BOOK REVIEWS

N. G. GAYLORD, *Editor*

Compression and Transfer Moulding of Plastics. J. BUTLER. Interscience, New York; Iliffe, London, 1959. x + 230 pp. $5.75.

Mr. Butler makes the following statement in his opening sentence of the preface: "This book is intended for students of mould design, for designers and moulding shop executives."

This reviewer is of the opinion that the book is lacking on the following points:

A. More emphasis should be placed on the production and design advantage of the semi-positive mold as shown in Figure 5.

B. The author mentions "splashing" of the powder from flash type molds, but he omits recommending the use of preforms of "pellets" to overcome this problem.

C. The author has omitted a chapter on Preforming. Lacking is a discussion on the geometry of preforms, density of preforms, and the advantages of their use over powder loading.

D. We are not in agreement with his design or recommendation on "Three-Plate Molds." The author's designs are cumbersome and such molds are difficult to de-flash or clean.

E. We believe he has overemphasized oven preheating while he does not mention oven steam preheating except a reference to "moistened pellets" (page 86).

F. The two chapters on Radio Frequency Preheating are very weak for the following reasons.

1. The author makes no mention of the use of a non-conducting plate of glass or fiberglass under the preforms on bottom electrode to prevent overheating of the bottom of the preforms.

2. The author mentions drying the material to reduce moisture content if excessive swelling or condensate is encountered, but he doesn't state that this lower moisture content will also increase the preheat time.

3. The author does not mention the use of rectangular preforms preheated on their sides when non-uniform swelling is encountered. This is standard practice in the U.S.A.

4. In regard to the R.F. preheating of powder, the author recommends the use of cardboard or glass containers. He makes no mention of the use of polyethylene or Teflon containers which are used extensively in the U.S.A.

5. The author makes no mention of the effect of radio frequency cycle on the rate or penetration of preheat. Early generators in this country operated at about 27 megacycles, but most modern generators operate between 65 and 85 megacycles which results in considerably higher efficiency.

6. This reviewer is unable to understand the full meaning of the first three paragraphs of Chapter 16, page 171. Paragraph 16.3.1: Is he referring to compression, transfer or plunger molding? Paragraph 16.3.2: Statements in this paragraph are directly opposed to statement made in first paragraph, page 171.

G. Chapters on Transfer Moldings do not go into sufficient detail on pressures nor does the author discuss sufficiently auxiliary ram plunger molding in detail as follows:

1. Pressure ratios between clamp and injection.

2. He does not discuss plunger cull design or thickness.

3. He does not discuss geometry of runners or "feed channels" as to rectangular, oval half round, or full round in cross section. This subject is very important in plunger molding.

4. There is no mention of runner design as to radial from cull, Y runners, or T runners.

5. The author has under-rated the importance of cavity vents (page 177). Any well built mold should be "tight," therefore vents for the removal of air and/or gas are essential.

6. The author's statement in the third paragraph of Section 16.5.2, page 187, is directly contrary to the accepted practices in plunger molding techniques in the U.S.A. using the proper plasticity of material.

The author's chapters on Split Molds and Tapered Splits are very good, and there is much worthwhile background information contained in the book.

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Identification of Textile Materials, 4th ed. C. E. M. JONES, Ed. (prepared by Technical Committee "C" of the Textile Institute). The Textile Institute, Manchester, 1958. 148 pp.

This book is a very comprehensive treatment of fiber identification using microscopic, chemical, and some staining techniques which can be applied in any laboratory without special equipment. Two excellent features of this book are an introductory chapter on the properties of fibers which gives the reader sufficient background to develop his own tests when given some knowledge of the chemical nature of