

Department of Textile Technology
Indian Institute of Technology, Hauz Khas, New Delhi - 110016

NOTICE INVITING QUOTATIONS

Date: 21.01.2013

Sub: NIQ for “Fabrication of instrument for measuring thermal transmission through fabrics”

Sealed quotations in separate envelopes of technical and commercial bids, kept in one sealed outer envelope, are invited for **“Fabrication of instrument for measuring thermal transmission through fabrics”**. Your sealed quotation should reach latest by **5 PM on February 8, 2013** to Prof. Apurba Das, Professor, Department of Textile Technology, Indian Institute of Technology - Delhi, Hauz Khas, New Delhi - 110016.

Your quotation should be superscripted **“Quotation for instrument for measuring thermal transmission through fabrics”**.

Technical Specifications are as follows:

The equipment shall meet the following requirements:

- 1) The equipment should broadly include,
 - a. Different sensors for measuring thermal transmission through the fabrics in case of fire.
 - b. Design and fabrication of mechanical setup, i.e. fabric holding arrangements, flame generator, sensor board, variable insulating space, etc.
 - c. Development of electronic circuit and total setup for the real time measurement of thermal transmission, etc.
 - d. Data acquisition system including DAQ card, online plotting and software.

- 2) The instrument will be able to evaluate the level of heat exposure and energy transmitted to predict whether a second degree burn injury will occur.

- 3) The instrument will also be able to record the time required for a second degree burn injury.
- 4) The instrument is based on thermal sensing method.
- 5) As the flame generator generates the flash fire, the thermal sensors placed on the sensor board will sense and record the heat flow behaviour through fabric in real time.
- 6) Provisions of very precise measurement of heat flow.
- 7) The voltage output is fed into PC through an ADC.
- 8) Specially designed user friendly software to plot the curves.
- 9) Customized software for complete automatic testing and analysis of results.