

# SIMOPS Simultaneous Operations System for the Oil & Gas Industry

## INTRODUCTION

- In simultaneous operations (SIMOPS), independent operation may impact the safety of personnel, equipment, and environment of another operation. SIMOPS requirements include hazard identification and risk mitigation and/or safety impact when planning SIMOPS work activities to be taking place simultaneously in the same location. These operations can be offshore, i.e. subsea oil and gas production, or onshore, i.e. oil and gas marine terminals during expansion or major maintenance work within a “live” process area of existing facility. SIMOPS also refer to steps taken during the construction, commissioning, start-up and operation of any onshore Oil & Gas Processing Plant.
- This training course will focus on the strengths of creating and implementing SIMOPS plans and activities for organization regarding onshore and offshore projects. Consequences of not including them, such as costly delays or serious harm or injury to onshore/ off shore oil and gas installations and personnel, will also be explained. The training course will include several workshops with solving real problems from everyday practice.

Participants on the SIMOPS training course will develop the following competencies:

- Full confidence in dealing with various aspects of SIMOPS
- Effective communication necessary for making SIMPOS efficient and working smoothly
- Development of risk mitigation measures in case of simultaneous hazardous activities
- Help your technical team find good solutions in complex operational situations
- Organization of effective working teams with clear roles and responsibilities

## **PROGRAMME OBJECTIVES**

This SIMOPS training course aims to enable participants to achieve the following objectives:

- Techniques to handle effectively the simultaneous operations (SIMOPS)
- Skill to organize and plan all relevant activities
- Ability to analyze both onshore and offshore operations
- Knowledge of the hazards and risks involved in SIMOPS
- Flexibility to adapt to new situations
- Understanding of the process guidelines to be followed
- Recognizing the roles and responsibilities of all parties involved

## **WHO SHOULD ATTEND?**

The SIMOPS training course is suitable for a wide range professionals, including, but not limited to:

- Plant Engineers and Project Engineers
- Operations Team Leaders
- Reliability and Integrity Supervisors and Engineers including safeguarding of process
- Technical personnel responsible for monitoring and assessing equipment maintenance and operations
- Supervisors responsible for maintenance and shutdown planning and implementation

## **TRAINING METHODOLOGY**

- The Simultaneous Operations System training course will be conducted along workshop principles with formal lectures and interactive worked examples. The emphasis in the training course will be on the explanation of all technical points and providing answers to problems that are encountered in everyday industrial practice regarding the risk assessment of simultaneous operations and related activities in oil & gas industry.
- Each learning point will be reinforced with practical examples. There will be ample opportunities for active discussion and sharing professional experiences and exchange that will help solidify the gained knowledge. All training course materials will be provided.

## **PROGRAMME SUMMARY**

- The training course aims to provide useful knowledge in applying the risk assessment techniques to various aspects of simultaneous operations (SIMOPS). The training course will also provide the knowledge on how to organize technical teams that function efficiently so that good solutions can be found in urgent situations. This SIMOPS training course will provide best practices on how the efficient technical teams function, and what are the roles and responsibilities of the team members in doing SIMOPS activities.

## PROGRAM OUTLINE

### Principles and Organization of SIMOPS

- Where and When we need SIMOPS?
- Work Identification Plans & Communication to avoid Accidents
- Meeting Organization, Flow of Information and Field Schedule (Gantt Chart etc.)
- Documentation on Interface Control and Tracking & Monitoring
- SIMOPS & HSE: Leaks, Fires & Explosion Protection
- Workshop: Case Studies & Worked Examples

### SIMOPS Risk Management and Control Work

- Hazard Identification & Risk Calculation: Quantitative Approach
- Agreement on Risk Assessment Methodology (Risk Matrix)
- Risk Management Process: Risk Mitigation Measures
- High Risk & Focus Areas: Enclosed Space & Hot Work
- Permit to Work (PTW) Management System & Procedures
- Workshop: Case Studies & Worked Examples

### SIMOPS Roles, Responsibilities & Competence

- Matrix of Responsible Personnel (RASCI) involved in SIMOPS
- Site Project Manager
- HSE Manager: Emergency Response Procedure (ERP)
- SIMOPS Operations Leader (SOL)
- Installation, Commissioning and Startup Manager
- Task Supervisor
- Workshop: Case Studies & Worked Examples

### SIMOPS in On-Shore Oil & Gas Industry

- SIMOPS On-Shore Elements & Operations Related to Safety
- Onshore Process Plants and Storage Terminals: Challenges
- Oil Pumping Stations and Gas Compressor Stations: Safety Issues
- SIMOPS in Construction, Commissioning & Start Up of Plants & Pipelines
- Oil & Gas Transfer: Filling and Emptying Tanks
- Leaks, Fires & Explosion Protection
- Workshop: Case Studies & Worked Examples

## SIMOPS in Off-Shore Oil & Gas Industry

- SIMOPS Related to Port Operations & Marine Oil & Gas Terminals
- Platform Operations: Fixed & Floating Units
- FPSO & TLP Operations: Topside Facilities: Gas Train & Oil Train Safety
- SIMOPS Related to Ship DP Operations
- Subsea Operations & Piping Systems Hazards
- Marine Pollution Accidents & Environmental Protections Aspects