

■ **Course title:**

Root Cause Failure Analysis and Investigation of Process Incidents in Fertilizer Plants

■ **Introduction:**

This training course is aim to assist with reducing risks and have a positive impact on production, budget, wasted personnel time, and/or safety and environmental effects. Eliminating root causes will help improve reliability of equipment, humans and systems, once successful implementation of recommendations is completed.

This training is designed that a person leading an RCFA investigation should be able to complete a investigation, even without formal previous experience. It is anticipated that individuals may need to be involved in, or lead, several RCFA analyses to become completely proficient.

■ **Course outline:**

Lessons

1. Introduction
2. Designing an Incident Investigation Management System
3. Incident Causation Theories
4. Incident Investigation Tools and Methodologies
5. Reporting and Investigating Near Misses
6. The Impact of Human Factors
7. Building and Leading an Investigation Team
8. Gathering and Analysing Evidence
9. Determining Root Causes-Structured Approaches
10. Developing Effective Recommendations
11. Communication Issues and Preparing the Final Report
12. Implementing the Team's Recommendations
13. Seeking Continuous Improvement
14. Lessons Learned

Author(s) / Trainer(s):



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Reliability and Maintenance Specialist,

Bogdan is a maintenance engineer in Fertilizer Industrial Services.

He has a wide range of experience gained during the 27 years spent in the field of construction, commissioning, maintenance and operation of Oil & Gas Facilities in Upstream and Refineries and Ammonia and Urea Plants.

During these years he held the following positions: Mechanical Supervisor; Maintenance Superintendent; Mechanical Superintendent Construction; Project Engineer; Maintenance Engineer; Operability & Maintainability Coordinator; Head of Maintenance Engineering Department; Shutdown and Turnaround Coordinator; Senior Reliability Engineer; Project Manager, Maintenance Manager; Operation Readiness & Assurance Lead.

In the last 24 years he worked with one of the biggest IOC's, NOC's & EPCC's companies such as Shell, Exxon Mobil, BP, ENI, OMV, Snamprogetti, UHDE GmbH, Technip, KBR, Casale, NNPC (Nigerian National Petroleum Company, NIOC (National Iranian Oil Company, NOC (Libyan National Oil Company), SOCAR (Azerbaijan National oil Company).

■ Learning outcomes:

By the end of this training course you will understand:

- The basic principles for incident investigations.
- How to identify the essential features of a management system designed to support high quality incident investigations.
- How to list detailed information for planning and conducting incident investigations including investigative tools, techniques, and methodologies for determining causes.
- Understand what circumstances might drive one RCFA technique rather than another (frequency, consequence or complexity)
- Learn how to use the “5 Why’s” process
- Learn how to build a Process Map to document business processes
- Learn how to build a Cause & Effects Map to understand the system of root causes, so that recommendations truly address root causes and not symptoms of problems
- How to use the findings of an investigation to make effective recommendations that can reduce the likelihood of recurrence or mitigate the consequences of similar incidents.

■ Who will benefit:

- Incident investigation team leaders
- Incident investigation team members (mechanical and process engineers)
- Corporate and site process safety managers and coordinators
- Anyone directly involved in leading or participating on incident investigation teams

■ Course materials:

- Hand-out presentation slides in PDF format

■ Price:

€ 950

■ Discounts:

- 2 places – 10% discount
- 3 places – 15% discount
- 4 or more places – 20% discount.

■ In-company training:

This course is also available as an in-company course (face-to-face or online) where content can be customised to meet your organisation's specific needs and delivered on a date/location that suits your requirements.

[Contact us](#) for more information.

■ Training code: MECH02