Pre-bid Meeting.	10-30 hours, 15-01-2018, Head Office, Bangladesh Cable Shilpa Ltd., Shiromoni Industrial Area, Khulna-9206, Phone no. 0088-041-785150, 785750.				
<b>INFORMATION FOR TENDERER</b>						
15	Eligibility of Tenderer	Tenderer from all countries of the world except Israel. Tenderer / Supplier shall have minimum 5 (five) years experience of supply, installation, commissioning and trial-run of same Machineries on full turn-key basis around the world for lot No. 1 and Tenderer / Supplier shall have minimum 5 years supply experience in Telecommunication Cable Manufacturing Factories and in the relevant fields around the world for lot No. 2 & 3.				
16	Brief Description of Goods	1. HDPE Silicon Core Pipe Extrusion Line Machine for Duct Manufacturing Plant as per tender document and 2. Raw Materials for Manufacturing of Telecommunication Copper Cables.				
17	Price of Tender Document	Tk. 2,000.00 (Taka two thousand) only (non refundable) per set.				
18	<b>Lot No.</b>	<b>Identification of Lot</b>	<b>Location</b>	<b>Quantity</b>	<b>Tender Security.</b>	<b>Completion Time</b>
	1.	Name of the machineries and equipment : 01(one) set Brand New HDPE Silicon Core Pipe Extrusion Line Machine (Details as per Tender Documents)	Khulna	01(one) Set machine.	Tk. 2,00,000.00 (Taka two lac) or equivalent US\$ /EURO (To be submitted along with technical offer).	5 (Five) months from the date of signing bi-partite contract.
	2.	Polyethylene Granules (HDPE) for Wire Insulation, Natural Colour	Khulna	15 M. Ton	USD 400	Within 30 days from the date of purchase order.
	3.	Petroleum Jelly (Cable Grade)	Khulna	10 M. Ton	USD 300	
<b>PROCURING ENTITY DETAILS</b>						
19	Name of Official Inviting Tender	Md. Alauddin Al Azad				
20	Designation of Official Inviting Tender	General Manager (Purchase & Marketing)				
21	Address of Official Inviting Tender	Bangladesh Cable Shilpa Ltd., Shiromoni Industrial Area, Khulna-9206. Phone No. 0088-041-785150, 01711402002, 785236 Ext. 221, Fax No. 0088-041-785375.				
22	Contact details of Official Inviting Tender	Foreign Purchase Section, Bangladesh Cable Shilpa Ltd., Shiromoni Industrial Area, Khulna. Phone no. 0088-041-785150, 785750, 01711402002,785236 Ext. 221, Fax no. 0088-041-785375. Please visit our website at www.bcsil.gov.bd & CPTU Web Site: www.cptu.gov.bd & E-mail: dmpurbcsil702@gmail.com.				
23	The procuring entity reserves the right to accept or reject any or all tenders without assigning any reason whatsoever.					

  
 (Md. Alauddin Al Azad)  
 General Manager (Purchase & Marketing)  
 Bangladesh Cable Shilpa Limited.  
 Khulna-9206, Bangladesh.

FORM OF ACKNOWLEDGEMENT

Bangladesh Cable Shilpa Limited,  
Shiromoni Industrial Area,  
P.O. Sonali Jute Mills Limited,  
Khulna-9206, Bangladesh

Subject: Participation in International Re-tender No. **14.37.0000.702.07.237.17.5595** date: **31-12-2017**  
due to for opening on **31-01-2018**.

We,..... hereby, offer for supply,  
..... hereby, offer for supply,  
installation, commissioning and trial operation of 1(one) brand new HDPE Silicon Core Pipe  
Extrusion Line Machine for Duct Manufacturing Plant on turn-key basis in conformity with the  
specifications as enumerated **in Annexure-I**. We confirm to bid for the designated item(s) at the  
firm price quoted in full compliance with the terms and conditions of the attached tender  
documents.

A tender security in the form of Bank Guarantee/Demand Draft/Pay Order of an amount of Tk.  
..... only or equivalent US\$/EURO/ pound sterling has been enclosed **with technical  
offer**.

Very truly yours

Date:

Signature of the Tenderer/bidder  
including title and capacity.

(To be filled up and signed by the Manufacturer on their letterhead pad)

**TO WHOM IT MAY CONCERN**

**POWER OF ATTORNEY / AUTHORISATION LETTER**

**SUBJECT:** Re-tender No. ....

Date: .....

For Supply of .....

**Dear Sir,**

We, the undersigned, M/s. .... (Name and address)....., being the manufacturer of ..... (Name of Machine) ..... do hereby appoint M/s. .... (Name and address of the supplier /tenderer) ..... as our authorized representative for submitting bid(s) against the above mentioned re-tender invited by the Bangladesh Cable Shilpa Ltd., Khulna, Bangladesh.

We also hereby authorize the said representative to supply our goods, submit all documents related to the re-tender, negotiate and do necessary formalities with your authority as and when required and sign the contract for and on our behalf.

Very truly yours,

.....  
Signature:  
Name:  
Designation:

(To be filled up and signed by the Supplier/Tenderer on their letterhead pad)

**TO WHOM IT MAY CONCERN**

**POWER OF ATTORNEY / AUTHORIZATION LETTER**

**SUBJECT:** Re-tender No. ....

Date: .....

For Supply of .....

**Dear Sir,**

We, the undersigned, M/s. ....  
..... (Name and address of the  
Supplier/Tenderer) being the Supplier/Tenderer of ..... (Name of Machine)  
do hereby appoint M/s.....  
..... (Name and address of the local  
agent in Bangladesh) as our authorized representative for submitting bid(s) against the above  
mentioned re-tender invited by the Bangladesh Cable Shilpa Ltd., Khulna, Bangladesh.

We also hereby authorize the said representative to supply our goods, submit all documents  
related to the re-tender, negotiate and do necessary formalities with your authority as and when  
required and sign the contract for and on our behalf.

Very truly yours,

.....  
Signature:  
Name:  
Designation:

**ABSTRACT OF OFFER TO BE SUBMITTED WITH TECHNICAL OFFER**

(This form shall duly be filled in and submitted with technical offer)

1. If any point remains blank and not properly filled-up and word such as 'as per tender' are written, the offer shall be treated as incomplete and liable for rejection. Submitted information must be supported by proper documents from the Principal.

**Points must be included in technical offer:**

- i) Name of the Principal/Supplier with complete address :
- ii) Name and address of the manufacturer with the original certificate confirming the supply as per tender document :
- iii) Name of the Local Agent with complete address :

SI No.	Particulars	Related information
1	Tender Security Amount	
2	Tender Security No.	
3	Country of Origin	
4	Port of Destination	Mongla Sea Port, Bangladesh
5	Port of shipment	
6	Period of shipment from the date of signing bipartite contract	
7	Offer Validity	

- vi) Tenderer's original technical offer shall be enclosed in triplicate with number and date :
- v) Tenderer shall have to submit tender security **(Annexure-II) along with technical offer** from any schedule bank of Bangladesh stating tender security No. and date :
- vi) Certificate from the principal authorizing the local agent, if any, to participate in the re-tender shall be enclosed. Certificate number and date are to be stated. :
- vii) Certificate from the Manufacturer authorizing the principal/supplier, if any, to supply the machine as per re-tender specification shall be enclosed. Certificate number and date are to be stated. :
- viii) Certify that we have carefully gone through all instructions and terms of the re-tender document and accepted them in full. We have signed and sealed the necessary papers of the re-tender document. We enclose herewith the following documents as per requirement of the re-tender terms :
- a) Original receipt evidencing purchase of Re-tender Document :
- b) Chief Controller of Importer & Exporter (CCI&E) registration as Indentor :

- c) Registration with Bangladesh Bank as Indentor :
- d) Membership Certificate from Bangladesh Indenting Agents' Association :
- e) Trade License & VAT registration certificate :
- f) TIN No and up to date Income Tax clearance certificate :
  
- ix) Certificate of genuineness of the supplier as per clause no. 43. Particulars i.e. No. and date, etc. are to be stated. :
- x) The tenderer shall state whether it is a Proprietorship / Partnership firm/Limited Company and the authorised person shall sign on its/their behalf :
- xi) Any other important points/ features of the offer :

Signature and seal of the tenderer with official address and Telephone No/ Fax No/ E-mail

Date.....

**BANGLADESH CABLE SHILPA LIMITED**  
**SHIROMONI INDUSTRIAL AREA**  
**KHULNA, BANGLADESH.**

ABSTRACT OF OFFER FOR SUPPLY, INSTALLATION, COMMISSIONING AND TRIAL OPERATION OF 1 (ONE) BRAND NEW HDPE SILICON CORE EXTRUSION LINE MACHINE FOR DUCT MANUFACTURING PLANT IN BANGLADESH CABLE SHILPA LIMITED(BCSL), KHULNA ON FULL TURN-KEY BASIS.

(This form shall duly be filled in and submitted with price offer)

**2. Points must be included in price offer:**

- i) Name of the Principal/Supplier with complete address :
- ii) Name and address of the manufacturer with the original certificate confirming the supply as per tender document :

SI No.	Particulars	Price and related information
1	01(one) No. HDPE Silicon Core Duct Extrusion Line Machine (FOB Price) as per description in SL No. 52.1 to Sl No. 52.17	
2	Freight	
3	<b>C&amp;F Mongla Sea Port, Bangladesh (1+2)</b>	
4	Cost of process tools for HDPE Silicon Duct/pipe production and related other items as per description of SL No. 54	
5	Cost of raw materials for PET strapper material as per description in SL No. 59	
6	Cost of installation, commissioning and trial run/production including on-job training of 8 (eight) BCSL personnel at the Buyers' premises in Bangladesh	
7	Cost of visit for pre-shipment inspection for 2 (Two) BCSL officials for 5(five) days excluding travel time in Manufacturer's Premises.	
8	<b>Total Cost (3+4+5+6+7)</b>	
9	<b>Price (optional)</b> of spare parts for 3(three) years operation of machine (must be included item-wise and total value).	
10	<b>Price (optional)</b> of Screw type Air Compressor with dryer as per description of Sl. No. 52.18 .	
11	<b>Price of Testing Equipments (Optional):</b> a) Environmental Stress Cracking Resistance (ESCR) Test Apparatus as per description in SL No. 52.19	
	b) <b>High Accuracy Digital Density Meter</b> as per	



	description in SL No. 52.20	
	<b>c) Crush Resistance Tester Test Apparatus as per description in SL No. 52.21</b>	
<b>11</b>	Country of Origin (except Israel)	
<b>12</b>	Port of Destination	Mongla Sea Port, Bangladesh
<b>13</b>	Port of Shipment	
<b>14</b>	Period of Shipment from the date of signing bi-partite contract.	
<b>15</b>	Validity of Offer	

**N.B: 1. If any tenderer wants to give discount on offered price, this discount must be from principal/supplier of machine. Discount from local agent is not acceptable.**

**2. The tenderer must include all prices for this tender. If any item(s) is mistaken to quote before opening of tender, the tenderer will have to supply the same at free of cost with the machine. In this case, no extra cost will be entertained.**

- iii) Tenderer's original proforma invoice shall be enclosed with price offer. Invoice number and date are to be stated. :
- iv) Certificate from the principal authorizing the local agent, if any, to participate in the re-tender shall be enclosed. Certificate number and date are to be stated. :
- v) Submitted tender security **along with technical offer** No. and date :
- vi) Tenderer shall have to furnish 10% (Ten percent) performance security (**Annexure-III**) within 28(twenty eight) days from the date of receipt of Notification of Award. Confirmation of performance security is to be given :
- vii) The tenderer shall state whether it is a Proprietorship/ Partnership firm/Limited company. :
- vii) Any other important points/features of the offer :
- ix) Certify that we have carefully gone through all instructions and terms of the re-tender document and accepted them in full. We (authorised person) have signed and sealed the necessary papers of the re-tender document. We enclosed herewith the following documents: :

  - a) Original receipt evidencing purchase of Re-tender Document :
  - b) Chief Controller of Importer & Exporter (CCI&E) registration as Indentor :

- c) Registration with Bangladesh Bank as Indentor :
- d) Membership Certificate from Bangladesh Indenting Agents' Association :
- e) Trade License & VAT registration certificate :
- f) TIN No and up to date Income Tax clearance certificate :

Signature and seal of the tenderer with official address and telephone No/Fax No/ E-mail.

Date.....

**INSTRUCTIONS, TERMS & CONDITIONS TO TENDERERS:**

3. These instructions are intended to serve as a guideline for preparation of tender/bid.
  - 3.1 NOTE OF CAUTION:
    - a) Re-tender/Bid is being invited hereunder in accordance with international competitive bidding procedure.
    - b) **Re-tender/Bid containing any deviation from the instructions to tenderers and the stated contractual terms and conditions, specification and any addendum related thereof, shall be treated non-responsive.**
  
4. CLARIFICATIONS, INSTRUCTIONS AND INFORMATION:  
Any request for clarification of any additional information in connection with this tender or any aspects of the bid-documents must be submitted in writing well ahead of opening of the tender. If any additional information is needed, it will be furnished in writing to all prospective bidders by BCSL.
  
5. MODIFICATION OF TENDER DOCUMENT:  
Any modification, correction or clarification of tender document or extension of time for tender closing will be issued in the form of any addendum which will become a part of the tender and shall be signed by the tenderer and enclosed with the tender. Failure to do so may disqualify the offer.
  
6. BIDDING INSTRUCTION:
  - 6.1 **One stage with two envelopes tendering method with international competitions will be strictly followed on invited re-tender.**
  - 6.2 **Bidders will use 2(two) separate sealed envelopes; one for technical offer and the other for financial offer; and the individual envelope should be marked accordingly. Both these envelopes are to be dropped simultaneously in single envelope in the tender box.**
  - 6.3 **Tender Security is to be attached with technical offer.**
  - 6.4 Technical offer/bid will contain full information as required for proper technical evaluation of the bid and will include the followings: -
    - i) Full technical specifications with details.
    - ii) Catalogues/leaflets/brochures /illustrative literatures.
    - iii) Manufacturing and foundation drawings, flow sheets etc. if any,
    - iv) Data providing history of the bidding /manufacturing company, its financial competency and technical ability for the similar work with technical offer.
    - v) Information about manufacturing facilities and the back-ground of the technical personnel employed.
    - vi) Experience of the similar work and services during the last 5 (five) years with technical offer.
    - vii) Original money receipt evidencing purchase of tender document with technical offer.
  - 6.5. Financial offer will contain with total price and also price break-up of each part/section of the machine, Freight, Price of process tools, Raw Materials for Pet-stripper, Cost of installation, commissioning and trial-run, Cost of Pre-shipment inspection for 2 (two) BCSL officials, Price of optional item such as : Spare parts for 3 (three) years operation and prices of Screw type Air Compressor with dryer, Testing Equipments

mentioned in **page no. 8 & 9** of this document duly supported with the followings :

i) Original Proforma invoice of the Principal/Supplier/Manufacturer.

**N.B: The tenderer must quote for optional items (4 items). Otherwise, the offer may be rejected.**

- 6.6 The bid shall be submitted in triplicate. The bidder shall seal the original and each copy of the bid envelope duly marked as "Original" and copy".
- 6.7 The envelope shall be addressed to **Managing Director, Bangladesh Cable Shilpa Limited, Nilkhet Telephone Exchange Building (1<sup>st</sup> Floor), Dhaka-1205, Bangladesh.**
- 6.8 For both technical and financial offer, the envelope shall bear the tender number, the name and full mailing address of the bidder so as to enable the purchaser to return the unopened bid(s) in case it is declared late/delayed.
- 6.9 If the envelope is not properly sealed, marked and inscribed as instructed above the purchaser shall assume no responsibility for misplacement or premature opening of the bid.
7. CLARIFICATION OF BIDS:  
To assist in the examination, evaluation and comparison of bids, the purchaser may at it's discretion, ask the bidder for a clarification of the bid. The request for clarification and the response shall be in writing and no change of the unit price or substance of the bid shall be sought, offered or permitted.
8. PRELIMINARY EXAMINATION:
- 8.1 Arithmetical errors will be rectified on the following basis. If there is discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. **If the supplier does not accept the correction of the errors, its bid will be rejected.** If there is a discrepancy between words and figures, the amount in words will prevail.
- 8.2 Prior to detailed evaluation, pursuant to clause-7, the purchaser will determine the substantial responsiveness of each bid. A substantially responsive bid is one which confirms to all the terms and conditions of the tender document without major and material deviation.
- 8.3 A bid determined as not substantially responsive will be rejected by the purchaser.
- 8.4 The purchaser may waive any minor deviation or non- conformity or irregularity in a bid which does not constitute a major and material deviation, provided such waiver does not prejudice or effect the relative ranking of any bidder.
- 8.5 For the purpose of evaluation of bids for the contract, tenderer's price offer shall be converted into US Dollars using exchange rates of the Bangladesh Bank prevailing on the day of opening of the price offer.
9. EVALUATION OF THE BIDS:
- 9.1 The following procedures shall be applied to select the most reliable Supplier/Turn-key contractor. The Technical Bids shall be opened and evaluated

first. Clarification on Technical offers will be made during evaluation of respective Bid, if necessary.

- 9.2 The factors which shall be considered during technical evaluation include the followings:
- i) Field proveness of the machineries and equipment.
  - ii) Experience of Tenderer in supply, installation, commissioning and trial-run of similar machineries & equipment.
  - iii) Project management and implementation plan.
  - iv) Project design and engineering experience.
  - v) The Bidder will provide Quality certificate of similar types of machineries and equipment from appropriate authority where they have supplied.
  - vi) Training plan.
  - vii) Guarantee and Warrantee.
- 9.3 The bids will be finally evaluated on the following priorities:
- a) Technical specifications.
  - b) Ease of operation & maintenance,
  - c) Lowest price.

10. **OPTIONAL ITEMS:**

- 10.1 Price spare parts for 3(three) years operation of machine [as per description of SL No. 64(a)] must be included as item-wise and total value also which price will valid for 5 years.
- 10.2 **Price of Screw type Air Compressor with dryer** as per description in SL No. 52.18
- 10.3 **Price of Testing Equipments:** of Environmental Stress Cracking Resistance (**ESCR**) Test Apparatus, **High Accuracy Digital Density Meter, Crush Resistance Tester** Test Apparatus as per description in SL No. 52.19,52.20 & 52.21

**N.B: (i) Price of optional items will not be considered for tender evaluation to select the lowest bidder. BCSL reserves the right to reject or procure all optional items fully or partly.**

**(ii) Bidder will provide a complete list of spare parts with peice break up for further procurement.**

11. **AMENDMENTS TO TENDER DOCUMENTS:**

- 11.1 At any time prior to deadline for submission of bids the purchaser may, for any reason, whether of his own initiative or in response to a clarification requested by a bidder, modify the tender documents by the amendments.
- 11.2 The amendments will be notified in writing by fax or by e-mail to all bidders who have purchased tender documents and the same will be binding on them.
- 11.3 In order to allow the bidders reasonable time to take the amendment into account in preparing their bids, the purchaser may at its sole discretion extend the deadline for submission of bids.

12. **PREPARATION AND SUBMISSION OF TENDER/BID :**

- 12.1 Tender/bid and all supporting documents should be written in English and be submitted in triplicate (one original and two copies) in a sealed envelope to the following address :-

**Managing Director,  
Bangladesh Cable Shilpa Limited,  
Nilkhet Telephone Exchange Building (1<sup>st</sup> Floor),**

**Dhaka-1205, Bangladesh.**

Tender number and opening date should be written on the envelope.

- 12.2 Tender/bid may be sent **by post/courier service** but care must be taken to ensure that it reaches buyer's office at stipulated date and time. Late submitted tender would be returned unopened.
- 12.3 The suppliers may quote in their own letter head but it is essential that the 'Abstract of Offer' is also completed and returned to the buyer. If the same is not accordingly returned, the tender/bid may not be considered.
- 12.4 Tender/Bid should be based on C&F price; but FOB price and freight should be shown separately. Any increase in freight before shipment will be on the seller's account. The buyer has the option to place order either on FOB or on C&F basis. Buyer shall not pay any commission to seller's local agent.
- 12.5 The name of the manufacturer, principal, supplier and country/countries of origin with port of shipment proposed should invariably be mentioned in the offer. In case of multiple origins, at seller's option, the country of origin and port of shipment may be confirmed prior to issuing Notification of Award (NOA) or at the time of signing contract.
- 12.6 Tenderer must submit the original and signed proforma invoice of their Principal with the tender/bid. Fax offers may be considered provided signed copy of proforma invoice is received by the tender floating authority within 24(twenty four) hours of opening of the tender.
- 12.7 If the bid is made by a firm or a corporation, it shall be signed by a person authorised to make the commitment on behalf of the firm or corporation. Bid signed by an agent is to be accompanied by an evidence of its authority to bid on behalf of its Principal.
- 12.8 Tenderer should submit a certificate with the offer to the effect that they have gone through the instructions and the conditions as enumerated in the tender document and have agreed with them in full. As a token of such acceptance each page of the tender document must be signed by the supplier with seal and returned accordingly. In case of disagreement on any point the same must be stated clearly in a separate sheet. Tenderer must give full and detailed specification of the item(s) they like to offer. **Expression like 'as per your specification' should be avoided.**
13. CONTRACT:  
The terms & conditions of the tender document shall form an integral PART OF THE CONTRACT/Purchase order document. The tenderer is requested to check this tender document in order to ensure proper compliance and the 'Form of Acknowledgement' along with the abstract of offer shall duly be filled in by the tenderer and shall be returned to the purchaser.
14. BID LANGUAGE:  
The bids, all correspondences and documents shall be written in **English Language.**
15. BID CURRENCIES:  
Prices shall be quoted in USD/EURO/Pound Sterling.
16. PRICE:  
16.1 The tenderer shall quote their price on C&F Mongla Sea-port, Bangladesh basis showing break-up of FOB & Freight separately. Freight shall be paid at actual against freight memo but not exceeding the amount shown in the bid. The purchaser shall have the right to accept or reject any offer not furnishing such break-up.

- 16.2 The FOB price shall include the cost of seaworthy packing of international standard and shall be deemed to have included duties, taxes and levies imposed by the Government or its agencies of the exporting country.
- 16.3 If any bidder offers any mandatory item as optional and if the Brand/Country of Origin/Quality remains the same, then tender will be evaluated by adding the quoted price of mandatory item with main offer.
- 16.4 No alternation of the unit price whatsoever shall be entertained during the validity or the period of enforceability of the order/contract.
17. TENDER/ BID SECURITY:
- 17.1 Tenderer/Bidder shall submit tender/bid security amounting to Tk. 2,00,000.00 (**Taka two lakh**) only or equivalent foreign currency favouring Bangladesh Cable Shilpa Ltd., Khulna, either in the form of Pay Order or Demand Draft or unconditional Bank Guarantee (**Annexure-II**) valid for a minimum period of **120 days** from the date of opening of the tender from any schedule Bank in Bangladesh along with the technical offer. Neither any inland cheque nor any cheque/guarantee issued by a Bank of foreign countries will be accepted.
- 17.2 Tender/ bid security is liable to forfeiture if the tenderer whose price is evaluated as lowest fails to furnish the required performance security within **28 (twenty eight) days** from the date of issuance of Notification of Award (NOA). Tender/ Bid security of unsuccessful tenderer would be returned by BCSL Management. The tender not accompanied by tender/ bid security would be treated non-responsive. Tender/bid security of the successful bidder shall be returned by BCSL on receipt of performance security from the successful bidder.
18. VALIDITY OF THE OFFER:  
Price offer shall remain valid, firm and irrevocable for a minimum period of **120 (One hundred and twenty)** calendar days from the date of opening of the tender which may be extended for a further period if it is desired by the buyer.
19. TENDER EXPENSES:  
All expenses incurred in connection with preparation, submission and delivery will be at tenderer's accounts. No claim will be entertained for refund or reimbursement of such expenses.
20. OPENING OF TENDER:
- 20.1 **The tenderer will have to submit both Technical offer and financial offer with separate sealed envelope. These two separate envelopes will have to give in another sealed envelope. Only the technical Offer will be opened immediately after closing of the tender in presence of the tenderers/bidders or their representatives (if any). At first, the technical offer will be evaluated by the concerned technical sub-committee.**
- 20.2 After approval of technical evaluation report, a notice will be issued to the Technically Responsive bidder(s) mentioning the date, time and place of opening of financial offer. Financial offer of technically non-responsive bidder will be returned un-opened.
- 20.3 As per stipulated time, day and place in the notice, the financial offer will be opened in presence of the tenderers/bidders or their representatives (if any).

21. REVISION OF OFFERS:

After opening of financial offer, no change of unit price in the bid shall be entertained. Besides, if any bidder makes any complaint in writing stating that there is deviation in others bids and if such complaint is proved to be unfounded and false, the tender evaluation committee may recommend forfeiture of tender/bid security of the complainant and may also recommend black listing of the complainant firm in case their tender/ bid security has already been returned.

22. CAUSES OF NON-RESPONSIVENESS OF BID(S):

The bid(s) will be treated as **non-responsive** at the discretion of the buyer for the following reasons / lapses:

- 22.1 If the schedule of price and Technical specifications are not enclosed with the bid duly filled in, signed and sealed.
- 22.2 If the original **proforma invoice in original letter head pad of Supplier/Principal** is not submitted with the bid.
- 22.3 If tender/ bid security in proper form and in requisite amount is not submitted with the tender/bid.
- 22.4 If the amount and validity of tender/ bid security do not conform to the requirement of the tender inquiry.
- 22.5 If the original official money receipt evidencing purchase of tender documents is not furnished with the tender / bid.
- 22.6 If the tenderer / bidder makes any addition or alteration to his price, specification or any other terms and conditions of his tender / bid after opening of tender.
- 22.7 If each and every page of the tender document both for technical & financial offer including the General conditions is not signed and sealed by the tenderer / bidder as a confirmation of their acceptance of the tender terms.
- 22.8 If the tender / bid is made on behalf of a firm of such a country with whom Bangladesh does not have any diplomatic relation.
- 22.9 **If any bidder mistakes to mention any mandatory item in their tender or any information regarding mandatory item when it is found after opening of financial offer, the bidder must supply this item without extra cost within their quoted price. Otherwise, tender will be considered as Non-Responsive.**

23. SPECIAL CONDITIONS:

- 23.1 No conditional tender / bid shall be accepted, unless relevant to the nature of the item or its trade conventions and practices.
- 23.2 Third party documents including bill of lading are not acceptable.
- 23.3 Tender /bid shall be signed by a person who has authority to enter into contract with the purchaser. If it is detected afterwards that the person signing the bid or documents forming part of the contract had no authority to do so; the purchaser may, without prejudice and other civil and criminal remedies, cancel the contract, forfeit the tender/ bid security /performance security and hold the signatory liable for all costs and damages.
- 23.4 In case the supplier/contractor is from a third country i.e, other than-country of origin where from shipment will be made a certificate from the manufacturer will have to be submitted with the proforma invoice stating that the supplier/contractor secures order/contract against the tender enquiry under reference, they will manufacture the machineries & equipment and execute the order contract on behalf of the



- supplier/contractor. In all other cases also, manufacturer's certificate as aforesaid shall be submitted together with the proforma invoice.
- 23.5 Local agent who desires to participate in the tender shall mention his **indenting registration number and Bangladesh Bank permission number supported with photocopies of documentary evidence issued by Chief Controller of Import and Export, Government of the People's Republic of Bangladesh and the Bangladesh Bank respectively. Tenderer shall have to produce the originals if required by the buyer.**
- 23.6 Schedule of price and specifications duly completed, signed and sealed shall form an integral part of the bid.
- 23.7 The Purchaser reserves the right to accept any item or group of items against this tender.
- 23.8 The tenderer/bidder must mention specification of machineries & equipment and date of shipment. Expressions like ' as per tender specification' and 'shipment as desired' shall not be acceptable and shall make the tender/bid liable to disqualification.
- 23.9 The tenderer/bidder must enclose with his bid the original money receipt evidencing purchase of tender document.
24. TENDER COMPARISON:  
For comparison of tender the currency quoted by the tenderer / bidder shall be converted into Bangladesh Taka at the rate (official selling) prevails on the date of opening the tender in Bangladesh Bank or rate of any scheduled Bank as advised by Bangladesh Bank.
25. NOTIFICATION OF AWARD (NOA):  
The buyer may award NOA to the successful tenderer / bidder whose bid is substantially responsive and has been determined as the lowest evaluated bid amongst the technically accepted Tenderers / bidders.
26. PERFORMANCE SECURITY:
- 26.1 The successful tenderer / bidder shall be required to furnish a performance security to the extent of **10% (Ten percent)** of the total contract price in the form of an unconditional irrevocable Bank Guarantee executed by any schedule Bank of Bangladesh as enclosed (**Annexure-III**). The performance security shall have to be valid for a period of 6 (six) months from the date of successful trial-run of the project and extendible for a further period, if required by the buyer. Performance security must be furnished and a bi-lateral agreement is to be signed within **28 (twenty eight)** days from the date of issuance of Notification of Award. Performance security shall be en-cashed and forfeited if the supplier fails to supply the machineries & equipment and complete the contracted work in time or commits any breach of contract.
- 26.2 On completion of bi-lateral agreement, the buyer will open one **letter of credits for 'C&F Mongla price for machineries, process tools, raw materials for stripper, spare parts and testing equipments.**
- 26.3 **Payment for installation, commissioning and trial-run and inspection etc' will be made through FTT** in favour of the seller after successfully completion of the same.
- 26.4 Should the suppliers be adjudged insolvent, the buyer shall have the right to terminate the contract and forfeit the performance security submitted against the contract.

27. QUALITY CERTIFICATE:

Tenderer shall furnish **guarantee from the original manufacturers** to the effect that the machineries & equipment is of first party origin, first class workmanship and will be of exact specifications as laid down in the tender document **(Annexure-I)** and in the event of placing order to the tenderer, the manufacturer will supply machineries & equipment to the tenderer against the tender. Tenderer, for all purpose, shall be responsible for the act of omission and commission of Principal. The tenderer / bidder shall also guarantee the quality of machineries & equipment.

28. UNDERTAKING.

The supplier/manufacturer undertakes that if any defect is found in any stage of the project (supply, installation, testing, commissioning & trial-run), the said defect of the machineries & equipment shall be rectified by replacing at their cost and responsibility.

29. PACKING AND MARKING:

29.1 The seller shall be responsible for furnishing proper seaworthy international standard packing and marking the machineries & equipment for shipment by rail, road and sea. Machineries & equipment shall be assembled to the maximum extent practicable prior to shipment. Machineries & equipment shall be packed so as to withstand usual rough handling and ensure delivery without loss or damage.

29.2 Each case/package must have the detailed packing list inside & the following information printed in BOLD LETTERS on the outside:

- i) Name of the consignee and destination.
- ii) Letter of Credit number.
- iii) Gross and net weight.
- iv) Brief Description of the machineries & equipment
- v) Serial number of package and
- vi) Name and address of the supplier.

30. INSURANCE:

Insurance will be arranged by the buyer against their marine policy with M/s. Sadharan Bima Corporation, Bangladesh. The supplier will send the clearing particulars of the consignment, the name of the carrying vessel its' sailing date, port of shipment, number of bill of lading and quantity and value of the machineries & equipment to the buyer as well as to the Sadharan Bima Corporation by Fax/E-mail advice. All documents related to insurance shall be sent by international courier service.

31. TAXES AND OTHER CHARGES:

All duties, taxes and other charges levied on the machineries & equipment by authorities in buyer's country shall be borne by the buyer and shall not be included in the bid price. Charges of such nature in seller's country or in any country other than the buyer's country shall be borne by the supplier.

32. TERMS OF PAYMENT:

32.1 **75%** of the cost of machineries, process tools and spare parts shall be paid on presentation of shipping documents, **15%** of the cost be paid against Certificate of Successfully Installation & Commissioning of the Machine signed by the Seller and buyer within 60 days after delivery and the remaining **10%** of the cost will be paid against Final Acceptance Report signed by both Seller and Buyer i.e. successfully production of the testing samples and the money will be paid after 120 days from the date of Final Acceptance Report. All payments will be made through L/C.

- 32.2 **100% payment will be paid through FTT** for supply, installation, commissioning, trial-run and inspection etc. will be paid on submission of a buyer's satisfactory completion certificate stating that all works have been completed and the machineries & equipment are ready for final operation and inspection has been completed satisfactorily.
- 32.3 As soon as shipment is made, the supplier shall send 6 (six) copies of the following shipping documents to BCSL so as to reach BCSL well ahead of time of the consignment reaches Mongla port, Khulna
- a) Complete set of original clean on Board bill of lading marked freight pre-paid.
  - b) Supplier's invoice signed in ink.
  - c) Buyer's authorised inspection agent's certificate.
  - d) Supplier's guarantee certificate.
  - e) Fax/E-mail advice for insurance cover.
  - f) Certificate of Origin (except Israel).
  - g) Factory test certificate.
  - h) Certificate showing that the machineries & equipment have been shipped by a non- Israel flag vessel.
  - i) Freight memo showing freight pre-paid.
- 32.4 Bank charges in Bangladesh for opening of the letter of credit shall be borne by the buyer. Any bank charge for revalidation or amendment of the letter of credit on the request of the supplier shall be exclusively borne by the beneficiary and not by the buyer. However, amendments required due to any delay/lapse on the part of the buyer will be at buyer's cost.
- 32.5 Bank charges in the event of withdrawal of letter of credit established by the buyer shall be borne by the beneficiary.
- 32.6 Confirmation of letter of credit by foreign Bank(s) will only be entertained at beneficiary's cost. Transshipment may be allowed in container vessel only.
33. SHIPMENT PERIOD:  
Shipment shall have to be made within **90 (Ninety)** days after opening of L/C, Part shipment shall not be allowed.
34. URGENCY OF DELIVERY:  
Complete delivery shall have to be made within the period as specified in clause No.33. However, early delivery is preferable.
35. SHIPPING DOCUMENTS:
- 35.1 Notice of shipment shall be made by fax/ e-mail to:
- a) Managing Director,  
Bangladesh Cable Shilpa Limited,  
Shiromoni Industrial Area,  
P.O. Sonali Jute Mills Ltd.,  
Khulna-9206, Bangladesh.  
Fax No.: 0088-041-785375  
E-mail: mdbcskhulna@gmail.com / dmpurbcs1702@gmail.com
  - b) M/s. Sadharan Bima Corporation,  
23/24, K.D.A. Commercial Area,  
Khulna-9100, Bangladesh.
- 35.2 Notice of shipment shall contain the following:-
- a) Contract Number.

- b) Description of item(s).
  - c) Total quantity of Item(s) shipped and value thereof.
  - d) Name of vessel.
  - e) Bill of Lading number and date.
  - f) Port of loading.
  - g) Date of shipment.
  - h) Estimated time of arrival of ship.
  - i) Whether it is part shipment.
- 35.3 Upon shipment, the seller shall supply the following advance copies of the documents directly by international courier service to the buyer with a copy to the insurance company
- a) 6(six) copies of invoice mentioning the unit and total delivery price duly signed in ink.
  - b) 6(six) copies of non-negotiable 'Clean on Board' Bill of Lading marked freight pre-paid.
  - c) 6(six) copies of packing list identifying contents of each case of packages.
  - d) 6(six) copies of certificate of country of origin.
  - e) 6(six) copies of beneficiary's insurance advice.
  - f) Manufacturer's / seller's guarantee certificate and
  - g) Clean inspection certificate issued by the buyer's authorized inspection agency and the seller's factory inspection report.
36. TERMS OF DELIVERY:
- 36.1 The machineries & equipment shall be shipped on C&F basis when the order is placed on **C&F Mongla Sea-port** basis. Lighter age, if any, will be on seller's account and liability.
- 36.2 For transportation of machineries & equipment preference must be given for shipment by Bangladesh Flag Vessel.
37. INSPECTION AND TESTS:
- 37.1 The Buyer or its representatives will visit to manufacturer's premises to inspect and test the machineries & equipment to confirm the technical specifications of machineries as per the contract.
- 37.2 The following inspection procedures and tests may be required by the purchaser:  
BCSL authority shall be entitled to inspect, examine and test the materials and working of the machineries in accordance with the suppliers standard factory test items and procedures at all reasonable time during manufacture at manufacturer's premises. If any part of the machine is manufactured at other's premises, the supplier shall obtain permission for BCSL or its authorised representative(s) to inspect, examine and test as if the said machineries are being manufactured in the supplier's premises. Such inspection, examination or testing, if made, shall not release the supplier from obligation under the contract.

The supplier shall submit the manufacturing schedule of the machineries & equipment to BCSL within one month after coming into force of the contract. The manufacturing schedule includes the time schedule for the manufacturing of the machineries & equipment and the names, addresses and telephone nos. of plants, factories and places where the machineries & equipment is to be manufactured. BCSL's authorised representative may witness the final tests of the machineries and equipment at manufacturer's plant. Requirement for factory test shall be in

accordance with the technical specification. The costs for any such inspection shall be borne by the supplier.

BCSL will send a team consisting of 2(two) officials to the country of manufacturer for 5 (five) days excluding travelling time. Following cost for each of these personnel will be borne by the supplier:

- a) Return Air Ticket from/to Dhaka.
- b) Daily Allowance of US\$ 150.00 per person.
- c) Local transportation, accommodation, fooding and other services.
- d) Insurance.
- e) Medical services, if required.

Supplier shall give 30 days notice in advance to the buyer before shipment stating the likely date and place for factory test of the machineries & equipment. Factory test will not start until the BCSL inspection team arrives at the factory premises for eyewitness of the result of the test and certify on the required document. The cost of such inspection must be quoted by the bidder as separate item.

- 37.3 Should any inspected or tested machineries & equipment fail to conform to the specifications, the purchaser may reject them and the supplier shall either replace the rejected machineries & equipment or make all alterations necessary to meet specification requirements free of cost to the purchaser.
- 37.4 The purchaser's right to inspect and test where necessary, reject the machineries & equipment after the arrival of the machineries & equipment in the purchaser's country shall in no way be limited or waived by reason of the machineries & equipment having previously been inspected, tested and passed by the purchaser or its representative prior to the machineries & equipment shipment from the country of origin.
- 37.5 BCSL may appoint an international reputed inspection agency as inspection agent for carrying out inspection on the machineries & equipment. This agent shall be entitled to inspect, examine and test all material and working of the plant. The charges of this inspection agent are to be borne by the supplier of the machineries & equipment. The charges may be quoted separately
- 37.6 Nothing in clause 39 shall in any way release the supplier from any warranty or other obligations under this contract.
38. QUALITY.  
Specification for machineries & equipment and scope of work shall be as per Annexure-I.
39. BREACH OF CONTRACT:  
On any breach of contract by the supplier, the buyer shall have the right to recover the actual loss suffered and the amount may be realised by encashing the performance security. When performance security (PS) will not cover the loss, the balance amount will be claimed upon the seller for payment.
40. PATENT RIGHT:  
The supplier shall indemnify the purchaser against all third party claims of infringement of patent, trade mark or industrial design rights arising from use of the machineries & equipment or any part thereof in the purchaser's country.
41. GUARANTEE & WARRANTY:
  - 41.1 The supplier must warrant that the machineries & equipment and component supplied under the contract shall be new, unused and of the most recent or the current model and that they incorporate all recent improvement, in design and materials unless provided otherwise in the contract. The supplier further must warrant that the machineries & equipment supplied under this

contract shall have no defect arising from design, materials or workmanship (except in so far as the design or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied machineries & equipment in the conditions prevailing in the country of final destination.

- 41.2 **This warranty shall remain valid for 18 (eighteen) months after the final acceptance of the machineries & equipment.**
- 41.3 The Purchaser shall promptly notify the supplier in writing of any claim(s) arising under this warranty for rectification or replacement at free of cost.
- 41.4 Upon receipt of such notice, the supplier shall, with all reasonable speed, repair or replace the defective machineries & equipment without costs to the purchaser.
- 41.5 If the supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.
42. LIQUIDATED DAMAGE:
- 42.1 Liquidated damage equivalent to half percent per week or part thereof on the value of the undelivered machineries & equipment may be realised from the supplier/contractor.
- 42.2 In specific cases where delay in delivery is likely to cause dislocation of work and financial loss, a higher rate of liquidated damage not over 1 %(one percent) up to 3(three) months delay and 1/2% (half percent) for the period beyond 3(three) months of delay per week or part thereof on the value of the machineries & equipment may be charged.
- 42.3 In case of delay in delivery beyond one hundred calendar days for importable item(s), purchase order/contract may be cancelled in which case the performance security shall be en-cashed and forfeited.
- 42.4 On genuine reasons/grounds beyond the control of the suppliers/ contractor, extension of delivery period may, however, be granted without realization of any liquidated damage provided validity of their performance security covers such extension.
43. GENUINENESS OF THE PRINCIPAL SUPPLIER:  
The principal supplier shall have to submit a certificate from the supplier's Bankers regarding its standing the bonafide and standing of the suppliers.  
AND / OR  
Certificate from the chamber of commerce and Industry from the supplier's country regarding its standing as an exporter/manufacturer along with the proforma invoice.
44. FORCE MAJEURE:  
Should the supply of the machineries & equipment be delayed for causes such as labour strike, factory closure, fire, dock strike etc. beyond the reasonable control of the supplier 'to be termed as "FORCE MAJEURE". This should be supported by documentary evidence from appropriate authorities. If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof.
45. WORKMAN'S COMPENSATION:  
Workman's compensation, if any, for employment of labours for completion of works will be borne by the contractor/Supplier.

46. TO WORK AS COMPLETE SYSTEM:

Any omission of parts/components/material required for satisfactory operation of machineries & equipment is to be made-up by the contractor/supplier at their own cost and responsibility.

47. Tenderer shall mention in their offer the name of firms & countries where this type of machineries & equipment has been supplied.

48. ARBITRATION AND SETTLEMENT OF DISPUTES:

In the event of any dispute arising out of the terms of this contract the parties undertake to make every effort to reach at an amicable settlement.

- (1) Except as otherwise provided in this contract, if any difference, dispute or question arising out of or with reference to this contract which cannot be settled amicably shall within 60(sixty) days from the date that either party informs them in writing that such difference, dispute or question exists be referred to arbitration of 03(three) arbitrators.
- (2) Within 60(sixty) days of the said notice, one arbitrator shall be nominated in writing by BCSL and one arbitrator shall be nominated in writing by the tenderer / supplier. The third arbitrator who shall preferably be a retired Judge of one of the High Courts or the Supreme Court of Bangladesh shall be nominated by the two arbitrators before entering upon the reference within one month from the latest date of their respective appointments. The arbitration tribunal shall have its seat in Bangladesh.
- (3) The arbitration shall be conducted in accordance with the rules and procedures set forth in the Bangladesh Arbitration Act 1940 as subsequently amended. The award of the majority of the arbitrators shall be final and binding on *both parties*.
- (4) Each party shall bear the cost of its own arbitrator and the cost of the third arbitrator shall be borne equally by both parties.
- (5) In the event of an arbitrator resigning or becoming incapable or unable to act, the party nominating such arbitrator shall be entitled to appoint another in the place of the outgoing arbitrator, proceedings shall continue without recommencing as if such arbitrator had been originally nominated.
- (6) The court may on an application made to it, nominate an arbitrator for a party who fails to do so.
- (7) If the two arbitrators cannot reach an agreement on the nomination of the third arbitrator, then the third arbitrator will be nominated by the, President of the International Chamber of Commerce.

49. **BANGLADESH CABLE SHILPA LIMITED IS NOT BOUND TO ACCEPT THE LOWEST TENDER / BID AND RESERVES THE RIGHT TO REJECT ANY OR ALL TENDERS WITHOUT ASSIGNING ANY REASON WHATSOEVER.**

**(Md. Alauddin Al azad)**  
General Manager (Pur. & Mkt.)  
Bangladesh Cable Shilpa Ltd., Khulna

# Technical Specification for Supply, Installation, Commissioning & Trial operation of 1(one) Brand New HDPE Silicon Core Extrusion Line for Duct Manufacturing Plant on full Turn-Key basis in BCSL, Khulna, Bangladesh

## 50.0 Objectives:

- 50.1 To Produce of HDPE silicon core duct of standard quality, with perfect plasticization, high extrusion efficiency, uniform & smooth outside surface and inside ribbed in or smooth as per demand of the customer.
- 50.2 The machine should be capable to produce 32/26mm, 34/28mm, 40/33mm, 50/42mm and 63/52mm diameter of duct with international standard.
- 50.3 The machine should be of high speed satisfying all specification given below.
- 50.4 It should be suitable for production with HDPE, Silicon master batch materials.
- 50.5 Extrusion line must be provisioned to produce Pin point (Copper tracer) DUCT.

## 51. Basic Line Specifications:

- 51.1 HDPE Silicon Core Duct Diameter :  $\Phi$ 63/52mm,  $\Phi$ 50/42mm,  $\Phi$ 40/33mm,  $\Phi$ 34/28mm  $\Phi$ 32/26mm
- 51.2 Silicon Thickness : 10 percent or standard ratio with duct thickness.
- 51.3 Maximum diameter of Duct :  $\Phi$ 63mm
- 51.4 Line Construction speed : 4-20m/ min
- 51.5 Line speed : 10-12 m/min (Minimum) (for dia  $\Phi$ 40/33mm)
- 51.6 Length of the line : Less than 42 m
- 51.7 The line centre height : Max. 1000
- 51.8 Operation direction : Fixed at the time of Purchase order.
- 51.9 Line color : Standard color
- 51.10 Winder Capacity : Min 1200 meter
- 51.11 Overall dimension : To be mentioned
- 51.12 Electricity : 380V $\pm$ 5% 50Hz, 3-Phases
- 51.13 Installed power : To be mentioned
- 51.14 Air Pressure : 7 bar working pressure
- 51.15 Cooling water : To be mentioned
- 51.16 Total weight : To be mentioned



**52. Line Configurations:*****Machine:***

52.1	Auto Feeder of Materials and Dryer ( Min. 280-300 kg)	1 set
52.2	Single Screw Extruder ( 60/38)	1 set
52.3	Auto Feeder of Materials and Dryer ( Min. 40 kg)	1 set
52.4	Single Screw Extruder for inner silicon layer (45/30mm)	1 set
52.5	Marking line co-extruder (25/25)	1 set
52.6	Co-Extrusion mould for (Die Head inner silicon, outer main HDPE and line Marking arrangement)	1 set
52.7	Vacuum Calibrating Tank	1 set
52.8	Detachable Copper tracer unit	1 set
52.9	Spray Cooling Tank	2 set, 6 meter each
52.10	Continuous Ink Jet printer	1 set
52.11	Haul Off Unit	1 set
52.12	Non-Scrap Auto Cutting Machine	1 set
52.13	Two station torque control winder/Coiler	1 set
52.14	Air Cooled Water Chiller (20 R.Ton)	1 set
52.15	PLC based Electrical Control System for the whole Line	1 set
52.16	Automatic Plastic Stripper Tool	1 set
52.17	Conical Colour Mixture	1 set

**Optional Items:**

52.18	Screw Type Air Compressor with Dryer (50 cfm)	1 set
52.29	Environmental Stress Cracking Resistance (ESCR) Test Apparatus	1 set
52.20	High Accuracy Digital Density Meter	1 set
52.21	Crush Resistance Tester	1 set

**Brief Description of Different Components of the Machine:****52.1 Auto-Feeder of Materials and Dryer:**

52.1.1	Hopper capacity	: 300kg (Min.)
52.1.2	Auto feeding type	: Vacuum suction method.
52.1.3	Auto Dryer machine	: Auto Dryer mounted on extruder.
52.1.4	Drying type	:Automatic hot air

**52.1.5 Constructional & Operational Features:**

- The turbo-pump will inhale the air in the autonomic material conveyer so that the inlet of the material and the whole system will be in vacuum.
- The materials along with the outer air will be inhaled into the hopper through the inhaling tube.
- The materials and the air will be separated and the material particles fall down into the hopper in the drying device that will be connected with the extruder.
- According to the central ventilating and drying principle, the device will have to be designed. It will have high heating efficiency and will dry homogeneously.
- Two devices will work at the same time so that the autonomic conveying and drying can be achieved.
- On the other hand, the dryer can be kept full of materials and the drying

effect will be very excellent.

- Manufacturer's standard can be allowed.

### **52.2 Main Single Screw HDPE Extruder:**

52.2.1 Screw Diameter	: $\Phi 60\text{mm}$ (Barrier screw)
52.2.2 Length to Diameter ratio	: 38: 1
52.2.3 Materials for Screw and Barrel	: 38CrMoAIA
52.2.4 Treatment of screw and barrel	: Surface nitrogen treatment, depth of nitrogen: 0.4-0.7mm
52.2.5 Surface hardness of screw and barrel	: $\geq \text{HV}740$ and $\geq \text{HV}940$
52.2.6 Structure of screw and barrel	: Specialized design and manufacturing for HDPE/PE processing, the barrel will have a slotting along the feeding part. <b>Barrel pressure have to be controlled by Transducer.</b>
52.2.7 Main motor	
Motor Brand	: Siemens/ ABB.
Power:	To be mention as per Manufacturer standard, 380V $\pm$ 5% 50Hz, 3-Phases AC motor, Over-load and other protection.
Rotating speed	: As per manufacturer standard
52.2.8 Gear Box	
Gear Materials	: 20CrMnTi carburizing hard- toothed surface, and gear grinding process. The gearbox to high life low noise and low calorific special deceleration process.
Gear Type	: Helical gears or manufacturers standard type
Heat treatment of the gear surface	: Manufacturer's standard design
Materials of the axis	: 20CrMnTi
Bearings	: High Quality or standard
Lubrication System	: Press systems or Standard
Cooling system	: Equipped with separate cooling system.
52.2.9 Feeding block:	
Method	: Water circled cooling system
Materials	: Q235 or Standard
52.2.10 Connection of motor and gearbox	: Direct mounting/ Belt type
52.2.11 Heating mode	: sections, ceramic heater with long life/ Stainless steel heater
Heating power	: 3Kwx5+3.5kwx1 or manufacturer standard
52.2.12 Cooling mode	: Fan cooling
52.2.13 Cooling power	: 0.25kwx6 or manufacturer

52.2.14 Driving model	standard.
52.2.15 Inverter brand (frequency)	: Variable AC frequency Drive : ABB/Parker/Danfoss/Siemens
52.2.16 Temperature control model	: PID control with SSR
52.2.17 Temperature control brand	: Siemens Temperature module / Individual Temp controller Omron /Fuji and all with SSR output.
52.2.18 Low voltage apparatus	: Siemens/ Schneider
52.2.19 Frame structure	: welded frame with high quality square steel pipe and standard design.
52.2.20 Electrical control panel	: Panel Air Cooled
52.2.21 Contactor	: Siemens/ Schneider
52.2.22 Die head	: 38CrMoA1A Treatment nitrogen and bluing.
52.2.23 Rotating speed of screw pole	: To be mentioned.
52.2.24 Extruding Output	: Min. 280-300 Kg/Hr.

#### 52.2.25 Constructional & Operational Features:

- The machine will be made by reputed manufacturer and the brand will also be from reputed supplier.
- The extruder will suit many standards and applications in Duct and water pipe manufacturing. A unique screw and barrel combination, perfected through theoretical studies.
- The machine will consist of the screw pole, cylinder, reducer, extruder head's stand, the water and wind cooling system, the lubricating system, temperature-controlling system, speed-changing cabinet etc.
- Proven design and reliability will be the main features of the low noise gearbox. Splash lubrication will ensure minimum maintenance requirements.
- The screw pole will be made of alloy steel and processed nitrogenous. It will have excellent ability of hardness. At the same time, it will be wear-resisting and corrosion-resisting.
- The gears in the reducer and the bearings will be lubricated by the standard way.
- At the same time, the lubricating system of the oil pump will be designed to circulate the machine oil compulsively.
- Required dies, nipples, tips, guiders, needles and other related necessary tools of very high quality and long time usable for producing of different types of Ducts.
- **Automatic material loading facility to extruder hopper will have to be included.**
- **Machine operation related tools (complete set) for opening and closing of extruder screw, head & other related parts will have to be supplied along with the machine.**

**52.3 Auto-Feeder of Materials and Dryer:**

52.3.1 Hopper capacity	: Minimum 40 Kg
52.3.2 Auto feeding type	: Vacuum suction method
52.3.3 Auto Dryer machine	: Auto Dryer mounted on extruder
52.3.4 Drying type	: Automatic hot air

**52.3.4 Constructional & Operational Features:**

- The turbo-pump will inhale the air in the autonomic material conveyer so that the inlet of the material and the whole system will be in vacuum.
- The materials along with the outer air will be inhaled into the hopper through the inhaling tube.
- The materials and the air will be separated and the material particles fall down into the hopper in the drying device that will be connected with the extruder.
- According to the central ventilating and drying principle, the device will have to be designed. It will have high heating efficiency and will dry homogeneously.
- Two devices will work at the same time so that the autonomic conveying and drying can be achieved.
- On the other hand, the dryer can be kept full of materials and the drying effect will be very excellent.
- Manufacturer's standard can be allowed.

**52.4 Auxiliary Single Screw Extruder:**

52.4.1 Screw Diameter	: $\Phi 45$ mm
52.4.2 Length to Diameter ratio	: 30 : 1
52.4.3 Materials for Screw and Barrel	: 38CrMoA1A
52.4.4 Treatment of screw and barrel	: Surface nitrogen treatment, depth of nitrogen: 0.4-0.7mm
52.4.5 Surface hardness of screw and barrel	: $\geq$ HV740 and $\geq$ HV940
52.4.6 Structure of screw and barrel	: Specialized design and manufacture for HDPE/PE processing, the barrel has slotting along the feeding part.
52.4.7 Main motor:	
Motor Brand	: Siemens/ ABB.
Power	: To be mentioned as per Manufacturer Standard, 380V $\pm$ 5% 50Hz, 3-Phases AC motor, Over-load and other protection.
Rotating speed	: as per manufacturer standard
52.4.8 Gear Box:	
Gear Materials	: 20CrMnTi carburizing hard- toothed surface, and gear grinding process. The gearbox to high life low noise and low calorific special deceleration process.
Gear Type	: Helical gears or manufacturers standard.

Heat treatment of the gear surface	: Standard manufacturer design
Materials of the axis	: 20CrMnTi
Bearings	: High Quality or manufacturers standard.
Lubrication System	: Press system or Standard system
Cooling system	: Equipped with separate cooling system.
52.4.9 Feeding block:	
Method	: Water circled cooling system
Materials	: Q235 or standard
52.4.10 Connection of motor and gearbox	: Direct mounting/belt type
52.4.11 Heating mode	: 5 sections, ceramic heater with long life/Stainless steel heater
Heating power	: 2Kwx4+2.5kwx1 or standard
52.4.12 Cooling mode	: Fan cooling
52.4.13 Cooling power	: 0.14KWx5 or standard
52.4.14 Driving model	: Variable AC frequency drive
52.4.15 Inverter brand (frequency)	: ABB/Parker/Danfoss/Siemens
52.4.16 Temperature control model	: PID control with SSR
52.4.17 Temperature control brand	: Siemens Temperature module/ Temperature controller Omron / Fuji with SSR output
52.4.18 Low voltage apparatus	: Siemens/ Schneider
52.4.19 Frame structure	: welded frame with high quality square steel pipe and standard design.
52.4.20 Electrical control panel	: Air conditioned.
52.4.21 Contactor	: Siemens/ Schneider
52.4.22 Die head	: 38CrMoA1A Treatment nitrogen and bluing.
52.4.23 Rotating speed of screw pole	: To be mentioned
52.4.24 Extruding Output	: Min 40 Kg/Hr.
52.4.25 <b>Constructional &amp; Operational Features:</b>	
➤ The machine will be made by reputed manufacturer and the brand will also be from reputed supplier.	
➤ The extruder will suit many standards and applications in Duct and water pipe manufacturing. A unique screw and barrel combination, perfected through theoretical studies.	
➤ The machine will consist of the screw pole, cylinder, reducer, extruder head's stand, the water and wind cooling system, the lubricating system, temperature-controlling system, speed-changing cabinet etc.	
➤ Proven design and reliability will be the main features of the low noise gearbox. Splash lubrication will ensure minimum maintenance requirements.	
➤ The screw pole will be made of alloy steel (38CrMoA1A) and processed nitrogenous. It will have excellent ability of hardness. At the same time, it will be wear-resisting and corrosion-resisting.	

- The gears in the reducer and the bearings will be lubricated by the standard way.
- At the same time, the lubricating system of the oil pump will be designed to circulate the machine oil compulsively.
- Required dies, nipples, tips, guiders, needles and other related necessary tools of very high quality and long time usable for producing of different types of Ducts.
- **Automatic material loading facility to extruder hopper will have to be included.**
- **Machine operation related tools (complete set) for opening and closing of screw, head & other related parts will have to be supplied along with the machine.**

#### **52.5 Co-Extruder for Marking Line :**

52.5.1 Screw Diameter	: $\Phi 25$ mm
52.5.2 Length to Diameter ratio	: 25: 1
52.5.3 Materials for Screw and Barrel	: 38CrMoA1A
52.5.4 Treatment of screw and barrel	: Surface nitrogen treatment, depth of nitrogen: 0.4-0.7mm
52.5.5 Surface hardness of screw and barrel	: $\geq$ HV740 and $\geq$ HV940
52.5.6 Structure of screw and barrel	: Specialized design and manufacture for HDPE/PE processing, the barrel has slotting along the feeding part.
52.5.7 Main motor:	
Motor Brand	: Siemens/ ABB/equivalent.
Power	: To be mentioned, 380V $\pm$ 5% 50Hz, 3-Phases AC motor, Over-load and other protection.
Rotating speed	: as per manufacturer standard
52.5.8 Gear Box:	
Gear Materials	: 20CrMnTi carburizing hard- toothed surface, and gear grinding process. The gearbox to high life low noise and low calorific special deceleration process.
Gear Type	: Helical gears or manufacturers standard.
Heat treatment of the gear surface	: Manufacturer standard design
Materials of the axis	: 20CrMnTi
Bearings	: High Quality or standard
Lubrication System	: Standard design
52.5.9 Connection of motor and gearbox	: Direct mounting/belt type
52.5.10 Feeding block:	
Method	: Water circled cooling system
Materials	: Q235 or standard
52.5.11 Heating mode	: 3 sections or standard, ceramic heater with long life/Stainless

Heating power	steel heater
52.5.12 Cooling mode	: 1.2Kwx3 or standard.
52.5.13 Cooling power	: Fan cooling
52.5.14 Driving model	: 0.12Kwx3 or standard.
52.5.15 Inverter brand (frequency)	: AC Variable frequency Drive
	: ABB/Parker/Danfoss/Siemens
52.5.16 Temperature control model	: PID control with SSR
52.5.17 Temperature control brand	: Siemens Temperature module/ Omron /Fuji, temp controller with SSR output.
52.5.18 Low voltage apparatus	: Siemens/ Schneider
52.5.19 Frame structure	: Welded frame with high quality square steel pipe and standard design.
52.5.20 Electrical control panel	: Fan cooled.
52.5.21 Contactor	: Siemens/ Schneider
52.5.22 Die head	: 38CrMoA1A Treatment nitrogen and bluing.
52.5.23 Rotating speed of screw pole	: To be mentioned
52.5.24 Extruding Output	: Min. 8 Kgs.
52.5.25 <b>Constructional &amp; Operational Features:</b>	
	<ul style="list-style-type: none"> <li>➤ The machine will be made by reputed manufacturer and the brand will also be from reputed supplier.</li> <li>➤ The extruder will suit many standards and applications in Duct and water pipe manufacturing. A unique screw and barrel combination, perfected through theoretical studies.</li> <li>➤ The machine will consist of the screw pole, cylinder, reducer, extruder head's stand, the water and wind cooling system, the lubricating system, temperature-controlling system, speed-changing cabinet etc.</li> <li>➤ Proven design and reliability will be the main features of the low noise gearbox. Splash lubrication will ensure minimum maintenance requirements.</li> <li>➤ The screw pole will be made of alloy steel (38CrMoA1A) and processed nitrogenous. It will have excellent ability of hardness. At the same time, it will be wear-resisting and corrosion-resisting.</li> <li>➤ The gears in the reducer and the bearings will be lubricated by the standard way.</li> <li>➤ At the same time, the lubricating system of the oil pump will be designed to circulate the machine oil compulsively.</li> <li>➤ Required dies, nipples, tips, guiders, needles and other related necessary tools of very high quality and long time usable for producing of different types of Ducts.</li> <li>➤ <b>Automatic material loading facility to extruder hopper will have to be included.</b></li> <li>➤ <b>Machine operation related tools (complete set) for opening and closing of screw, head &amp; other related parts will have to be supplied along with the machine.</b></li> </ul>

### 52.6 Co-Extrusion Mould (Compound die head):

- 52.6.1 Materials of extrusion die : High quality alloy of 40Cr
- 52.6.2 Treatment of flow path : Chromate treatment
- 52.6.3 Structure of the extrusion die : Spiral Spider type
- 52.6.4 Pipe specifications change method : only change calibrating mould and parts of the extrusion die
- 52.6.5 Material of calibrating mould : Copper or Brass / Ph Bronze.
- 52.6.6 Mould : The mould body, calibrating mould, sleeve & part of dies (complete set) should be supplied for the duct of 63/52mm, 50/42mm, 40/33mm, 34/28mm & 32/26mm.**
- 52.6.7 The construction and design of the unit should be of high quality and long life. The heating element and other supported heating related parts must be improved in quality and life time.

### 52.7 Vacuum Calibrating Tank:

- 52.7.1 Calibrating scope :  $\Phi 20$ - $\Phi 63$ mm
- 52.7.2 Length of the calibrating tank : 6000-9000 mm or as per manufacturer's standard, Single chamber, stroke-500 mm
- 52.7.3 Material of the calibrating tank : Stainless steel with the thickness 4mm
- 52.7.4 Structure of the calibrating tank : whole welded structure with full Vacuum, equipped with Observation window.
- 52.7.5 Adjustment of the calibrating tank : Motorise forward and reverse adjustment with limit switch for motor stop protection, and rest two direction manual screw jack.
- 52.7.6 Power of the advance and retreat motor/distance : 1.5Kw/700 mm or manufacturer standard
- 52.7.7 Vacuum pump quantity/power : 3Kwx2sets or manufacturer standard
- 52.7.8 Vacuum pump brand : To be mentioned.
- 52.7.9 Water pump quantity/power : 3Kwx2sets or manufacturer standard.
- 52.7.10 Water pump brand : To be mentioned.
- 52.7.11 Spray pipe : Stainless pipe/4set or manufacturer standard
- 52.7.12 Material of sprayer : Injection type
- 52.7.13 Water level control : Auto control system
- 52.7.14 Low-voltage apparatus : Siemens or others reputed brand.
- 52.7.15 Tank cover : Cast Aluminium
- 52.7.16 The construction and design of the unit should be of high quality and long life. The electrical and mechanical parts like motor, control unit, pump, chamber and other supported heating related parts must be improved in quality and life time.



**52.8 Detachable Copper Tracer Unit:**

52.8.1	Copper Wire	: Ø 1.20 mm ± 0.2mm
52.8.2	Co-Extruded	: With PE Material
52.8.3	Thickness of PE Covering	: 1.25mm min.
52.8.4	<b>Single Screw Extruder:</b>	

- Extruder mounted on Rigid structural steel frame trolley with castor wheel.
- Barrel - Nitro alloy steel duly nitride.
- Screw - Nitro alloy steel, duly nitride.
- Power Transmission by A.C. Induction Motor to Gear Box through direct coupling.
- AC Variable Frequency Drive for fine screw speed adjustment
- Helical Reduction gear box with thrust bearing housing.
- First filled of oil for Gear Box.
- Heating by mica band heaters.
- Each zone is provided with jacket to minimize heat losses from Barrel.
- Suitable hopper with dryer will have to be provided on Extruder feeding port.
- Heating control Panel , Drive control Panel.
- Motor Power and Heating Power to be mentioned.

**52.8.5 Extruder Motorized Longitudinal Movement :**

- The whole Extruder will be supported on Front & Rear AXLE
- Set of Flange wheel with Bearing at both end of the AXLE will have to be installed.
- Flange wheel will be guided on rail.
- AC Geared Motor will be mounted on Rail
- Set of Threaded Screw & Nut will be driven by AC Geared Motor.
- DOL will be Starter for AC Geared Motor

**52.8.6 Extruder Height Adjustment:**

- Set of Threaded Spindle with Thrust & radial bearing will be mounted on Front & Rear AXLE.
- Ratchet spanner for fine adjustment will have to be supplied.

**52.8.7 Unwinding Station for Copper wire :**

- Fabricated structure
- Reel Diameter: 400mm
- Set of 4 castor wheels
- Spool with shaft
- Set of Brake pulley
- Set of Guide pulleys to guide the Cu wire.

**52.9 Spray Cooling Tank, 2(Two) Nos.:**

52.9.1 Duct cooling scope	: $\Phi 20\text{-}\Phi 63\text{mm}$
52.9.2 Length of the cooling tank	: 6000mm or standard.
52.9.3 Material of the tank	: Stainless steel with the thickness 2mm
52.9.4 Structure of the spray cooling tank	: Whole welded structure
52.9.5 Adjustment of the cooling tank	: Up and down with screw
52.9.6 Water pump quantity/power	: 3Kw x 1 sets or manufacturer standard
52.9.7 Water pump brand	: To be mentioned.
52.9.8 Spray pipe material quantity	: Stainless pipe
52.9.9 Material of sprayer	: Injection type
52.9.10 Low-voltage apparatus	: Siemens or others reputed brand.
52.9.11 Tank cover	: Cast Aluminium
52.9.12 The construction and design of the unit should be of high quality and long life. The electrical and mechanical parts like motor, control unit, pump, chamber and other supported related parts must be improved quality.	

**52.10 Continuous Ink Jet Printer :**

Dedicated for printing to the PIPE, CABLE, TUBE and PROFILE industries, the printer will combine a premium ink circuit with a new generation printhead design that will ensure the quality of codes even on dark substrates with an optimized TCO. High performance ink offer dedicated to extruded products providing contrasted durable print, even on difficult substrates like PE and in rough environmental conditions

**52.10.1 Printer features:**

- Mono-jet print head
- G head (printing resolution: 71 dpi)
- Up to 5 lines of print
- Print speed: up to 4.6 m/s
- Font height from 5 to 32 dots
- Character height: from 1.5 to 11 mm
- Language: English.
- Ultra-flexible 3-meter umbilical cable
- Near zero maintenance
- Wide choice of 1D and 2D barcodes (EAN8/EAN13/UPCA/UPCE barcodes, code 39, interleaved 2 of 5, Data matrix and QR code)
- Multiple nozzle size options
- automatic selection of fonts, depending on print speed and print head/object distance
- jet speed Control guarantees marking quality
- Maintenance-free ink support system
- Excellent start-stop behavior due to nozzle seal system
- Special ink system with electronically controlled density measurement for optimum print quality

**52.10.2 Technical Specifications:**

Brand	Markem Image
Printer Model	9410 , Single Head Single Jet.
Country of origin	France
Display	WYSIWYG 7-inch wide touch screen: realtime display of remaining print capacity expressed in hours and number of messages; integrated assistance and alert system; simplified message printing and management; creation of user profiles.
Housing materials	Stainless steel cabinet and print head case
Protection Class	IP56
Length of print head supply line	3-meter umbilical cable
Electrical Connection	210V +/- 10%, 50HZ
Operating Temperature	+5 deg C to +50 deg C.
Interfaces	Ethernet connectivity
Front Size	1.5 to 11 mm
Meter print	1 meter print interval. <b>Use Encoder for meter accuracy.</b>
Meter accuracy	± 0.3 %
Applications	Cables and wires, HDPE pipe
Materials	HDPE, MDPE, LDPE, PP & PVC
Ink colour	Black
Ink	Premium ink circuit to run all types of inks
Broad range of inks	Multi-use, high performance; ketone-free and mek-free inks
Clean nozzle function	Built-in
Nozzle shutter feature	For ensures smooth startup
Printer supports	Stands (stainless steel or Aluminium) Printhead stand (stainless steel) and different printhead brackets
Proximity Photocell	Proximity photocell with cable and Power cord
<b>Extra materials to be supplied with printer(Supporting with the printer for future use)</b>	
Black Ink	2 Cartidge
Make up/ solvent	2 Cartidge
Cleaning solution	1 litter
Operating Manual	English

52.10.3 The printer will be capable to print Manufacturer name, Customer name, Duct dimension, Manufacturing year/date, product name etc.

**52.11 Haul Off Unit:**

- 52.11.1 Duct diameter scope :  $\Phi 20\text{-}\Phi 63\text{mm}$
- 52.11.2 Haul-off method : Two Caterpillar (Pneumatic up and down belt traction, with direction device)
- 52.11.3 Clamping length : 1200mm
- 52.11.4 Caterpillar speed : 0-20 m/min (minimum).
- 52.11.5 Max haul-off force : 30000N
- 52.11.6 Main motor power : 2.2Kwx2sets, AC motor or manufacturer standard
- 52.11.7 Motor brand : ABB/Panasonic/Siemens.
- 52.11.8 Regulating method : AC Variable frequency Drive.
- 52.11.9 Inverter brand (frequency) : ABB/Parker or Danfoss
- 52.11.10 Belt clamping method : Pneumatic adjustment
- 52.11.11 Low-voltage apparatus : Siemens/Schneider or others reputed brand.
- 52.11.12 Reducer brand : To be mentioned.
- 52.11.13 Meter counting device : Digital display with encoder (High quality).
- 52.11.14 The construction and design of the unit should be of high quality and long life. The electrical and mechanical parts like motor, control unit, pump, gear, belt, rotating parts, chamber and other supported related parts must be improved quality.

**52.12 Non-Scrap Auto Cutting Machine:**

- 52.12.1 Cutting method : No Dust cutting
- 52.12.2 Pressing Method : Pneumatic or standard type
- 52.12.3 Movable type : Automatic
- 52.12.4 Blade material : Wolframe steel or as per Manufacturer's design
- 52.12.5 Cutting range :  $\Phi 20\text{-}\Phi 63\text{mm}$  with copper wire cutting facility
- 52.12.6 Trip range : 1000 mm
- 52.12.7 Motor power : 2.2 Kw or Manufacturer Standard
- 52.12.8 The construction and design of the unit should be of high quality and long life. The electrical and mechanical parts like motor, control unit, pump, gear, belt, rotating parts, chamber and other supported related parts must be improved quality.

**52.13 Two Station Winder/Coiler :**

- 52.13.1 Winding mode : Two position coiler
- 52.13.2 Control mode : winding speed controlled by torque motor and torque controller or speed controller or any standard method.
- 52.13.3 Perfect winding system will have to be included.
- 52.13.4 No drum winder will be allowed. Need facility to pack the duct roll properly before taking out from the winder.
- 52.13.5 The diameter of duct winding range :  $\Phi 20\text{-}\Phi 63\text{mm}$

52.13.6	Winding speed	: 0.5-20 m/min
52.13.7	Min inner diameter of the winder	: (adjustable) 25 x pipe dia.
52.13.8	Max outer diameter of coil	: 2600 mm
52.13.9	Winding width range	: 1000mm (adjustable)
52.13.10	Min winding length	: 1200 meter on 40/33mm duct.
52.13.11	Reel opening method	: Pneumatic collapsible arm with quick and easy operating facility.
52.13.12	Air pressure	: 0.6Mpa or as per requirement.
52.13.13	Torque motor	: 40 KN or as per requirement.
52.13.14	Motor power for up-down	:To be mentioned
52.13.13	Servo motor power for traversing unit including control technique.	: To be mentioned
52.13.14	Weight	: To be mentioned.
52.13.15	Dimension	: To be mentioned
52.13.16	The construction and design of the unit should be of high quality and long life. The electrical and mechanical parts like motor, control unit, pump, gear, belt, rotating parts, chamber and other supported related parts must be improved quality.	

#### **52.14 Air Cooled Water Chiller**

52.14.1	Model	: To be mentioned.
52.14.2	Cooling Capacity	: 20 R.Ton
52.14.3	Compressor	: Screw type
52.14.4	Refrigerant	: R-22/R407C
52.14.5	Flow rate	: As per requirement of machine
52.14.6	Evaporator cooling	: Fan cooling
52.14.6	Dimension	: To be Mentioned
52.14.7	Inlet and outlet	: As per requirement of machine.
52.14.8	Refrigerant Control mode	: Thermostatic expansion valve
52.14.9	Evaporator type	: Tube in shell style
52.14.10	Control	: With electronic board and digital display, overload protection, high/low pressure control etc.

#### **52.15 Electrical Control System for the whole Line:**

- **Main power will have to be controlled by MCCB.**
- The equipment will adopt industrial computer or operation display (**with touch screen facility**) and programmable logic control (that is IPC+PLC mode) to realize the line's synchronized running and the independent operation including alarm system.
- The production operation and the parameter set including zone temp setting and display will be carried out through the touch screen display.
- The production state collection and progress control will be realized on PLC, such as the motor start-up and stop, the given signal, the motor speed and so on.

- The Display will communicate with PLC, which can realize the production operation, the warning display, the line's emergency and other functions.
- PLC based Synchronization system for all extruder and haul-off unit.
- The display will be installed in the electrical cabinet, rationally and gracefully.
- PLC (programmable logic control) will adopt high-quality Siemens S7 series products or Allen-Bradley products or any other reputed suitable brand.
- The machine will also adopt AC converters, air-switch, contactor and other main low-pressure products of Siemens products and England Eurotherm drivers or other reputed suitable brand.
- The machine will also adopt RKC, Japan temperature measuring unit or other suitable reputed brand.
- The heat power control will have to be used by solid-state relays and individual PID Controller.
- The power will be supplied from three-phase and five-wire system.
- All ground wires and the crust of the equipment will must be connected to the earth reliably.
- On-line UPS 1000VA will be used for PLC and operation Display Backup systems.
- **The electrical & control signal cable for the machine in different sections will have to be arranged by metallic cable tray system over the floor. No floor cutting will be done for the cable laying.**

#### 52.16 Automatic Plastic Stripping Tool:

52.16.1 Model No : To be mentioned

52.16.2 Adjustable tension : Max. 270 kg (2650N)

52.16.3 Features:

- The most economic combination tool for standard duty strapping.
- Automatic tension, automatic friction welds sealing and cutting. No metal seals required.
- A protection shelter keeps tension & sealing adjustment knobs from undesired touch.
- Ergonomic design and excellent weight distribution reduce hand strength
- Alloyed Magnesium Aluminum mechanism ensures light and durable structure.
- Easy "One-Step" straps inserting.
- User self-adjustable front & rear strap guiders to fit different strap widths.
- User changeable strap cutting blade and other wearing parts.
- Battery Type & capacity: 14.4V 3.0Ah Li-Ion high capacity rechargeable battery or equivalent standard type.
- Charger: BOSCH 30 minutes charger or equivalent.
- Optional hanger reduces operation fatigue.
- Strap Thickness: Max. strap thickness 1.27mm ( 0.05 inch)
- Strap Width: 16 & 19 mm
- **Blade Type: Changeover of blade. (2 Pcs extra blade must be supplied with tool)**
- Motor type: Brushless motor
- Battery Charging Voltage: 220-240V, AC, 1Φ, 50HZ

- Fits poly strap: PP, PET.
- Sealing Efficiency:  $85 \pm 5\%$
- Weight: Light weight.
- Warranty: **18(eighteen) months warranty** on brushless motor and electronic control unit or international standard warranty.

### **52.17 Conical Colour Mixture:**

#### **52.17.1 Objectives:**

- The color mixing machine will be applicable for coloring and mixing of various kinds of plastic particles which is essential for injection molding machine and extruder.
- High performance
- Trouble free operation and easy maintenance.
- Compact design feature.

#### **52.17.2 Characteristics:**

- o Easy to clean and dismantle the blade.
- o Good regulate capability of mixing time.
- o Easy to use and coloring plastic.
- o Closed type mixing for safe and reliable operation.
- o Stainless steel materials for body and blade.
- o Standard structure on base with handling smoothly.
- o Not to cut the granules.
- o Not to generate extra heat.

#### **52.17.3 Main Technical Parameters:**

Type	: To be mentioned
Voltages(V)	: 380-400
power (KW)	: To be mentioned
Capability(KG)	: As per machine requirement
Height(MM)	: 1300
Barrel Size(MM)	: Standard
Foot Height(MM)	: Standard
Speed (R/Min)	: Min. 80
Thickness(MM)	: Min. 2
Blade Height (MM)	: Min. 50
Blade Thickness (MM)	: Min. 8

Bass Thickness (MM)	: Min. 10
Weight (KG)	: Standard

### Optional Items:

#### **52.18 Screw Type Air Compressor with Dryer:**

52.18.1 Model	: To be mentioned.
52.18.2 Brand	: Atlas Copco
52.18.3 Type	: Screw type
52.18.4 Capacity	: 50 cfm
52.18.5 Compressed air	: Minimum 7-8 bar continuous
52.18.6 Dryer Refrigerent	: R-22/R407C
52.18.7 Flow rate	: standard flow rate for machine
52.18.8 Cooling	: Air cooling system
52.18.9 Dimension	: Standard
52.18.10 Inlet and outlet	: 38 or 40mm or standard
52.18.11 Motor	: Siemens/ ABB/equivalent
52.18.12 Control technique	: Electronic control with digital Display, overload protection.
52.18.13 Power	: To be Mentioned
52.18.14 Origin	: EU
52.18.15 Air storage tank	: 1000 ltr capacity with manometric switch, Overload protection etc.

#### **52.19 Environmental Stress Cracking Resistance(ESCR) Test Apparatus:**

##### 52.19.1 Applications:

The instrument is used for determining the environmental stress cracking resistance of ethylene-based resins and plastics.

Environmental stress cracking resistance tester is based on GB1842-1999 "environmental stress cracking of polyethylene test method ".

The instrument consists of a main machine and a transparent thermostatic bath, which the main machine including notch, bending, transfer and other components, and specimen cutter, bending supporting cage and other accessories. Transparent thermostatic bath consists of a bath and electrical control components. Thermostatic bath can also be used for the viscosity and other thermostat test.

##### 52.19.2 Standard:

GB1842-1999, ASTM, ISO, DIN.

##### 52.19.3 Technical parameters:

Model	To be mentioned.
Brand	To be mentioned.
Specimen size	(38±2)*(13±1)*(2.0 ~ 3.8) mm



Inner bath size	12" X 8"X 8"
MOC	Inner SS304, Outer MS.
Circulation:	Centrifugal Stirring Method
Temperature Controller	Microprocessor based PID
Notch depth	0.2 ~ 0.65mm (adjustable according to different standards)
Temperature range	Room temperature ~ 100 °C with resolution 0.1 °C.
Temperature control accuracy	0.1 °C
Timer Range	999 hrs with resolution 1 hr
Station	6 Nos
Accessories	<ul style="list-style-type: none"> <li>• Test tube &amp; rubber corks : 6 Nos. each.</li> <li>• Sample Bending tool : 01 No.</li> <li>• Sample Transferring tool : 01 No.</li> <li>• "C" Channel : 06 Nos.</li> <li>• Aluminium foil : 01 No. each.</li> <li>• Sample Cutting Die : 01 No. each.</li> <li>• Duct/Pipe rotary cutter : 01 No.</li> </ul>
Power supply	220V ,50Hz
Power	To be mentioned.
Weight	To be mentioned.

### **52.20 High Accuracy Digital Density Meter:**

The Density meter will measure the density and density-related values of sample within seconds. Results should appear on the large LCD screen with backlight and are ready for storage, printout or export to a PC. The lightweight and robust design enables on-site operation in a wide range of environments. The digital hydrometer/density features leak proof of housing for operation in industrial and field applications including battery testing solutions for utilities and telecoms, food & beverage testing, quality control, biotechnology and many more.

Supported measuring units include: density, density at reference temperature, specific gravity (sg), Alcohol, API etc.

#### **52.20.1 Standard:**

ASTM D792, ASTM D297, GB/T1033, GB/T2951, GB/T3850, GB/T533, HG4-1468, JIS K6268, ISO 2781, ISO 118.

#### **52.20.2 Product features:**

- No need manual calculation, high accuracy, easy operation and durable;

- With the function of automatic zero tracking, buzzer alarm, overload alarm;
- With automatic compensation function of actual water temperature, adapt to environment changing;
- Use water as medium, also can use other liquid medium;
- Adopted with large capacity professional measuring platform, high transparent cistern, resistant to abrasion and corrosion;
- Equips with anti wind and dust cover, convenient combination, strong and durable
- Equipped with RS-232C interface to connect with computer and printer.

### 52.20.3 Technical parameters:

Model	To be mentioned.
Brand	To be mentioned.
Measurement Range	Density: 0.000 – 3.000 g/cm <sup>3</sup> Sample Temperature: 0°C – 40 °C (32°F – 104 °F) Viscosity: 0 – 1,000 mPa
Accuracy	Density: 0.001 g/cm <sup>3</sup> Temperature: ±0.2 °C (±0.4 °F)
Resolution	0.0001 g/cm <sup>3</sup>
Repeatability	0.0005 g/cm <sup>3</sup>
Minimum Sample Volume	2 mL
Display	Backlit LCD
Internal Storage	1024 Results
Operating Environment	10 – 50 °C (-15 – 122 °F)
Power Requirements	(2) AAA Batteries
Dimensions	To be mentioned.
Weight	To be mentioned.
Kit Includes	-Density meter -180 mm Sample Tube -2 mL Plastic Syringes - Adapter - Interface for Exporting Data to PC - Carrying Case - User Manual (English)

### 52.21 Crush Resistance Tester:

Crush resistance testing involves the measurement of a compressive load to a point when a sample deforms, fractures, shatters or collapses.

#### 52.21.1 Technical parameters:

Model	To be mentioned.
Brand	To be mentioned.
Load arrangement	Load arrangement to be made with rigid

	plates
Support system	Support system for the duct at the base
Dead load	15 Kgs or According to Standard
Load Attachment	Wheel type
Paint	Powder coated
Deflection gauge	Analog/Digital
Gauge range	0-70mm
Sample fixing	Slot arrangement
Deflection gauge	Deflection gauge will be Analog/Digital type with 0.001 mm resolution
Materials to be Tested	PE, PVC & XLPE
Dimensions	To be mentioned.
Weight	To be mentioned.

**Or internationally acceptable standard which will meet the requirement of Crush Resistance test.**

**53. The following also should be mentioned (if any):**

- Easily parameter setting availability for proper selection of products for smooth operation of the line and test equipment.
- Line status display facility on screen for configuring line & equipment parameters.
- Enough facility to allow edit and store the data in product recipes.
- Alarms display visibility of all line alarms with day and hour.
- Provision to configure with secret password, acceleration ramp, braking ramp, traverse end stop etc.
- All equipment's wires will be connected to the earth and shells are grounded reliably.

**54. Tools and Accessories:**

- Process tools for  $\Phi 63/52$  mm(1 set),  $\Phi 50/42$ mm(1 set),  $\Phi 40/33$ mm(2 sets),  $\Phi 34/28$ mm (1 set) &  $\Phi 32/26$ mm(1 set) (nipple, mouth, needle, tip & die and necessary others) for Duct/pipe production will have to be supplied with machine(**For Smooth Out Smooth In**).
- Process tools for  $\Phi 50/42$ mm(1 set),  $\Phi 40/33$ mm(1 sets), (nipple, mouth, needle, tip & die and necessary others) for Duct/pipe production will have to be supplied with machine.(**For Smooth Out Ribbed in**)
- Process tools (2 sets) for Copper Tracer (Pin Point) (nipple, mouth, needle, tip & die and necessary others) for Duct/pipe production will have to be supplied with machine.
- 1(one) complete set of operational tools for extruder head closing/opening and machine operation will have to be supplied with machine.
- Other necessary required process, operation; maintenance related tools & accessories are to be supplied including necessary drawing & measurements with the machine.

**55. Electrical equipment consisting of:**

Line control, process control system, control cabinet, Air conditioning for the cabinets, all interconnecting cables & wires for the complete line.

**56. Service Connection Available:**

- Power: 360 - 420 Volt, 50 Hz, 3 phases, 180 - 230 Volt, 50 Hz, single phase.
- The available compressed air supply is 6 bar. The manufacturer will have to design the machine on the basis of this available pressure.
- Water supply: As needed.

**57. Machine manufacturer shall have to clearly mention:**

- Inner & outer shape and colour mark line of duct produced by the machine will pass all necessary types of parameter test for quality assurance.
- Provision for proper signaling and auto controlling system of different accessories like auto feeding of materials, extrusion material flow, co-extrusion process, cooling system, caterpillar, diameter control, print, take up winder etc.
- Electrical power requirement for the offered equipment, connected load in every section, average power consumption for operating the machine with maximum line speed should be mentioned separately.

**58. Trial Run and Materials:**

BCSL will supply required raw materials (HDPE-PE100 Grade, Silicon Master batch, Colour Master batch and copper wire) for Trial run production of following products (outer surface will be Smooth Out Smooth in/Ribbed in and with copper tracer as per requirement) as trial production along with the machine;

1. 1 (One) Kilometer of diameter 32/26mm duct.
2. 1 (One) Kilometer of diameter 34/28mm duct.
3. 2 (Five) Kilometer of diameter 40/33mm duct.
4. 1 (Two) Kilometer of diameter 50/42mm duct.
5. 500 meter of diameter 63/52mm duct

Necessary drawing and design will have to be supplied by manufacturer for the process tools of different duct before signing of agreement.

**59. The Seller will also have to supply the following item as per description:**

59.1 Name: **PET Strapping**

59.2 Description: **PET strap smooth green (19mmX1.0X800m)**

59.3 **Quantity: 5 Roll**

59.4 Description:

Strong, lightweight and easy to use! PET Strapping is a high strength strapping which offers great flexibility and elastic memory for long term load retention. PET

Strapping can be joined with the metal PET seals (manual application), or for maximum efficiency, joined with the Battery Strapping Tools.

- High strength
- Cost-effective alternative to steel strapping
- Safe to use – no sharp edges
- Recyclable
- Available in both smooth or embossed options
- PET Strapping must be supply with machine.

## General Condition for the Tenderer:

### 60. General Terms and Conditions:

- a. All mechanical and electrical components/parts should be of high quality and anti-corrosive.
- b. The different components for the machine and test equipment enclosed in this schedule will be considered as complete offer.
- c. The supplier should capable to supply the machine & others equipment and related accessories for the duct production in Bangladesh Cable Shilpa Limited, Khulna, Bangladesh.
- d. The warranty period of the machine and test equipment will be 18 months from date of final acceptance of the machine & equipment by BCSL. In this period, the supplier will be bound to rectify or remove any fault of machine & test equipment and replace all damaged parts/components at free of cost.
- e. The country of origin of the machine and test equipment must be mentioned in the offer.
- f. The end users' certificate, list of users for last 5 (Five) years with detailed addresses & performance test certificate of the same type of machine and test equipment are to be enclosed with the offer.
- g. The tenderer should offer as per instruction of enclosed technical specification of the machine and test equipment.
- h. The tenderer shall offer the necessary section or components which are not same or any change in the technical specifications under their machine and test equipment design. In this case, they have to declare that all the functions and objectives will be complied as per the technical specifications in the schedule.
- i. The manufacturer shall have to submit the ISO certificates with the offer.
- j. **Any other accessories/components which are indispensable according to manufacturer's design for satisfactorily operation of the machine as a complete system for quality production should be included in the offer.**
- k. All electrical cables & wires, control cables & wires, pneumatic pipes & fittings, water disposal pipes & fittings for internal connection in machine, test equipment and other related accessories will have to be supplied.

### 61. Safety Precaution:

Sufficient precautionary safety guards should be provided with all moving parts.

### 62. Environmental Condition:

- a) Ambient Temperature : 15°C – 40°C

b) Humidity : 50% - 95%

**63. Tropicalization:**

- All supplied machine, test equipments, spare parts and other accessories like controller should be tropicalized. However, the supplier will quote for environmental conditioning equipment in detail.
- All control equipment, panel & cabinet should be provided with air conditioning system for keeping required temperature inside cabinet.

**64. Optional Item (which will no effect for tender evaluation but must be quoted):**

- a) Spare parts which may be required for 3 (Three) years operation of the machine and test equipment are to be submitted separately with detailed list, its price break-up & total value. The prices of these spare parts will be valid for 5 years. The following spare parts should be included within the 3 years spare parts list based on the assessment by the Seller;

**Heating elements for barrel and head, Temperature controller, control board, fuses, magnetic contactor, solid state relay, over-load circuit breaker, thermocouple, PLC power supply, PLC CPU, PLC input/output module card, motors, drives, belts, pneumatic regulator, nozzle spray, cutting blade, push button switch etc.**

**65. After Sales Service:**

- a) In the interest of smooth operation of the machine and test equipment, the supplier shall commit for availability of spare parts for smooth operation of the duct production Line and test equipment for long time in future.
- b) The supplier shall commit to furnish all information (technical) in respect of any improvement, modification or replacement of the supplied machine and test equipment for next 15 (fifteen) years.
- c) Supplier's agent & contact point names with full address of spare parts availability shall also be furnished to the tenderer.

**66. Erection, Installation, Commissioning, Trial run and Routine maintenance of the machine and Test Equipment on full turn-key basis:**

The supplier shall have to mention and supply the followings;

- a. Erection & installation time and No. of Installation Technician and Engineers.
- b. Trial run – No of persons and days to be mentioned.
- c. On job training time of BCSL personnel so that BCSL engineers & technicians can operate machine and test equipment independently, can locate the common fault and remove/repair the same.
- d. If the installation & commissions team from supplier is good in spoken english then no interpreter is required. Otherwise, supplier will arrange an interpreter through their local agent at their own cost during installation and commissioning.

**67. Right of the Purchaser:**

The purchaser has the right to procure any or all the items from the offerer and has the right to change the size of tools and dimensions of the accessories at the time of placing the purchase order.

**68. Technical Documents and Papers:**

- a) All technical documents and papers in English with detailed description of machine and test equipment operation, maintenance procedure, machine lay-out, foundation plan and related documents should be supplied by the manufacturer with mentioning service connection like electricity, water, compressed air etc.
- b) Three copies of the all technical detailed documents will have to be supplied along with the machine and test equipment in English Version.
- c) A copy of machine lay-out drawing with details measurement and section placement including power cables & wires requirement will have to be sent before shipment of the machine.
- d) List of all relays, fuses, circuit breakers, control devices, power supplies, bearings, pneumatic regulators, gear oils, greases and related accessories shall be provided with the machine and test equipment.
- e) List of alarms and fault messages which will be available in the machine and test equipment during operation.
- f) Detailed maintenance schedule of all mechanical moving parts & accessories.
- g) **Detailed drawing of extrusion mould tools (mouth & dies) will have to provide during supplying of the machine.**

**69. Price Quotation:**

Offered price must be given clearly as a whole or item-wise;

- I. Total and section-wise cost of Machine and equipment including all necessary items as per technical specification.
- II. Cost of installation, commissioning and trial run/production including on-job training of 8 BCSL personnel in the Buyers' premises in BCSL, Khulna, Bangladesh. This is mandatory item & it will be considered in the tender evaluation.
- III. Cost of Process tools for  $\Phi 63/52$  mm(1 set),  $\Phi 50/42$ mm(1 set),  $\Phi 40/33$ mm(2 sets),  $\Phi 34/28$ mm (1 set) &  $\Phi 32/26$ mm(1 set) (nipple, mouth, needle, tip & die and necessary others) for Duct/pipe production will have to be supplied with machine **(For Smooth Out Smooth In)** as per description of SL No. 54. This is mandatory item & it will be considered in the tender evaluation.
- IV. Cost of Process tools for  $\Phi 50/42$ mm(1 set),  $\Phi 40/33$ mm(1 sets), (nipple, mouth, needle, tip & die and necessary others) for Duct/pipe production will have to be

supplied with machine(**For Smooth Out Ribbed in**) as per description of SL No. 54. This is mandatory item & it will be considered in the tender evaluation.

- V. Cost of Process tools for Copper Tracer (Pin Point) (nipple, mouth, needle, tip & die and necessary others) Duct/pipe production will have to be supplied with machine as per description of SL No. 54. This is mandatory item & it will be considered in the tender evaluation.
- VI. Cost of PET strap material as per description in SL No. 59.
- VII. Cost of visit for Pre-Shipment Inspection for 2 (two) BCSL officials including round trip air ticket, highly comfortable accommodation, required fooding, lodging, local transportation, local insurance, medical facility (if required) etc and daily allowance USD 150.00/day for each person for 5(Five) days **excluding travelling period** prior to shipment of the machine and test equipment. This is mandatory item & it will be considered in the tender evaluation.
- VIII. Price (optional) of spare parts for 03 (Three) years operation of machine [as per description of SL No. 64(a)] must be included as item-wise and total value also which price will valid for 5 years.
- IX. Price (optional) of Screw Type Air Compressor with Dryer (50 cfm) as per description of Sl. No. 52.18.
- X. Price (optional) of Testing Equipments: Environmental Stress Cracking Resistance (ESCR) Test Apparatus, High Accuracy Digital Density Meter, Crush Resistance Tester Test Apparatus as per description in SL No. 52.19, 52.20 & 52.21.

**N.B. Price for optional items must be quoted. But the price for Optional Items will not be considered for tender evaluation to select the lowest responsive bidder.**

**70. Scope of works for the tenderer:**

Civil engineering works, foundation/installation etc.

All civil engineering works, foundation, installation of the machine and test equipment as well as wiring according to seller's drawing will be done under the supervision and assistance of buyer's personnel.

The machine and test equipment supplier will be liable to supply foundation bolts, nuts, related electric cables & wires, pneumatic pipes, fittings and related accessories and also responsible to erect, install and commission the machine including test equipment in shortest possible time and the Buyer will provide all necessary assistance to the technical team of the Seller.



ANNEXURE-II

(Specimen)  
BANK GUARANTEE IN LIEU OF PAY ORDER / BANK DRAFT / SDR

Bangladesh Cable Shilpa Limited,  
Shiromoni Industrial Area,  
P.O. Sonali Jute Mills, Code No. 9206,  
Khulna.

Guarantee No. ....  
Dated: .....  
(For mentioned amount)

Dear Sir,

Whereas Bangladesh Cable Shilpa Limited (BCSL), Shiromoni Industrial Area, P.O. Sonali Jute Mills, Khulna-9206, under tender No. ....dated ..... inviting tenders for supplies of (described supplies) has agreed to waive the requirement of cash deposit/call deposit of US\$/£/€/Taka..... as tender security by the bidder for making the supplies in accordance with the terms and conditions of the tender, if the tenderer shall provide the Bank Guarantee for payment for the said amount.

And whereas the tenderer  
M/s. .... of  
.....has requested us (name of bank) of ..... to issue an unconditional guarantee for payment of the amount of US\$/£/€/Taka ..... when called upon.

In consideration of the above, we (name of bank) of .....hereby undertake and guarantee due performance of the bidder M/s. .... of .....and unconditionally and absolutely bind ourselves.

1. To make payment without any question whatsoever of US\$/£/€/Taka..... to Bangladesh Cable Shilpa Limited (BCSL) or as directed by the authority immediately on receipt of demand from M/s. Bangladesh Cable Shilpa Limited, Khulna in writing, in the event of the bidder fails to perform the tender. It is expressly understood that M/s. Bangladesh Cable Shilpa Limited shall be the sole judge for deciding whether the bidder has performed the tender and fulfilled the terms and conditions of the tender.

2. It is specifically stipulated and understood by the Bank that any grant of time or indulgence to the bidder without reference to the bank shall not in any manner tend to absolve the bank from its liability to make payment as stipulated above under this guarantee.

3. The Bank's commitment under this guarantee is limited to an amount of US\$/£/Taka ..... ( .....) only.

4. This guarantee will remain valid for 120 days from the date of opening of the Tender up to .....

Yours faithfully,  
(Seal of Bank)

.....Bank.

Dated: .....

## ANNEXURE- III

(Specimen)

(STAMP)

**PERFORMANCE GUARANTEE**

Bangladesh Cable Shilpa Limited,  
Shiromoni Industrial Area,  
P.O. Sonali Jute Mills, Code No. 9206,  
Khulna, Bangladesh.

Bank guarantee.....

Dated.....

(For mentioned amount)

**Dear Sir,**

Whereas Bangladesh Cable Shilpa Limited (BCSL), Shiromoni Industrial Area, P.O. Sonali Jute Mills, Code No. 9206, Khulna hereinafter referred to as the buyer proposed to enter into a contract through a Notification of Award (NOA) No. ....dated..... hereinafter called the contract with (name of the sellers) of ..... hereinafter referred to as the sellers for the supply of (described supplies) in accordance with the terms and conditions of the contract.

And whereas the sellers have requested us (name of Bank) to issue an unconditional bank guarantee for an amount of US\$/£/€/Taka.....being 10 (Ten) percent of the C&F value of the offered Machine (name of the machine with quantity).

In consideration aforesaid we, (name and Bank) .....hereby undertake and guarantee due observance and performance of the terms and conditions of the contract by the sellers and we unconditionally and absolutely bind ourselves:

1. To make payment on demand and without demur and without reference to the seller of US\$/£/€/Taka ..... to the buyers or as directed by the buyers in writing, if the seller fails to perform the contract or fulfil the terms and conditions thereof.
2. To keep this guarantee valid and in force for 6 months from the date of successful trial-run and extendible for a further period if so required by the buyers.

The guarantee is unconditional and it is expressly understood that the Buyers shall be the sole judge for deciding whether the sellers have performed the contract and fulfilled the terms and conditions thereof.

It is specifically stipulated and understood by us (Name of the Bank) that and grant of time or indulgence to the sellers without reference to us shall not in any manner tend to absolve us from our liability to make payment as stipulated above under this guarantee.

Our commitment under this guarantee is limited to an amount of US\$/£/€/ Taka.....only.

This guarantee will remain valid upto .....

Yours faithfully,

(Seal of Bank)

Dated: .....

.....Bank.

**THE END.**