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RESEARCH NOTES

浮选柱中液相轴向返混的研究

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摘要 An experimental study on the axial dispersion of liquid was carried out in a 0.382-m-ID flotation columnpacked with different structured packings or free of packings. The correlations of axial Peclet numbers with theliquid and gas superficial Reynolds numbers were developed for various packings. Among the packings tested, itis found that in the column packed with 250Y or 350Y packings the axial dispersion is the lowest. The additionof frother can decrease the axial dispersion. By the simulation analysis of the one-dimension dispersion model ofpacked flotation column, it is found that small axial dispersion, high collection rate constant and low axial liquidvelocity can increase the collection zone recovery.

关键词 packed flotation column flotation column numerical analysis mineral processing

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Study on the Axial Dispersion of Liquid in Column Flotation

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Abstract An experimental study on the axial dispersion of liquid was carried out in a 0.382-m-ID flotation columnpacked with different structured packings or free of packings. The correlations of axial Peclet numbers with theliquid and gas superficial Reynolds numbers were developed for various packings. Among the packings tested, itis found that in the column packed with 250Y or 350Y packings the axial dispersion is the lowest. The additionof frother can decrease the axial dispersion. By the simulation analysis of the one-dimension dispersion model ofpacked flotation column, it is found that small axial dispersion, high collection rate constant and low axial liquidvelocity can increase the collection zone recovery.

Key words packed flotation column; flotation column; numerical analysis; mineral processing

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