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Technical textile yarns

Edited by R Alagirusamy and A Das, Indian Institute of Technology,
New Delhi, India

Woodhead Textiles Series No. 101

DESCRIPTION

Technical yarns are produced for the manufacture of technical textiles. As the range of technical textiles is rapidly increasing, an understanding of the range of yarns available and their properties is important, in order to be able to meet the requirements of the intended end-use.

Part one of the book begins by reviewing the advances in yarn production. Topics examine the advances in textile yarn spinning, modification of textile yarn structures, yarn hairiness and its reduction and coatings for technical textile yarns. The second group of chapters describes the range of technical yarns, such as electro-conductive textile yarns, novel yarns and plasma treated yarns for biomedical applications. Technical sewing threads and biodegradable textile yarns are also discussed.

Technical textile yarns provides essential reading for yarn and fabric manufacturers, textile scientists, technicians, engineers and technologists, covering a wide range of areas within textile applications. This book will also be an important information source for academics and students.

ABOUT THE EDITORS

Dr Alagirusamy is Professor in the Department of Textile Technology, Indian Institute of Technology (IIT), New Delhi, India. His main research interest includes yarn manufacture and application of textile structures for advanced composite applications. He has published numerous scientific papers, book chapters and has presented at many international academic lectures.

Dr Das is Associate Professor in the Department of Textile Technology, Indian Institute of Technology (IIT), New Delhi, India. He has wide experience in industries, including research and development and quality management. He has published more than 100 research papers in journals and conferences and written chapters in several books. His main areas of teaching and research interests include clothing comfort, yarn manufacturing, non-conventional spinning techniques, evaluation of textile materials and technical textiles.

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R Chattopadhyay, Indian Institute of Technology, Delhi, India

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R V M Gowda, V S B Engineering College, India

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A Das, Indian Institute of Technology, Delhi, India

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A Majumdar, Indian Institute of Technology, Delhi, India

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B K Behera, Indian Institute of Technology, Delhi, India

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H Hu and Y Liu, The Hong Kong Polytechnic University, Hong Kong

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Hybrid yarns for thermoplastic composites

R Alagirusamy, Indian Institute of Technology, Delhi, India

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T Wan, Nanjing University of Information Science & Technology, P.R. China

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B Gupta, S Saxena, N Grover and A R Ray, Indian Institute of Technology, Delhi, India

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Technical sewing threads

Rengasamy and Ghosh, Indian Institute of Technology, Delhi, India

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S Mukopadhyay, Indian Institute of Technology, Delhi, India

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Yarn and fancy yarn design using three-dimensional computer graphics and visualization techniques

W Tang, University of Teesside and T Wan, University of Bradford, UK

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