



Preface



Important Note

Any protective system that is worth maintaining is designed to protect you from a hazard. That hazard may be the cost of damaged equipment or production downtime. The system may protect you from environmental damage. It may even be the final defence against injuring or killing your own personnel or innocent members of the public.

The first chapter of this book shows how the failure of protective systems can lead to disaster; but even before you read that chapter, you need to understand that disasters have occurred not just because of negligence and lack of maintenance, but also from active interference and maintenance of those devices. Before implementing any failure management solution, you need to be certain that you understand the systems, the tasks you have put in place, and the level of risk that your company or organisation is assuming.

I wrote this book because modern industry relies so heavily on protective systems that are sometimes poorly understood and often badly maintained. I have been privileged to work with hundreds of technicians, operators, maintainers and managers in production, manufacturing and utility organisations. These individuals are massively committed to improving safety and reliability, and have been brutally honest in discussing both incidents that happened and those many more that were “near misses”. None of these incidents features in this book, but I am hugely grateful to those who persuaded me that this text needed to be written.

Although the reasons for writing this book may be clear, I am also aware that the author of a book has no control over its application. That concerns me. I cannot look over your shoulder to explain why a system should be treated in one way rather than another. I cannot ask you supplementary questions that might suggest a completely different approach from the one you are considering. I have no way of ensuring that the task you ask your maintainers to do is safe. Worse, I am human, and so there are mistakes in this book. If I were sitting next to you, it is probable that one of us would find them, but I am not. Therefore I need to draw your attention to this disclaimer.

Neither the author nor the publisher accepts any responsibility for the application of the information presented in this book, nor for any errors or omissions. The reader accepts full responsibility for the application of the techniques described in this text.

Review

Each chapter of the book ends with a section called *Key Points and Review*. If you have some experience in reliability analysis or in Reliability-centred Maintenance, you may already be familiar with the material covered in some chapters. You may want to use these sections to ensure that you understand the material covered in the chapter before skipping it.