

Technical Specification of Testing Equipment/Machinery

Summary Sheet for Tender No. CIPET/DDN/Tender/Equip/2019-20/01

S. No.	Name of the Equipment /Machinery	Qty
1	Karl Fisher Titration Apparatus	1
2	V- Notch Cutter	1
3	Machine for Uniformity of Emission rate for Emitting Pipe	1
4	Hydrostatic pressure tester with bath for Emitting Pipe	1
5	Machine for resistance to Tension at Elevated Temperature	1
6	Machine for Resistance to Pull Out	1
7	Machine for Emitter Pull Out	1
8	Machine for Uniformity of Emission Rate for Outline Emitters	1
9	International Rubber Hardness Degree (IRHD)	1
10	Dichloromethane Bath with Fume Hood	1
11	Positive Negative Hydrostatic Pressure Tester	1
12	End plugs with Frame work for positive Negative pressure tester	1
13	Electrical weighing Balance	1
14	Refractive Index Tester for Liquid	1

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Tender No. CIPET/DDN/Tender/Equip/2019-20/01

1. Karl Fisher Titration Apparatus

Sr. No	Specifications
1.	Measuring Range: Water Content 0.1 to 500mgH ₂ O, Concentration 10ppm to 100%H ₂ O
2.	Burette Precision: Volume 10mL burette, discharge ± 0.015 mL, Repeatability ± 0.005 mL
3.	Endpoint Detection: by polarized potential level detected with a twin platinum electrode
4.	Required solvent: 30 to 100mL if using standard S-type titration vessel
5.	Methods saved:100
6.	Data storage: 500 samples
7.	Ambient conditions: Temperature 5 to 35 degree C, 85% RH or below
8.	Burette Capacity: Standard with 1ea 10mL burette expandable to 2ea 10mL burette
9.	NABL Calibration certificate Should be provided for all required parameter
10.	Machine should Comply IS: 4984- 2016

2. V- Notch Cutter

Sr. No	Specification
1.	Max Pipe Size: 600 mm
2.	Cutting Angel: 60 °
3.	Cutting rate: 0.010 ± 0.002 per teeth
4.	Cutting speed: 150mm/Min
5.	NABL Calibration Certificate Should be provided for all required parameter
6.	Machine should Comply IS:4984 - 2016

3. Machine for Uniformity of Emission rate for Emitting Pipe

Sr. No	Specification
1.	Max pressure: 5.0 Kg/cm ²
2.	Pressure accuracy: 0.01 kg/ cm ²
3.	Timer accuracy: 0.1 sec
4.	Timer Should be start/stop with pump
5.	Minimum station 5 for plugging to pipe with variable Diameter as per IS 13488& for each Station separate Pressure gauge should be provided. And Pressure of each pressure gauge should be variable by valve.
6.	Stand for supporting of Emitting pipe should be provided for 25 emitter.
7.	Water tank capacity: 50 Liter
8.	Plastics measuring cylinder should be provided having minimum 600 ML capacity and 1 ml accuracy
9.	Machine material should be Non-corrosive.
10.	NABL Calibration certificate Should be provided for all required parameter
11.	Machine should Comply IS: 13488

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4. Hydrostatic pressure tester with bath for Emitting Pipe

Sr. No	Specification
1.	Max pressure: 20 Kg/cm ²
2.	Pressure accuracy: 0.01 kg/ cm ²
3.	Timer accuracy: 0.1 sec
4.	Timer Should be start/stop with pump
5.	Water tank capacity: 50 Liter
6.	Temperature range- 20 to 100 ⁰ C
7.	Temperature accuracy- $\pm 1^{\circ}$ C
8.	Machine material should be Non-corrosive.
9.	NABL Calibration certificate Should be provided for all required parameter
10.	Machine should Comply IS: 13488

5. Machine for resistance to Tension at Elevated Temperature

Sr. No	Specification
1.	Temperature range- Ambient to 100 ⁰ C
2.	Temperature accuracy- $\pm 1^{\circ}$ C
3.	Load- as per the IS- 13488
4.	Suitable Clamping Device for Emitting pipe
5.	NABL Calibration certificate Should be provided for all required parameter
6.	Machine should Comply IS: 13488

6. Machine for Resistance to Pull Out

1.	Load- as per the IS- 13488
2.	Suitable Clamping system for Emitter with pipe.
3.	NABL Calibration certificate Should be provided for all required parameter
4.	Machine should Comply IS: 13488

7. Machine for Emitter Pull Out

1.	Load- as per the IS- 13487
2.	Suitable Clamping system for Emitter with pipe.
3.	NABL Calibration certificate Should be provided for all required parameter
4.	Machine should Comply IS: 13487

Technical Specification of Testing Equipment/Machinery

8. Machine for Uniformity of Emission Rate for Outline Emitters

Sr. No	Specification
1.	Max pressure: 5.0 Kg/cm ²
2.	Pressure accuracy: 0.01 kg/ cm ²
3.	Timer accuracy: 0.1 sec
4.	Timer Should be start/stop with pump
5.	Minimum station 5 for plugging to Emitter with source & for each Station separate Pressure gauge should be provided. And Pressure of each pressure gauge should be variable by valve.
6.	Water tank capacity: 50 Liter
7.	Plastics measuring cylinder should be provided having minimum 600 ML capacity and 1 ml accuracy
8.	Machine material should be Non-corrosive.
9.	NABL Calibration certificate Should be provided for all required parameter
10.	Machine should Comply IS: 13487

9. International Rubber Hardness Degree (IRHD)

Sr. No	Specification
1.	Resolution : 0.1 IRHD
2.	Inserts : 1 mm (IRHD H) 2.5 mm (IRHD N) 5 mm (IRHD L) Durometer A
3.	NABL Calibration certificate Should be provided for all required parameter
4.	Machine should Comply ASTM D 1415, IS 5382

10. Dichloromethane Bath with Fume Hood

Sr. No	Specification
1.	Tank capacity: 50 liter.
2.	Minimum temperature: 10 ⁰ C.
3.	Temperature Accuracy: 0.01 ⁰ C.
4.	Exist valve should be provided at bottom.
5.	Suitable fume hood should be provided for Exhaust of Fumes with sufficient length of Flexible Corrugated pipe.
6.	5 liter Di-Chloromethane should be provided.
7.	NABL Calibration certificate Should be provided for all required parameter
8.	Machine should Comply IS 13592

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11. Positive Negative Hydrostatic Pressure Tester

Sr. no	Specification
1.	Positive pressure- 0.01 to 5 MPa having 0.001 MPa accuracy
2.	Negative pressure-0.01 to 5 MPa having 0.001 MPa accuracy
3.	Timer accuracy- 0.1 sec
4.	NABL Calibration certificate Should be provided for all required parameter
5.	Machine should Comply IS 15328: 2003

12. End plugs with Frame work for positive Negative pressure tester

Sr. no	Specification
1.	End Plug Diameter 110, 125, 160, 200 ,250, 315, 400 mm
2.	Angular deflection accuracy- 1degree
3.	Frame material Should be Non-corrosive
4.	NABL Calibration certificate Should be provided for all required parameter
5.	Machine should Comply IS 15328: 2003

13. Electrical weighing Balance

Sr. no	Specification
1.	Min Capacity- 600 kg. with detachable display
2.	Accuracy- 100 gram.
3.	Last few data should be stored by machine.
4.	NABL Calibration certificate Should be provided for all required parameter.
5.	Machine should have ISI Mark

14. Refractive Index Tester for Liquid

Sr. no	Specification
1.	Range 1.3000 to 1.7000 Ri
2.	Accuracy- ± 0.0001 Ri
3.	NABL Calibration certificate Should be provided for all required parameter
4.	Machine should Comply IS 15328: 2003