



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

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Technical Specifications for a TAP-KPC reactor system for catalytic reaction studies (TAP-KPC multi – experiment base platform)

RFX NO. 610000851 (Reference No. 1000016592)

Temporal Analysis of products- Kinetic Processing and Characterisation system with the following specifications and accessories

1. Removable reactor chamber configuration that allows different reactor chambers to be mounted. Vent to vacuum system. Should allow atmospheric pressure as well as high vacuum operation.
2. Microreactor assemblies (SS) with temperature probe and controller
3. QMS Mass spectrometer attachment with Faraday cup and electron multiplier (1-500 amu). To have direct access to the reactor chamber with suitable valve arrangement.
4. Above units capable of operating at high vacuum (10^{-8} torr)
5. Kinetic probe assembly with computer controlled positioning system
6. Pulse valve manifold capable of admitting pulse sizes 10^{14} to 10^{16} molecules, complete with power supply, pneumatically operated continuous flow valve.
7. Suitable liquid nitrogen trap vacuum chamber
8. Suitable support platform with cabinets for system power supplies, gauges and controllers.
9. Control and data acquisition system complete with computer and requisite software, with connections to mass spectrometer, temperature controller, valve controller etc.

10. Vacuum equipment and gas mixing system for the required range of operation as mentioned above. Adequate number of gauges to be provided
11. Training to be provided for system installation operation and maintenance