



विद्यारन्तम् महास्त्रम्

**Rajiv Gandhi Institute of
Petroleum Technology**

(An Institution of National Importance
established under an Act of Parliament)

Chola MS
RISK SERVICES

**Cholamandalam MS
Risk Services**



Certified **HAZOP** Leader Training

October 3rd – November 8th 2020

First time in India – A HAZOP Certification program offered by
Rajiv Gandhi Institute of Petroleum Technology and Cholamandalam MS Risk Services

About the Program and Partnership

This program is being jointly offered by RGIPT and Cholamandalam MS Risk Services. This alliance has been formed to provide the industry with Certified Professionals who have the right mix of Academic Excellence and Practical Skill in the areas of Process Safety, Environment and Sustainability.

Backed by the rich experience and credentials of both the organisations in the industry, the program will feature well-researched curriculum designed to benefit professionals with specific emphasis on safety engineering solutions. This partnership will serve to bridge the gap between theoretical and practical knowledge, providing the much-needed industrial exposure to the participants. The prime objective of these programs is to provide world-class education, training, and research to meet the growing requirements of the world today in safety and risk management.

About RGIPT

The Ministry of Petroleum & Natural Gas (MoPNG), Government of India set up The Rajiv Gandhi Institute of Petroleum Technology (RGIPT) at Jais, Dist. Amethi, Uttar Pradesh through an Act of Parliament ("Rajiv Gandhi Institute of Petroleum Technology Act 2007"). RGIPT has been accorded the eminence of being an "Institution of National Importance" along the lines of the Indian Institutes of Technology (IIT). The Institute is empowered to award degrees in its own right. RGIPT is co-promoted as an energy domain specific institute by six leading Oil Public Sector Units (ONGC, IOCL, OIL, GAIL, BPCL and HPCL) in association with the Oil Industry Development Board (OIDB). The Institute has been associating with the leading IITs (Kanpur, Bombay, Roorkee & Guwahati), CSIR Labs (IICT, CIMFR & IIP), IIT Allahabad and International Universities like Persian Gulf University, Iran and Edith Cowan University, Australia specializing in the domain of Petroleum Technology and beyond.

For more details: www.rgipt.ac.in

About Cholamandalam MS Risk Services

Cholamandalam MS Risk Services Limited, part of the INR 381 Billion Murugappa Group, is a 50:50 joint venture with the Mitsui Sumitomo Insurance Group, Japan, offering comprehensive risk management and engineering solutions. With two decades of experience and over 8500 consulting projects across 42 industrial sectors, the company offers best-in-class services to organizations to optimize their EHS (Environment, Health & Safety) performance and set new benchmarks in safety performance.

For more details: www.cholarisk.com



OBJECTIVE

Introduction to the concept of process safety in Industry and understanding the PHA (Process Hazard Analysis) and Risk Assessment, with further focus on understanding and application of HAZOP (Hazard and Operability Study) to real life problems. On successful completion of the program you can take up opportunities as Certified HAZOP Leader.

METHODOLOGY

Lectures will be delivered via online classroom tools (RTC platforms). The candidates are required to have a good internet connection. Besides Lectures, the course will use tools like guided exercises, case study discussions and workshops. Study teams will be formed with other participants to work in workshops which will be monitored by an instructor.

ELIGIBILITY

Engineers with relevant work experience of over 10 years in process operation & technical services, maintenance, design, and HSE (process plant experience) and the ability to understand P&IDs is a pre-requisite.

CERTIFICATE

Upon successfully completing all requisites of this course comprising of formative and summative assessments, you will receive a Certificate issued by RGIPT. This certificate program requires 80% attendance.

ADMISSION PROCESS

Interested candidates may fill the Application form and submit to edp@rgipt.ac.in. Selected candidates will be intimated by email/phone. The confirmation of admission will be subject to receiving the full payment towards the Fees.

Last Date **29th September, 2020**

There are many PHA techniques which are being used in the industry and each of these have its strength and weakness. Hazard Identification (referred to as HAZID), What-If Analysis (referred to as What-If) and Hazard and Operability (referred to as HAZOP) are a few powerful tools used by process industries to identify potential hazards in any operating or new process plant. Somehow HAZOP has become the de-facto standard for chemical process hazard analysis.

The technique has spanned over four decades and is continuously evolving to identify the potential hazards and operability issues associated with systems which may have detrimental effects on People, Asset, Environment and Reputation of the process plant. The following course underlines the understanding of different PHA techniques with focus on HAZOP and its application to a process plant.

PROFESSIONAL DEVELOPMENT HOUR

Date : October 3rd – November 8th 2020

Schedule : 1:30 PM – 5:30 PM (Every Saturday and Sunday)

40 hrs

Note: Candidates may be required to spend additional 2-4 hours in a week to complete assignments

TRAINING SESSIONS

1 Basic Concepts

- Safety Vs Process Safety
- Process Safety Management (PSM) Overview
- Importance of Process Hazard Analysis (PHA) in PSM, History and evolution of International Standards and Regulatory Framework
- PHA Overview, PHA Techniques
- Project Lifecycle and Suitability of Techniques
- Hazard Vs Risk

2 PHA Techniques (HAZID/What-If)

- Introduction to HAZID, Hazard Management Process, Introduction to What-If Analysis
- Case Studies/Exercise

3 Group Exercise

- HAZID and What-If Analysis

4 HAZOP Methodology

- Learning from Accidents
- Introduction to HAZOP
- Need for HAZOP, HAZOP Types
- Standard & Legal Requirements, Strengths and Limitations
- Components of HAZOP, HAZOP Node Identification and Selection, Standard Guidewords, Design Intent, Parameters, and deviation, Interactive Exercise
- HAZOP examples and HAZOP Application

5 HAZOP Methodology (Cont'd)

- Identification of causes & evaluating consequences, Safeguard identification and validating of safeguard based on criteria, Existing Risk reduction measures (using alarms and trips)

- Qualitative risk evaluation,
- Recommendations (Additional Safeguards) for further risk reduction, Development of worksheets

6 HAZOP Pre-Requisites

- Identification of team, Team leader and Scribe pre-requisite qualifications, Team leader responsibility, Scribe Responsibility, Team Responsibility, Pre-requisite data and document validation
- Planning and Leadership - Selection of a team leader and the team, Preparation and Pre-meeting with client, Planning required for the meeting, Hardware requirements for the session, Validation of the terms of reference, assumptions, risk matrix and ground rules with the team
- Remote / Virtual PHA Studies

7 Group Exercise (HAZOP)

8 Recording, Auditing and Advance Aspects

- Recording tools (Software), Preparation of reports, Conducting and Documenting HAZID/HAZOP Revalidations, Managing the Follow-Up of HAZID/HAZOP Results
- HAZOP in Non-Chemical Process Industry

9 Final Assessment

- Individual Quizzes
- Individual Project / Assignment

Group Exercise (8 hours)

Already indicated in the plan above

- Final Exam – 3 hours

Course Fee

INR 60,000/- PLUS 18% GST

- Registration closes on September 29th 2020
- Course Fee mentioned is per delegate.
- Payments to be made on or before 29th Sept'20 via bank transfer
- Fee once paid will not be refunded.
- Fee includes lectures, participant guide, examination and certificate

Account Details for NEFT/IMPS:

A/c Holder : Rajiv Gandhi Institute of Petroleum Technology
 Bank : Bank of Baroda
 Branch : RGIPT, Jais Campus
 A/c No. : 59480100000001
 IFSC : BARBOJAICAM (5th digit is zero)

APPLICATION FORM

We'd like to get to know your background and requirements from the program a little more.

NAME	
OFFICIAL EMAIL ID	
PERSONAL EMAIL ID	
MOBILE NO.	
COUNTRY	
ADDRESS FOR SENDING INVOICE / RECEIPT	
GSTIN	
ORGANISATION	
DESIGNATION & EMP. ID	
CURRENT ROLE	
EDUCATION BACKGROUND – UG/PG/ CERTIFICATIONS/DIPLOMA	
YEARS OF EXPERIENCE	
NATURE OF EXPERIENCE AND ROLES HELD (Attaching a Resume is recommended)	
BRIEFLY TELL US ABOUT YOUR EXPOSURE TO PROCESS SAFETY	
WHAT IS YOUR KEY EXPECTATION FROM THIS PROGRAM?	
HOW DO YOU INTEND TO USE THIS LEARNING FROM THIS PROGRAM WHEN YOU GO BACK?	

Whom to Contact

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