DEVELOPMENTS IN PLASTICS TECHNOLOGY—3

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DEVELOPMENTS IN PLASTICS TECHNOLOGY—3

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PREFACE

Because of the sheer size of the plastics industry, the title *Developments in Plastics Technology* now covers an incredibly wide range of subjects or topics. No single volume can survey the whole field in any depth and so what follows is therefore a series of chapters on selected topics. The topics were selected by us, the editors, because of their immediate relevance to the plastics industry.

When one considers the materials produced and used by the modern plastics industry, there is a tendency to think of the commodity thermoplastics (such as poly(vinyl chloride) or polyethylene); the thermosetting materials are largely ignored. Because of this attitude we are very pleased to include in this volume a chapter which deals with the processing of a thermosetting material, i.e. the pultrusion of glass reinforced polyester.

The extrusion of plastics is, of course, a very important subject but an aspect which is often overlooked is the need to remove volatile matter during processing: for this reason we have included a chapter on devolatilisation. Current industrial practice is towards materials modification and this attitude is reflected in the chapters on the transformation of ethylene vinyl acetate polymers and the use of wollastonite in two important thermoplastics. When assessing the performance of materials, there is a tendency to concentrate on short-term mechanical tests and ignore such topics as fatigue and longer-term testing. We are therefore very pleased to include a chapter on this subject.

Over the past few years, since the advent of cheap computing power, there has been a tremendous growth in the science of computer modelling of processes such as injection moulding and extrusion. This interest is reflected in what is the longest chapter in the book and which is devoted to computer-aided analysis of some thermoplastic processing operations. Alternative methods of polymer processing are always being sought in an effort to reduce costs, save energy or to obtain unusual properties in selected components. One such technique is solid phase compaction and a review of this interesting technique is presented.

Each of the contributions was written by a specialist in that field and to them all, we, the editors, extend our heartfelt thanks, as writing a contribution for a book such as this, whilst doing a full-time job, is no easy task.

A. WHELAN
J. L. CRAFT

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