

## WE CONTROL IGNITION SOURCES



If a hydrocarbon release does occur, we can often reduce or eliminate the worst of the potential consequences by avoiding ignition. About half of the fatal process safety incidents reviewed involved ignition, so minimizing the likelihood of ignition can make a big difference in avoiding fatalities. Some sources of ignition may be quite obvious, like hot work or nearby fired heaters, but others are less clear. The fatal incidents in the IOGP data show that ignition sources include hot work, static electricity, pyrophoric materials, ingestion into generators or other fired equipment, hot surfaces, lightning, defective electrical equipment and vehicles. Staff are therefore encouraged to understand the full range of potential ignition sources that are relevant to their facility and the measures in place to control them.

Use of hazardous area classification/zoning is widespread in the industry. But users should bear in mind that the flammable cloud from larger releases can extend far beyond the classified/zoned areas shown on the area classification drawings. It is important to recognise this, particularly if doing work in areas that are outside the formally classified areas. The likelihood of getting a flammable cloud in these areas may be low, but that does not mean that it cannot happen. Risk assessments and risk control measures will need to take this into account.

In preparing for and conducting work activities, consider and act on the following:

- Ignition sources can include vehicles, open flames, grinding tools, pyrophoric materials, electrical equipment, hot surfaces, lightning, static electricity, and other portable electrical equipment.
- Reporting of defects in electrical equipment and other potential ignition sources, such as cladding on hot surfaces, damaged EX equipment, open wires, damaged grounding aids, is important in controlling potential ignition.
- Vehicle entry into areas with the potential for flammable release should be avoided where practical. If that is not practical, vehicle entries should be minimized and controlled.
- Control of work risk assessments should evaluate the potential for flammable hazards even outside classified/zoned areas shown on the area classification drawing.

### Tips for Managers:

Regularly check that personnel understand the full range of potential ignition sources and the requirements for ignition source control.

### Additional guidance:

- IEC 60 079 series
- ANSI/API RP 505
- EI Model Code of Safe Practice 15 - *Area classification for installations handling flammable fluids*
- Center for Chemical Process Safety Beacon (August 2016): [A little static can cause a big fire!](#)
- Center for Chemical Process Safety Beacon (August 2014): [Ignition Sources](#)