

Performance of an RTL contactor for gas-liquid systems: effective interfacial area and volumetric mass-transfer coefficient by oxidation of sodium sulfite solution.

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Abstract

The effective interfacial area a and volumetric, liq.-side, mass-transfer coeff. $k_L a$ of an RTL contactor were obtained at different stirring speeds by absorption of O_2 from air into 0.8 kmol/m³ aq. Na₂SO₃ in the presence of Co^{2+} ions. a and $k_L a$ ranged from 80 to 150 m²/m³ and 0.0003 to 0.00053/s, resp., when the stirrer speed was increased from 8 to 40 rpm. k_L alone was practically const.