

Training in hazard assessment

Management of risk and the demonstration of appropriate risk reduction measures are becoming increasingly important in industry today. This can be relevant to compliance with aspects of legislation, such as COMAH, and in the application of standards such as IEC61508.

This course provides training for those looking for a sound understanding of the principles and techniques of risk and hazard quantification.

29 September - 3rd October 2003, Cheshire

What will the course cover?

Training is given in the skills of hazard assessment and quantification of risk. Topics include: -

- Calculation of hazardous event frequencies
- Assessment of risk reduction from protective systems and Safety Integrity Levels (SIL)
- Criteria for tolerable levels of risk.
- Assessment of demand frequency on protective systems

The effective use of the techniques should also allow questions to be answered in the areas of safety, health and environment; asset management and maintenance; loss prevention; new investment.

Who will benefit and what will they gain?

Typical attendees would be:

- Process Design Engineers
- Electrical, Control, Instrument Engineers
- Safety Managers and Advisors
- Works or Technical Managers with responsibility for managing risk

Typical attendees would probably have:

- A degree, or equivalent, in an engineering discipline or applied science
- Some experience of design, and plant operation
- An analytical and structured approach to problem solving
- Confidence to work with numbers and exercise engineering judgement
- A reasonable grasp of basic engineering mathematics



On completion, delegates should be able to

- Demonstrate a working knowledge of hazard assessment including:-
 - Logical analysis, using fault tree techniques of scenarios leading to hazardous events
 - Use of data and its application to predict the likelihood of a hazardous event
 - Development of practical hazard criteria
 - Handling of dependent or common mode failures
 - Basic human error assessment
- Be able to apply basic hazard assessment in variety of situations to help in making more effective and cost effective decisions.

This course is the basic qualification for those intending to become trainee hazard analysts, and on completion of the course trainees need:

a) to have the opportunity to carry out some assessments soon after attending the course, and

b) to receive guidance from a more experienced analyst acting as a mentor.

It also forms part of the training, in a number of organisations, for accredited hazard study leaders wishing to become senior practitioners.

The training method

The course comprises a mixture of presentations, individual exercises and work in syndicates. A wide range of exercises, mostly carried out in small groups, allow the participants to try out what they have learnt during the lecture presentations. The exercises are based on real plant examples with important practical solutions and covering many different approaches and potential pitfalls.

Course leader

Alan G King, Safety, Risk and Reliability Consultant. Following an earlier career in ICI Fibres and Nobel's Explosives in R&D and Product Development, Alan has spent a number of years in Process SHE, previously with ICI Technology, and now with ABB Eutech. Alan is director of the 5-day Hazard Assessment Course and has also tutored a number of other Safety, Health and Environment courses.

Previous participants comments

"Got out of the course exactly what I wanted"

"Highly informative; good balance between lectures and examples"

"Excellent, very practical and comprehensive"

"Well thought out and presented; excellent documentation and references"

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