



White Paper

Pneumatic Plant for Discharging Ship's Cargo

Edited by on 18. Oct. 2023

[Published in bulk solids handling, Vol. 2 \(1982\) No. 1](#)

Some special techniques in the field of pneumatic conveying are described and general operational and technological aspects for unloading bulk ships are discussed in detail. Machinery for unloading ships has been known for as long as goods have been conveyed on rivers and canals. One of the most characteristic pieces of equipment, and one of the best known is the crane at the gable end of a multi-storey warehouse transferring sacks or bales from ship to shore.

This method of unloading had to change when goods were no longer packaged in sacks, but transported and stored in bulk. Initially, to move a bulk cargo from ship to the warehouse containers were filled and lifted by crane. This is the basic principle used today in the form of a grab crane. Continuous discharge equipment was not developed at this time and this progressively evolved using various types of screw conveyors, chain and flight conveyors conveyor belts bucket elevators and finally pneumatic suction systems. Many characteristics set pneumatic suction systems apart from mechanical conveyor systems. Since this field has involved the development of special techniques, it is intended to explain them briefly below and then to examine general operational and technological aspects.