

# 煤矿安全

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## SAFETY IN COAL MINES

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煤科集团沈阳研究院有限公司

主办

1970年创刊·月刊

### 支架系统的 **绿色血液** 安全高效的 **动力源泉**

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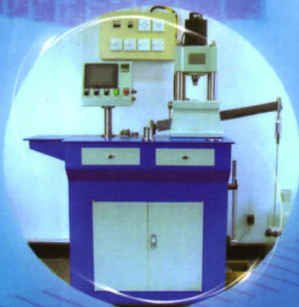


- ▶ 适用于手动控制支架系统
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- ▶ 具有优良的润滑性、稳定性、防锈性、防腐蚀性及密封材料相容性
- ▶ 性能稳定，保证系统清洁
- ▶ 环保，具有优良的可生物降解性能

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- ▶ 对水质的适应范围更加广泛



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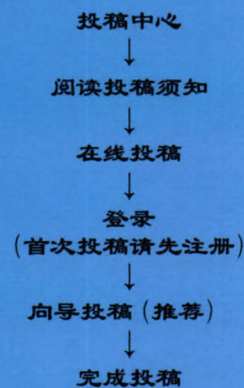
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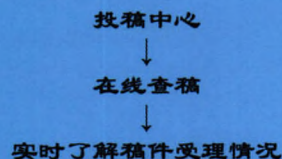
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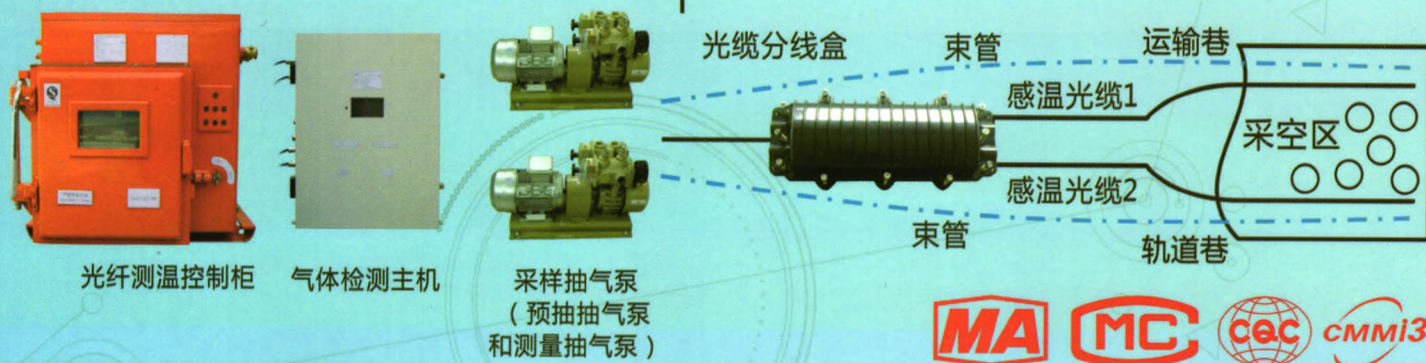
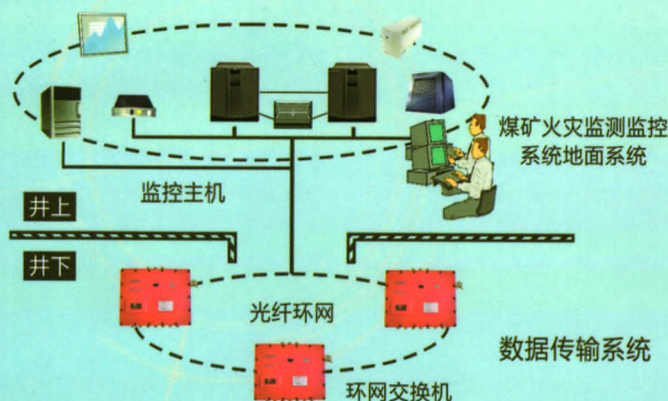
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# 矿用分布式激光火情监测系统



矿用分布式激光火情监测系统是为解决现有束管系统在煤矿采空区火情监测中响应慢、管路维护困难、检测精度无法保证的缺陷，在井下采面利用光纤传感技术和激光调制吸收光谱技术连续监测采空区 $CH_4$ 、 $CO$ 、 $C_2H_2$ 、 $CO_2$ 、 $O_2$ 等气体浓度和采空区温度，实时将采集的数据通过光纤环网上传至地面，利用火情监测系统软件实现监测、预警、防火效果评估。

## 性能特征

- 最完善的火灾预测模型，包含温度、 $CO$ 、 $CH_4$ 、 $C_2H_4$ 、 $C_2H_2$ 、 $O_2$ 、 $CO_2$ ，集分布式光纤传感和激光多气体检测技术为一体。
- 气体检测采用高分辨率激光吸收光谱技术，消除气体交叉干扰，测量不受粉尘、水汽的影响。
- 温度检测采用光纤传感技术，本质安全，铺设简单，无需维护，测量准确，可对采空区发火点精确定位。
- 本地实时连续测量，响应速度快，不受管路影响。

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