Preface

Stone processing continues to grow steadily amongst nearly all countries having an abundant supply of raw material due to the increasing demand for stone products. Since the competition from emerging stone processing countries has been putting the leading stone countries under pressure, various attempts are being made to improve the economics of stone processing operation and hence maintain natural stone as a cost-effective building material. Numerous papers related to the machining of natural stone have been published in various journals and conference proceedings, but an overall understanding of the subject is difficult to a general reader. The purpose of this book is to provide an opportunity for academic researchers and industrial experts to summarize the achievements and predict new trends in the area in a single volume.

The book presents the state-of-the-art information about the recent research, development and applications on the machining of natural stone materials in the form of 44 invited and selected contributions from China, Germany, Poland, Spain, Turkey, UK, and USA. It is divided into four parts: "Tooling Technology", "Machining Process", "Unique Technique", and "Other Aspects". The topics covered include the diamond impregnated circular sawing, turning, frame sawing, wire sawing, drilling, polishing, laser machining and treatment, water-jet machining, measurement and surface quality assessment, coolants, manufacture of diamond tools, modification of diamond grits, the mechanics and mechanisms of machining processes, novel designs for machine tools and novel machining techniques. It is therefore valuable to production and research engineers, research students and academics in the area.

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