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## 大型多支承回转窑运行状态监测与调整

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### Monitoring and Adjustment of Running Condition of Large-Scale Rotary Kiln With Multi-Supports

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- 摘要
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**摘要** 在研究回转窑运行状态影响因素的基础上,建立了回转窑载荷分配与轴线变化的线性关系式;得出了运行时回转窑主体部件的应力及变形情况;探明了回转窑轴向运动机理,建立了轴向运动接触力学调控模型;给出了回转窑最佳运行状态调整的优化方法,建立了调密参数模糊优化模型;研究了一种新型的回转窑运行轴线测量方法——零位移方向键相法;应用理论研究成果,开发了回转窑运行状态分析与监测系统。

**关键词:** 回转窑 运行状态 监测系统

**Abstract:** On the basis of studying the factors to affect the running condition of rotary kiln,the linear relation is set up between kiln load distribution and axis deviation;the stress and deformation of the main kiln parts is obtained;the principle of axis movement is made clear,the adjusting and controlling model of axis movement is established;the optimization method of running condition adjustment of rotary kiln is given out,the fuzzy optimization model of kiln adjustment parameters is set up;a new axis deviation survey method-zero displacement keyway-phase measure method is studied.Applying the theoretical harvest,the analysis and monitoring system of running condition of rotary kiln is developed.The system's performance is stable,the monitoring accuracy is high and the analytic result is right.

**Key words:** rotary kiln running condition monitoring system

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