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Effect of Sudden Increase of Solid Feed Rate on the Arching in Hoppers Connected to a Standpipe with Interstitial Gas Flow

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摘要 In this paper, a model is proposed for the prediction of the width of arching in hoppers resulted from sudden changes in solid feed rates. Such changes in solid feed rate usually come from the collision on the surface of the moving-bed in the standpipe. The model also takes into account the effect of the powder height in the standpipe of the hopper. The model proves to be adaptable for predicting operational conditions to avoid arching by keeping constant powder height in the main standpipe with interstitial gas flow.

关键词 [moving-bed standpipe](#) [width of arching](#) [model](#) [sudden increase of solid feed rate](#)

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Abstract In this paper, a model is proposed for the prediction of the width of arching in hoppers resulted from sudden changes in solid feed rates. Such changes in solid feed rate usually come from the collision on the surface of the moving-bed in the standpipe. The model also takes into account the effect of the powder height in the standpipe of the hopper. The model proves to be adaptable for predicting operational conditions to avoid arching by keeping constant powder height in the main standpipe with interstitial gas flow.

Key words [moving-bed standpipe](#); [width of arching](#); [model](#); [sudden increase of solid feed rate](#)

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