Designs that Lacked Inherent Safety: Case Histories

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ABSTRACT

The fundamentals of Inherently Safer Design were not fully appreciated in the initial design in the following series of case histories. Case histories involving the basic element of plant layout to minimize property damages and injury will be covered first. Simple separation could have reduced the loss of lives and drastically decreased property damages in these accidents.

Other case histories involving designs which allowed incompatible chemicals to inadvertently mix will also be reviewed. The inadvertent combination of these fluids caused equipment damage in one case and a threat to the public in another case. This paper will conclude with case histories involving poor piping routing or poorly identified piping systems which needlessly resulted in expensive repairs.

Exercising the principles of Inherent Safety would have reduced the severity and perhaps the opportunity of these events.