

TENDER

**FOR
Establishment of Plastic Testing Lab at
NTSC-Rajkot**

AT

**NSIC TECHNICAL SERVICES CENTRE RAJKOT
The National Small Industries Corporation Limited
(A Government of India Enterprise)
80 Ft. Road, Near Bhavnagar Road Crossing
Aji Industrial Area, Rajkot-360003. (Gujarat)**



**THE NATIONAL SMALL INDUSTRIES
CORPORATION LTD.**

**(A Government of India Enterprise)
80 Ft. Road, Near Bhavnagar Road Crossing
Aji Industrial Area, Rajkot-360003. (Gujarat)**

Tel No. 0281-2387613/2389070
Email- ntscraj@nsic.co.in

Fax No. 0281-2387729
Website-<http://nsic.co.in>

**NSIC TECHNICAL SERVICES CENTRE RAJKOT
The National Small Industries Corporation Limited
(A Government of India Enterprise)**

80 Ft. Road, Near Bhavnagar Road Crossing
Aji Industrial Area, Rajkot-360003. (Gujrat)
Tel: 0281-2387613/ 2389070/ 2387397/98
Email: ntscraj@nsic.co.in

Ref. : NTSC/RAJ/PLASTIC TESTING LAB/14-15/01 Date: 9th Feb.2015

M/s. _____

**Sub : Establishment of Plastic Testing Lab
AT NSIC TECHNICAL SERVICES CENTRE RAJKOT 80 Ft. Road, Near Bhavnagar
Road Crossing Aji Industrial Area, Rajkot-360003. (Gujarat).**

Sir,

Tender document in respect of the above mentioned works containing 35 pages as detailed are forwarded herewith. Please note that tender is to be delivered in the office of the Deputy General Manager NSIC TECHNICAL SERVICES CENTRE, 80 Ft. Road, Near Bhavnagar Road Crossing, Aji Industrial Area, Rajkot 360003, up to 3.00 P.M. on 26.02.15.

The Tender should be signed on each page, dated and witnessed in all places provided for in the documents; all other paper should be initialed.

The Tender should be accompanied by Earnest Money Deposit in the form of demand draft/at par Cheque as mentioned in Appendix. Tenders without Earnest Money Deposit shall be summarily rejected. Tender Fee for Rs. 500/-(Non refundable) in the form of Demand Draft/at per cheque in favour of "The National Small Industries Corporation Limited" payable at Rajkot. The tenders will be opened at 4.00 P.M. 26.02.2015.

The person, signing the tender on behalf of company/firm or on behalf of another person shall attach with tender a certified copy of proper authority/power of attorney on a non-judicial stamp paper of requisite value duly executed in his favour by such person, company/firm and must state specifically that he has authority to sign such tenders for and on behalf of such person or company/firm as the case may be, and in all matters pertaining to the contract including arbitration clause.

The letter shall form part of the "CONTRACT" and must be signed and returned along with the tender documents.

Yours Faithfully

**Deputy General Manager,
NSIC Technical SERVICES Centre Rajkot**

Signature of the Contractor

Tender Notice

NSIC TECHNICAL SERVICES CENTRE RAJKOT
The National Small Industries Corporation Limited
(A Government of India Enterprise)
80 Ft. Road, Near Bhavnagar Road Crossing
Aji Industrial Area, Rajkot-360003. (Gujrat)
Tel: 0281-2387613/ 2389070/ 2387397/98
Email: ntsraj@nsic.co.in

Tender no. : NTSC/RAJ/PLASTIC TESTING LAB/14-15/01 Date: 09.02.2015

Subject: Establishment of Plastic Testing Lab at NTSC-Rajkot

NSIC TECHNICAL SERVICES CENTRE RAJKOT is setting up Incubation Centre for Small Enterprise Establishment at NTSC, Rajkot Campus Premises.

We are pleased to invite your offer in two parts viz. (a) Technical and (b) Financial, strictly as per enclosed terms and conditions and instructions to bidders, in sealed covers for the under mentioned plant and machinery / equipment required for supply and installation at NTSC, Rajkot Campus Premises location. One set of equipment's consisting of the following:

Sl. No.	Description	Quantity
1.	<p>Air less Digital Hydrostatic Pressure Testing Machine with Four stations.</p> <p>Specification</p> <ul style="list-style-type: none"> • Air less pressure system to develop pressure and give proper boosting to high diameter of pipes. • Microcontroller: Indicating and controlling Pressure, Range: 99.99 Kg/cm² with resolution of 0.01 kg/cm² and Hour Meter with range of 9999 hrs with indication of hr:min:sec • Smart control with Digital calibration for pressure to microcontroller, Lower and Upper band to control • Failure detection: Through Microcontroller. • Caster wheels for easy movement with user friendly design. • Water Input: overhead tap water with 80 micron filter. • Power requirement: 230V 50Hz. • Paints: Powder Coating. <p>1. Pressure range : 0 – 99.99 Bar / kg /cm² or as per your specification</p> <p>2. Timer Range: 9999 hours</p> <p>3. Number of stations :Four (To test specimen at four different pressure) with 12 outlets.</p> <p>4. Pressure input: High Pressure Pump to</p>	One No.

	<p>develop pressure to four Stations.</p> <p>5. Specimen: Size 20 mm to 630 mm diameter and length of 1000 mm or as per requirement as specified.</p> <p>6. Accuracy: $\leq 1\%$</p> <p>7. Media of Test: Water(Hydrostatic pressure of water)</p> <p>8. Fill Pump: One fill pump to fast fill the specimen with water prior to test.(Optional)</p> <p>9. Power :230 Volts, 50HZ</p> <p>10. Paints :Powder coating.</p> <p>11. Size: 4 ft X 3 ft X 3 ft – 2nos.</p> <p>12. Weight: 200 Kgs</p> <p>13. Packing: Export worthy Wooden Packing</p>	
2.	<p>Opacity tester. Specification:</p> <ol style="list-style-type: none"> 1. Indigenous design to read direct percentage reading of light passing through specimen. 2. Precious least count of 0.01%. 3. Solid state electronic design ensures maintenance free long life of the apparatus. 4. Simple to operate and allegiant appearance. 5. Dust free specimen chamber. 6. Paint : Powder coated <p>Power : 230 V AC</p>	One No.
3.	<p>S.S.Oil bath under immersion method for reversion Specification</p> <ol style="list-style-type: none"> 1. Size of the inner S.S – 304, bath: 32"X24"X 24". 2. Size of the Outer M.S body: 41"X 28"X 30". 3. Insulation: PUF (2" on wall) 4. Temp controller: Digital PID controller with range up to 150°C and accuracy of 0.1°C. 5. Top Cover made up of S.S. 6. Top sample hanging facility. 7. Load:4 to 6 KW 8. Paint: Powder Coating 9. Power: 230 V AC, 50 Hzs 	One No.
4.	<p>Apparatus for Sulphate Ash Content Specification</p> <ol style="list-style-type: none"> 1. Size of muffle furnace: 4" X 4" X 9" deep. 2. Heating Load: 2 KW. 3. Temperature Range: Ambient to 1000°C. 4. Temperature Controller: Microprocessor based digital PID with resolution of 1°C & Accuracy of 1°C. 5. Silica crucible having a diameter of 75 mm and a depth of 75 mm. 6. Paint: Powder Coating. 	One No.

	<p>7. Power: 230 V AC</p> <p>Accessories:</p> <p>1.Desiccators: 1no Pipette: 1no 2.Bunsen burner with silica triangle & tripod: 1no</p>																												
5.	<p>Single Station Vicat Softening Point Apparatus with water cooling facility</p> <p>Specification:</p> <p>1. Material of Construction: Inner bath S. S. & Outer body M. S. 2. Temperature Controller : PID with range up to 400°C, 3. Resolution of 0.1°C & Accuracy of 0.1°C. 4. Circulation: Induction Motor. 5. Rate of Heating:50°C/hour or 120°C/hour (selectable) 6. Paints: Powder Coated. 7. Power : 230 V AC, 50 hzs</p> <p>Accessories:</p> <p>1.Baker makes dial gauge: 1no. 2.Indenture: 1no; Specimen Holder: 1no 3.5 Kg weight: 1no</p>	One No.																											
6.	<p>Impact tester for pipe</p> <p>Specification:-</p> <p>1. Height of fall: 500mm, 1000mm and 2000mm 2. Material of striker: M.S (Chrome Plated) 3. Weight of striker: 250gms, 500gms, 1kg 4. Release of the striker: Manual with spring release 5. Paint: Powder coating.</p>	One set																											
7.	<p>Weighing Balance for Specific Gravity Test</p> <p>Specification:</p> <p>1. Model: Analytical Weighing Balance of reputed make. 2. Range:0.1Mg to 200 Mg 3. Power: 230 V AC, 50 Hzs.</p>	One set																											
8.	<p>Freezer for conditioning for impact tester.</p> <p>Specification:</p> <p>1.Size of the inner S.S chamber: 18"X 18" X 18". 2.Temp range: ambient to 0 deg C. 3.Temp controller: digital with accuracy of +/- 1 deg 4.Refrigeration: through compressor. 5.Paint: powder coating. 6.Power : 230 V AC, 50Hz</p>																												
9.	<p>Chemicals and Glassware Required for laboratory</p>	One Set																											
10.	<p>End Caps as per IS 4985</p> <p>Specification:-</p> <p>Material of construction: Aluminum holding clams and M.S. Hard chrome Plated locking caps.</p> <table border="1"> <thead> <tr> <th>SR.NO.</th> <th>SIZE IN MM</th> <th>QUANTITY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20</td> <td>1 SET</td> </tr> <tr> <td>2</td> <td>25</td> <td>1 SET</td> </tr> <tr> <td>3</td> <td>32</td> <td>1 SET</td> </tr> <tr> <td>4</td> <td>40</td> <td>1 SET</td> </tr> <tr> <td>5</td> <td>50</td> <td>1 SET</td> </tr> <tr> <td>6</td> <td>63</td> <td>1 SET</td> </tr> <tr> <td>7</td> <td>75</td> <td>1 SET</td> </tr> <tr> <td>8</td> <td>90</td> <td>1 SET</td> </tr> </tbody> </table>	SR.NO.	SIZE IN MM	QUANTITY	1	20	1 SET	2	25	1 SET	3	32	1 SET	4	40	1 SET	5	50	1 SET	6	63	1 SET	7	75	1 SET	8	90	1 SET	
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	9 110 1 SET 10 125 1 SET 11 165 1 SET 12 180 1 SET 13 200 1 SET	
11.	Melt Flow index tester Specification: 1. Temperature Controller: Microprocessor based Digital Temperature Controller with range up to 400 deg C, resolution up to 0.1 deg C & Accuracy of +/- 0.1 % F.S.D. 2. Timer: Microprocessor based Digital Timer With range up to 999.9 Seconds and having preset Facility and buzzer output. 3. Weights: 2.16 Kg & 5 Kg hard chrome plated weights. 4. Accessories: Orifice, Piston, Material charger, Barrel Cleaner, Orifice cleaner, Sample Cutter. 5. Sample Cutting: Manual. 6. Paint: Powder Coated. 7. Power: 230V AC, 50 Hz 8. Amperes: 4 Amps. 9. Table Top Model	One Set
12.	Hydraulic Press to prepare sample For density test Specification: 1.Capacity: 0-10 Tons 2.Working Temp: up to 200 deg C 3.Platen size: 150 mm X 150 mm. 4.Day Light: 100 mm 5.Platen movement by hydraulic system (up stroke) 6.Microprocessor based Temperature controller for both platens. 7.Heating system in platens. 8.Power: 3 phase + Neutral 9.Paint: Powder Coated	
13.1	Dumbbell Dia Length : 150 mm	One No.
13.2	Dumbbell Dia Length : 115 mm	One No.
13.3	Dumbbell Dia Length : 75 mm	One No.
14.	E.S.C.R. (Environmental Stress Resistance) Specification: 1.Size : Inner Bath 12" x 18" x 10" 2.Material of Construction: Inner Bath S.S. outer Bath M.S. 3.Temperature Controller : Microprocessor Based digital Auto tunnel PID controller with range up to 300 °c Resolution of 0.1deg.c & accuracy of +/- 0.5°c 4.Heating Load: 2 KW. 5.Circulation: Induction motor with stirrer. 6.Testing Capacity: six tests at a time. 7.Accessories : Cutting Die, Nicking Jig, bending cum Transfer tool and Specimen holder, Test tube and rubber cork-6nos. each. 8. Power: 230V AC, 1 Phase, 50 Hz. 9.Paint: Powder Coating. 10.Solution required for test Igpol.(Customers scope)	One No.
15.	Migration test Accessories & Glassware	One No.

16.	<p>Carbon black content apparatus Specification:</p> <ol style="list-style-type: none"> 1. Microprocessor based PD Controller with range up to 800 deg C And Accuracy of +/-1 deg C 2. Silica quartz combustion tube and boat. 3. Heating load of 2 kw. 4. Ceramic furnace with nichrome heating element. 5. Paint: Powder Coated. 6. Power: 230V AC 	One No.
17.	<p>Carbon black dispersion test apparatus +Inline Emitter flow path measurement Specification:</p> <ol style="list-style-type: none"> 1. Thermostatically operated hot plate with 8" diameter and on/off switch, projection microscope, with 6" diameter screen, built-in variable halogen lamp, light with special rack and pinion with mechanical Arrangement 2. Glass Slide Box 3. "Baker" make dial gauge of range 0 – 10 mm with L.C. of 0.01. 4. Mechanical stage 5. Power: 230 V AC / 50 Hzs. 6. Magnification: 10X, 40X. 7. Power: 230V AC 	One No.
18.	<p>Universal Tensile Testing Machine Specification :</p> <ol style="list-style-type: none"> 1. Load Capacity: 500 Kgf 2. Upper day light to crosshead for test of Tensile & Elongation Maximum daylight: 700 mm. 3. Digital Indication of Peak Load, Elongation and Peak Load. 4. Auto stop at break point. 5. Limit switches for protection of cross head travel 6. Operation for test from Machine with For, Rev and Stop switch on machine and Also from PC software. 7. Speed: Variable by AC Frequency drive. 8. Speed Range: 10 mm/min – 500 mm/min 9. Microprocessor based load indicator: Accuracy Of +/- 0.05% of load indicated and Resolution of 0.1 Kg. 10. Results can be evaluated in K Newton, Kgf and MPa. 11. Extension meter: Least count of 0.1 mm through proximity/encoder switch. 12. Vice type or Wedge type grip gripe to hold the sample. 13. Over load excess elongation protection provided 14. Repeat test facility with comparison of report upto 5 samples in software. 15. RS 232 interface with WINDOW based software to conduct test and keep record of data with graph For the test and calculated results of Yield Load, Yield Extension, Break Load, Break Extension and Modulus of Elasticity. 16. Floor Standing Model 17. Paint : Powder Coating 18. Power: 220V AC, 1phase, 50 Hzs. 	One No.
19	<p>Pull out test for Inline emitters as per new standard Specification:</p> <ol style="list-style-type: none"> 1. Load as per standards to test the specimen full range. 2. Equipment will be as specified in standard IS 13488 – 2008. 3. With mechanical structure to hang the sample. 	One Set

	<p>4.Pneumatic load releasing system 5.Input of Air from compressor is required. 6.Paint: Powder coated</p>	
20	<p>Inline Emitter flow variation measurement Tester, 5 STATION Specification:- 1.Test apparatus suitable to test emission rate of Inline emitter 2.Digital timer with range of 999.9/9999 minutes. With buzzer output for test over indication. 3.Water tank with inner S.S. and outer M.S. with powder coating With five outlets for the sample 4.Connection and pressure gauge. 5.Total 5 stations, in one station 5 mts length of lateral with inline can be tested. 6.25 measuring cylinders and calibrated borosil glass measuring Cylinder. 7.Angel structure to hold specimens in 5 mts laying length 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs.</p>	One Set
21.	<p>Hydro test at elevated temperature +S.S. Water Bath for Hydro Specification:- 1.Inner S.S. and outer M.S. powder coated Water tank for the test. 2.Inner size: 40" X 24" X 18". 3.Outer size: 44" X 28" X 22" 4.Heating load: 4 KW 5.Control panel with temperature controller with range of 99.9 deg C. 6.Pressure gauge with fitting facility for tubes. 7.Water circulations through "Kirlosker" or C.G. make pump. 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs</p>	One Set
22.	<p>Tension test at elevated temp +Air Circulating Oven for Reversion Specification: 1.Size of inner S.S. chamber: 18 inch X 18 inch X 18 inch. 2.Temperature controller: digital PID controller with Range up to 250 deg. C and accuracy of +/- 0.5 deg C 3.Heating load: 1.5 kw. 4.Air circulation: Radial fan. 5.Tray: 2 numbers. 6.Hot air circulating oven with mechanical structure for Five samples to hinge with 180 N load 7.Paint: Powder coated 8.Power: 230 V A.C., 50 Hzs</p>	One Set
23.	Go - No GO Gauges (12,16,20,25mm)	One Set
24.	End fittings for pressure Testing. Size: 12,16,20,25 mm	One Set

Note:

The aspects mentioned below must be noted while submitting bids for the above mentioned plant and machinery / equipments:

- a) All machines / equipment should be compatible with 220 V Single Phase, 380-440 V Three Phase - 50 cycles per second supply. Electrical wiring for interconnection of the machines upto main supply wherever necessary should be supplied along with machines.
- b) In case foundation of the machine is required for installation, necessary foundation bolts, pads, washers etc. should be supplied along with foundation drawing.
- c) All machines should be supplied with electrical, raw material handling along with working tools.
- d) List out the technical specification, additional equipment required, if any, for smooth running of the project.
- e) All machines should be complete and ready for production of stated capacity and should be supplied with operation and maintenance manual.

The detailed tender document can be obtained free of cost from Deputy General Manager, NSIC TECHNICAL SERVICES CENTRE RAJKOT at the above address. The tender document can also be downloaded from NSIC website www.nsic.co.in. Any clarification on technical specifications can be obtained in writing from NSIC TECHNICAL SERVICES CENTRE RAJKOT before tender opening.

Please submit your lowest quotation / offer for the above requirement subject to our terms and conditions. Your offer should be submitted to Deputy General Manager, NSIC TECHNICAL SERVICES CENTRE RAJKOT 80 Ft. Road, Near Bhavnagar Road Crossing, Aji Industrial Area, Rajkot-360003 latest by 26th Feb, 2015 till 3:00 P.M. Offers received after the last date and scheduled time shall not be considered.

The format for technical bid and financial bid shall be as per Annexure-I and Annexure-II respectively. The offer should be submitted with a covering letter as per format at Annexure-III in a **sealed envelope clearly mentioning the above tender number on top of the envelope.**

The technical bid shall be opened on 26th February 2015 at 04:00 P.M. In the presence of authorized representatives of the bidders who may like to be present. The authorized representative should bring authority letter from their principals for attending the bid opening.

Note: The vendor should submit their best price while submitting their bids itself and they will not be allowed to revise the price any time thereafter.

NSIC reserves the right to reject one or all of the bids without assigning any reasons.

KINDLY READ ALL TERMS AND CONDITIONS OF "TENDER DOCUMENT" THOROUGHLY. QUOTATION NOT IN ACCORDANCE WITH THE TERMS AND CONDITIONS IS LIABLE TO BE DISQUALIFIED AND IGNORED.

Deputy General Manager

Important Instructions to bidders for submission of tender

1) Preparation of Bids:

The bids should be prepared in the following manner:-

- a. The Bid shall be neatly arranged, plain and intelligible.
- b. Each page of the bid should be signed by the authorised person. Letter regarding the authorisation of such person should be obtained from the Principal / Manufacturer and enclosed with the bid.
- c. Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.
- d. Bids should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid.
- e. Any conditional bid not adhering to the terms & conditions of the tender shall be rejected.
- f. The bidder should be the Principal / Original manufacturers of plant & machinery/ equipment, failing which the quotation shall not be considered.
- g. The bidders should have executed at least three purchase orders / contracts of equivalent value in the last five years. The bidder is required to submit catalogue of the plant & machinery/ equipment, complete reference of the past supply of equipment for the same or similar specification giving details of customer with name of the contact person, Fax no, phone no, E-mail.
- h. The bidders (originals manufacturers) will have to submit ink-signed offer / bid in original to NSIC TECHNICAL SERVICES CENTRE RAJKOT. **Bids not complying with this condition shall not be considered.**
- i. In the Financial Bid, prices are to be indicated in both figures and words. In case of any discrepancy of value the prices quoted in words shall be considered for evaluation and establishing L1 status.
- j. No price variation clause will be entertained.

Signature of Bidder
Seal of Bidder

- k. Specifications are the basic essence of the "Product". Mere copying of the tender specifications by the Bidder into their bids shall not make them eligible for consideration. Appropriate and sufficient evidence of conformity by way of data (catalogues etc.) shall be furnished. There should be an item-by-item commentary on the Specifications demonstrating responsiveness of the offered equipment to the specifications.
- l. Bid with any pre-conditions (like conditional discounts) for price are liable to be "Not considered" / "Rejected".

2) Submission of Bids:

- a. Bids must be received by NSIC TECHNICAL SERVICES CENTRE RAJKOT on or before the due date and time at the address specified in the tender document. In the event of the specified date for the submission of bids being declared a holiday for NSIC TECHNICAL SERVICES CENTRE RAJKOT, the bid-closing deadline will stand extended to the next working day up to the same time.
- b. Any bid received by NSIC TECHNICAL SERVICES CENTRE RAJKOT after the deadline for submission of bids, will not be accepted and returned unopened to the bidder.
- c. NSIC TECHNICAL SERVICES CENTRE RAJKOT at its discretion may extend the deadline for the submission of bids if the bid document undergoes changes during the bidding period, in order to give prospective bidders time to take into consideration the amendments while preparing their bids.
- d. In case of receipt of inadequate numbers of bids, NSIC TECHNICAL SERVICES CENTRE RAJKOT may extend the deadline for submission of bids giving opportunity to other bidders to participate in the bidding process to make it competitive.
- e. If the Supplier submits only one envelop / cover containing all the bids or combined bids e.g. techno-commercial bid & price bid together, the bid is liable for rejection.

NOTE: The manufacturers should submit their best price at this stage itself and they will not be allowed to revise the price. Any revision / discount given by manufacturers subsequently will be ignored.

Signature of Bidder
Seal of Bidder

3) Amendment of Bidding Documents:

- a. At any time prior to the deadline for submission of bids, NSIC TECHNICAL SERVICES CENTRE RAJKOT may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.
- b. All prospective bidders who have requested for the bidding document will be notified of the amendment in writing, and such amendments/ modifications will be binding on them.

4) Bid opening and evaluation of Bids:

- a. The technical bids shall be opened on 26th Feb,2015 at 04:00 P.M.
- b. Bidder whose technical bid is qualified based on the eligibility criteria as specified in this tender document will be considered for financial bid evaluation. The date and time of opening of the financial bid will be informed to such bidders.
- c. NSIC TECHNICAL SERVICES CENTRE RAJKOT will open financial bids of only the technically qualified, in the presence of the bidders or their authorised representative who choose to attend the bid opening.
- d. The bidder's authorised representative who attends the bid opening shall sign an attendance register as a proof of having attended the bid opening.
- e. The bidder's name, bid prices, discounts and such other details will be announced at the time of opening of the financial bids.

5) Award of Contract

- a. The financial bids of the technically qualified bidders shall be opened by the constituted committee. Thereafter the committee shall prepare the comparative statement (CST) based on the FOR, NSIC TECHNICAL SERVICES CENTRE RAJKOT price quoted by the bidders. This will facilitate to shortlist the L-1 bidder quoting the lowest price.

Signature of Bidder
Seal of Bidder

- b. L-1 will be decided on the basis of total value of the bid.
- c. NSIC TECHNICAL SERVICES CENTRE RAJKOT shall award the contract to the eligible bidder whose financial bid has been accepted and determined as the lowest evaluated financial bid.
- d. If more than one bidder happens to quote the same lowest price, NSIC reserves the right to award the contract to any one bidder.
- e. Separate supply order shall be placed for supply and installation of machinery and equipment required for each location at NSIC TECHNICAL SERVICES CENTRE RAJKOT. The bidder shall deposit 'Security Deposit' for Rs. 20,000/- (Rs. Twenty thousand only) for each supply orders placed for different locations.
- f. The successful bidder, on award of contract/order, must send the contract/order acceptance in writing, within 7 days of award of contract/order, failing which the EMD will be forfeited.

6) Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clauses in this Tender Document, NSIC TECHNICAL SERVICES CENTRE RAJKOT interpretation of the clauses shall be final and binding on all parties.

7) Earnest Money Deposit:

- a. The units registered with Central Purchase Organization (DGS&D), The National Small Industries Corporation (NSIC) or the concerned Ministry or Department shall be exempted from the payment of Earnest Money as defined under Rule 157 .EMD should be 20,000/- (in words Rupees Twenty- thousand only) by way of Demand Draft (DD) drawn in favour of "The National Small Industries Corporation Limited" payable at Rajkot for one set of goods only (even in case the bidder is quoting for more than one set). No cash / cheque towards EMD shall be accepted. The DD for EMD should be placed inside the envelope containing technical bid. The offers without EMD shall be rejected.

Signature of Bidder
Seal of Bidder

- b. The EMD of unsuccessful bidder shall be refunded within 30 days from the award of contract.
- c. No interest will be allowed for earnest money deposited with the Company.
- d. The EMD shall be forfeited:
 - (i) If the bidder withdraws the bid during the period of bid validity specified in the tender.
 - (ii) If the successful bidder fails to furnish the acceptance in writing, within 7 days of award of contract/order.

8) Security Deposit

- a. The EMD of successful bidder shall be kept as 'Security Deposit' for supply of goods against each supply order and shall be released at the time of final payment after successful completion of work.
- b. In case of bidder exempted from payment of EMD (as mentioned in Para 7 a. above), 'Security Deposit' for Rs. 20,000/- by way of demand draft in favour of "The National Small Industries Corporation Limited" payable at Rajkot should be submitted along with order acceptance against each supply order. However, the successful bidder can furnish a Bank Guarantee of Nationalized Bank of equivalent amount in lieu of 'Security Deposit' valid for one year from the date of supply order.

9) Prices:

All items are to be quoted in INR only in the format as per Annexure-II. The price quoted should be inclusive of proper and strong packing, insurance and freight on for NSIC Technical SERVICES Centre, Rajkot basis. The prices should also be inclusive of all taxes and duties as applicable. The price quoted shall be considered firm and no price escalation shall be permitted.

10) Validity of the Quote:

The validity of quote should be at least six months (180 days) from the closing date of tender. A bid valid for a shorter period shall stand rejected.

Signature of Bidder
Seal of Bidder

NSIC TECHNICAL SERVICES CENTRE RAJKOT may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. A bidder agreeing to the request for extension will not be permitted to modify his bid.

11) Delivery period:

The goods shall be delivered at NSIC Technical SERVICES Centre, Rajkot (or any other place as specified by NSIC Technical SERVICES Centre, Rajkot) within 60 days from the date of award of contract. Part delivery shall not be permitted. Separate dispatch instruction shall be issued after inspection of goods and acceptance thereof by NSIC Technical SERVICES Centre, Rajkot. No other delivery terms shall be acceptable.

12) Taxes / Duties:

- a. The bidders should be registered with sales tax / income tax department of Govt. of India and should hold a valid VAT registration certificate, as applicable.
- b. Sales tax, excise duty, VAT, octroi or any other tax shall be paid on actual as per rule applicable and on production of documentary proof. No tax concession form or proof of shipment of goods shall be issued.

13) Payment terms:

- a. 80% of order value to be released on submission of following documents:
 - i. Signed commercial Invoice-two copies certifying that the goods are exactly as per the purchase order and the specification quoted.
 - ii. One copy of NSIC TECHNICAL SERVICES CENTRE RAJKOT supply order.
 - iii. Proof of delivery of the consignment at NISC Technical SERVICES Centre ,Rajkot
 - iv. Clean report of findings issued by NSIC TECHNICAL SERVICES CENTRE RAJKOT.
 - v. Packing list two copies duly signed.
- b. Balance 20% order value shall be released after successful installation and commissioning of equipment at NSIC Technical SERVICES Centre ,Rajkot

Signature of Bidder
Seal of Bidder

14) Packing & Marking:

Consignment must be packed in proper and strong packing cases, taking all precaution against damage during handling and sea weather corrosion.

Proper marking on the packing cases should be made for smooth handling of consignment. The supplier will be held responsible for the plant and machinery / equipment's not being sufficiently and properly packed and in such eventuality the supplier shall have to transport them by rail, road at their destination, at his expense free from loss or damage.

Every package delivered under our order shall at the expense of the supplier be distinctly marked with description and quantity or contents with the consignee name and address (which shall be notified subsequently) with gross weight and net weight, with the distinctive number and mark which is also to be shown for the purpose of identification on the suppliers packing account.

Each packet shall contain a packing note quoting a number and date of our order and showing its contents in detail.

15) Pre-Shipment Inspection:

The plant and machinery / equipment to be supplied and packing thereof shall be subject to inspection by NSIC TECHNICAL SERVICES CENTRE RAJKOT or third party (name shall be conveyed to the successful bidder) at manufacturer's premises prior to dispatch thereof. Approval and clean report of findings shall be submitted at the time of claiming 80% payment. Machinery & equipment including packing boxes shall be offered by the awarded unit for inspection at least 10 days before the stipulated date of delivery. Deviations, if any pointed out by the visiting inspection team, as mentioned above, shall be corrected and the machinery and equipment as per specification shall be dispatched on or before the contract delivery date.

16) Liquidated damages:

In the event of delay in supply of the goods within the stipulated period, Liquidated Damages (LD) shall be charged by NSIC TECHNICAL SERVICES CENTRE RAJKOT @ ½% (one-half of one percent) of the total order value per week of delay or part thereof subject to a maximum of 5 (five percent)

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of the order value. Supplier shall deduct the applicable LD from the first payment while raising the claim for the same.

17) Insurance:

All goods are to be insured for 110% of the FOR value of the goods by successful bidder from the works to NSIC Technical SERVICES Centre, Rajkot.

18) Installation & Commissioning:

- a. The awarded bidders shall have to depute expert(s) for installation & commissioning at site as and when instructed by NSIC TECHNICAL SERVICES CENTRE RAJKOT.
- b. No additional charges shall be payable for installation & commissioning of equipment at site the supplier has to inform in advance about the material handling facilities to be arranged for unloading, successful installation, commissioning, training and pilot production from the machines and equipments supplied.
- c. The supplier will be required to train for at least 7 days the operators as decided by NSIC TECHNICAL SERVICES CENTRE RAJKOT.

19) After Sales SERVICES / Warranties by Suppliers:

The equipment shall be warranted for any manufacturing defect for a period of 18 months from the date of shipment or 12 months from the date of successful completion of installation and commissioning at site, whichever is later. Should any part or parts fail or proved defective within the period specified above, owing to defect in design, material or workmanship, the supplier will have to replace them at the place of installation free of all charges.

During the warranty period, expert(s) shall be deputed at site by the awarded unit whenever found essential and which cannot be undertaken locally or by the NSIC TECHNICAL SERVICES CENTRE RAJKOT experts including rectifying any defect / malfunctioning of plant & machinery. The cost of deputation of expert(s) and any other associated expenditure shall be borne by the awarded unit.

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20) Technical Documents:

The awarded unit shall provide technical documents like operation and maintenance manual etc. in English language in three copies for each items of equipment. Two copies to go with the consignment, one copy to be forwarded to NSIC TECHNICAL SERVICES CENTRE RAJKOT office.

21) Risk Purchase:

In case of delays in supplies / defective supplies or non-fulfillment of any other terms and conditions given in the Supply Order, NSIC TECHNICAL SERVICES CENTRE RAJKOT may cancel the supply order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier.

In case vendor does not agree to above risk purchase clause, their offer is liable to be rejected. In case any vendor accepts risk purchase clause initially and subsequently declines to honour the term in the eventuality of RISK PURCHASE, they may be banned for business with NSIC TECHNICAL SERVICES CENTRE RAJKOT.

22) Cancellation of Bids

- a. NSIC TECHNICAL SERVICES CENTRE RAJKOT reserves the rights to cancel any bid without assigning any reasons.
- b. NSIC TECHNICAL SERVICES CENTRE RAJKOT reserves the rights to cancel bids and refloat a fresh tender, at any time after opening of the bids, in case it finds the response to its bid are not meeting its requirement. This shall be at the sole discretion of NSIC TECHNICAL SERVICES CENTRE RAJKOT.

23) Blacklisting / Debarring of Firm

- a. Units blacklisted by any Government Departments / PSUs are not eligible to participate in the tender.
- b. If the unit(s) commits breach of contract, it shall be black listed / debarred for further business with NSIC TECHNICAL SERVICES CENTRE RAJKOT for a declared period.

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24) Post Tender Negotiations

- a. NSIC TECHNICAL SERVICES CENTRE RAJKOT reserves the right to conduct negotiations on the 'Price' and 'other commercial terms' with the lowest ranked offered, and
- b. If so required by NSIC TECHNICAL SERVICES CENTRE RAJKOT, supplier may have to share their cost data / costing sheet with NSIC TECHNICAL SERVICES CENTRE RAJKOT.

25) Force Majeure

If at any time during the currency of this contract, the performance in whole or in part, by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events), then provided notice of happening of any such events is given by either party to other within ten days from the date of occurrence thereof, neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

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Annexure-I**Format for technical bid****Establishment of Plastic Testing Lab at NTSC-Rajkot**

Sl. No.	Description	Qty.	Compliance (Yes/No)
1.	<p>Air less Digital Hydrostatic Pressure Testing Machine with Four stations.</p> <p>Specification</p> <ul style="list-style-type: none"> • Air less pressure system to develop pressure faster and give proper boosting to high diameter of pipes. • Microcontroller: Indicating and controlling Pressure, Range: 99.99 Kg/cm² with resolution of 0.01 kg/cm² and Hour Meter with range of 9999 hrs with indication of hr:min:sec • Smart control with Digital calibration for pressure to microcontroller, Lower and Upper band to control • Failure detection: Through Microcontroller. • Caster wheels for easy movement with user friendly design. • Water Input: overhead tap water with 80 micron filter. • Power requirement: 230V 50Hz. • Paints: Powder Coating. <ol style="list-style-type: none"> 1. Pressure range : 0 – 99.99 Bar / kg /cm² or as per your specification 2. Timer Range: 9999 hours 3. Number of stations :Four (To test specimen at four different pressure) with 12 outlets. 4. Pressure input: High Pressure Pump to develop pressure to four Stations. 5. Specimen: Size 20 mm to 630 mm diameter and length of 1000 mm or as per requirement as specified. 6. Accuracy: ≤ 1 % 7. Media of Test: Water(Hydrostatic pressure of water) 8. Fill Pump: One fill pump to fast fill the specimen with water prior to test.(Optional) 9. Power :230 Volts, 50HZ 10. Paints :Powder coating. 11. Size: 4 ft X 3 ft X 3 ft – 2nos. 12. Weight: 200 Kgs 13. Packing: Export worthy Wooden Packing 	One No.	
2.	<p>Opacity tester.</p> <p>Specification:</p> <ol style="list-style-type: none"> 1) Indigenous design to read direct percentage reading of light passing through specimen. 	One No.	

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	<p>2.Precious least count of 0.01%.</p> <p>3.Solid state electronic design ensures maintenance free long life of the apparatus.</p> <p>4.Simple to operate and allegiant appearance.</p> <p>5.Dust free specimen chamber.</p> <p>6.Paint : Powder coated</p> <p>Power : 230 V AC</p>		
3.	<p>S.S.Oil bath under immersion 1no. Rs. method for reversion</p> <p>Specification</p> <p>1.Size of the inner S.S – 304, bath: 32"X24"X 24".</p> <p>2.Size of the Outer M.S body: 41"X 28"X 30".</p> <p>3.Insulation: PUF (2" on wall)</p> <p>4.Temp controller: Digital PID controller with range up to 150°C and accuracy of 0.1°C.</p> <p>5.Top Cover made up of S.S.</p> <p>6.Top sample hanging facility.</p> <p>7.Load:4 to 6 KW</p> <p>8.Paint: Powder Coating</p> <p>9.Power: 230 V AC, 50 Hzs</p>	One No.	
4.	<p>Apparatus for Sulphate Ash Content</p> <p>Specification</p> <p>1.Size of muffle furnace: 4" X 4" X 9" deep.</p> <p>2.Heating Load: 2 KW.</p> <p>3.Temperature Range: Ambient to 1000°C.</p> <p>4.Temperature Controller: Microprocessor based digital PID with resolution of 1°C & Accuracy of 1°C.</p> <p>5.Silica crucible having a diameter of 75 mm and a depth of 75 mm.</p> <p>6.Paint: Powder Coating.</p> <p>7.Power: 230 V AC</p> <p>Accessories:</p> <p>1.Desiccators: 1no Pipette: 1no</p> <p>2.Bunsen burner with silica triangle & tripod: 1no</p>	One No.	
5.	<p>Single Station Vicat Softening Point Apparatus with water cooling facility</p> <p>Specification:</p> <p>1.Material of Construction: Inner bath S. S. & Outer body M. S.</p> <p>2.Temperature Controller : PID with range up to 400°C,</p> <p>3.Resolution of 0.1°C & Accuracy of 0.1°C.</p> <p>4.Circulation: Induction Motor.</p> <p>5.Rate of Heating:50°C/hour or 120°C/hour (selectable)</p> <p>6.Paints: Powder Coated.</p> <p>7.Power : 230 V AC, 50 hzs</p> <p>Accessories:</p> <p>1.Baker makes dial gauge: 1no.</p> <p>2.Indenture: 1no; Specimen Holder: 1no</p>	One No.	

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	3.5 Kg weight: 1no		
6.	Impact tester for pipe Specification:- 1.Height of fall: 500mm, 1000mm and 2000mm 2. Material of striker: M.S (Chrome Plated) 3. Weight of striker: 250gms, 500gms, 1kg 4. Release of the striker: Manual with spring release 5. Paint: Powder coating.	One set	
7.	Weighing Balance for Specific Gravity Test Specification: 1.Model: Analytical Weighing Balance of reputed make. 2.Range:0.1Mg to 200 Mg 3.Power: 230 V AC, 50 Hzs.	One set	
8.	Freezer for conditioning for impact tester. Specification: 1.Size of the inner S.S chamber: 18"X 18" X 18". 2.Temp range: ambient to 0 deg C. 3.Temp controller: digital with accuracy of +/- 1 deg 4.Refrigeration: through compressor. 5.Paint: powder coating. 6.Power : 230 V AC, 50Hz		
9.	Chemicals and Glassware Required for laboratory	One Set	
10.	End Caps as per IS 4985 Specification:- Material of construction: Aluminum holding clams and M.S. Hard chrome Plated locking caps. SR.NO. SIZE IN MM QUANTITY 1 20 1 SET 2 25 1 SET 3 32 1 SET 4 40 1 SET 5 50 1 SET 6 63 1 SET 7 75 1 SET 8 90 1 SET 9 110 1 SET 10 125 1 SET 11 165 1 SET 12 180 1 SET 13 200 1 SET		
11.	Melt Flow index tester Specification: 1.Temperature Controller: Microprocessor based Digital Temperature Controller with range up to 400 deg C, resolution up to 0.1 deg C & Accuracy of +/- 0.1 % F.S.D. 2.Timer: Microprocessor based Digital Timer With range up to 999.9 Seconds and having preset Facility and buzzer output. 3.Weights: 2.16 Kg & 5 Kg hard chrome plated weights. 4.Accessories: Orifice, Piston, Material charger, Barrel Cleaner, Orifice cleaner, Sample Cutter.	One Set	

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	<p>5.Sample Cutting: Manual. 6.Paint: Powder Coated. 7.Power: 230V AC, 50 Hz 8..Amperes: 4 Amps. 9.Table Top Model</p>		
12.	<p>Hydraulic Press to prepare sample For density test Specification: 1.Capacity: 0-10 Tons 2.Working Temp: up to 200 deg C 3.Platen size: 150 mm X 150 mm. 4.Day Light: 100 mm 5.Platen movement by hydraulic system (up stroke) 6.Microprocessor based Temperature controller for both platens. 7.Heating system in platens. 8.Power: 3 phase + Neutral 9.Paint: Powder Coated</p>		
13.1	Dumbbell Dia Length : 150 mm	One No.	
13.2	Dumbbell Dia Length : 115 mm	One No.	
13.3	Dumbbell Dia Length : 75 mm	One No.	
14.	<p>E.S.C.R. (Environmental Stress Resistance) Specification: 1.Size : Inner Bath 12" x 18" x 10" 2.Material of Construction: Inner Bath S.S. outer Bath M.S. 3.Temperature Controller : Microprocessor Based digital Auto tunnel PID controller with range up to 300 °c Resolution of 0.1deg.c & accuracy of +/- 0.5°c 4.Heating Load: 2 KW. 5.Circulation: Induction motor with stirrer. 6.Testing Capacity: six tests at a time. 7.Accessories : Cutting Die, Nicking Jig, bending cum Transfer tool and Specimen holder, Test tube and rubber cork-6nos. each. 8. Power: 230V AC, 1 Phase, 50 Hz. 9.Paint: Powder Coating. 10.Solution required for test Igpol.(Customers scope)</p>	One No.	
15.	Migration test Accessories & Glassware	One No.	
16.	<p>Carbon black content apparatus Specification: 1.Microprocessor based PD Controller with range up to 800 deg C And Accuracy of +/-1 deg C 2.Silica quartz combustion tube and boat. 3.Heating load of 2 kw. 4.Ceramic furnace with nichrome heating element. 5.Paint: Powder Coated. 6.Power: 230V AC</p>	One No.	

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17.	<p>Carbon black dispersion test apparatus +Inline Emitter flow path measurement Specification: 1. Thermostatically operated hot plate with 8" diameter and on/off switch, projection microscope, with 6" diameter screen, built-in variable halogen lamp, light with special rack and pinion with mechanical Arrangement 2. Glass Slide Box 3. "Baker" make dial gauge of range 0 – 10 mm with L.C. of 0.01. 4. Mechanical stage 5. Power: 230 V AC / 50 Hzs. 6. Magnification: 10X, 40X. 7. Power: 230V AC</p>	One No.	
18.	<p>Universal Tensile Testing Machine Specification : 1. Load Capacity: 500 Kgf 2. Upper day light to crosshead for test of Tensile & Elongation Maximum daylight: 700 mm. 3. Digital Indication of Peak Load, Elongation and Peak Load. 4. Auto stop at break point. 5. Limit switches for protection of cross head travel 6. Operation for test from Machine with For, Rev and Stop switch on machine and Also from PC software. 7. Speed: Variable by AC Frequency drive. 8. Speed Range: 10 mm/min – 500 mm/min 9. Microprocessor based load indicator: Accuracy Of +/- 0.05% of load indicated and Resolution of 0.1 Kg. 10. Results can be evaluated in K Newton, Kgf and MPa. 11. Extension meter: Least count of 0.1 mm through proximity/encoder switch. 12. Vice type or Wedge type grip gripe to hold the sample. 13. Over load excess elongation protection provided 14. Repeat test facility with comparison of report upto 5 samples in software. 15. RS 232 interface with WINDOW based software to conduct test and keep record of data with graph For the test and calculated results of Yield Load, Yield Extension, Break Load, Break Extension and Modulus of Elasticity. 16. Floor Standing Model 17. Paint : Powder Coating 18. Power: 220V AC, 1phase, 50 Hzs.</p>	One No.	
19	<p>Pull out test for Inline emitters as per new standard Specification: 1. Load as per standards to test the specimen full range. 2. Equipment will be as specified in standard IS 13488 – 2008. 3. With mechanical structure to hang the sample. 4. Pneumatic load releasing system 5. Input of Air from compressor is required. 6. Paint: Powder coated</p>	One Set	

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20	<p>Inline Emitter flow variation measurement Tester, 5 STATION</p> <p>Specification:-</p> <ol style="list-style-type: none"> 1.Test apparatus suitable to test emission rate of Inline emitter 2.Digital timer with range of 999.9/9999 minutes. With buzzer output for test over indication. 3.Water tank with inner S.S. and outer M.S. with powder coating With five outlets for the sample 4.Connection and pressure gauge. 5.Total 5 stations, in one station 5 mts length of lateral with inline can be tested. 6.25 measuring cylinders and calibrated borosil glass measuring Cylinder. 7.Angel structure to hold specimens in 5 mts laying length 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs. 	One Set	
21.	<p>Hydro test at elevated temperature +S.S. Water Bath for Hydro</p> <p>Specification:-</p> <ol style="list-style-type: none"> 1.Inner S.S. and outer M.S. powder coated Water tank for the test. 2.Inner size: 40" X 24" X 18". 3.Outer size: 44" X 28" X 22" 4.Heating load: 4 KW 5.Control panel with temperature controller with range of 99.9 deg C. 6.Pressure gauge with fitting facility for tubes. 7.Water circulations through "Kirlosker" or C.G. make pump. 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs 	One Set	
22.	<p>Tension test at elevated temp +Air Circulating Oven for Reversion</p> <p>Specification:</p> <ol style="list-style-type: none"> 1.Size of inner S.S. chamber: 18 inch X 18 inch X 18 inch. 2.Temperature controller: digital PID controller with Range up to 250 deg. C and accuracy of +/- 0.5 deg C 3.Heating load: 1.5 kw. 4.Air circulation: Radial fan. 5.Tray: 2 numbers. 6.Hot air circulating oven with mechanical structure for Five samples to hinge with 180 N load 7.Paint: Powder coated 8.Power: 230 V A.C., 50 Hzs 	One Set	
23.	<p>Go - No GO Gauges (12,16,20,25mm)</p>	One Set	
24.	<p>End fittings for pressure Testing. Size: 12,16,20,25 mm</p>	One Set	

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Enclosures:

1. Company profile with catalogues.
2. Detailed specification of all items mentioned above.
3. Copy of purchase orders/ contracts of similar nature and size in the last five years.
4. Copy of Pan Card / Sales tax / VAT registration certificate.
5. Copy of SSI / MSME Memorandum part - II / NSIC TECHNICAL SERVICES CENTRE RAJKOT registration certificate, if applicable.
6. Demand draft for Rs. 20,000/- as EMD.
7. Tender fee Rs. 500/- through Demand Draft/At per Cheque
8. Authorization letter in favour of authorized signatory from the bidder.

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Annexure-II

Financial price schedule
Establishment of Plastic Testing Lab at NTSC-Rajkot

Sl. No.	Description	Qty.	Price (INR)	Tax & Duties (INR)	Total Price (INR)
1.	<p>Air less Digital Hydrostatic Pressure Testing Machine with Four stations. Specification</p> <ul style="list-style-type: none"> • Air less pressure system to develop pressure faster and give proper boosting to high diameter of pipes. • Microcontroller: Indicating and controlling Pressure, Range: 99.99 Kg/cm² with resolution of 0.01 kg/cm² and Hour Meter with range of 9999 hrs with indication of hr:min:sec • Smart control with Digital calibration for pressure to microcontroller, Lower and Upper band to control • Failure detection: Through Microcontroller. • Caster wheels for easy movement with user friendly design. • Water Input: overhead tap water with 80 micron filter. • Power requirement: 230V 50Hz. • Paints: Powder Coating. <p>1. Pressure range : 0 – 99.99 Bar / kg /cm² or as per your specification 2. Timer Range: 9999 hours 3. Number of stations :Four (To test specimen at four different pressure) with 12 outlets. 4. Pressure input: High Pressure Pump to develop pressure to four Stations. 5. Specimen: Size 20 mm to 630 mm diameter and length of 1000 mm or as per requirement as specified. 6. Accuracy: ≤ 1 % 7. Media of Test: Water(Hydrostatic pressure of water) 8. Fill Pump: One fill pump to fast fill the specimen with water prior to test.(Optional) 9. Power :230 Volts, 50HZ 10. Paints :Powder coating. 11. Size: 4 ft X 3 ft X 3 ft – 2nos. 12. Weight: 200 Kgs 13. Packing: Export worthy Wooden Packing</p>	One No.			
2.	<p>Opacity tester. Specification:</p> <p>1.Indigenous design to read direct percentage reading of light passing through specimen.</p>	One No.			

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	<p>2.Precious least count of 0.01%.</p> <p>3.Solid state electronic design ensures maintenance free long life of the apparatus.</p> <p>4.Simple to operate and allegiant appearance.</p> <p>5.Dust free specimen chamber.</p> <p>6.Paint : Powder coated</p> <p>Power : 230 V AC</p>				
3.	<p>S.S.Oil bath under immersion 1no. Rs. method for reversion</p> <p>Specification</p> <p>1.Size of the inner S.S – 304, bath: 32"X24"X 24".</p> <p>2.Size of the Outer M.S body: 41"X 28"X 30".</p> <p>3.Insulation: PUF (2" on wall)</p> <p>4.Temp controller: Digital PID controller with range up to 150°C and accuracy of 0.1°C.</p> <p>5.Top Cover made up of S.S.</p> <p>6.Top sample hanging facility.</p> <p>7.Load:4 to 6 KW</p> <p>8.Paint: Powder Coating</p> <p>9.Power: 230 V AC, 50 Hzs</p>	One No.			
4.	<p>Apparatus for Sulphate Ash Content</p> <p>Specification</p> <p>1.Size of muffle furnace: 4" X 4" X 9" deep.</p> <p>2.Heating Load: 2 KW.</p> <p>3.Temperature Range: Ambient to 1000°C.</p> <p>4.Temperature Controller: Microprocessor based digital PID with resolution of 1°C & Accuracy of 1°C.</p> <p>5.Silica crucible having a diameter of 75 mm and a depth of 75 mm.</p> <p>6.Paint: Powder Coating.</p> <p>7.Power: 230 V AC</p> <p>Accessories:</p> <p>1.Desiccators: 1no Pipette: 1no</p> <p>2.Bunsen burner with silica triangle & tripod: 1no</p>	One No.			
5.	<p>Single Station Vicat Softening Point Apparatus with water cooling facility</p> <p>Specification:</p> <p>1.Material of Construction: Inner bath S. S. & Outer body M. S.</p> <p>2.Temperature Controller : PID with range up to 400°C,</p> <p>3.Resolution of 0.1°C & Accuracy of 0.1°C.</p> <p>4.Circulation: Induction Motor.</p> <p>5.Rate of Heating:50°C/hour or 120°C/hour (selectable)</p> <p>6.Paints: Powder Coated.</p> <p>7.Power : 230 V AC, 50 hzs</p> <p>Accessories:</p> <p>1.Baker makes dial gauge: 1no.</p> <p>2.Indenture: 1no; Specimen Holder: 1no</p>	One No.			

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	3.5 Kg weight: 1no				
6.	Impact tester for pipe Specification:- 1.Height of fall: 500mm, 1000mm and 2000mm 2. Material of striker: M.S (Chrome Plated) 3. Weight of striker: 250gms, 500gms, 1kg 4. Release of the striker: Manual with spring release 5. Paint: Powder coating.	One set			
7.	Weighing Balance for Specific Gravity Test Specification: 1.Model: Analytical Weighing Balance of reputed make. 2.Range:0.1Mg to 200 Mg 3.Power: 230 V AC, 50 Hzs.	One set			
8.	Freezer for conditioning for impact tester. Specification: 1.Size of the inner S.S chamber: 18"X 18" X 18". 2.Temp range: ambient to 0 deg C. 3.Temp controller: digital with accuracy of +/- 1 deg 4.Refrigeration: through compressor. 5.Paint: powder coating. 6.Power : 230 V AC, 50Hz				
9.	Chemicals and Glassware Required for laboratory	One Set			
10.	End Caps as per IS 4985 Specification:- Material of construction: Aluminum holding clams and M.S. Hard chrome Plated locking caps. SR.NO. SIZE IN MM QUANTITY 1 20 1 SET 2 25 1 SET 3 32 1 SET 4 40 1 SET 5 50 1 SET 6 63 1 SET 7 75 1 SET 8 90 1 SET 9 110 1 SET 10 125 1 SET 11 165 1 SET 12 180 1 SET 13 200 1 SET				
11.	Melt Flow index tester Specification: 1.Temperature Controller: Microprocessor based Digital Temperature Controller with range up to 400 deg C, resolution up to 0.1 deg C & Accuracy of +/- 0.1 % F.S.D. 2.Timer: Microprocessor based Digital Timer With range up to 999.9 Seconds and having preset Facility and buzzer output. 3.Weights: 2.16 Kg & 5 Kg hard chrome plated weights. 4.Accessories: Orifice, Piston, Material charger, Barrel Cleaner, Orifice cleaner, Sample Cutter. 5.Sample Cutting: Manual. 6.Paint: Powder Coated.	One Set			

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	7.Power: 230V AC, 50 Hz 8.Amperes: 4 Amps. 9.Table Top Model				
12.	Hydraulic Press to prepare sample For density test Specification: 1.Capacity: 0-10 Tons 2.Working Temp: up to 200 deg C 3.Platen size: 150 mm X 150 mm. 4.Day Light: 100 mm 5.Platen movement by hydraulic system (up stroke) 6.Microprocessor based Temperature controller for both platens. 7.Heating system in platens. 8.Power: 3 phase + Neutral 9.Paint: Powder Coated				
13. 1	Dumbbell Dia Length : 150 mm	One No.			
13. 2	Dumbbell Dia Length : 115 mm	One No.			
13. 3	Dumbbell Dia Length : 75 mm	One No.			
14.	E.S.C.R. (Environmental Stress Resistance) Specification: 1.Size : Inner Bath 12" x 18" x 10" 2.Material of Construction: Inner Bath S.S. outer Bath M.S. 3.Temperature Controller : Microprocessor Based digital Auto tunnel PID controller with range up to 300 °c Resolution of 0.1deg.c & accuracy of +/- 0.5°c 4.Heating Load: 2 KW. 5.Circulation: Induction motor with stirrer. 6.Testing Capacity: six tests at a time. 7.Accessories : Cutting Die, Nicking Jig, bending cum Transfer tool and Specimen holder, Test tube and rubber cork-6nos. each. 8. Power: 230V AC, 1 Phase, 50 Hz. 9.Paint: Powder Coating. 10.Solution required for test Igpol.(Customers scope)	One No.			
15.	Migration test Accessories & Glassware	One No.			
16.	Carbon black content apparatus Specification: 1.Microprocessor based PD Controller with range up to 800 deg C And Accuracy of +/-1 deg C 2.Silica quartz combustion tube and boat. 3.Heating load of 2 kw. 4.Ceramic furnace with nichrome heating element. 5.Paint: Powder Coated. 6.Power: 230V AC	One No.			

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17.	<p>Carbon black dispersion test apparatus +Inline Emitter flow path measurement Specification: 1. Thermostatically operated hot plate with 8" diameter and on/off switch, projection microscope, with 6" diameter screen, built-in variable halogen lamp, light with special rack and pinion with mechanical Arrangement 2. Glass Slide Box 3. "Baker" make dial gauge of range 0 – 10 mm with L.C. of 0.01. 4. Mechanical stage 5. Power: 230 V AC / 50 Hzs. 6. Magnification: 10X, 40X. 7. Power: 230V AC</p>	One No.			
18.	<p>Universal Tensile Testing Machine Specification : 1. Load Capacity: 500 Kgf 2. Upper day light to crosshead for test of Tensile & Elongation Maximum daylight: 700 mm. 3. Digital Indication of Peak Load, Elongation and Peak Load. 4. Auto stop at break point. 5. Limit switches for protection of cross head travel 6. Operation for test from Machine with For, Rev and Stop switch on machine and Also from PC software. 7. Speed: Variable by AC Frequency drive. 8. Speed Range: 10 mm/min – 500 mm/min 9. Microprocessor based load indicator: Accuracy Of +/- 0.05% of load indicated and Resolution of 0.1 Kg. 10. Results can be evaluated in K Newton, Kgf and MPa. 11. Extension meter: Least count of 0.1 mm through proximity/encoder switch. 12. Vice type or Wedge type grip gripe to hold the sample. 13. Over load excess elongation protection provided 14. Repeat test facility with comparison of report upto 5 samples in software. 15. RS 232 interface with WINDOW based software to conduct test and keep record of data with graph For the test and calculated results of Yield Load, Yield Extension, Break Load, Break Extension and Modulus of Elasticity. 16. Floor Standing Model 17. Paint : Powder Coating 18. Power: 220V AC, 1phase, 50 Hzs.</p>	One No.			
19	<p>Pull out test for Inline emitters as per new standard Specification: 1. Load as per standards to test the specimen full range. 2. Equipment will be as specified in standard IS 13488 – 2008. 3. With mechanical structure to hang the sample. 4. Pneumatic load releasing system 5. Input of Air from compressor is required. 6. Paint: Powder coated</p>	One Set			

Signature of Bidder
Seal of Bidder

20	<p>Inline Emitter flow variation measurement Tester, 5 STATION</p> <p>Specification:-</p> <ol style="list-style-type: none"> 1.Test apparatus suitable to test emission rate of Inline emitter 2.Digital timer with range of 999.9/9999 minutes. With buzzer output for test over indication. 3.Water tank with inner S.S. and outer M.S. with powder coating With five outlets for the sample 4.Connection and pressure gauge. 5.Total 5 stations, in one station 5 mts length of lateral with inline can be tested. 6.25 measuring cylinders and calibrated borosil glass measuring Cylinder. 7.Angel structure to hold specimens in 5 mts laying length 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs. 	One Set			
21.	<p>Hydro test at elevated temperature +S.S. Water Bath for Hydro</p> <p>Specification:-</p> <ol style="list-style-type: none"> 1.Inner S.S. and outer M.S. powder coated Water tank for the test. 2.Inner size: 40" X 24" X 18". 3.Outer size: 44" X 28" X 22" 4.Heating load: 4 KW 5.Control panel with temperature controller with range of 99.9 deg C. 6.Pressure gauge with fitting facility for tubes. 7.Water circulations through "Kirlosker" or C.G. make pump. 8.Paint: Powder coated 9.Power: 230 V A.C., 50 Hzs 	One Set			
22.	<p>Tension test at elevated temp +Air Circulating Oven for Reversion</p> <p>Specification:</p> <ol style="list-style-type: none"> 1.Size of inner S.S. chamber: 18 inch X 18 inch X 18 inch. 2.Temperature controller: digital PID controller with Range up to 250 deg. C and accuracy of +/- 0.5 deg C 3.Heating load: 1.5 kw. 4.Air circulation: Radial fan. 5.Tray: 2 numbers. 6.Hot air circulating oven with mechanical structure for Five samples to hinge with 180 N load 7.Paint: Powder coated 8.Power: 230 V A.C., 50 Hzs 	One Set			
23.	<p>Go - No GO Gauges (12,16,20,25mm)</p>	One Set			
24.	<p>End fittings for pressure Testing. Size: 12,16,20,25 mm</p>	One Set			

Signature of Bidder
Seal of Bidder

Lump sum price for one set of machinery & equipment (FOR, NTSC Rajkot): Rs. _____

(In words Rupees: _____)

Spares

Sl. No.	Description and Technical specification	Quantity	Price (INR)	Tax & Duties (INR)	Total price (FOR, NTSC, Rajkot) (INR)
1.	Spares to maintain the normal operations of machine for two years. Ensure the spares list include all the items/ parts those are required to be replaced during the course of normal running of machine, due to their wear & tear. (please specify price of each item with detailed specifications & quantity-use separate sheet)	One set			

Note: The above price should be inclusive of sea-worthy packing, transportation and insurance and Taxes & Duties etc.

Signature of Bidder
Seal of Bidder

Annexure-III

Format of covering letter

Ref. No.:.....

Date:.....

Dy. General Manager
NSIC TECHNICAL SERVICES CENTRE RAJKOT
The National Small Industries Corporation Limited
80 Ft. Road, Near Bhavnagar Road Crossing
Aji Industrial Area, Rajkot-360003. (Gujrat)

Ref.: Tender No-**NTSC/RAJ/PLASTIC TESTING LAB/14-15/01**

**Subject: Establishment of Plastic Testing Lab at NTSC-Rajkot
dated 09th FEB, 2015**

Dear Sir,

With reference to above tender notice, we are submitting herewith our offer for above as per following documents:

1. Technical bid in prescribed format as Annexure-I in sealed envelope no.1 along with enclosures (No financial figures should be mentioned directly or indirectly in technical bid).
2. EMD for Rs. 20,000/- in the form of Demand Draft in favour of "The National Small Industries Corporation Limited" payable at Rajkot along with technical bid in an envelope marked "EMD" placed inside sealed envelope no.1.
3. Financial bid in prescribed format in sealed envelope no.2.
4. Tender Fee for Rs. 500/- in the form of Demand Draft/at par cheque in favour of "The National Small Industries Corporation Limited" payable at Rajkot

We hereby agree to fully abide by all the terms & condition of this tender.

Thanking you,

Yours faithfully,

Name.....
Designation.....

Signature of Bidder
Seal of Bidder