Primer on Engineering Standards

Expanded textbook edition

Owen R. Greulich and Maan H. Jawad

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PRIMER ON ENGINEERING STANDARDS

EXPANDED TEXTBOOK EDITION

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To those who seek excellence through
their knowledge of standards

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Preface

Engineering principles including classical and numerical analysis as well as other engineering techniques are essential for the engineer to perform various designs. However, as society gets more interdependent and the common implements of daily life more complex and sophisticated, standards become more and more indispensable as additional engineering tools. This book introduces the concept of standards as well as their impact and value. It includes a brief history of standards and it addresses the different ways in which they come about. Some of the chapters discuss the role of government in creating standards as well as the processes by which nongovernmental standards are produced. Other chapters discuss the different types and applications of standards, how interpretations of standards are obtained, the problem of how to ensure conformity with standards, and what might be done when conformity cannot be attained.

Some characteristics of a "good standard" are presented, along with some pitfalls to avoid in producing a standard. Benefits of getting involved in the standards development process are explained, along with pointers on both selecting a standards organization to get involved with and how to go about it. This book provides a short synopsis of "Standards" to enable the reader get a quick understanding of the various aspects, ramifications, and implications of standards. It consists of eleven chapters and four appendices. Various case studies are included to help the reader develop an in-depth understanding of the topics discussed. The wide range of topics covered in this book is intended to give the reader a good starting point in understanding how standards play an integral part of the engineering profession.

There are tens, perhaps hundreds of thousands of engineering standards worldwide, covering every imaginable subject related to engineering. Listing them all

would be a monumental undertaking and this book, by necessity, covers only a small portion of them. The appendices at the end of this book provide assistance in identifying a few of these engineering standards, who developed and maintains them, and contact information to help the reader obtain further information.

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