

RESEARCH NOTES

搅拌槽内温度对气含率的影响

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摘要 Gas holdups in ambient gassed and hot sparged systems with multiple modern impellers and the effect of temperature on gas holdup are reported. The operating temperature has a great

impact on gas holdup though the gas dispersion regime in the hot sparged system is similar to the ambient gassed condition. The gas holdup under the elevated temperature and the ambient gassed operation is successfully correlated. With the same total gas flow rate and power input, the gas holdup in the hot sparged system (say near the boiling point) is only about half of that in the ambient system. The results imply that almost all existing hot sparged reactors have been designed on the basis of incorrect estimates of the gas holdup during operation.

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Effect of Temperature on Gas Hold-up in Aerated Stirred Tanks

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Abstract Gas holdups in ambient gassed and hot sparged systems with multiple modern impellers and the effect of temperature on gas holdup are reported. The operating temperature has a great impact on gas holdup though the gas dispersion regime in the hot sparged system is similar to the ambient gassed condition. The gas holdup under the elevated temperature and the ambient gassed operation is successfully correlated. With the same total gas flow rate and power input, the gas holdup in the hot sparged system (say near the boiling point) is only about half of that in the ambient system. The results imply that almost all existing hot sparged reactors have been designed on the basis of incorrect estimates of the gas holdup during operation.

Key words [gas holdup](#); [temperature effect](#); [gas dispersion](#); [hot sparged reactors](#); [radar probe](#); [stirred tank](#)

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