

BEST PRACTICE

LOCATION: Concrete products plant
ACTIVITY: Occupational Health
SUB ACTIVITY: Air and dust
BEST PRACTICE No: BP2055
COUNTRY OF ORIGIN:

ARTICLE YEAR: 2019
COMPANY: Tarmac Building Products Ltd
COMPANY LOCATION: Croxden DSM
COMPANY TEL: 0000

TITLE

Dust suppression

ARTICLE

DESCRIPTION

Tarmac Building Product's dry silo mortar (DSM) business was having significant issues with the amount of dust produced in the working environment. Dust monitoring results showed levels of dust in excess of worker exposure limits. In certain areas of plants, it was possible to actively see dust plumes and a covering of dust on floors, walls and equipment.

A company engineer was tasked with identifying a suitable dust suppression system that would reduce the risk of occupational ill health and create a better and safer work environment across

the 5 plants operated. Various options were researched including vacuum systems, local dust extraction systems and fine mist sprays.

It was decided that the fine mist spray option provided the best solution when taking all factors into consideration. This included the potential for legionella with the mist-based system.

Croxden DSM was selected as the trial site because it had the most severe issues with dust. The engineer worked with the site managers and operatives to identify the problem areas. The team worked with a specialist contractor to design a mist/spray system that would work within the site requirements.

The solution consisted of a water pump pressurised to 70 bar which atomised the water to a fine mist. The mist was sprayed through a polyurethane piping system stretching hundreds of meters across the plant to the affected areas. The risk of water borne bacteria was minimised by introducing a UV lamps and a water chlorination system.

The installation was completed to schedule and budget. The system was an immediate success. The only addition to the system, following a trial period, was an internal, bulk water container to provide a back-up water supply if required.

BENEFITS

- A better and safer working environment for all
- A reduction in dust levels of 80%
- Need to wear respiratory protection removed in most areas
- Similar system planned for remaining 4 sites
- Team involvement enhanced safety culture at site

ARTICLE IMAGES

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