1. Record Nr. UNISALENTO991003225019707536 Autore Mills, David Titolo Pneumatic conveying design guide [e-book] / David Mills Pubbl/distr/stampa Oxford; Boston: Elsevier/Butterworth-Heinemann, 2004 **ISBN** 9780750654715 0750654716 Edizione [2nd ed.] Descrizione fisica xii, 637 p.: ill.; 24 cm Disciplina 621.8672 Soggetti Pneumatic-tube transportation Electronic books. Lingua di pubblicazione Inglese **Formato** Risorsa elettronica Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index Nota di contenuto Systems and Components: -- Introduction to pneumatic conveying and the guide. -- Review of pneumatic conveying systems. -- Pipeline feeding devices. -- Pipelines and valves. -- Air movers. -- Gas-solid separation devices. -- System selection considerations. -- System Design: -- Air flow rate evaluation. -- Air only relations. -- Conveying characteristics. -- Conveying capability. -- Material property influences. -- Pipeline scaling parameters. -- Design procedures. --Case studies. -- First approximation design methods. -- Multiple use systems. -- System Operation: -- Troubleshooting and material flow problems. -- Optimizing and up-rating of existing systems. --Operating problems. -- Erosive wear. -- Particle degradation. --Moisture and condensation. -- Health and safety. -- Appendix 1: Determination of relevant material properties. -- Appendix 2: Additional conveying data. -- Index The Pneumatic Conveying Design Guide will be of use to both designers Sommario/riassunto and users of pneumatic conveying systems. Each aspect of the subject

and users of pneumatic conveying Design Guide will be of use to both designers and users of pneumatic conveying systems. Each aspect of the subject is discussed from basic principles to support those new to, or learning about, this versatile technique. The Guide includes detailed data and information on the conveying characteristics of a number of materials embracing a wide range of properties. The data can be used to design pneumatic conveying systems for the particular materials, using logic diagrams for design procedures, and scaling parameters for the

conveying line configuration. Where pneumatic conveyors already exist, the improvement of their performance is considered, based on strategies for optimizing and up-rating, and the extending of systems or adapting them for a change of material is also considered. All aspects of the pneumatic conveying system are considered, such as the type of material used, conveying distance, system constraints including feeding and discharging, health and safety requirements, and the need for continuous or batch conveying. * Highly practical, enabling suppliers and users to choose, design, and build suitable systems with a high degree of confidence * Health and safety requirements taken into consideration in the safe conveying methods described in this book * Practical application combined with background theory makes this an excellent resource for those learning about the topic