



Innovation in dust-free bulk loading



With environmental concerns for ports and bulk exporters becoming more strict, several companies are turning to a new technology to stop pollution during shiploading.

BlueWater Misting (BWM) has developed a dust-suppression system that fits to the top of the vessel hatch and creates a barrier of fine mist that prevents escape of fugitive dust emissions.

WHAT IT IS

The system consists of a power pack that sits on the quay connected to the power and water of the port. These deliver a high pressure spray to an array of purpose-built spray bars that are temporarily fitted to the hatch combing by the stevedores during loading.

HOW IT WORKS

The BWM system creates a complete mist screen at the top of the hatch.

By wetting airborne fines, the weight of each particle is increased. These heavier combined particles of dust and water fall out of the air back to the pile. BWM used science and its experience to create moisture 'curtains' in and around ship's holds to make contact with the dust fines, increasing their mass and removing them from the air stream.

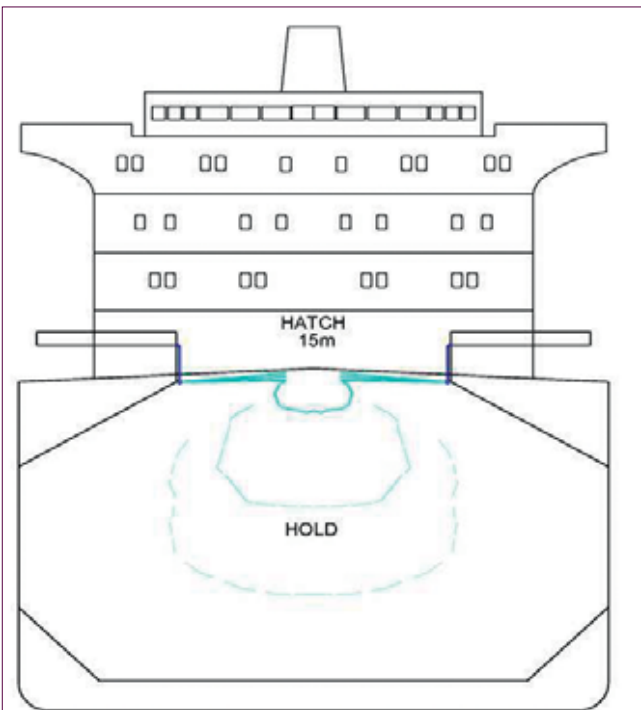
WHERE IT IS USED

The systems are deployed on several continents in Australia and Asia, but the most interesting systems are in Chile and South Africa.



Chile

The System is employed in Chile at the port of Antofagasta to load very valuable copper concentrate. The concentrate is valuable as it contains gold and silver as well. In this case, dust is considered 'money blowing in the wind'. While the companies involved are very environmentally aware, they utilize the misting



system in loading stopping dust escaping from ships' holds. The benefit is huge saving in loss of valuable concentrate.

South Africa

Port Elizabeth is the start of the Garden Route in South Africa, a place of great unspoilt beauty with a thriving car export facility. Local mining company Tshipi wanted to export manganese fines, but the local authorities had concerns over the dust, particularly as the car loading facility was nearby.

Using the innovative Blue Water Misting dust suppression system fitted to the hatch, Tshipi is able to prevent fugitive dust emissions during shiploading. This was a great win for industry — and the local community, providing a number of jobs — showing mining can be green.



NOT ALL DUST IS THE SAME

There is a range of different materials and particle sizes. Before each new job BWM consults with the client and provides a bespoke designed system spray nozzles and bars that capture that dust. BWM can also provide a dry fog for material that can't be wet like grain or cement

ALL APPLICATIONS

The BWM system is very flexible and can be deployed with any type of loading system. Systems are currently in used with tipplers, grab and shiploaders.