**DESIGN AND FABRICATION OF JET LOOP REACTOR TO STUDY THE HYDRODYNAMIC PARAMETERS**

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**ABSTRACT**

Jet loop reactors are simple in construction and operation. These types of reactors are mainly used where the mass transfer requirement of the liquid is very high. The main advantage of jet loop reactors are directed circulation of fluids; very fine gas dispersion, high rate of mass transfer and low power requirement.

The operational behavior of jet loop reactor with the gas entering at the top is determined mainly by the ratio of draft tube to reactor diameter. The gas holdup can be increased by simultaneous increase in energy dissipation rate and draft tube diameter. Mass transfer in the entire reactor system is considerably influenced by the flow regime in the reactor. So it is essential for a proper designing of jet loop reactor to consider the ejector and the vessels as a system of two reactors is series and requires individual modeling.