**PRESS RELEASE**

A water-wise dust suppression solution

***07 April, 2015:*** *Dust is a pervasive hazard that undermines the health of workers, impacts negatively on the surrounding environment and substantially reduces the lifespan of machinery. In a water scarce country such as South Africa, it is essential that local operations do not waste vast quantities of this precious resource as part of their dust suppression solutions.*

In addition to being in short supply, water is also severely limited in its effectiveness, as it evaporates quickly – thereby releasing the dust back into the environment. In order to address this challenge in a cost-effective and environmentally-friendly manner, I-CAT Environmental Solutions stocks and distributes the internationally-recognised Telesto SCRUBmist dry mist dust suppression system.

I-CAT operations director **Anton van der Merwe** notes that the dry mist system removes respirable and inhalable dust particles from the air with minimal water usage, and no collateral damage to property. “It works by atomising water into minute droplets 5 micron (µm) to 15 µm in size. They are electrostatically attracted to dust particles and form agglomerations that subsequently fall out of the air.”

Conventional sprinkler systems produce considerably larger droplets of between 80 µm and 100 µm. These collide with far less particles, as the air-stream present around them deflects dust outwards and away. Wind and high temperatures are also factors that negatively impact the dispersal of droplets produced by conventional systems, which have low kinetic energy and are easily neutralised.

By injecting water between layers of air moving at supersonic speed, van der Merwe explains that the dry mist system is able to produce droplets with high kinetic energy that remain unaffected in the harshest conditions. “As a result, SCRUBmist utilises as little as 200 ml per minute, compared to sprinkler systems that spray multiple litres of water per nozzle per minute.”

With this technology, the water volume per nozzle can be adjusted and only two nozzles are required per installation point, as opposed to the standard of 20 or more. This not only saves resources, but also lowers operational costs. The SCRUBmist system is ideally-suited for use in a variety of applications, including; coal mines, power plants, wood and stone aggregate plants, and cement factories.

SCRUBmist is vital in facilities where excessive dust is generated by the processing, production, transfer or movement of materials, and can cause significant damages. Van der Merwe adds: “The use of this system guarantees safety, improves working conditions and increases productivity, while simultaneously minimising downtime by lowering machinery repair and replacement costs.”

The success of SCRUBmist has already been proven at Nkomati Nickel Mine in Mpumalanga, where the system was installed at 19 transfer points. “The project was completed in August 2014, following two months of installation work and the system continues to run smoothly to date,” reveals van der Merwe.

Although SCRUBmist is easy to retrofit into existing structures, van der Merwe admits that I-CAT did face challenges during the installation process. “The equipment was installed on chutes, hoppers, header boxes and conveyor belts, and all moving parts had to be locked down to ensure safety.”

Van der Merwe indicates that, through detailed planning and a strong working relationship with the client, I-CAT successfully fitted the control panels and laid the piping during live operations, while the diffusers and nozzles were installed during shutdowns. “As a result, the system was commissioned within specified deadlines and budgets.”

I-CAT is currently installing a SCRUBmist system at Assmang’s Beeshoek Iron Ore Mine in the Northern Cape too. “The project also includes the installation of a programming logic controller (PLC) for remote system automation and monitoring, and is due for completion in April 2015,” van der Merwe concludes.

**Ends**

**Notes to the editor**
There are numerous photographs specific to this press release. Please visit <http://media.ngage.co.za> and click the I-CAT link.

**About I-CAT**
I-CAT is a leading environmental solutions company with a primary focus on supplying products and services that assist industrial clients in various aspects of environmental compliance. The company is well positioned to assist all its clients’ needs in environmental management regarding; dust suppression solutions, water solutions, environmental management services, carbon solutions, agro-forestry products and fire solutions.

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