

**TECHNICAL BID PROFORMA**

Tender No. ME/GNAN/01/IOE23/ETMFTTP

Item Name: “Electrodynamic Testing Machine for Fatigue and Tensile Tests for Polymers Quantity - 1”

**Bidder Eligibility Criteria:**

1.0	Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)	Class I / Class II	Local Content value	Reference, Page No.
I	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 <sup>th</sup> September 2020 and other subsequent orders issued therein.			
2.0	Bidder Eligibility Criteria-II	Compliance (Yes/No)	Reference Page No.	Remarks, If any
1	The bidder/OEM should have supplied & installed at least 3 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 3 years worldwide, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.			

**3.0 Technical Compliance:**

S.No	Technical Specification	Complied / Not Complied	Reference Page No.
1	Drive : Linear Motor Technology.		
2	Dynamic Test Load in tension/compression direction: at least ±10kN		
3	Static Test Load in tension-compression direction: at least ±6kN		
4	Test Frequency range (test condition dependent) up to 100Hz		
5	The linear actuator stroke minimum 60 mm.		
6	Test Speed Range : 1 to 2m/s		
7	Positioning accuracy and repeatability : +/- 2 µm or superior		
8	Data resolution must be up to 24-bit for all channels.		
9	Fully digital closed loop control with control loop to be updated at a rate of at least 10kHz.		
10	Mechanical stop to halt actuator motion automatically on power loss.		
11	The actuator shall be powered electrically, without any external requirement.		
12	Rigid load frame / structure		

<b>Load Cell</b>			
1	A load cell $\pm 10\text{kN}$ or higher capacity and capable of measuring dynamic loads at high frequencies. With 200% overload capacity (Accuracy class 0.5)		
2	Additional load cell $\pm 0.5 \text{ kN}$ for soft materials needs to be quoted. (Accuracy class 0.5)		
<b>GRIPS</b>			
1	One set of tension and compression grips to hold flat polymer samples of thickness upto 5 mm		
2	One set of grips to tension grips to hold fibers of diameter upto 500 microns		
<b>Other features</b>			
1	Machine should be capable of conducting tests under load control, stress control, displacement/stroke controlled and strain-controlled conditions.		
2	The position, load channel (e.g., strain) should be available for control and data acquisition.		
3	Machine should be supplied with integrated air-cooling system.		
<b>PC and Software</b>			
1	The control software shall be a true graphical user interface compatible with MS Windows with High-performance interface. Suitable and advanced Software platform for fatigue, Tensile tests and other cyclic, dynamic, and quasi-static materials and component tests with the following features. A compatible reputed desktop computer needs to be supplied.		
<b>ADDITIONAL TERMS AND CONDITIONS</b>			
1	The equipment must have One Year warranty. Quote must include warranty and AMC cost for the 2 <sup>nd</sup> and 3 <sup>rd</sup> Year. Total cost for 3 years will be considered for the finance bid price comparison.		
2	The Quote must also include installation and delivery at IIT Madras.		
3	All necessary manuals, perpetual license of software (necessary for operation and maintenance) must be provided. Software Key must be provided for installation at other systems, in case of fault in the supplied system or software reinstallation situations.		
4	The TWO DAYS training on equipment utilization and maintenance must be provided.		
5	Quote must include essential cables, connectors, standard samples, consumable needed		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the above points with document proof as required. Failing which bidders will be technically disqualified)

**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**