

所致, 本文用的是巢式 PCR-RFLP, 而文献用的是 PCR-RFLP。本文首次发现苯接触健康人群与正常健康人群之间 TNF- α -238 及 TNF- α -308 的基因多态性差异无显著性, 今后期待有更多这方面的研究进行探讨, 在这基础上有必要进一步研究 TNF- α -238 及 TNF- α -308 的基因多态性与慢性苯中毒的关系。

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·短篇报道·

自激式除尘器治理滑石粉效果评价

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某电缆厂橡胶车间生产皮带所使用的主要原料为滑石粉。在配料振动过程中粉尘四处逸散, 污染严重。现对该厂自激式除尘系统治理滑石粉尘的效果进行评价, 供借鉴。

1 基本情况

该配料间占地面积 16 m², 日产量为 275 kg, 其主要工序是筛选粉料。筛选粉料工序位于车间偏中部。无任何机械通风除尘设施。

2 治理方案

经有关专家多方考察、论证, 并根据作业场所工艺布局及粉尘性质等情况综合分析, 决定采用隔离上吸式自激水力除尘系统。首先对车间内的工艺布局进行重新调整, 将振动筛由车间偏中部移到东南角, 借两面靠墙的优势, 用铝合金玻璃窗隔离, 并留拉门; 在振动筛上方 1.2 m 处安装伞式吸尘罩; 排尘管路采用合理变径, 加阻尼, 硬连接方式; 风机

采用 4-72-4[#], 并且安装有 FB-3.6 消声器; 除尘系统采用 DTS-11 自激式水力除尘器。

3 评价内容、方法和效果

治理前共采集样品 6 个, 测定值 10~17 mg/m³, 平均浓度为 13.5 mg/m³; 治理后采集样品数同治理前, 测定值 2.3~3.8 mg/m³, 平均浓度为 2.7 mg/m³。经统计学处理, 治理前后粉尘浓度差异有显著性 ($t=4.35$, $P<0.01$), 并且治理后作业场所的粉尘浓度达到国家卫生标准。

用 QDF 热球式风速计测量罩口风速并计算应用风量: 应用风量 (m³/h) = 3 600 × 罩口风速 × 罩口面积。罩口风速 1.5 m/s, 面积 0.52 m × 1m, 经计算风量为 2 808 m³/h。

4 评价与分析

重新调整工艺布局后, 将污染源控制在一定范围内, 采取上吸隔离振动筛措施, 即挡、排除了粉尘又达到了隔声作用。采用自激式水力除尘器, 捕捉粉尘效率高, 并将捕捉的粉尘沉淀处理, 符合环保要求。根据治理前后结果显示除尘效果显著, 达到了国家卫生标准。

滑石粉所引起的主要病理改变是肺组织纤维化及肉芽肿, 同时滑石尘肺合并肺癌的发病率较高, 因此对工人身体健康危害极大。该厂通过对振动筛隔离、排尘、水幕除尘等多项措施, 成功地控制了滑石粉尘的污染, 改善了作业环境, 保护了工人的身体健康。