



# Contents

*Preface* v

## **Part 1 Machining Methods**

- Section 1* Broaches and Broaching 1-1
- Section 2* Drills and Drilling 2-1
- Section 3* Files and Burrs 3-1
- Section 4* Gears, Splines, and Serrations 4-1
- Section 5* Grinding, Honing, Lapping, and Superfinishing 5-1
- Section 6* Milling and Milling Cutters 6-1
- Section 7* Planing and Shaping 7-1
- Section 8* Reamers and Reaming 8-1
- Section 9* Saws and Sawing 9-1
- Section 10* Threading Processes and Thread Systems 10-1
- Section 11* Taps and Tapping 11-1
- Section 12* Turning and Boring 12-1
- Section 13* Screw-machine Work 13-1

## **Part 2 Metal-forming Methods**

- Section 14* Metal Spinning 14-1
- Section 15* Pressworking and Cold-roll Forming 15-1
- Section 16* Forging, Upsetting, and Cold Heading 16-1
- Section 17* Cold Working of Metals 17-1
- Section 18* Die Casting 18-1
- Section 19* Babbitting of Bearings 19-1

## **Part 3 Assembly Methods**

- Section 20* Arc Welding and Surfacing 20-1
- Section 21* Gas Welding and Oxygen Cutting 21-1
- Section 22* Resistance Welding 22-1
- Section 23* Brazing 23-1
- Section 24* Soldering and Soft Solders 24-1

## **Part 4 Materials**

- Section 25* Steels and Irons 25-1
- Section 26* Nonferrous Metals 26-1

	<i>Section 27</i>	Heat-treatment of Metals	27-1
	<i>Section 28</i>	Gages, Tolerances, and Weights of Metal Products	28-1
<b>Part 5</b>	<b>Finishing of Metals</b>		
	<i>Section 29</i>	Metal-cleaning Processes	29-1
	<i>Section 30</i>	Plating and Metal Coating	30-1
	<i>Section 31</i>	Paint and Painting	31-1
	<i>Section 32</i>	Electrolytic and Chemical Finishes for Metals	32-1
<b>Part 6</b>	<b>Inspection</b>		
	<i>Section 33</i>	Limits, Fits, and Tolerances	33-1
	<i>Section 34</i>	Measuring and Gaging Equipment	34-1
	<i>Section 35</i>	Tapers and Dovetails	35-1
<b>Part 7</b>	<b>Fastening Devices</b>		
	<i>Section 36</i>	Bolts, Screws, Rivets, and Washers	36-1
	<i>Section 37</i>	Keys and Pins	37-1
<b>Part 8</b>	<b>Tool Engineering and Drafting Practice</b>		
	<i>Section 38</i>	Jig and Fixture Details	38-1
	<i>Section 39</i>	Drafting Practice and Engineering	39-1
	<i>Section 40</i>	Surface Finish	40-1
<b>Part 9</b>	<b>Machine-tool Standards</b>		
	<i>Section 41</i>	Standard Machine-tool Elements	41-1
	<i>Section 42</i>	Machine-tool Inspection	42-1
<b>Part 10</b>	<b>Power-transmission Equipment</b>		
	<i>Section 43</i>	Chain, V-belts, and Motors	43-1
<b>Part 11</b>	<b>Mathematics and Tables</b>		
	<i>Section 44</i>	Mathematics	44-1
	<i>Section 45</i>	Reference Tables	45-1

*Index*

