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6.3 Failure modes and effects analysis 6.3.1 Strengths and weaknesses of an FMEA; 6.4 Hazard and operability studies; 6.5 SWIFT; 6.6 Fault tree analysis; 6.6.1 Qualitative analysis; 6.6.2 Quantitative analysis; 6.7 Event tree analysis; 6.7.1 Barrier block diagrams; 6.8 Bayesian networks; 6.9 Monte Carlo simulation; Part II Examples of applications; 7 Safety measures for a road tunnel; 7.1 Planning; 7.1.1 Problem definition; 7.1.2 Selection of analysis method; 7.2 Risk assessment; 7.2.1 Identification of initiating events; 7.2.2 Cause analysis; 7.2.3 Consequence analysis; 7.2.4 Risk picture
7.3 Risk treatment 7.3.1 Comparison of alternatives; 7.3.2 Management review and decision; 8 Risk analysis process for an offshore installation; 8.1 Planning; 8.1.1 Problem definition; 8.1.2 Selection of analysis method; 8.2 Risk analysis; 8.2.1 Hazard identification; 8.2.2 Cause analysis; 8.2.3 Consequence analysis; 8.3 Risk picture and comparison of alternatives; 8.4 Management review and judgement; 9 Production assurance; 9.1 Planning; 9.2 Risk analysis; 9.2.1 Identification of failures; 9.2.2 Cause analysis; 9.2.3 Consequence analysis; 9.3 Risk picture and comparison of alternatives
9.4 Management review and judgement. Decision 10 Risk analysis process for a cash depot; 10.1 Planning; 10.1.1 Problem definition; 10.1.2 Selection of analysis method; 10.2 Risk analysis; 10.2.1 Identification of hazards and threats; 10.2.2 Cause analysis; 10.2.3 Consequence analysis; 10.3 Risk picture; 10.4 Risk-reducing measures; 10.4.1 Relocation of the NOKAS facility; 10.4.2 Erection of a wall; 10.5 Management review and judgment. Decision; 10.6 Discussion; 11 Risk analysis process for municipalities; 11.1 Planning; 11.1.1 Problem definition; 11.1.2 Selection of analysis method
11.2 Risk assessment

Sommario/riassunto

Everyday we face decisions that carry an element of risk and uncertainty. The ability to analyze, predict, and prepare for the level of risk entailed by these decisions is, therefore, one of the most constant and vital skills needed for analysts, scientists and managers. Risk analysis can be defined as a systematic use of information to identify hazards, threats and opportunities, as well as their causes and consequences, and then express risk. In order to successfully develop such a systematic use of information, those analyzing the risk need to understand the fundamental concepts of risk