PREFACE

A thesis entitled 'Gas dispersion in non-Newtonian liquid-jet ejectors and two-phase co-current vertical upflow' is submitted herewith. In the present investigation studies have been carried out on the hydrodynamics of two-phase gas-non-Newtonian liquid flow in a vertical pipeline contactor fitted with a constant area mixing type ejector. A detailed analysis of the gas dispersion and energy dissipation in such a system have been presented.

Correlations in terms of various physical and dynamic variables of the system have been developed to predict the frictional pressure drop and the holdup fraction in the vertical pipeline contactor. Correlations have also been developed to analyse the frictional energy loss in the throat and the energy loss in the diverge diffuser of the ejector. The conditions for the best utilization of liquid-jet energy potential have also been established.

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