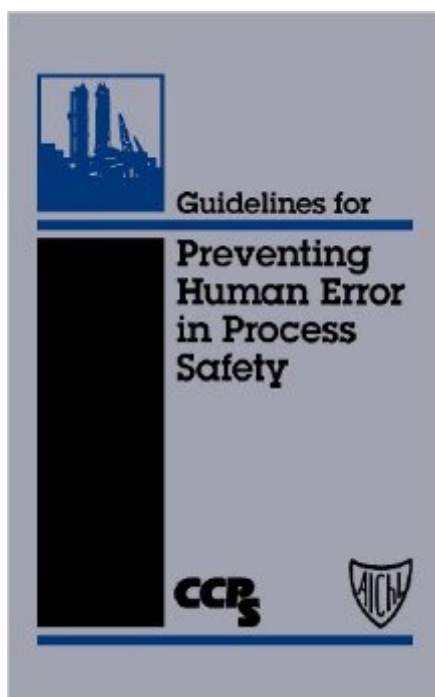# Guidelines For Preventing Human Error In Process Safety

Guidelines for
Preventing
Human Error
in Process
Safety

CCPS

AIChE

Synopsis

Almost all the major accident investigations--Texas City, Piper Alpha, the Phillips 66 explosion, Feyzin, Mexico City--show human error as the principal cause, either in design, operations, maintenance, or the management of safety. This book provides practical advice that can substantially reduce human error at all levels. In eight chapters--packed with case studies and examples of simple and advanced techniques for new and existing systems--the book challenges the assumption that human error is "unavoidable." Instead, it suggests a systems perspective. This view sees error as a consequence of a mismatch between human capabilities and demands and inappropriate organizational culture. This makes error a manageable factor and, therefore, avoidable.

Book Information

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Customer Reviews

The Center for Chemical Process Safety (CCPS) has produced numerous excellent books for the Chemical Processing Industry (CPI), and this is one of the best of the bunch. I have worked as a Production Manager in a chemical manufacturing facility, have spent much of my life researching and teaching in aviation safety programs, and believe that not only do the majority of case studies, concepts, and conclusions drawn in this book apply to the CPI, but in many other technically oriented tightly-coupled industries as well.The book commences with an excellent brief glossary and acronym list (pp. xvii-xxi). Most of the terms were familiar, but one that was new to me was "encystment", which is a characteristic of a human under stress, whereby the individual focuses on

minor problems or details, while ignoring more important issues. This is similar to "target fixation" in military aviation, but perfectly encompasses a characteristic that has been a problem throughout technological systems, and has caused major accidents in the CPI, aviation, and elsewhere. In this discussion of human error, I took particular delight in a typo on p. 5, which introduced the topic: "Human rror [sic] is probably the major contributor to loss of life, injury to personnel and property damage in the CPI." While unintentional, this minor detail demonstrates that even in an extremely carefully prepared document, mistakes happen.The book uses numerous excellent case studies throughout to illustrate principles, and spotlights organizational factors (p. 22ff) that are critical to safety, particularly emphasizing the importance of having a blame-free culture which encourages the flow of information, and an explicit policy that safety considerations are always primary.

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