



PROCESS SAFETY MANAGEMENT

A systematic approach to major accident hazard management.

Major accidents happen infrequently due to the care taken in developing equipment codes, and the increasing expertise of plant designers and operators. However, many companies face major challenges related to the speed at which operations have to be installed, manpower downsizing, environmental pressures, ageing of plants, and acquisition of other companies.

Despite all the challenges, a company must ensure that safety management is adequate for its processes and (if possible) compatible between one site and another, so that performance standards can be established and maintained.

The objective of Process Safety Management (PSM) is to proactively ensure process integrity by preventing loss of containment of hazardous chemicals, the loss of control of energy and the prevention of associated adverse consequences. PSM requires contingency plans to be in place to mitigate, as far as reasonable and practicable, the potential consequences of such incidents. The principles of PSM apply throughout the lifecycle of a plant or installation to ensure that the facilities can be managed safely and achieve acceptable levels of business risk overall. Elements such as process safety information, process hazards, standard operating procedures, training, contractor management, asset integrity, pre-start up safety reviews, permit to work, management of change, accident and incident investigations, emergency planning and response, auditing, etc., are included in a PSM programme.

Bureau Veritas applies the principles from the process safety management of highly hazardous chemicals standard, which forms part of the United States Department of Labour OSHA standards (1910.119). Based on this standard and good practices, Bureau Veritas performs gap audits on clients' PSM programmes to identify areas of compliance as well as those requiring improvement.

Key benefits

Bureau Veritas is a widely recognised world leader in many of the elements of PSM. It provides advice to clients about what studies are appropriate at the right time in a facility's life, and responds to requests for specific work or enhancements to their PSM programme. A well-entrenched PSM programme can assure that:

- Operational hazards and risks are identified;
- Potential incidents are avoided;
- Operational safety requirements are considered in business decisions;
- Unacceptable risks to persons, property, products and the environment are avoided; and
- Emergency and contingency plans exist.

Spin-offs from the objectives result in reduced exposure to lawsuits, penalties, public liability claims and hikes in insurance premiums. Other intangible benefits include retention of corporate image.

Related services

- Process safety critical equipment
- Operating and maintenance procedures
- Asset maintenance strategies and plans
- Fitness for service assessments
- Risk-based inspection (RBI) studies
- Pipeline integrity management systems (PIMS)
- In-service inspections
- Risk assessments
- Pre-start up safety reviews (PSSR)
- Reliability studies
- Fitness for service (FFS) assessments

