EFFECTIVE MASS TRANSFER AREA DETERMINING OF A MELLAPAK 750 Y STRUCTURED PACKING

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Abstract

The effective mass transfer area of a Mellapak 750 Y structured packing was measured in a bench-scale plant with a column having an internal diameter of 100mm, and a packing height of 518 mm, using a broad range of gas and liquid flow rates. The absorption of carbon dioxide into natrium hydroxide aqueous solutions of 0.5 and 1.0 mol/L has been employed as test reaction. The validity of data obtained was tested by checking the two conditions of fast pseudo first order irreversible reaction. The data have been correlated by a criterial equation giving the ratio between the effective and the geometric areas versus the Reynolds number of the liquid phase. The coefficients of the equation have been identified by regression.

Key words: absorption rate, absorption column, chemical method, criterial equation

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