

Process Safety Forum

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Process Safety – scope and application to smaller businesses

The purpose of this Learning Brief is to promote process safety management to a broad range of businesses, including smaller businesses. Process Safety has become a well-established approach to managing hazards and risks in a wide range of process manufacturing sectors and businesses, many of which are covered by the Control of Major Accident Hazards Regulations – COMAH. However it is also highly relevant to smaller and less complex facilities – including those outside process manufacturing. Applying a process safety approach can help manage the risks of the ‘worst case’ incidents that can harm people, the environment and business. Many industry sectors where process safety has not traditionally been the main focus are now adopting this as part of a structured approach to safety management. One example of this is the water industry which in March 2015 hosted a national seminar ‘Raising Awareness of Process Safety’ to help implementation of process safety within water supply companies.

What is ‘Process Safety’?

There is no single agreed definition of ‘Process Safety’. The Process Safety Forum (PSF) believes that in its simplest form it is best described as a systematic framework for managing the integrity of hazardous processes and storage. It uses a blend of engineering and management skills aimed at preventing major accidents including (but not exclusively) explosions, fires and toxic releases. It focuses on three key aspects:

- Plant (hardware),
- Process (systems),
- People

The message for smaller businesses is that process safety is not about the complexity of the operation, the range of hazardous substances or quantities of those substances - it is about managing risks effectively so that people, the environment and assets are kept safe.

Differentiating process safety from occupational safety (or personal safety) is an important starting point. Focusing exclusively on occupational safety performance – for example reducing Lost Time Accident and personal injury rates, improving occupational health, reducing slips trips and falls - will NOT deliver success in managing process safety. Many high profile incidents have been characterised by an over-emphasis on improving occupational safety at the expense of the less frequent but potentially more serious process accidents.

There are a number of advantages to adopting a process safety approach:

- It will help identify potential vulnerabilities in plant, process and people so that businesses can prioritise and act on them appropriately;
- It can help demonstrate to regulators that risks are effectively managed;
- It helps to set a positive safety culture in the business, by engaging the workforce and demonstrating to staff that senior management care about promoting and maintaining safety;
- It delivers improved business efficiency and financial benefit derived from fewer incidents, less downtime, and better controlled costs.

Key elements of process safety

The main elements of process safety that companies will need to address, in order to maintain a successful process safety approach within their business, are as follows:

- **Leadership**, senior management are actively involved in and set the tone for managing the biggest potential risks;
- **Identification and assessment of the main risks** that could materialise if not effectively managed;
- **An Asset Integrity programme** appropriate to the hazards and risks, to ensure potential loss of containment is avoided;
- **Competence management**, to ensure that relevant staff know and understand the hazards and their role in preventing incidents;
- **A range of Performance Indicators**, so that the site management has a true picture of the performance of the business and the robustness of measures designed to prevent incidents (see for example HSE's guidance document HSG 254 "Developing process safety indicators: A step-by-step guide for chemical and major hazard industries" <http://www.hse.gov.uk/pubns/books/hsg254.htm>).

Relevant guidance

There is a wealth of relevant guidance available to help businesses manage process safety. Perhaps the most concise but comprehensive document is the Organisation of Economic Co-operation and Development (OECD) guidance on *Corporate Governance for Process Safety* published in 2012. The guidance clearly sets out the essential process safety elements and behaviours of leaders, and has a simple 'self-check' assessment tool so that companies can do their own assessment of their process safety management capability. It is available from the OECD website here:

<http://www.oecd.org/chemicalsafety/corporategovernanceforprocesssafety.htm>

For more information on the role of the Process Safety Forum together with other useful learning briefs, safety alerts and references to other process safety information and guidance, visit the PSF website here:

<http://www.p-s-f.org.uk/>

The Process Safety Forum has been set up to provide an industry association platform whereby initiatives, best practice, lessons from incidents and process safety strategy can be distilled and shared across sectors, to influence our stakeholders (including the Regulators), and to drive the process safety management agenda. The Process Safety Forum consists of representatives from UKPIA, TSA, CIA, OGUK, CBA, RSSB, ENA, ECIA, UKLPG, BAMA, EIG, UKOPA, SWA, MPA, UKLPG, BAMA, DRAMS and SDF. For further details contact: peter.davidson@ukpia.com.