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Guidance Systems; 4.4 Guidance Methods; 4.5 Challenges Facing Autonomous Vehicles; 4.6 Conclusions; References; Other Contacts; Chapter 5. Grain Harvesting Machinery Design; 5.1 Introduction; 5.2 History; 5.3 Machine Design: Pre-harvest Issues; 5.4 Performance Factors; 5.5 Heads: Grain Platforms, Corn Heads, and Strippers; 5.6 Feederhouse; 5.7 Cylinder or Rotor and Concave; 5.8 Separation: Straw Walkers and Rotary Separation; 5.9 Cleaning Shoe 5.10 Elevators: Clean Grain and Tailings5.11 Grain Bin and Unloading Auger; 5.12 Other Attachments; 5.13 Operator's Station, Adjustments, and Monitoring Systems; 5.14 Field Performance; 5.15 Grain Damage; 5.16 Combine Trends; References; Chapter 6. Grain Storage Systems Design; 6.1 Introduction; 6.2 Materials; 6.3 Physical Properties of Agricultural Grains; 6.4 Management Factors; 6.5 Codes; 6.6 Drying; 6.7 Structural Loads; 6.8 Stresses in Granular Materials; 6.9 Temperature Cables; 6.10 Thermal Loads and Moisture-induced Loads; 6.11 Conical Grain Bins; 6.12 Snow and Wind Loads 6.13 Seismic Loads6.14 Grain Handling; 6.15 Chutes; 6.16 Grain Cleaning; 6.17 Testers for Measuring Flow Properties; 6.18 Modeling of Granular Materials; References; Chapter 7. Milking Machines and Milking Parlors; 7.1 Introduction; 7.2 The Milking Routine; 7.3 The Milking Machine; 7.4 Milking Unit; 7.5 Milking Systems; 7.6 Milking System Piping; 7.7 Vacuum Production; 7.8 Vacuum Regulation; 7.9 Vacuum Gauge; 7.10 Test Ports; 7.11 Distribution Tank or Interceptor; 7.12 Receiver Group; 7.13 Pipe Sizing and Layout; 7.14 Milkline Sizing- Pipeline Systems; 7.15 Pulsator Airline Sizing 7.16 Main Airline

Sommario/riassunto

Indispensable for food, chemical, mechanical, and packaging engineers, *Handbook of Farm, Dairy, and Food Machinery* covers in one comprehensive volume fundamental food engineering principles in the design of food industry machinery. The handbook provides broad, yet technically detailed coverage of food safety, regulations, product processing systems, packaging, facilities, waste management, and machinery design topics in a ofarm to the fork organization. The 22 chapters are contributed by leading experts worldwide with numerous illustrations, tables, and references. The book includes t
