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Construction Safety Management and Engineering

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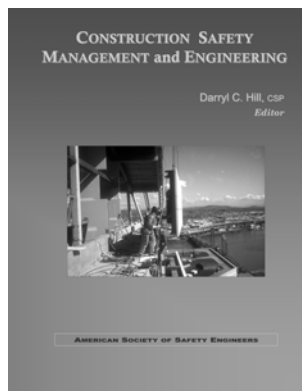
One of the many benefits of ASSE membership is the networking and problem-solving capabilities. Now, thanks to the Construction Practice Specialty and 37 subject-matter experts, ASSE has published a comprehensive and informative reference book, *Construction Safety Management and Engineering*.

This reference manual gives the reader--whether new to construction safety or a seasoned veteran--a 'heads-up' in helping to make a difference in the lives of workers. In addition to the SH&E practitioner, this book will prove invaluable to the student, professor, project manager, engineer, and those actually a comprehensive reference guide had been available when I started some 30 years ago. The manual is laid out in five sections--from "Before the Work Commences" to "Other Considerations."

Before Work Commences

The six chapters in this section cover the necessary groundwork that should be in place before construction commences, starting with the first chapter's discussion of the history of the current state of occupational safety and health and the ethical considerations facing the SH&E profession. This chapter also examines the roles that SH&E professionals are expected to fill, as well as the role of OSHA in construction safety and health. The chapter also discusses key components of successful SH&E processes and how the corporate culture impacts safety and health.

"This book gives the reader access to some of the best subject-matter experts in the construction industry."



Chapter 2 takes an in-depth look at a model SH&E system, from essential elements to organizing system elements into an all-inclusive process. Chapter 3 discusses jobsite culture and its impact on incidents. It also discusses accident-causation theories, the roles of employees and management in the injury cycle, and the principles of variation and how statistical methods help understand incidents.

Chapter 4 addresses elements of workers' compensation, while Chapter 5 explains consolidated insurance programs and examines the role of the experience modification rate in policies.

Chapter 6 covers contractor selection, discussing such topics as economic and regulatory factors, selection criteria and key components of a proactive contractor safety process.

Safety Process Key Components The five chapters of the second section discuss key components of the safety process, from drug testing (Chapter 7) to safety training and training requirements (Chapter 11). Other elements covered include incentive programs (Chapter 8); risk assessment, planning and security (Chapter 9); and the roles of management, maintaining an incident-free environment and incident investigation (Chapter 10). This chapter also discusses building safety into the corporate strategy and rewarding safety successes.

Legal Aspects

The third section includes three chapters that cover various legal aspects of construction safety management. Chapter 12 discusses multiemployer „worksites, including how OSHA handles these sites and ways to e risk expos-e. Chapter 13 examines the responsibilities of prime contractors for site safety and health oversight; explains IRS distinctions between contractors and employees; discusses the concepts and assumptions of tort law on risk; and the role of statutory employer status. Chapter 14 examines regulatory requirements as they relate to documents of federally mandated construction safety standards; discusses how those standards are enforced; summarizes employers' key duties for worker safety; identifies specific OSHA standards that mandate involvement of individuals with special skills; and explains how to access key safety standards on the Internet.

Technical Issues in Construction The next section includes 12 chapters, each of which addresses a technical issue that might be faced on a construction project. Topics include fall protection, best practices, scaffolds, crane safety, electrical safety, excavation work, powerlines, environmental impact, demolition, concrete work, confined spaces and industrial hygiene.

Other Considerations

The final section covers various factors that might play a role in construction projects, including work zone traffic control; construction safety in healthcare facilities; MSHA considerations for contractors; managing and communicating in a crisis; certifications; OSHA partnerships/VPP; issues specific to women in construction; communicating ,with the Spanish-speaking workforce; and future trends.

Everyone in industry today is short on time and money This book is ideal for anyone seeking to maximize dollars and research time. It is one of the most comprehensive manuals for the construction industry I have ever seen. Darryl C. Hill, CSP, editor, says it best in his foreword. "Each chapter facilitates and inspires, the reader in the process of building a strong foundation on which to sustain his or her educational career."

A final thought: This book not only gives the reader access to some of the best subject-matter experts in the construction industry, it also allows access to hundreds of references for continuing the quest to make a difference.

M.E. "Eddie" Greer, CSP, OHST
Sugar Land, TX

Construction Safety Management and Engineering

Darryl C. Hill, CSP, Editor

Construction Safety Management and Engineering provides a comprehensive discussion in the field of construction safety for both new and veteran construction and engineering safety practitioners. Readers are offered an integrated view of the knowledge base, research, and practice of construction engineering safety within a context of multiple perspectives and a wide range of thinking and experience. The format is divided into five major areas.

The first section explores what a practitioner must understand before the work commences at a jobsite:

Part I – Before the Work Commences

Introduction to Construction Safety (Tom Broderick)

Construction Program Essentials (Charlotte Gardner, CSP)

Incident Causation (Darryl Hill, CSP)

High Costs of Worker Injuries in Construction (Darryl Hill, CSP)

Consolidated Insurance Programs (Trish Ennis, ARM, CSP)

Contractor Selection (Everett Beaujon, CHMM, CSP / Greg Smith, CSP)

The second section looks at critical process components that are critical to the overall success for a project:

Part II – Safety Process Key Components

Substance Abuse Programs for Construction Sites (Gordan Wall / Arnold Braver, MBA)

What's Wrong (or Right) about Incentives (John Gambatese, Ph.D., P.E.)

Pre-Job/Task Planning (John Gleichman, CSP)

Accident Investigation / Reconstruction (Ronald B. Cox, Ph.D., P.E.)

Training (Christine Fiori, Ph.D., P.E.)

The third section looks at legal aspects, including liability and regulatory requirements:

Part III – Legal Aspects

Multi-Employer Worksite Issues (Everett Beaujon, CSP, CHMM / Greg Smith, CSP)

Managing Subcontractor Liability (Adele Abrams, Esq., CMSP)

Regulatory Requirements (T. Michael Toole, Ph.D., P.E.)

The fourth section addresses the many technical aspects in construction such as fall protection, steel erection, scaffolding, and much more:

Part IV – Technical Issues in Construction

- Fall Protection: Compliance and Solutions (Nigel Ellis, Ph.D., P.E., CSP)
- Steel Erection (Brian Clarke, CSP / Wayne Rice, CSM)
- Scaffolding Safety (John Palmer, CSP)
- Crane Safety on Construction Jobsites (David MacCollum, P.E., CSP)
- Electrical Safety (Kraig Knutson, Ph.D.)
- Excavation, Trenching, & Shoring (Mike Hayslip, Esq., P.E., CSP)
- Power Line Safety (Sam Gualardo, CSP)
- Management of Environmental Impacts (Jane Beaudry, CHST, CSP)
- Demolition (David Korman, CSP)
- Concrete (Robert F. Eckhardt, P.E., CSP)
- Confined Spaces (Brad Giles, P.E., CSP / Willie Piispanen, CIH, CSP)
- Industrial Hygiene Issues in Construction (Adele Abrams, Esq., CMSP / Jeffery C. Camplin, CPEA, CSP / Richard Hofman, CIH, CPEA, CSP,)

The fifth area examines the emerging issues and other key aspects in construction safety:

Part V – Other Considerations

- Work Zone Safety / Traffic Control (George Wolff, CSP)
- Construction in Healthcare Facilities (Ralph Estep, RN, CIH, CSP)
- MSHA Consideration for Contractors (Adele Abrams, Esq., CMSP)
- Managing and Communicating in a Crisis (Janine Reid)
- Construction Safety Certifications (Del Tally, P.E., CSP)
- OSHA Construction Partnerships / VPP (T.J. Lyons, CSP)
- Safety and Health Issues for Women in Construction (Carol Schmeidler, CSP)
- How to Communicate With Your Spanish-Speaking Workforce (Hector Escarcega, ARM, CSP)
- Future Trends in Construction Safety (Jim Lapping, P.E., CSP)

- Appendix A – Safety & Health Regulations in Construction
- Appendix B – OSHA Position Letter, Substance Abuse
- Appendix C – OSHA Partnerships
- Appendix D – Construction Partnership--Florida CARE Program
- Appendix E – Construction Safety Resources

Each chapter facilitates and inspires the reader in the process of building a strong foundation on which to sustain his or her educational career. The focus is in proven principles and best practices intended to improve a company's construction safety process.

Chapters include **learning objectives and questions** to facilitate the academic environment. Questions are designed to model and encourage readers in the development of critical thinking and supported analysis of key issues. They also allow the reader to compare their experience to that of noted experts and professors in the field. A number of nationally noted academicians and safety professionals from leading institution and progressive companies have provided original expert reflections on critical topics within each chapter.

Students will gain a solid understanding of the multiple facets of this dynamic discipline. Anyone interested in construction safety and its effects on students will find here a useful reference book and guide to understanding a very complex subject. Above all, this book will provide a template on how to design an effective safety process at a construction. This book is a powerful resource for professional development focused on conquering the SH&E challenges of the 21st Century.

Darryl C. Hill is Director of Safety and Health for ABB Inc., Auburn Hills, MI. He is the Vice President of ASSE Region VII and has held various offices at the practice specialty and chapter level. Mr. Hill is a doctoral candidate in Educational Leadership at Oakland University where he an adjunct faculty member teaching Construction Safety and Environmental Standards.

Appendices
Index
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