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Turbulent Liquid Flow in a Gas-Liquid Bubble Column

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摘要 The radial distribution of the axial component of time-average liquid velocityand turbulent

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关键词 <u>bubble column</u> <u>liquid velocity field</u> <u>turbulent intensity</u> <u>turbulent viscosity</u> 分类号

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Abstract The radial distribution of the axial component of time-average liquid velocityand turbulent intensity in a gas-liquid bubble column was investigated experimentally using Laser Doppler Anemometer (LDA). The effects of operating parameters on liquid turbulent intensity are studied and an empirical relationship between turbulent intensity and viscosity was established. Such a relationship can be used conveniently in the calculation of liquid velocity profiles in bubble columns.

Key words bubble column; liquid velocity field; turbulent intensity; turbulent viscosity

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