## ADDENDUM\_01

## **T**ender no.2021-22/04

Equipment: 2021-22/04/07 - Computerized Universal Testing Machine (100 KN) with Electronic Extensometer and all Accessories

S.	Existing Technical Specification		Amended Technical Specification
5	Maximum cross head speed at 50 KN	Should be more than 500 mm/min	Should be 500 mm/min or better
7	Load cells	100 N, 1 kN, 50 KN	100 N, 1 kN, 100 KN
9	Grips & Fixtures	Pneumatic and Screw type Specimen Thickness-200 microns to 10 mm Specimen length: 2 cm to 20 cm Specimen width: Up to 2 cm Provision of special gripping for polymeric, film and rubbery materials, Wide variety of grips and fixtures Pneumatic grip 25 x 50 mm up to 10 KN Pneumatic grips for fiber Rigid plastics (self lock wrench grip, opening up to 12mm), plastic/composite rod (upto 12 mm dia) woven sacks (100 mm width), rubber, fibre/filament. Compression test kit Fixtures for peel and shear Flexural - three point bend jig fixture with different nose dia for specimen support up to 10 KN and adjustable span 10- 400 mm All fixtures should be suitable for low temperature testing and can be accommodated in to environmental chamber	Pneumatic and Screw type Specimen Thickness-200 microns to 10 mm Specimen length: 2 cm to 20 cm Specimen width: Up to 2 cm Provision of special gripping for polymeric, film and rubbery materials, Wide variety of grips and fixtures Pneumatic grip 25 x 50mm up to 5 KN or better Pneumatic grips for fiber Rigid plastics (self lock wrench grip, opening up to 12mm), plastic/composite rod (upto 12 mm dia) woven sacks (100 mm width), rubber, fibre/filament. Compression test kit Fixtures for peel and shear as per ASTM D 3330Test method A 180° Flexural - three point bend jig fixture with 4mm and 10mm dia for specimen support up to 10 KN and adjustable span 50-300 mm or equivalent Fixtures such as Tensile grips, mechanical wedge grips, roller grips, pneumatic vice grips should suitable for low temperature testing and can be accommodated in to environmental chamber.
11	Extensometer	Automatic axial contacting extensometer Should have capability for automatic gauge length positioning and automatic attachment to the specimen Should be fully controlled by	Laser extensometer Capable to use both ambient and chamber to the maximum travel of 600 mm or better Vertical travel: 600 mm or equivalent Resolution: 0.02 mm or better

		system software Gauge length:10-700 mm Vertical travel: 750 mm Specimen width:0-400 mm Specimen thickness:0-100 mm Specimen diameter:0-100 mm Resolution: 0.1 µm Accuracy: 0.5% of reading Machine shall be able to measure extension 0.01mm with extensometer	Accuracy: 1% on 25mm gauge length
22	Terms & Conditions	The bidder must have supplied machines at other Institutes in the past (a satisfactory performance certificate from those users may be solicited if needed). Bidder should submit complete contact details. Authorization Letter from OEM List of clients in last five years to be provided. Manufacture/Supplier should have sizable installations of same model worldwide and at least five in India.	The bidder must have supplied machines at other Institutes in the past (a satisfactory performance certificate from those users may be solicited if needed). Bidder should submit complete contact details.  Authorization Letter from OEM List of clients in last five years to be provided.  Bidder shall upload all necessary document, catalogue, technical datasheet to comply the specification provided. Providing compliance statement without submitting proof of documents shall reject the bidder by the Technical Committee

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