## **CONTENTS**

Chap 1.	The Production of High Vacua  The Mean Free Path—Vacuum Pumps—The Water-jet Pump— The Gaede Mechanical Rotary Pump—The Cenco-Hyvac Rotary Pump—The Kinney Pump—The Gas Ballast Pump—The Molecular Pump—The Mercury Diffusion Pump—Freezing Traps— The Oil Diffusion Pump—Pumping Systems—Cut-offs—Leak Finding—The Characteristics of Vacuum Pumps—The Construction of Vacuum Systems.	Page 1
2.	The Measurement of High Vacua	73
3.	The Measurement of Pumping Speed The Flow of Gas through a Tube—Definition of Pumping Speed —Constant Pressure Methods—Constant Volume Method—Pressure-time Characteristics.	108
4.	De-gassing and "Gettering"  Low-temperature Baking—De-gassing of Glass—De-gassing of Metals—Eddy-current Heating—"Gettering"—Drying Agents—Discharge Cleaning.	123
5.	The Applications of High Vacua in Industry.  Exhausting and Activating Radio Valves—Cathode-ray Tubes—Gas-filled Tubes—The Photo-cell—The Deposition of Metal Films in vacuo—The Evaporation Process—The Sputtering Process.	137
6.	The Properties of Materials Important in High Vacuum Technique	161
	Bibliography	201
	Index	203