

A Study on the Optimum Removal Efficiency of Fine PM Using Activated Carbon Fiber

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초 록 The concentration of PM in urban railway tunnels (178.1 ug/m^3) appears to be higher than that in the metropolitan area (49 ug/m^3) addition, even in the case of NO_x, which directly affect lung diseases, the concentration in the tunnel was found to be higher than the atmospheric standard of the Ministry of Environment. In this study, we tried to examine the adsorption efficiency on a lab scale by using Activated Carbon Fiber (ACF), which has a high adsorption speed and a high adsorption capacity. As experimental variables, the depth of ACF, the distance between ACF, the flow rate, and the concentration of fine PM and NO_x in the tunnel were given. Through experiments, the concentration before and after the filter are checked, and the removal efficiency is checked to derive optimal conditions.

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