

Plastic Injection Molding

...mold design and
construction fundamentals

By Douglas M. Bryce

Volume III: *Fundamentals of
Injection Molding* series



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Preface

This book is the third in a series providing basic information, concepts, and ideas to those interested in, or already existing in, the world of injection molding of thermoplastics (Volume I covers manufacturing process fundamentals and Volume II explains material selection and product design fundamentals). This volume covers the subject of fundamental mold design and construction. My intention was to write this book (and the others in the series) in such a way that both newcomers and old-timers would be able to obtain information that is otherwise not readily available.

In this book we take a look at the role of the mold in the injection molding process, and how it should be designed and built. Along the way we discuss mold components, various materials from which to make molds, and some of the more popular mold designs. Of course, we also look at some of the methods and equipment used for making these molds. We'll also address a few of the important design criteria that are required for both product and mold design.

Whether you are involved in designing and/or making molds or not, this book is intended for you. Please enjoy reading it as much as I enjoyed writing it. I would love to hear from you if you can take the time to write and tell me about your experiences in the injection molding industry. In fact, maybe you should consider writing a book yourself. Good luck!

I would like to take a moment to thank the following for their contribution to the completion of this volume.

- *Society of Manufacturing Engineers*, for providing the various resources for editing and publishing the entire series.
- The *reviewers* of this book before publication, for giving valuable advice on how to make it better:

Lawrence G. Cook, President, MidWest Plastics Sales & Associates

Marion Cooper, President, Cooper Engineering, Inc.

Jon H. Eickhoff, C.E.O. Ronningen Research and Development Company

- *Texas Plastic Technologies*, for supporting my efforts and continuing operations smoothly during those few times when I needed to be locked up in my office writing.
- *Various moldmakers and mold designers*, who shared design and construction ideas with me as well as their thoughts and opinions of what I was trying to do and say.

I am dedicating this volume to my father, from whom I inherited the desire, energy, and perseverance to complete such an achievement, and for being there to provide a gentle prod when needed.

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