GUIDELINES FOR

Safe Storage and Handling of Reactive Materials

CENTER FOR CHEMICAL PROCESS SAFETY
of the
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS
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Proceedings of the International Conference/Workshop on Modeling and Mitigating the Consequences of Accidental Releases of Hazardous Materials, 1991.
Proceedings of the International Symposium on Runaway Reactions, 1989
CCPS/AIChE Directory of Chemical Process Safety Services

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Preface

The Center for Chemical Process Safety (CCPS) was established in 1985 by the American Institute of Chemical Engineers (AIChE) for the express purpose of assisting industry in avoiding or mitigating catastrophic chemical accidents. To achieve this goal, CCPS has focused its work on four areas:

- Establishing and publishing the latest scientific, engineering, and management practices for prevention and mitigation of incidents involving toxic, flammable, and/or reactive material.
- Encouraging the use of such information by dissemination through publications, seminars, symposia, and continuing education programs for engineers.
- Advancing the state of the art in engineering practices and technical management through research in prevention and mitigation of catastrophic events.
- Developing and encouraging the use of undergraduate engineering curricula that will improve the safety, knowledge, and consciousness of engineers.

In 1988, *Guidelines for Safe Storage and Handling of High Toxic Hazard Materials* was published. A more recent work, *Guidelines for Chemical Reactivity Evaluation and Applications to Process Design,* gives details of current methods for evaluating chemical reactivity and the use of evaluation results in the engineering design of reactive chemical processes. This document, *Guidelines for Safe Storage and Handling of Reactive Materials,* builds on the preceding CCPS guidelines, but nevertheless is intended as a stand-alone resource for persons responsible for reactive chemical handling. Many books and articles have been written on chemical reactivity, and the intent of this book is not to give an exhaustive discussion of reactivity. Rather, the purpose of this book is to summarize current process industry practices for designing and operating facilities to safely store and handle reactive materials.