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## Compressor Handbook: Principles and Practice

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### Description:

This book examines the full spectrum of compressor types, how they operate, how to control them, and how operating conditions can significantly impact their performance. Discussed in detail are the influence of pressure, temperature, molecular weight, specific heat ratio, compression ratio, speed, vane position, and volume bottles. The various methods of throughput control are also addressed, including discharge throttling, suction throttling, guide vane positioning, volume, bottles, suction valve unloaders, speed control, as well as how each of these control methods affects compressor life. Compressor surge is defined and discussed in detail, along with the types of instrumentation (controllers, valves, pressure, and temperature transmitters) available, and which of those are most suitable for controlling surge.

Case studies have been included to illustrate the principles covered in the text. This edition also includes detailed information on compressor seals. Various types of seals providing the best results for different applications are discussed, thereby giving the reader a basic understanding of seal serotypes and applications.

**Keywords:** Stationary seals, dynamic seals, contacting seals, non-contacting seals, O-ring seals, seals, gland packing seals, carbon face seals, brush seals, packing seals, pressure breaker seals, labyrinth seals, honeycomb seals, knife edge, seals, carbon ring seals, circumferential seals, dry gas seals, active seal components, inactive seal components, seal land, rubber seal, nitrile rubber, polyacrylic rubber, silicone rubber, fluorinated rubber, hydrogenated nitrile rubber, ethylene-propylene rubber, carboxylated nitrile, Teflon, fluoroelastomer, Hastelloy.