

Dust-free coal handling with Wuvio



Wuvio deals with dust caused in coal handling operations.

Wuvio makes dealing with dust easier, cost effective and allows implementation with minimized down time. Its solutions are in use wherever fugitive dust is an issue, and are ideal for the coal handling market. Wuvio uses innovative proprietary additives, developed in-house, to combat dust. Various techniques can be used to either suppress or control dust. Wuvio's foaming, crust forming, agglomerating and moistening additives are used to reduce mass loss, lower (or maintain) moisture levels and lower water consumption.

DUST MEASUREMENT? IS IT NECESSARY?

Dust is always present, even when it's invisible.

WHAT IS DUST?

Dust is a common air pollutant generated by many different sources and activities. Examples in the industry of dust polluting areas are mainly loading and unloading, screening, shredding, crushing facilities and excavation of different kind of materials such as coal, iron ore, minerals, fertilizers but also from materials you do not expect such as cereals, flower and corn.

Dust particles vary in size from visible to invisible. The smaller the particle, the longer it stays in the air and the further it can travel. The larger particles that can be breathed in are called inhalable or inspirable dust particles. Inhalable dust particles are visible to the naked eye and are deposited in the nose, throat and upper respiratory tract. Respirable dust contains dust particles so small they are invisible to the naked eye and reach deep into the lungs and can be absorbed directly into the blood stream. Anyone who is exposed to

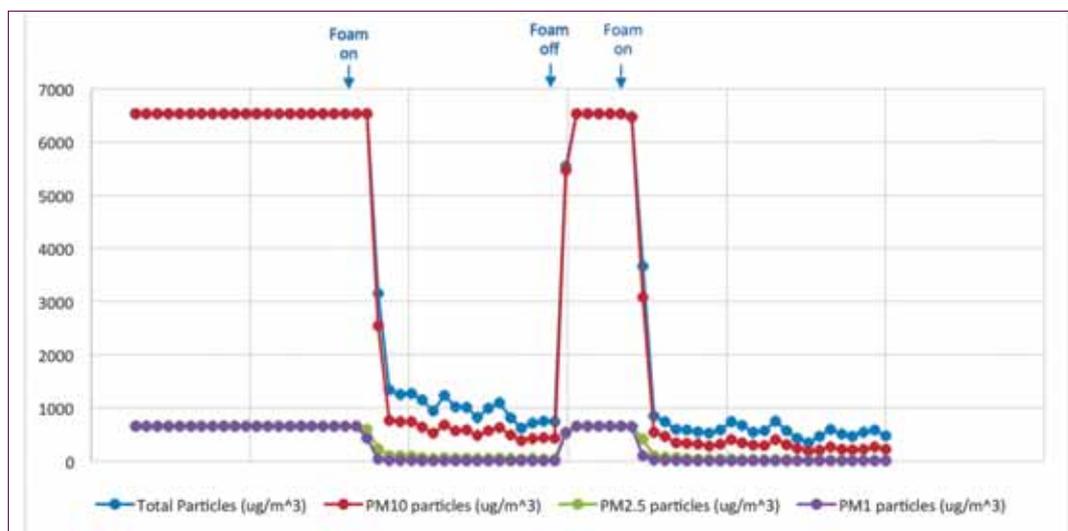


high levels of dust may be affected — the longer you breathe in the dust, then the greater the chance that it will affect your health.

HOW CAN WE MEASURE DUST?

There is a wide variety of different instruments either fixed or mobile. The instruments will continuously indicate the concentration of thoracic, inhalable and respirable particles down to 0.1 micro-

grams per cubic metre. The dust monitors use a light scattering technique to measure different dust particle sizes simultaneously, recording TSP, PM₁₀, PM_{2.5} and PM₁ fractions.



HOW CAN WUVIO HELP DECREASE DUST ISSUES?

Wuvio is a company that specializes in dust suppression and control in industrial environments. It uses unique, in-house developed solutions. By using innovative solutions, Wuvio is able to create optimal working conditions for its customers. The company's products are used in a variety of sectors. Products for dust control find their way to companies in waste treatment, recycling, bulk transshipment, energy producers, mining industry and feed and food sector. Besides the product, Wuvio also provides the necessary equipment.

TOTAL DUST SURVEY

As an option, Wuvio can perform a total dust survey which includes a total approach, measurements before and after implementation of its recommendations. Wuvio's reports can be used for the local authorities and/or internal use. It guides its customers through the whole process.

CASE STUDY

One of Wuvio's latest projects for a major steel company was to reduce dust on its conveyor belts for cokes from $>6,000\text{ug/m}^3$ to $<1,000\text{ug/m}^3$. With its foam unit and specialized foam, Wuvio succeeded in reducing dust to the levels required by the steel company and the local authorities. Its dust measurement equipment was used to measure the below results. The dust particles, PM_{2.5} and PM₁, which are the most harmful to people, have been reduced almost to zero. By creating a professional report (see graph, above), the customer could show the local authorities that it is complying with its licence to operate.