

Requirements Report

Summary:

This document is a Limited Tender Enquiry issued by Maulana Azad National Institute of Technology (MANIT) Bhopal, an Institution of National Importance, for the procurement of a Cascade Refrigeration Cycle Test Rig. The tender number is MANIT/ME/2025:002, dated 14/08/2025, with an estimated cost of Rs. 501,500.00. Bidders must submit their proposals offline by 03/09/2025 at 12:00 hours, with bids opening on 04/09/2025 at 15:00 hours. The tender is valid for 60 days from the technical bid opening.

The scope of supply includes one Cascade Refrigeration Cycle Test Rig with specific components like a stainless steel evaporator (0.35m x 0.35m x 0.35m) with bare tube copper coils and PUF insulation, ethylene glycol-water mixture (45 litres), two hermetically sealed reciprocating compressors (high-pressure side with R600a, 2-2.5 kW cooling capacity; low-pressure side with R290, 1.5-2 kW cooling capacity), an air-cooled condenser, a cascade condenser (tube and tube/plate type), two thermostatic expansion valves, HP/LP cut-outs, service valves, rotameters, and a comprehensive control panel. The control panel features on/off switch, provisions for varying temperatures/pressures, digital energy meters, digital pressure and temperature measurement with data logger (Labview-based software), a computer interface with Data Acquisition Card and sensors, and an instruction manual.

Bidders must meet eligibility criteria, including being operational for at least three years, having supplied similar goods to government/public listed companies in the last three years, and achieving an annual turnover double the estimated cost of the tender. An Earnest Money Deposit (EMD) of 2% of the tender value (for values between 2.5 to 25 lakhs) is required, payable to "Director MANIT Bhopal" (Bank A/c No: 10020150107, State Bank of India). Performance Security Deposit (PSD) of 5% (for values between 2.5 to 25 lakhs) is also required. Payment will be made within 30 days of successful supply and installation. A penalty of 0.50% per week (up to 20 weeks) applies for delayed delivery. Purchase preference will be given to "Make in India" products with specified local content and Micro and Small Enterprises (MSEs). The purchaser is registered with DSIR for custom duty exemption.

Requirements Table:

REQUIREMENT	DETAILS