

1. Record Nr.	UNINA9910805575103321
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Titolo	Pneumatic Conveying [[electronic resource]] : Basics, Design and Operation of Plants // by Peter Hilgraf
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2024
ISBN	3-662-67223-5
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (479 pages)
Disciplina	621.8672
Soggetti	Industrial engineering Production engineering Chemistry, Technical Pharmacy Industrial and Production Engineering Industrial Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- General basics -- Gas/solids systems -- Basics of pneumatic conveying -- Special calculation approaches, scale-up -- Modern dense phase conveying methods -- Bulk material locks -- Wear in conveying systems -- Design of a conveying system.
Sommario/riassunto	This book introduces the basics of pneumatic conveying, the construction of pneumatic conveying systems and their operation. The first three chapters deal with the physical properties of bulk materials and conveying gases as well as the general behaviour of gas-solid systems. The following chapter describes the application of these fundamentals to pneumatic conveying: starting with various flow forms and processes at the plug and ending with a detailed description of the pressure loss in pneumatic conveying lines. The subsequent sections discuss, among other things, calculation approaches for transferring the measurement results from test plants to large-scale plants as well as modern dense phase conveying methods in which the material to be conveyed moves at low speed in the form of strands, plugs or as a flowing fluidised bed. The book concludes with a chapter in which a

complete pneumatic conveying system is designed as an example and a chapter on the various forms and causes of wear in such systems. The work offers a large number of calculation and application examples and is state of the art. The contents Introduction.- General basics.- Gas/solids systems.- Basics of pneumatic conveying.- Special calculation approaches, scale-up.- Modern dense phase conveying methods.- Bulk material locks.- Wear in conveying systems.- Design of a conveying system. The target groups The book is aimed at engineers, plant constructors and operators of product lines with pneumatic conveying. The author Peter Hilgraf has been working in the field of bulk solids process technology in industry and academia for 40 years. His tasks in this field include development, research, dimensioning of plants and product line management. In particular, he has developed new conveying methods, e.g. FLUIDCON, as well as models and calculation methods for plant design. The translation was done with the help of artificial intelligence. A subsequent human revision was done primarily in terms of content.
