**PRESS RELEASE**

Dealing with fire risk in a mining environment

**Mining vehicle fire-protection systems are based on a Hazard Identification and Risk Assessment (HIRA)**

**28 June 2022:** Mining vehicles such as excavators, haul trucks and even drag lines are high-value assets that operate in arduous conditions where there is a high fire risk. This means that pre-shift and weekly inspections on mining vehicles are essential to ensure that the fire prevention system is in good working order.

“We assist mining operations to mitigate any risk posed by fire, which can affect productivity and profits,” says [ASP Fire](https://www.aspfire.co.za/) CEO **Michael van Niekerk**. The fire engineering expert designs systems to suit individual vehicles and their specific requirements. This means examining the conditions not only inside the vehicle, but also within the surrounding environment.

The design and installation of a vehicle fire-protection system requires that mining vehicles are subjected to a Hazard Identification and Risk Assessment (HIRA) of potential fires. Each vehicle needs to be assessed carefully within its specific operating environment to understand what hazards and fire risks that vehicle is exposed to.

Inherent fire risks include the turbochargers and brake system overheating, as well as high-pressure hydraulic systems and electrical equipment that may ignite a combustible or flammable component of the vehicle.

Although Dry Chemical Powder (DCP) extinguishers are highly effective in firefighting, they offer minimal cooling properties. This results in re-ignition of flames, especially in liquid fuel and rubber fires, thereby increasing the risk of property damage and loss of life. The powder inside DCP extinguishers can also compact due to vibration when placed on a moving vehicle.

The compacted powder increases the risk of malfunction when activated. As a result, DCP extinguishers placed on mobile equipment need to be serviced more frequently. DCP extinguishers also pose serious operator and environmental hazards. When used in confined spaces, they can affect the fire respondents’ visibility and capability to effectively suppress the fire, or to safely evacuate an area should the fire spread out of control.

A much more effective and ‘greener’ solution is water-mist handheld fire extinguishers. Utilising water as the main agent and nitrogen as a propellant, these can extinguish most types of fires, including rubber and plastic, diesel and petrol fires, and electrical fires rated up to 245 kV.

The atomised mist generated by the extinguisher increases the surface area of the water by more than a hundredfold. The micro-droplets rapidly turn into cold steam when meeting burning or very hot materials, further increasing the surface area by 1 600 times. The endothermic reaction effectively cools down any hot surfaces in the immediate environment.

Not only is the fire extinguished, but any hot spots also cool down without any thermal shock. The thermal heat radiation barrier created allows the operator to approach the fire without sustaining burns to deploy the extinguisher. A protection mechanism eliminates any false alarms. This consists of a heat-sensitive pressurised activation tube that requires heat to rupture and open a differential valve on the main cylinder to activate the system.

Another solution offered by ASP Fire is an Aqueous Film Forming Foam (AFFF) for fire-extinguishing and vapour suppression of hydrocarbon fuel fires. The AFFF blanket blocks oxygen supply to the fuel and cools any hot flammable liquid by effectively sealing the surface.

**Pull quote**

“We can assist mining operations to mitigate any risk posed by fire, which affects productivity and profits.” – **Michael van Niekerk**, CEO, ASP Fire

**Social media**

***Twitter***

#ASPFire assists mining operations to mitigate any risk posed by fire that can affect productivity and profits. Protect your high value mine vehicle assets such as excavators, haul trucks and even drag lines.

***Ends***

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**Notes to the Editor**
To download hi-res images for this release, please visit <http://media.ngage.co.za> and click the ASP Fire link to view the company’s press office.

**About ASP Fire**
ASP Fire operates across the entire African continent from its Gauteng base, providing professional, accredited fire risk management and support to its clients. ASP Fire designs, installs, and maintains a full range of fire detection and suppression equipment suited to clients’ needs. ASP Fire provides a holistic, proactive, and preventative fire solution based on integrated fire risk assessment, training, and consulting, with the installation and maintenance of fire detection and suppression systems that meet SABS, NFPA, FPASA, FDIA and SAQCC standards.

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