

ENGINEERING MANUFACTURING PROCESSES:

CASTING, FORMING, WELDING AND METAL CUTTING

CASTING



FORMING



WELDING



METAL CUTTING



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ISBN No.: 978-81-687571-4-1 (Digital Download and Online)

First published in June, 2026 by

Learnet Publishing

19/B, Kali Kumar Majumder Road, P.O. Santoshpur Avenue, P.S. Survey Park, Kolkata – 700075, West Bengal, India

Email IDs: learnetpublishing@gmail.com | info@learnetpub.co.in

Mobile No. / WhatsApp: +91-9836423405

Website: www.learnetpub.co.in | www.jctmg.in | www.eolearnet.co.in

MRP: INR 599 (Digital Edition)

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Cover design and production by **Learnet Publishing.**

PREFACE

Engineering Manufacturing Processes: Casting, Forming, Welding and Metal Cutting has been prepared with the objective of providing students, educators, and practicing engineers with a clear understanding of the fundamental manufacturing processes widely used in modern engineering industries. Manufacturing technology forms the backbone of product development and industrial growth, and a sound knowledge of these processes is essential for every engineering student.

This book presents the basic concepts, principles, classifications, operating procedures, advantages, limitations, and applications of casting, metal forming, welding, and metal cutting processes in a simple and systematic manner. The contents have been organized to facilitate easy learning and to bridge the gap between theoretical knowledge and practical industrial applications.

Special emphasis has been placed on presenting the topics in a concise and student-friendly format. Illustrations, process descriptions, and examples have been included to enhance understanding and to support classroom learning, laboratory activities, and competitive examination preparation.

The authors sincerely hope that this book will serve as a valuable resource for diploma, undergraduate, and early-stage engineering learners. Suggestions and constructive feedback from readers are always welcome and will be greatly appreciated for improving future editions.

Authors

ACKNOWLEDGEMENT

The authors express their sincere gratitude to all those who have directly and indirectly contributed to the successful completion of this book. We are deeply thankful to our teachers, mentors, and academic colleagues whose guidance, encouragement, and valuable insights have greatly influenced the development of this work.

We acknowledge the support of various educational resources, reference materials, and technical publications that helped us present the subject matter in a clear and systematic manner. Their contributions to engineering education have been an important source of inspiration throughout the preparation of this manuscript. We also extend our heartfelt appreciation to Learnnet Publishing for their cooperation, professional support, and assistance during the editing, design, and publication stages of this book.

Special thanks are due to our family members and well-wishers for their patience, encouragement, and unwavering support throughout this endeavor. Their motivation and understanding made the completion of this work possible. Finally, we express our gratitude to the students and readers for whom this book has been written. We hope that the material presented herein contributes positively to their academic growth and professional development.

Authors

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Published by:

LEARNET PUBLISHING

**19/b, Kali Kumar Majumder Road,
P.O.-Santoshpur Avenue, P.S.- Survey Park,
Kolkata-700075, West Bengal**

Email: learnetpublishing@gmail.com

Website: www.learnrtpub.co.in

www.jctmg.in

ISBN 978-81-687571-4-1



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