PRESS RELEASE

ASP Fire offers complete solutions for highly hazardous environments

19 July 2019: From concentrated solar power (CSP) systems to oil-seed extraction plants, printing plants, and even explosives manufacturing facilities, fire engineering specialist ASP Fire offers a range of solutions for highly hazardous environments.

Fire risk in an industrial environment is often not localised to a specific area, which means that any potential hazards are not easy to identify and mitigate as a result, ASP Fire CEO **Michael van Niekerk** highlights.

Environments where there is a risk of flammable vapour discharge calls for a different focus, as any kind of ignition must be prevented from occurring. "Stopping a fire before it starts is the fundamental approach we adhere to," van Niekerk stresses.

If a particular industrial environment poses any danger of flammable vapour being emitted, then it has to be ventilated accordingly. In addition, detection equipment has to be installed that can trigger emergency ventilation if need be.

If this measure by itself is insufficient, special foam-pouring equipment can also be installed to spray a foam layer over any large solvent spill, thereby preventing it from evaporating and forming a flammable vapour.

"An atmosphere containing combustible dust can be more dangerous than an atmosphere containing flammable vapour," van Niekerk points out. When vapour burns, the concentration of fuel in the air might be 1.7% by volume.

Solid dust particles, on the other hand, contain more energy, and hence any explosion here is much more violent. That is why sugar mills and flour mills, for example, generally blow up in the event of a dust explosion.

Any primary ignition in a hazardous environment can also result in dust layers on the roof of the building or even on the window sills to be suspended and pose a threat for ignition. Here the potential secondary explosion can be much more devastating than the initial event. "Hence we deploy ventilation and dust extraction to mitigate any fallout from the presence of dust," van Niekerk elaborates.

Hazardous industrial environments with flammable vapour atmospheres are classified as different zones according to the risk, from Zone 0 (the highest risk) to Zone 1 and Zone 2 (lower risk), while atmospheres with combustible dust are classified as Zone 20 (the highest risk), to Zone 21 or Zone 22 (lower risk).

"Our main goal is to prevent any ignition sources," van Niekerk stresses. Here electrical equipment has to be protected, for example, by using tried-and-tested methods such as static bonding or encapsulation with flame proof enclosures. Real-time measuring equipment can even be installed to ensure that the $10~\Omega$ threshold for static build-up is not exceeded.

"Preventing any explosion is critical. If you do have an ignition in a hazardous area, it is more likely that there will be an explosion instead of a fire. That is to be avoided at all costs. Sprinkler, deluge and gas suppression systems are redundant in such an instance, as these measures are only triggered after the explosion has occurred," van Niekerk stresses.

He urges that workers and management in highly hazardous industrial environments must become fanatical about fire safety. "It is important not only to install the correct equipment, but to ensure

that all workers receive rigorous training in risk identification and mitigation," van Niekerk concludes.

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Notes to the Editor

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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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