Quantitative Process Risk Screening Tool

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Abstract

Management of hazardous chemicals used in industry has been a major concern of citizens and government regulators for many years. A broad variety of regulations have been promulgated in many countries covering all phases of hazardous chemical use from development through manufacturing, transportation, end use, and the final disposal or treatment of hazardous waste.

Although specific regulations and requirements vary from country to country, there is an overall expectation that industry has a general duty to identify risks from hazardous chemicals which are posed to employees and the communities surrounding industrial facilities, to manage processes safely so as to prevent the release of hazardous chemicals into the environment, and to have appropriate emergency plans in place to deal with any releases which might occur.

A variety of methods and techniques have been developed to analyze processes for potential hazards that they present. These methods vary from quite simple and qualitative to very complex and detailed, sometimes analyzing individual components in the process and control systems to determine the probability and effect of failure. Some government regulations specify which methods must be used under certain circumstances. In other circumstances, the selection and application of methods for hazard assessment is left to industry.