

The Monsoon Fog Cannon

Quattro Solutions has an agreement to market the Monsoon Turbine range of fog cannons in Australia. The Monsoon revolutionises wet mist suppression technology used to control air entrained dust problems.

Water as a Dust Suppressant

Water has long played a significant role in fugitive dust abatement strategies employed in industrial and mining processes. Traditionally the process has entailed low or medium pressure and high volumewater application. The success of these initiatives has been somewhat varied astraditional spray arrangements produce insufficient droplets to have a significant impact on the huge number ofparticles suspended in a dust cloud. The velocity of these droplets further limits their ability to attract suspended dust particles - punching through the entrained dust plume and falling to ground.

Wet Mist Suppression

Wet mist dust suppression has sought to improve the efficiency of this process whilst at the same time significantly reducing the volume of water being applied. Entrained dust is by definition sufficiently small to be relatively weightless and accordingly remain entrained for considerable time. The principal of wet mist suppression is to create a matrix of micron size atomised fluid droplets of appropriate size weight and number to attract and knock entrained fugitive pollutants or odours out of entrainment.

Historically this technology evolved from machines used to create snow. There are today a number fog cannons utilising similar technology on the market. Water atomisation is accomplished by costly, complicated high maintenance spray nozzle arrangements and bulky fans. This technology whilst effective has a number of shortcomings. Most significantly the nozzles tend to block even with significant water filtration. As a further consequence of the technology used, these machines tend to be inordinately expensive limiting their potential applications.

The Buffalo Turbine

Buffalo Turbine has revolutionised the misting process withthe development of the Monsoon Gyrotory Atomising Nozzle.This technology uses high velocity air to fracture low pressure and low volume water, directed into the air stream through a large orifice nozzle. The result is a system virtually resistant to blockage. Moreover the use of appropriate technology has produced a misting cannon that is highly effective and priced at around 30% of comparable equipment. The Monsoon is also significantly smaller than available equipment.

The result of these features is that the Monsoon has a far greater range of application than existingmisting equipment. Possible areas of application are crushers, tip heads, conveyer structures as well as underground stopes and galleries.