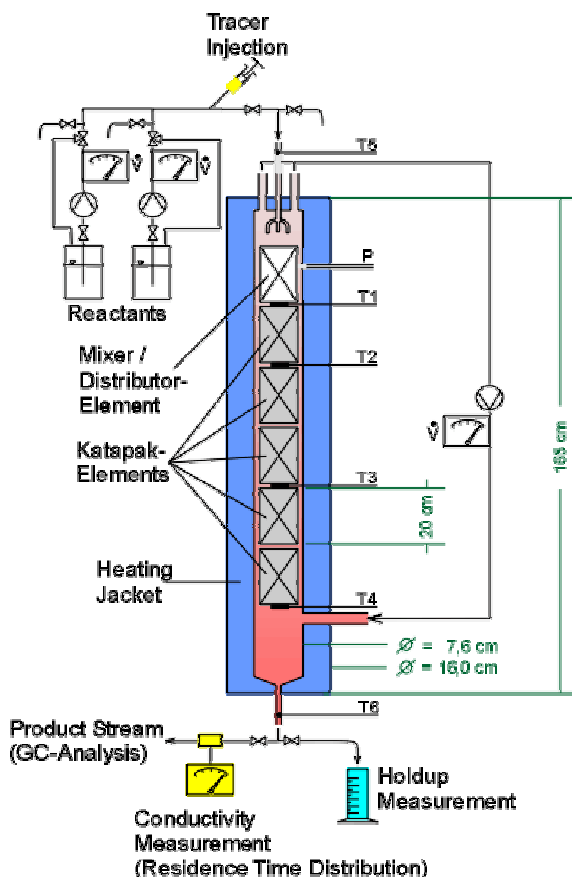


TRICKLE BED REACTOR APPARATUS



A trickle-bed reactor is employed to check for macrokinetic phenomena inside of catalyst-containing structured packings.

Preheated reactants are pumped on top of a mixer/distributor-element, which ensures a uniform distribution of the liquid over the entire cross section of the reactor. The liquid trickles downward through the reactive packing & is collected at the bottom of the reactor. The product stream can be collected for hold-up measurements, analyzed by gas-chromatography, or its conductivity can be measured to obtain the residence-time distribution resulting from a Dirac-pulse of a tracer fed into the feed stream.

A reactor model including all collected information plus kinetic data from a batch reactor and the heat of reaction is used to check the validity of the kinetic model under trickle-bed conditions. Since a trickle-bed reactor behaves hydrodynamically much like a distillation column at low vapor loads, the results can be used to assess the importance of macrokinetic phenomena in a reactive distillation column equipped with the same structured packing.

Salient features of our product are as follows :-

1. Suitable for use in colleges & research laboratories
2. Interdisciplinary training is facilitated
3. Works on single phase AC power
4. Silent operation, negligible vibrations
5. User friendly; easy to operate & maintain
6. No operator training required
7. Compact, requires minimum table/floor space
8. Low maintenance downtime & cost
9. PC-based process control with SCADA software available
10. Can be hooked up to existing process control system
11. Reactor design suitable for facilitating scale-up to commercial levels

Manufactured in India by :-

NAVIN PROCESS SYSTEMS

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