

Separation of Iodine from HIx mixtures for Sulfur-Iodine Hydrogen Production System

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Sulfur-Iodine cycle is a promising candidate to produce hydrogen using atomic energy. In a SI-hydrogen production system, separation of iodine from HIx mixture (mixture of hydrogen iodide + water and iodine) is an important step. In this paper, a method to separate iodine from HIx mixture was proposed based on melt crystallization of iodine. Basic phase equilibrium data were obtained from crystallization experiment and correlated with Peng-Robinson EOS with chemical reaction equilibrium.