

*Officially approved for the
Associate Membership Examination
of the Institution of
Production Engineers*



**PRODUCTION
TOOLING
EQUIPMENT**

**The design of
Jigs, Tools
and Gauges**

**Second
Edition**

S. A. J. PARSONS

PRODUCTION TOOLING EQUIPMENT

The Design of Jigs Tools and Gauges

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SECOND EDITION



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Preface

In the new edition systematically has been taken to revise the sections on cutting tools and workpiece and inspection gauges, to add something on the necessary tool lips and some characteristics of materials, and to make two or three corrections at the instance of readers, to whom the writer expresses his gratitude. The new syllabus 'Tool Design' for the Associate Membership Examination of the Institution of Production Engineers replaces the former 'Fig and Tool Design' syllabus.

Based on lectures delivered to advanced students at the College of Technology, Birmingham, augmented by much additional information, the book aims to set out general principles concerning the efficient design of cutting equipment, for the general education of engineers, lecturers and students. It has been written with due regard to recent research and development and with emphasis on the economic aspect wherever appropriate.

The first two parts deal with the design of drilling jigs and fixture tool-holds. As far as possible, each jig or fixture is discussed relative to accompany with working drawings to be used with simple but clear diagrams.

The third part deals with cutting tools and tool layouts for various productive materials. Special attention has been given to the design and application of cutting tools, a subject so often neglected or inadequately presented. A number of sections are included which are, it is thought, not generally found in similar books. These include a section on micro-drilling, the design of high speed milling cutters, broach design with some reference to surface broaching, and a comprehensive tooling layout for a Sliding Head Type Automatic. The last part is concerned with the design of reamer gauges, such as are commonly used for production.

Apart from its function as a reference-book in industry, the volume should provide ample material for the student studying Tool Design as a subject for examination, either for the Higher National Certificate in Production Engineering, or for the Associate Membership examination of the Institution of Production Engineers. The Appendices include a whole set of recent examination questions set for the subject of Fig and Tool Design, and further may be increased in the suggested syllabus now set out for H.N.C. courses covering either one or two seasons.

London,
June 1959.

S. A. I. PARSONS.

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