**PRESS RELEASE**

Live fire suppression demonstrations are an overwhelming success

***30 June, 2015:*** *One of the most imminent risks involved with mining operations is fire – which is a constant threat in numerous applications. As a result, I-CAT hosted live demonstrations on 25 June 2015 to showcase the importance of adopting effective suppressant solutions that are specifically-designed for special fire risks.*

The event, hosted at the Council for Scientific and Industrial Research (CSIR) Kloppersbos facility, approximately 40 km north of Pretoria, proved to be an overwhelming success – with more than 140 attendees present – officially the highest attendance ever recorded at the fire and explosion test, training, research and development facility.

I-CAT fire division manager **Andro Gibhard** reveals that the event was aimed at the South African mining industry in particular. “A large number of existing and potential clients were present to witness fist-hand the latest cutting-edge fire suppression and mine safety technology from I-CAT.”

He highlights the fact the demonstrations were well-received by representatives from numerous mining sectors, including; gold, platinum, coal, chrome and iron ore. The live fire demonstrations undertaken on the day included demonstrations in the ‘Red Zone’ and a ‘Safe Zone’, and included a coal dust and methane explosion.

**Red Zone:**

* Demonstration of a localised protection system for conveyor belts
* Methane and coal dust explosion in a 200 m tunnel
* Underground mining fire and fire curtain demonstration
* Demonstration of localised protection system for transformer/power packs
* Demonstration of switchgear in-cabinet protection systems

**Safe Zone:**

* Demonstration of mobile and mining vehicle suppression systems
* Extinguishing all classes of fire with the new water mist and foam mist extinguishers
* Fast response Roto-Fire-Pac demonstration for underground and surface mining

**The importance of effective suppression solutions specifically-designed for a particular type of risk**

A major obstacle to fire safety in the mining industry is that standard dry chemical powder (DCP) handheld extinguishers are specified on most of the areas on-site. Although DCP extinguishers are highly-effective in extinguishing flames, they offer minimal cooling properties.

This results in re-ignition of flames, particularly in fuel and rubber fires, thereby increasing the risk of property damage and loss of life. Rubber fires can occur on conveyor belts, tyre stores, mining vehicles and plastic or rubber pipes. In this scenario, a first responder would typically use a number of DCP extinguishers to subdue the recurring flames, while waiting until firefighters extinguish it permanently.

The powder inside DCP extinguishers also compacts as a result of vibration when placed on a moving vehicle. This compacted powder creates the risk of malfunction when activated, creating further health and safety concerns. As a result, DCP extinguishers placed on mobile equipment need to be serviced more frequently, which results in higher costs for mining operations.

DCP extinguishers also pose serious operator and environmental hazards too. When used in confined spaces, they can affect operator visibility, and excessive powder inhalation can prove to be fatal. Discharged powder often ends up in water ways and filtration systems, causing contamination or blockages, and the discarding and clean-up process can be long and costly.

**A more effective and environmentally-friendly alternative**

I-CAT recently introduced the new range of Water Mist and Foam Mist handheld fire extinguishers to the local market. Utilising water as the main agent and nitrogen as a propellant, this handheld range is capable of extinguishing all types of fires, including; rubber and plastic fires; kitchen cooking oil fires; diesel and petrol fires; and electrical fires rated up to 245 kV.

Using patented technology from Europe, Gibhard states that the atomised mist generated by the extinguisher gradually cools down a hot surface without causing thermal shock. “It creates a thermal heat radiation barrier between the operator and the fire, thereby shielding the operator from the heat radiation emitted by the fire when operating the extinguisher.”

Gibhard highlights the fact that the Water Mist and Foam Mist range is environmentally-friendly and ensures greater operator safety. “Each litre of water amounts to 120 m2 coverage capability, making it extremely safe and efficient. What’s more, the small quantity of water used also results in little to no redundancy or damage,” he continues.

The Water Mist range boasts an operational lifespan four to five times longer than standard DCP extinguishers, to ensure greater cost-savings too. The Water Mist extinguisher range received SABS approval at the end of 2014, and Gibhard is confident that it will be well-received by the local market. “The use of water and nitrogen is safer, more effective, and saves on maintenance and service costs – all of which are major benefits in modern-day mining,” he concludes.

When using conventional equipment in commercial and residential applications, only five percent of water directed at the fire actually applies to extinguishing it. The remaining 95 percent floods the surroundings. EXTINGUISHmist emits a superfine atomised mist that quickly vaporises in the fire zone. A handheld Water Mist fire extinguisher is able to suppress all types of fires without causing extra collateral damage to property, people, animals and the environment.

Other fire suppressants, such as foam, DCP and CO2 are toxic, causing harm to people and animals, destruction to property, and pollution. The EXTINGUISHmist, on the other hand, is ideal and is so safe that it can be sprayed directly onto victims threatened by fire, allowing responders to swiftly and effectively execute rescues.

Response time is the main factor determining the extent of a fire’s damage to life and property. EXTINGUISHmist’s universal application across all common fire classes not only accelerates fire incident response, but also reduces the need to carry multiple types of equipment. “Equipped with the EXTINGUISHmist, responders can attack a fire immediately without having to worry about whether the agent is appropriate for the type of fire,” adds Gibhard.

The small amount of water sprayed from the EXTINGUISHmist – just six litres per minute – also guarantees a ten times longer lasting firefighting capacity than traditional DCP extinguishers. It also has a high degree of dispersion and forms a large screening surface or ‘halo’.

Gibhard says: “People shielded by this mist barrier can survive even in close proximity to a powerful fire. It protects firefighters and victims alike from thermal radiation and smoke. Because the mist contains air, it allows them to breathe freely, preventing asphyxiation and buying time in rescue operations. Rescuing victims is problematic with other suppressants, as the agents are harmful.”

The EXTINGUISHmist portable fire extinguisher consists of a proprietary nozzle and T-Rotor unit, unique to I-CAT’s Water Mist and Foam Mist range. The technology is also available in a hose reel device that can be mounted onto fire trucks, vehicles and trailers.

***Ends***

**Notes to the editor**  
To download hi-res images for this release, please visit [http://media.ngage.co.za](http://media.ngage.co.za/) and click the I-CAT link to view the company’s press office.

**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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