Preface

Undertaking the design, erection and commissioning of process engineering plants requires a whole host of knowledge areas. Moreover, apart from this knowledge, project engineers also need to be in command of a range of so-called “soft skills” in order to communicate with engineers involved in the project in multi-disciplinary ways. Furthermore, project engineers are under enormous pressures of time and cost due to the strong international competition. Finally, a lot of experience is required in the business of plant engineering and construction. Some companies’ tendency towards early retirement entails great loss in experience values. To make matters worse, sometimes those “old hands” are not given the opportunity to transfer their knowledge to young engineers. Thus, the mistakes of former generations continue to be repeated.

This flood of demands, however, should by no means act as a deterrent. On the contrary: The fascination of process plant engineering needs to be conveyed. Try imagining how it feels if after two or three years of hard project-related team work, a process plant, planned and erected with consideration having been given to the latest process-engineering, environmental and safety-engineering insights is finally realized. This is something you can show your kids and say: “I had a share in it!”

Of course, mistakes are sometimes made during the execution of a project. The crucial point, however, is how to avoid big and thus really expensive mistakes. Therefore, in this book, with the help of examples, many possibilities for error that may arise during the execution of a project will be described.

This book is intended to address beginners and to give them an overview of the activity flow involved in process plant engineering. The technical details are not exhaustive, but are rather intended to give a broad coherent view. Process engineers are also required to have a certain basic knowledge of economics, and this is given in Chapter 3, “Contract”, in terminology which, I hope, will be comprehensible to engineers.
In general, more importance is attached to clear and understandable rather than technical and dry language. Therefore, many terms are derived from industry terms and jargon.

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