

RECOMMENDATIONS

It is accepted that in the research presented many questions are still unanswered: each investigation produces more questions than answers. The main limitation of the present work is that results have been obtained only in the air-water system. It is highly desirable that the influence of the physical properties of the fluids on the observed effects should be established, especially on the equations describing the characteristic hydrodynamic transitions.

Apart from this, the largest equipment used in this study was 1.5 m³; at least ten times this scale is common in industry. Because large scale reactors are impractical for academic research, collaboration with industry to perform full scale experiments would be fruitful.

It is known that in ionic solutions both gas-fraction and mass transfer are significantly different from their values in water. Because it has been found in this study that the hydrodynamic flow maps are practically unaffected by the presence of ions, it is also recommended that gas-fraction and mass transfer measurements are made in ionic systems and the results incorporated into flow maps. The work reported on gas fraction and mass transfer is restricted to a single impeller-tank diameter ratio and the importance of this geometric parameter on these aspects of performance should also be examined.

Finally, further research is needed in order to derive relations which quantitatively describe gas recirculation and liquid pumping capacity of a gassed impeller.

CURRICULUM VITAE

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1964 diploma MULO-A

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1971 diploma HTS-Dordrecht, Chemische Techniek

1975 diploma TH-Eindhoven, Scheikundige Technologie

Sinds 1976 verbonden aan de TH-Delft als wetenschappelijk medewerker op het Laboratorium voor Fysische Technologie van de afdeling der Technische Natuurkunde.

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