



# Process Safety Management

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## Who we are

Project Design Engineers Ltd (PDE) is a leading multi-disciplined Engineering Design Consultancy servicing the needs of a range of industries throughout the UK and Ireland. Established in 1989, PDE has both the experience and the calibre of staff to compete with larger consultancies and work on projects of all sizes. We have an exceptional reputation for delivering a high quality, professional service and as a result enjoy long term relationships with an established client base.

## Why Process Safety?

Process Safety is a framework for the prevention and control of catastrophic accidents and near misses. It is essential for companies who deal with hazardous materials and processes to have a robust Process Safety Management program in place. This program allows the impact of incidents involving toxic effects, fires or explosion on personnel, environment or operations to be minimized.

## PDE Process Safety

Within PDE we have a team of personnel who are experts in the field of Process Safety, providing a wide range of safety services such as hazard identification, assessment of protection layers and detailed design of Safety Instrumented Systems (SIS).

Our safety team works closely with our clients to help them understand and evaluate their risks, using our expertise and knowledge to offer practical solutions.

This in-house expertise allows us to provide a wide range of safety services to meet the needs of our clients.

# Hazard Identification

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Hazard Identification is a process we use with clients that allows us to identify key hazards which could pose a risk to safety, the environment or their commercial operations. It involves identifying causes and consequences of hazards as well as outlining any safeguards that could be put in place to protect against or mitigate those hazards. In addition, we can incorporate a level of risk assessment into the process to determine if the risk posed is acceptable and help to develop methods to minimize any risks.

A frequently used Hazard Identification tool is a Hazard and Operability (HAZOP) Study. A HAZOP is a structured collaborative session, set up to identify and evaluate the potential undesirable events that may create hazards or operability problems, including personnel risk, potential damage to assets, environment and reputation of the plant/site.

PDE can provide experienced and project independent chairpersons and scribes for a range of Process Hazard Analysis studies, including HAZOP, Hazard Identification (HAZID) and Hazard Analysis (HAZAN). Full reports can be produced based on these studies and support can be provided in implementing any recommendations in reducing risk and addressing operability issues.

## Safety Integrity Level (SIL) Studies

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### **Layers of Protection Analysis (LOPA)**

Through running a LOPA study our safety team will be able to identify any strengths or weaknesses in the safety systems used to protect personnel, assets and the environment. The LOPA will also be able to identify any SIS or additional protection layers needed to improve process safety, along with risk reduction and SIL targets for the SIS. We have the capability to chair LOPA studies and produce LOPA reports detailing the required risk reduction and proposed methods to meet these requirements.

### **Safety Requirement Specification (SRS)**

The SRS is a process that identifies and presents the safety requirements of the overall SIS, as well as any specific Safety Instrumented Functions (SIFs), identified in the LOPA or elsewhere. We work closely with clients to guide them through the SRS process, ensuring that they achieve maximum value and results.

### **Safety Integrity Level (SIL) Assessment**

A SIL assessment ensures that a specific SIF is suitable to address any potential hazardous scenarios adequately and is reliable enough to provide effective risk reduction. These requirements can be quantified as a SIL and can then be compared with the SIL target of any risk reduction set during the LOPA study.

# Control of Major Accidents & Hazards (COMAH) Site Support

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We have extensive experience in working with both Upper and Lower Tier COMAH sites, and as a result our safety team can support you in ensuring all legal requirements are met. Our team has the expertise to prepare and support you in COMAH and Seveso Safety Reports, Major Accident Prevention Policies (MAPP) and Hazardous Substance Consents. We can also help you engage and consult with competent authorities and regulatory bodies such as HSE, EA, HSA and EPA.

## Hazardous Area Services

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Our safety team can provide you with support and the practical advice that you need to ensure that the hazardous areas within your organisation comply fully with regulation frameworks. We have the expertise to complete Dangerous Substances and Explosive Atmosphere Regulations (DSEAR) compliance reporting as well as ATEX inspection and compliance. This includes designing electrical and mechanical installations in hazardous areas as well as advising of any necessary remedial work. We can also assist you in preparing Explosion Protection Documentation and completing Hazardous Area Assessments and associated classification reports and drawings.

## Construction and Design Safety Management

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It is essential for health and safety risk to be managed during the design phase of any project. Our safety team has extensive knowledge and expertise in all areas of health and safety allowing them to effectively mitigate risks.

We can assess capabilities of designers & contractors on behalf of our client as well as undertake safety design & construction audits, inspections and reviews. We collaborate with design teams to ensure they are aware of their duty to identify and mitigate safety design risks. Our technical capability enables us to plan, coordinate and monitor the construction phase and produce all relevant safety documentation for the design, construction and handover stages.

# Additional Safety Services

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Process Safety Training Courses  
Health and Safety Training Courses  
Safety Relief Valve Calculations and Reports  
Planning, Regulatory and Environmental Compliance  
Functional Safety Assessments  
Preparation and Support with Basis of Safety Documentation

## Contact Us

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For further information or to organise a consultation with one of our safety experts you can contact us via phone, email or through our website.



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