How hazardous industries can eliminate explosions while boosting efficiencies

Keeping staff, equipment, sites and the environment safe from explosion or fire is front of mind for business leaders in industries where flammable materials or substances are present. Extreme caution is a must for those working in high risk environments. Yet at what point does caution begin to hold companies back in terms of efficiency, progress and innovation? In many cases we have seen companies still using pen and paper instead of introducing mobile technologies, for fear of handheld devices heating up or sparking and causing a fire or explosion. Manual processes such as using pen and paper will eventually reduce any competitive advantage and stymy future growth.

Sparks fly across sectors

The most common cause of workplace fires is electrical equipment . Electrical faults cause a large proportion of non-residential fires, and can start suddenly and spread quickly. In March 2018 for example, a suspected electrical fault caused a devastating blaze in a Brixham foundry , causing substantial damage to the building.
More recently, a UK chemicals factory was set alight due to a spark coming into contact with explosive liquids. The company has recently been ordered to pay thousands of pounds in legal fees as well as the cost of rebuilding its factory – and loss of revenue.

The distillery industry is another prime example where a tiny spark can cause a significant fire. A distillery fire near Birmingham caused more than 200 people to flee their homes as 70 firefighters battled the inferno . A 21-year-old distillery worker was rescued from the blaze, suffering 20% burns to his head, neck and hands. The fire also destroyed the warehouse, its stocks and caused damage to nearby cars and houses. According to the HSE inspector who worked on the case: “Companies that fail to ensure the integrity of their safety critical equipment place their employees, members of the public, emergency services and their entire livelihood at risk of serious harm. Poor management of highly flammable liquids can have catastrophic results both for individuals and businesses.”

These are just a few examples of significant fires in hazardous environments, yet there are many more, across industries and right across the world.

Intrinsically safe workplace devices

Companies still working with pen and paper in a bid to prevent fires in the workplace are able to introduce handheld devices for increased efficiency, without the risk of sparks or heating up.
Here at BARTEC, we work with Zebra Technologies to transform their ultra-rugged mobile devices into certified ones that can be safely operated in potentially explosive areas. These areas are typically classed as:

- Zone 1/Division 1: Where the risk of explosion is present under normal operating conditions
- Zone 2/Division 2: Where hazards are only present under abnormal operating conditions

The Zebra Technologies handheld devices we modify speed up efficiency, provide accuracy and streamline workflows, freeing up time for staff and modernising workplaces at risk of explosion. These devices eliminate the use of pen and paper and bring industries up-to-speed, providing competitive advantage and deep insights into the way a business is running.

The modified devices are classified as intrinsically safe (IS) or non-incendive (NI). The major difference between the two types of equipment is that NI circuits are evaluated for ignition capability under normal operating conditions, while IS circuits are evaluated under fault conditions.

- **Intrinsically safe (IS):** the device is incapable of ignition even in the event of up to two independent faults and can be used throughout all hazardous area classifications.

- **Non-Incendive (NI):** the device is incapable of ignition under normal operation conditions (no faults) and is restricted to use in Zone 2/22 and Div 2 areas only.

Case study: Food ingredients company

We recently worked with leading systems integrator VisionID and a foods ingredients company to deliver handheld BARTEC devices for its factories. Now fully installed, they provide a stable and safe platform for information-sharing and reporting, stock visibility in real-time, and increased efficiency in potentially hazardous sites across Europe.
Read the case study in full>

About us

We are able to provide intrinsically safe handheld solutions across a wide range of sectors where explosions may occur, from the oil and gas industry to chemical, petrochemical and pharmaceutical sectors, distilleries, mining, and airports – in fact anywhere a potential explosive area exists.
We also work with the strictest and most renowned notified bodies to modify ultra-rugged mobile devices into certified ones to meet stringent safety requirements, including ATEX, IECEx and NEC, as well as other country specific standards.

Contact us

Do you work in a potentially explosive environment and believe your teams could benefit from greater efficiencies through using handheld devices? Contact our team for hazardous area-safe solutions:

Visit: www.bartec.com
Call: 07931 597 000
Email: info@bartec.com

[1]www.delta-net.com/health-and-safety/fire-safety/faqs/the-most-common-cause-of-fire-in-the-workplace
[2]www.delta-net.com/health-and-safety/fire-safety/faqs/the-most-common-cause-of-fire-in-the-workplace
[3]www.yorkpress.co.uk/news/18146383.chemical-company-fined-massive-pocklington-fire/
[4]www.thedrinksbusiness.com/2016/08/distillery-fined-after-worker-is-engulfed-in-blaze/