Clarion Review

Business & Economics

Basics of Multi-Discipline Project Engineering
Subhendu Moulik
AuthorHouse
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Three Stars (out of Five)

“Multi-discipline project engineering is a special skill where the engineer has to have basic knowledge of all discipline deliverables,” author Subhendu Moulik writes. His first book, Basics of Multi-Discipline Project Engineering is intended for engineering students and professionals seeking basic knowledge of how different engineering disciplines are interrelated in a multi-discipline environment.

The subject matter contained in this book is very specialized to engineering, procurement, and construction (EPC) projects and won’t be found in a book on project management in general. The title of this work suggests a broader topic than its actual scope; a subtitle highlighting the focus on interrelated deliverables and roles in an EPC project would better represent the book.

Moulik’s text is very well organized and focuses on six engineering disciplines related to EPC engineering projects within the oil and gas industry, including process, instrumentation, piping, mechanical, civil, and electrical engineering. It identifies requirements for coordination of the multiple related disciplines and lists the standard deliverables associated with each discipline, such as process flow diagrams, plot plans, and electrical equipment layouts, and includes examples of each as illustrative figures.

The book lists the qualities of a successful project engineer, which include having a basic understanding of all discipline deliverables as well as being quality-, risk-, and cost-conscious; unfortunately, it doesn’t elaborate on these attributes. Especially noteworthy is that it discusses the role of the engineer in each discipline and the coordinated interaction between the disciplines. For example, Moulik writes, “Once Process Group has produced Equipment Data sheets the Piping discipline starts work in locating equipment within the plot plan. Process engineers work in tandem with piping engineers to do line hydraulics.” Including a project

GANTT chart would have been helpful to better illustrate the scheduling dependencies. Additional tools and techniques necessary for project managing in this environment would have also been useful, like a sample project work breakdown structure.

The writing is clear, concise, and easy to follow, especially for such a technical topic. Although the tables and figures are excellent examples, the book lacks significant narrative description and reads more like a manual than a book.

Moulik holds a Bachelor of Engineering degree in Mechanical Engineering from the National Institute of Technology-Surathkal (India) and has seventeen years of work experience in Chemical, Refinery, Oil and Gas, and related process industries. Given the author's extensive experience, it would have been helpful to readers to include discussion of real-life examples or a case study illustrating the application of these multi-discipline concepts in an actual business setting.

The author provides estimates of typical man-hours of workload per deliverable, based on his personal experience. Project managers may find this useful for project estimating, with the caveat that workload hours can vary by organization, criticality of task, and type of project.

Though the book's focus is very specific and narrowly defined, the subject matter is unique. Engineering students and people involved with international oil and gas projects may benefit from the expert information provided here.

Cindy Kryszak