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Process control in textile manufacturing

Edited by Abhijit Majumdar, Apurba Das, R. Alagirusamy and V. K. Kothari

The Textile Institute

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Foreword

I am pleased to write a Foreword for this unique and comprehensive volume on *Process control in textile manufacturing* edited by Abhijit Majumdar, Apurba Das, R. Alagirusamy and V. K. Kothari. The editors and authors have compiled urgently needed information, reflecting the highest standard of publication in this field, on a very important aspect of the conversion of fibers into the ultimate textile structures employed in various end-use applications. The subject matter discussed in this text is timely. The globalization of trade now demands that products marketed around the world meet certain basic quality and performance requirements. The current production of all types of fibers such as natural, manmade, and synthetics now exceeds 80 odd million tons annually. The use of suitable textile fibers in such highly sophisticated applications as medical devices, civil and construction engineering, automotive industry, filtration and aircraft and aerospace industries as well as for more mundane purposes, such as apparel, requires the maintenance of high quality products. 'Engineering With Fibers', a term that was coined and made popular by my mentor and professional colleague, Subhash Batra, is quite appropriate in the current environment of utilization of textiles in highly engineered textile structures. Consequently, the engineers and technologists engaged in machine design and processing of fibers must be knowledgeable regarding the availability and the performance of process control devices used in the industry. It has become mandatory on the part of textile manufacturers that they certify and guarantee the performance characteristics of highly engineered textile structures designed for composite applications.

The authors have done an excellent and noteworthy job of introducing the reader to the fundamentals of process and quality control in the cultivation of natural fibers and in the manufacture of synthetic fibers. Separate chapters on the process and control in the main systems of yarn production, nonwovens, knitting, weaving and subsequent handling of products in the dyeing and finishing and apparel manufacturing of textiles are important and extremely useful. In today's highly competitive environment the manufacturers must be diligent as well as expert in placing products in the market that are well-made and that meet the expectations of the industry and

the customer. This volume will be be an important resource in the hands of textile engineers, technologists and managers engaged in the development and manufacture of textile products.

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