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## DUST (SPM) PROBLEM IN OPEN CAST COAL MINES AND THEIR MANAGEMENT

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The air quality in coal mine is characterized by suspended particulate matter (SPM) and gaseous pollutants ( $\text{NO}_x$ ,  $\text{SO}_2$ ,  $\text{CO}$ ,  $\text{CH}_4$  etc). Among these SPM is a pollutant in the mine air. The characterization of SPM in terms of shape, size, and mineralogical composition. Whether dust particles are solid or liquid, they behave similarly when air-borne. Dust particles with a size less than 5 micrometers are called respirable dust. Respirable dust is physiologically very harmful. Radiological studies indicated that nearly fifteen percent of mine workers were suffering from pneumoconiosis. Therefore, respirable dust sampling on a routine basis is essential for every mine.

Different control measures for SPM have different control efficiencies. Water spraying is also not effective for all minerals due to different physio-chemical characteristics of SPM.