

Your Partner for Safer Tomorrow



Process Safety & Risk Management Services



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About Us

We are Process Safety Consultancy company with our head office at Surat-Gujarat. Lead by a team of Chemical Engineers having profound knowledge of Management of Safety in highly hazardous industries; we are privileged to have a client base of around 500 industries in and out of India. We have a team of in-house experts with profound knowledge and rich industrial experience in various process industries.

With his extensive experience, the founder Director Mr. Nilesh Jugal; leads the organization with quality, processes and commitments that are commensurate with the highest international standards. Under his stewardship; JOGI has developed methods and procedures for excellence in Process Safety services, while cultivating a high level of professionalism in team members.



JOGI believes in practical approach in achieving accident-free workplace and strives to find out innovative solutions to suit the culture and taboos of the people working in the industry.

Vision

To become one of the top consultancy company providing services in the areas of Process Safety Consulting, HSE Training & HSE Software.

Mission

Be the most reliable and trustworthy consultancy firm providing world class HSE solutions to process industries.

PROCESS SAFETY SERVICES

PSM - PROCESS SAFETY MANAGEMENT

HAZOP/HAZID Study | LOPA & SIL Study

QRA | Consequence Modeling

HAC (Hazardous Area Classification)

Fire System Design

Fire Adequacy Survey | Fire Load Calculation

F&G Mapping Study for onshore/offshore facilities

ERDMP following statutory requirements set by PNGRB India.

Flare Radiation & Dispersion Analysis

Accident Investigation

Electric Audit | Third Party Safety Audit | Fire Safety Audit

EHS Training

Background Of PSM

PSM is a result of significant process industry incidents, for example

1984 - Bhopal India, Chemical Release and Fatalities

1985 - Institute, West Virginia Chemical Plant Incident (evacuations of local communities, no fatalities)

1989 - Pasadena, Texas, chemical plant explosion, 23 deaths and over 100 confirmed injuries

1992 - Congressional pressure, concerns over protecting the Public & workers

OSHA Rules was issued

1994 - OSHA (29 CFR 1910.119) was developed

What Is PSM ?

The goal of a sound PSM program is to effectively ensure that process facilities handling highly hazardous materials operate safely. PSM also addresses issues related to the Operability, Productivity, Stability and Quality output of processes, leading to providing safeguards



Benefits Of PSM

PSM is an effective tool to systematically manage process safety at hazardous process industries. The major aim of PSM is to develop plant systems & procedures to prevent unwanted releases which may ignite and cause toxic impacts, local fires or explosion.



Our Approach

The relevance and importance of various PSM elements depend upon the type of process, type of unit operations involved, type of industry, size of industry and number of employees. JOGI therefore, designs a customized PSM program considering the only relevant and sufficient elements of PSM which encompasses all the aspects of process safety for that unit.



INTERNATIONAL STANDARDS & GUIDELINES

Integral part of OSHA Occupational Safety and Health Standards since 1992 Process Safety Management of Highly Hazardous Chemicals (29 CFR 1910.199)

PSM ELEMENTS

- Process Safety Information
- Process Hazard Analysis
- Safe Work Practices
- Management of Change
- Mechanical Integrity
- Quality Assurance
- Pre-Startup Safety Review
- Contractor Safety
- Incident Investigation
- Emergency Planning & Response
- Training
- Compliance Audits
- Employee Involvement

PSM IS ACHIEVED BY FOLLOWING PROCESS & STEPS

- PSM Gap Audit
- PSM Organogram
- Roles & Responsibility
- PSM Action Plan
- PSM Key Performance Indicators
- PSM Manual
- PSM Awareness Program
- PSM Elements Training
- Implementation & Monitoring
- PSM Third Party Audit

1

PSM GAP ANALYSIS

2

PSM ACTION PLAN

3

PSM MANUAL

4

TRAINING & IMPLEMENTATION

5

AUDIT & INSPECTIONS

HAZOP Study

HAZOP is one of the most widely used PHA technique worldwide in industries like Oil & Gas, Chemical, Petrochemical, Engineering, etc. The HAZOP technique attempts to identify how a process may deviate from its design intent, identifies the causes and possible consequences and finally evaluates existing safeguards to decide further recommendations if required.

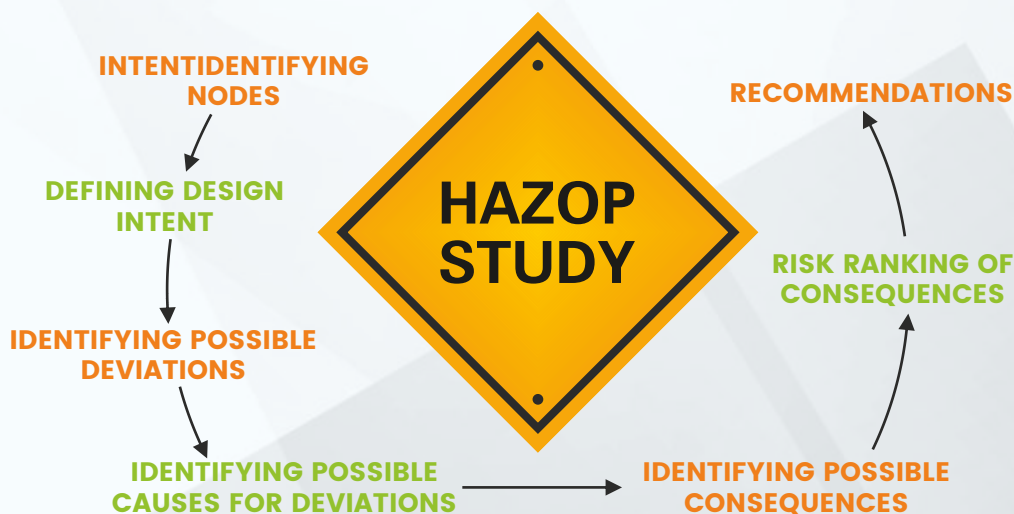
Benefits Of HAZOP

In addition to evaluation of efficacy and sufficiency of the safeguards; HAZOP technique gives recommendations to avoid occurrences of HSE incidents like fire, explosion or release of toxic gas. HAZOPs seek to minimize the effect of a typical situation in the operation/process by ensuring that control and other safety systems such as functional safety (e.g. emergency safe shutdown) are in place and work with a high level of reliability.

Why HAZOPs Fail ?

Lack of clarity about the purpose & deliverables of HAZOP. Unbalanced team representing only one or two departments. Too complex risk matrix when a simplified risk matrix could have been well understood and easily interpreted by team members. Worksheet not customized as per relevance. Repetitive filling of unnecessary and irrelevant fields in work-sheet results in bored sessions. Too long HAZOP session results in loss of interest of team members and it ends up with compromise in HAZOP quality due to hurry for the sake of completion.

Flow of Activities



Our Approach

Our approach is to make HAZOP Study simple, relevant, effective and in compliance to prevailing codes and guidelines applicable to the client. We start HAZOP study with a half-day session on HAZOP training to give an outline of the techniques and methodology of HAZOP to all the participants of HAZOP Sessions. We conduct HAZOP study with appropriate software depending upon the client needs and relevance; thereby ensuring that the deliverables are completely in line with client needs. We customize the format of worksheet and technique considering the plant life cycle, so that HAZOP Study becomes **COST EFFECTIVE & MEANINGFUL** for a particular stage of plant life.

Quantitative Risk Assessment (QRA) is a method for calculating individual, environmental, employee and public risk levels.

Facilities requiring Quantitative Risk Assessment (QRA) studies may include production and processing facilities, high pressure pipelines or storage and importation sites including liquefied natural gas (LNG). QRA may be a requirement of applicable legislation and/or internal company governance to show that risks are identified and controlled to an acceptable level. The criteria for risk acceptability may be defined by local regulations or company / investor policy.



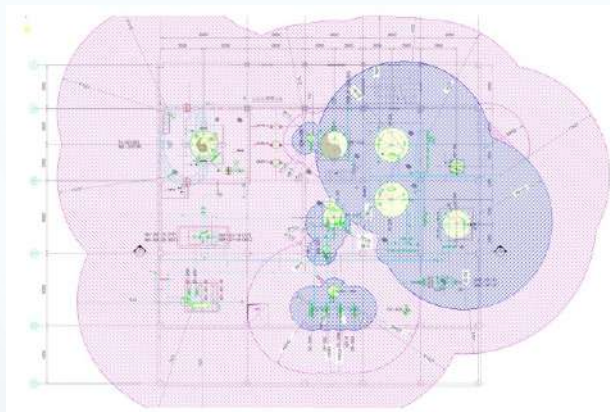
QRA Study



- Identification of Hazards
- Selection of scenarios to be modelled
- Estimation of Frequency of Failure
- Consequence Analysis: An analysis of the severity / consequence of accident scenarios
- Predicted number of fatalities / casualties for each scenario
- Estimation of Individual risk
- Group / Societal risk
- Potential loss of life
- Location specific risk
- Preventative / mitigation measures

We carry out Risk Assessment for existing as well as proposed units using most prevalent and relevant methodologies that involve the steps of identifying hazards associated with the operations and selecting worst case scenario for consequences estimation. Adopting reputed software models for consequences estimation. We suggest the measures to minimize or mitigate risks to meet appropriate acceptability criteria and/or demonstrating that the risks are as low as reasonably practicable (ALARP).

Hazardous Area Classification is a method of analyzing and classifying the environment where explosive gas atmospheres may occur. The main purpose is to facilitate the proper selection and installation of electrical equipments to be used in that environment, taking into account the properties of the flammable materials that will be present.



Hazardous areas are classified into zones based on an assessment of the frequency of the occurrence and duration of an explosive gas atmosphere, as follows:

Zone 0

An area in which an explosive gas atmosphere is present continuously or for long periods.

Zone 1

An area in which an explosive gas atmosphere is likely to occur in normal operation.

Zone 2

An area in which an explosive gas atmosphere is not likely to occur in normal operation &, if it occurs, will only exist for a short time.



Methodology

The typical Area Classification Process consists of following steps:

- Site Visit
- Acquiring details of various chemicals being handled, stored or processed
- Identifying the source & extent of release
- Verifying the plant layout
- Assessment of Zones
- Drawing the ZONE contours on layout
- Preparing the report with findings and Recommendations

Codes we follow

- IEC 60079
- ATEX Directives
- IP 15
- IS:5572:2009



Areas Of Expertise

- HAC (Hazardous Area Classification)
- Fire Proofing Design for flammable gases and liquids & combustible dusts
- Inspections & Auditing of existing flameproof equipments
- HAC Conformity assessment (Validation)
- Training for maintenance of equipments and safe practices in classified ZONEs.



Safety Audit is an important & useful technique for Industrial management, whereby one can obtain a systematic critical appraisal of the effectiveness of company/plant's safety program that is undertaken with a view to suggest improvements & up gradation. There are several types of audits; all with specific purpose and deliverables.

Third Party Safety Audit (IS:14489)

JOGI conducts third party safety audits, generate a report that identifies any corrective actions required, and then indicate facility safety solutions based on "Best Practices".

Our customized methodology has been designed to deliver findings and measures which truly proves to be a value-addition to client's HSE systems and has proved us the most reliable consultants for Third Party Safety Audits as per IS: 14489.



Electric Audit

We follow a systematic approach for evaluating potential electrical hazards and produce reports recommending actions for improvement in Electrical Installations.

Electrical Safety Audits helps in identifying:

- Electrical hazards to minimize the risk of accidents like fire due to short-circuiting,
- Areas of risk or vulnerability in electrical systems and installations,
- Non-compliance with the legislation and best practices.

Office Safety Audit

The Audit shall be carried out with a view to cover the AUDIT ELEMENTS mentioned below:

- Identification of Hazards
- Personnel Interactions
- Evaluation of Evacuation Plan
- Sign Boards
- Security and Vigilance on Personnel movement
- Ventilation

Fire Safety Audit

Fire in any occupancy has potential to cause severe damages to both life and property. Fire Safety audit is found to be the effective tool for assessing fire safety standards of occupancy. It helps the owners to identify the areas for improvement and evolve an action plan, in addition to emergency preparedness and mock drills...



Fire Fighting System Design

We provide design solution for installation of appropriate fire fighting facilities like Fire Hydrant network, Sprinklers, Fire Detection and Alarm Network, etc.

We provide the consultancy services for designing the fire fighting facilities as per TAC, NBC and NFPA standards.

We design:

- An integrated Hydrant System
- Sprinkler Systems
- Fire Detection network
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Code we follow:

- TAC,
- OISD
- IS (Indian Standards)
- NFPA Standards/guideline.

Fire Adequacy Survey

We conduct Gap Analysis to access the adequacy and efficacy of the existing fire fighting network/resources to effectively minimize the fire risk.

Code we follow:

- TAC Guidelines
- NFPA Standards
- National Building Code of India, 2016

Fire Load Calculation (NFPA - 557)

The calculation of the fire load is the basis for the determining the classification of the occupancies for the fire grading of buildings as well as determining the required resources for fire fighting.



JOGI provides Process Safety Training to Managers, Officers as well as Workers on various subjects. We customize our programs to suit the specific needs of industries.

We conduct regular Training Programs in various cities on INDIA on following subjects:



HAZOP Study

Its a TWO day training program intended for safety professionals to develop their competencies to independently conduct a **HAZOP** Study. Contents are a blend of theoretical understanding of HAZOP Methodology and some practical case based studies.

Duration: 2 Days

PSM (Process Safety Management)

This program gives basic understanding of PSM program. The participants learn about the need and benefits of PSM as well as get a considerable clarity about various elements of PSM with their applicability, relevance and method of implementation.

Duration: 2 Days

Incident Investigation

This program gives basic understanding of PSM program. The participants learn about the need and benefits of PSM as well as get a considerable clarity about various elements of PSM with their applicability, relevance and method of implementation.

Duration: 2 Days

Log on to our website to know about upcoming Training Programs:
www.jogisafetech.com/ehs-training

Other Subjects on which we provide Training

Emergency Preparedness	PTW (Permit To Work)
Chemical Safety	Procedure
Electrical Safety	Work At Height
Fire Fighting	Scaffolding
Job Safety Analysis (JSA)	Hot Work
Various Elements of PSM	Work in Confined Space
	Material Handling

CORE SERVICES

TESTIMONIALS

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We have engaged JOGI in the areas of Training on PSM implementation, Process Safety and Risk Assessment. I found his knowledge in the subject to be profound and being an avid learner himself, he always brought latest updates on the subject to the board

Mr. Premnath

Director - Technical
NetMatrix Crop Care Limited, Hyderabad

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JOGI has built a repo as a trustworthy brand in the Process Safety. We have high respect for its team for their capabilities to establish process safety systems.

Sandeep Zaveri

Managing Director
CS Performance Chemicals Pvt. Ltd.

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We have availed the services of M/s. JOGI for HAZOP Training. Participants gave high rating for trainer's ability to engage participants, training content with appropriate videos. Would recommend the program for all employees in O&M

Ilayaraja Palani

General Manager
Process Division -Corporate Technical and Energy Services
Aditya Birla Management Corporation Pvt. Ltd

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OUR PRESTIGIOUS CLIENTS





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