

pany libraries, as well as school libraries where chemistry or chemical engineering programs are offered (A supplemental book – Guidelines for Process Equipment Reliability Data – should be acquired together with this volume).

LESLIE E. LAHTI

Guidelines for Process Equipment Reliability Data, by the Center for Chemical Process Safety, American Institute of Chemical Engineers, New York, NY, 1989, ISBN 0-8169-0422-7, 303 pp., \$120.00.

This book supplements the above-reviewed volume of the series of guidelines being prepared by the Center for Chemical Process Safety established by the American Institute of Chemical Engineers in 1985, namely; A Guideline for Chemical Process Quantitative Risk Analysis (CPQRA). It provides information on how equipment reliability data is obtained in order to perform a quantitative risk analysis, such as a CPQRA. The book deals with rates of equipment failures and can be most helpful in developing generic reliability data for common types of equipment.

Making equipment reliability data commonly available requires the collection of raw data, conversion of the data into failure rates and a framework or taxonomy in which the failure rates can be stored. The book has met its goal of establishing such a framework, to which people can add information and truly develop a strong system. One especially useful chapter suggests a system for obtaining specific plant information on operations and how one might treat that data, in order to create plant-specific failure rate data or add to a generic data base.

The authors expect that the Center for Chemical Process Safety will update this book, as well as the generic data base when new information becomes available. It is a useful piece of work to go along with the volume on CPQRA.

LESLIE E. LAHTI

Methods for Assessing and Reducing Injury from Chemical Accidents, edited by P. Bourdeau and G. Green, John Wiley, Chichester, 1989, ISBN 0-471-92278-1, 303 pp., £51.00.

This book is the result of a workshop held in 1987 in New Delhi, India. It is based on a study carried out by the Scientific Group on Methodologies for the Safety Evaluation of Chemicals (SGOMSEC). SGOMSEC is an international organization, sponsored by the International Program on Chemical Safety and the Scientific Committee on Problems of the Environment (in cooperation

with the United Nations and the International Council of Scientific Unions). SGOMSEC commissioned the twelve papers which comprise the last two-thirds of the book. These invited papers were prepared and circulated to the participants (some 65 individuals from 12 countries, but mainly India), prior to the workshop. They formed the basis of discussion and the Joint Report that summarizes the results of the workshop, comprises the first 5 chapters of this monograph.

This report reviews how several large-scale accidents have happened, describes the physical consequences of such accidents and makes a series of recommendations for safety procedures that should be in place, in order to assess and control chemical accidents. One chapter of the report considers the assessment of risk from chemical exposures and describes the essential elements of immediate and long term medical and public health responses in the event of an accident. Another chapter discusses the effects of chemical accidents on plants and animals, but more importantly, how these can be used as indicators of exposure and biological damage to humans. The joint report concludes with a number of recommendations for emergency planning in case of disaster for communities, even though the community has little involvement with chemical plants per se.

This monograph should be considered as a source of critical information for those who have to deal with chemical accidents, as well as safety directors charged with developing plans for such potential events.

LESLIE E. LAHTI