

Brochure

Process Safety Management An integrated holistic approach



# Process Safety Management (PSM)

# To succeed in business you must:

- Protect your licence to operate
- Meet ever more demanding regulatory requirements
- Manage the sustainability of your business
- Raise stakeholder and public confidence
- Minimise and, where practicably possible, eliminate the risk of incidents

ABB provides technical consulting and engineering services to improve performance in the areas of compliance, operations and engineering to customers in the chemical, petrochemical, oil & gas, power, pharmaceuticals, metals and consumer industries worldwide.

A growing number of organisations are becoming increasingly aware that safety issues need to be managed in a risk-based way linked to their business needs, but also cost effectively. Good safety management must embrace the way in which people, plant and systems all inter-relate:

- Plant and equipment must be of an appropriate design standard / integrity and be adequately maintained
- Systems / procedures must be fit for purpose and practicable
- People must be adequately competent and work within a positive cultural framework that encourages safe behaviour and a belief that any injury, harm or damage can be avoided

## ABB's approach considers all elements



# Capabilities

We are able to support clients in all aspects of process safety including:

- PSM assessing and improving PSM performance including management systems, leadership and technical aspects
- Risk management and assessment identifying key vulnerabilities and helping to eliminate or minimise them
- Operational human factors practical approaches for minimising human error and delivering positive human interactions
- Functional safety systems improving performance across the total life cycle for safety systems to IEC 61508 and 61511

#### Our experience

We have a unique blend of leading edge technical excellence combined with an operational heritage. We provide a source of independent, informed and practical guidance across all areas of process safety. We develop solutions to problems and supply the skills and resources to ensure their effective implementation by drawing on our technical capabilities some of which are outlined at the back of this brochure.





# Our approach

The ABB approach to process safety is built on achieving sustainable risk reductions, through delivering proven solutions that can be practically implemented in potentially hazardous operations. Typically we get involved in one of more stages of any improvement, namely;

Process Safety Management		
Risk assessments or audits	Optimise risk reduction options Confirm tolerable residual risk	Implementation and ongoing support
"Find the gaps"	"Specify optimum risk reductions"	"Reduce Risks"
<ul> <li>Risk assessments - PHA, PHR, target SIL,</li> </ul>	<ul> <li>Generate potential solutions</li> </ul>	Implement     improvement
<ul> <li>occupied buildings etc.</li> <li>Assessments against best practice - alarm management, human factors, etc.</li> </ul>	<ul> <li>Confirm risk reduction, cost, feasibility etc. of options to select optimum</li> </ul>	programme - improved systems, training, engineering projects, procedures etc.

At all stages of our involvement we work with customer teams to ensure we maximise the use of local operational experience and to share our skills and experience. This approach provides optimum solutions by combining best practice knowledge with a true understanding of operational needs.

#### Benefits

By using our proven approach, we can ensure that you:

- Are in control of all the safety aspects of your business
- Achieve the safety performance improvements needed
- Spend money on safety management and improvement in the most effective way
- Have a consistent commitment to safety throughout the business
- Have access to the skills, resources and expertise required

#### ABB's 3 steps to manage risks

#### Event probability



Result - reduced risks

#### **Client comments**

"We have found ABB's approach extremely help full in putting us on the road to broad-based PSM implementation. When one pieces together the various components of the ABB offering it results in a full fledged and very pragmatic management system around PSM. The way ABB works also allows one to make whatever is developed bespoke to your company needs and I have found ABB incredibly eager and flexible when we have made changes to the approach. ABB always strives to make sure you get what works. Highly experienced and articulate team members are always contactable and this helps greatly when there are issues."

- Michael de Klerk, Process Safety Director, Corus Group

#### Safety services:

- Alarm management
- ATEX / DSEAR
- Consequence assessment and gas dispersion
- Control of Major Accident Hazards (Seveso II / COMAH) compliance
- Dust explosion hazards
- Effective safety management processes
- Electrostatic hazards
- Fire and explosion safety management
- Functional safety systems management (IEC 61508 and 61511)
- Hazard and Quantified Risk Assessment (QRA)
- HAZOP and life cycle hazard studies for new projects and existing plants
- Human factor reviews and HSE culture change
- Occupied buildings assessments
- Process Safety Management (PSM)
- Workplace safety

#### Other ABB capabilities include:

- Environmental services
- Industrial Energy Efficiency (IEE)
- Inspection
- Integrity management
- Operational engineering support
- Operations improvement
- Project services
- Software
- Technical training

For further information please contact:

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