

矿井支护系统可靠熵研究

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摘要 把矿井“围岩-支护”系统看作是一个围岩稳定性变化的信息源, 而把矿井支护系统可靠性看作是一个信息的采集、传输、加工和反馈的处理过程。分析了信息熵与矿井可靠性之间的关系, 得出可靠熵的概念。根据信息熵是系统不确定或无序程度的原理, 建立了矿井支护系统可靠熵模型与计算方法, 它是系统平均可靠性的度量。将此方法应用到实践当中, 取得了非常好的效果。

关键词 [采矿工程](#); [信息熵](#); [可靠熵](#); [结构可靠度](#); [矿井支护](#)

分类号

STUDY ON RELIABILITY ENTROPY OF SUPPORT SYSTEM IN MINE

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Abstract

The stability change of surrounding rock supporting system in mine is taken as an information source and the support reliability is treated as a handling process of information collection, transmission, process and feedback. By analyzing the relation between information entropy and reliability of the mineral well, and the concept of reliability entropy is obtained. Since the information entropy represent uncertainty of system or degree of disorder, the reliability entropy models of support system in mines and calculation method are set up, which express an average reliability of system. This method has been applied in practice, and a good effect is realized.

Key words [mining engineering](#); [information entropy](#); [reliability entropy](#); [structure reliability degree](#); [mine support](#)

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