Preface

As coauthors with a combined professional experience (in 2016) of well over 100 years, we are keenly aware of the profusion of compressor texts available to the reader. In our personal reference libraries, we probably have more outdated compressor books than we care to enumerate. However, access to these personal library books allows us to make our main point: Changing technology made some books outdated. Educational approaches have certainly changed over the years, and a new set of needs has emerged in the many decades since most of these texts were written. We decided that the existing books on compressor technology did not at all, or did not sufficiently, delve into the details of compression technology of interest to us in 2020.

While compressor basics and their underlying thermodynamics and physics are immutable and have not changed, some compressor books and compression-related texts cater to a relatively narrow range of interests. Conversely, other texts have attempted to address too wide a spectrum of readers and/or are simply too voluminous in either size or scope. This then prompted our decision to approach De Gruyter with a solid proposal for this unique book.

Much of the input was developed for us by subject matter experts. We asked for their input on the distinct topic of new approaches to a very mature technology. Today, these new approaches are primarily pursued by a handful of safety and reliability-focused users and process operating companies. They then commission the most experienced engineering–procurement–construction companies to implement plants making the fullest use of known best-available or fully optimized technology approaches. The best and most profitable owner–operators judiciously superimpose their own experts to ascertain that these approaches are consistently and efficiently implemented.

This book explains and describes in detail where, why, and how new approaches to compression technology are of value to all process plants. We refer to existing facilities contemplating upgrades as well as facilities that have merely reached cost estimating or preengineering and definition-of-scope status.

Our contents speak to the need and delineate where we are going with this book. It was our goal to keep it to 460 or so pages. We endeavored to steer clear of preexisting or widely disseminated prior books; these materials are referenced – if necessary – but will not be reused as a filler material for *Compressor Technology Advances*.

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