

陈俊英 厦门市思明区育青路6号203 (厦门大学 机电系) 361004

林辉 厦门大学 机电系 361005

摘要: 甲烷的安全防爆是矿山开采中的一个重要问题, 甲烷浓度实时准确的检测是问题的关键。本文重点阐述两类基于不同原理的甲烷检测技术: 光纤吸收法、光干涉法。并对光纤吸收法中的差分检测技术、谐波检测技术进行比较, 对各种方法检测甲烷的检测精度进行分析。

关键词: 甲烷检测, 光纤吸收, 光干涉

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The development of CH₄ detection technique

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Abstract: CH₄ is a kind of danger gas, how to detect it accurately and instantly is a very important project. This paper focuses on two different theoretical types of methane detection techniques which are fibre-optic absorption and light interference. It also illustrates the comparison between difference detection technique and frequency harmonic detection technique relate to fibre-optic absorption. At the same time, the detection precision of measures discussed in this paper are analysed.

Key words: methane detection, Fibre-optic absorption, Light interference

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