

论文

大明矿通风系统故障源诊断及风速传感器的布置

潘竟涛, 赵丹, 李宗翔, 高坤, 陈占君

- 1. 辽宁工程技术大学 安全科学与工程学院, 辽宁 阜新 123000;
- 2. 煤炭科学研究总院 沈阳研究院, 辽宁 沈阳 110016

摘要:

析了大明矿分支风阻变化与各分支风量之间的关系, 通过改进灵敏度矩阵, 建立了分支灵敏度0-1矩阵, 并据此建立了大明矿通风网络故障巷道范围库。为了故障源诊断能够包含到所有分支, 风速传感器布置的最小数量及位置问题也是研究的重点, 提出最少全覆盖布点法, 给出了大明矿风速传感器的布置方案。通过工业试验, 大明矿故障源诊断结果与现场试验结果一致, 验证了矿井通风系统故障源诊断技术及方法的可行性。

关键词: 矿井通风; 故障源; 风速传感器; 分支; 诊断

Fault source diagnosis for ventilation system and air velocity transducer placement in Daming Mine

Abstract:

The relationship between drag changes of branch and the air amount of branches were analyzed in Daming Mine, 0-1 sensitivity matrix of branch was built by improving sensitivity matrix, and fault roadway range library of ventilation network for Daming Mine was built. To make the diagnosis can include all branches, the minimum number and location of air velocity transducers is the key issues of research projects, and minimum and full coverage of distribution method was proposed, and the program of setting air velocity transducer for Daming Mine was gave. Through industrial test, the results of fault sources diagnosis in Daming was consistent with test results in the field, verified the feasibility of a source of diagnostic techniques and methods of mine ventilation system fault.

Keywords: mine ventilation; fault sources; air velocity transducer; branch; diagnosis

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通讯作者: 潘竟涛

作者简介: 潘竟涛(1976—), 男, 新疆哈密人, 工程师, 博士研究生
作者Email: 163tao@163.com

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