

Plastics Films: Technology and Packaging Applications

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by Kenton R. Osborne & Wilmer A. Jenkins, Technomic, Publishing Co., Lancaster PA, 1992, ISBN no. 87762-842-2

There are a number of useful texts for the extrusion professional that while not dealing directly with the art of extrusion per se, cover either upstream or down stream portions of an extrusion operation. Books on feeding systems, pellet drying and handling, die design, sheet, film, and profile forming all fall into this category. One of these texts is Plastic Films by Kenton R. Osborne and Wilmer A. Jenkins recently (1992) published by Technomic Publishing Co.

Osborne and Wilmer are both former E.I. DuPont de Nemours employees from the Packaging Products Division. They have produced a seven chapter text that provides an introduction to packaging films starting with the obligatory chapter on the nature of polymers through conversion operations, processes for modifying films, a brief introduction on the functional requirements of packaging, applications for plastic films and future trends in the industry.

The heart of the treatise begins with the chapter on conversion operations, or the act of converting a polymer melt into a useful film. The authors go over the distinctions between cast and blown film, and outline the advantages and disadvantages of each. To a limited extent, the authors also touch on which method is better for a given polymer or type of polymer, although a more extensive treatment of the selection process would have been beneficial.

The cast film operation is broken down further into treatments of different quenching methods and some discussion around the various types of dies one may choose from (along with their advantages and disadvantages) for producing a cast film. Similar treatment of blown film operations is followed by a comparison of the two.

Later chapters move in depth into post-conversion modification of the film, beginning with orientation and covering such topics as lamination, printing, etc. While these areas could probably be texts by themselves and one senses that quite a bit of this is closely guarded art, these sections at least serve to introduce the reader to the topics, issues, and some of the solutions out there.

The audience who would benefit the most from this text are people who are looking for an introduction and overview of the field. There is an extensive glossary that covers much of the lexicon of film conversion, and the text as a whole serves as a good broad overview. One element of introductory texts that is missing or slighted in Osborn and Jenkins text is extensive references. The bibliographies posted at the end of each chapter are somewhat scant and would

not serve well as a source for a more in-depth coverage of any given topic.

- Robert E. Jerman