



CLAUDIUS PETERS
TECHNOLOGIES

Technik **FLUIDCON**

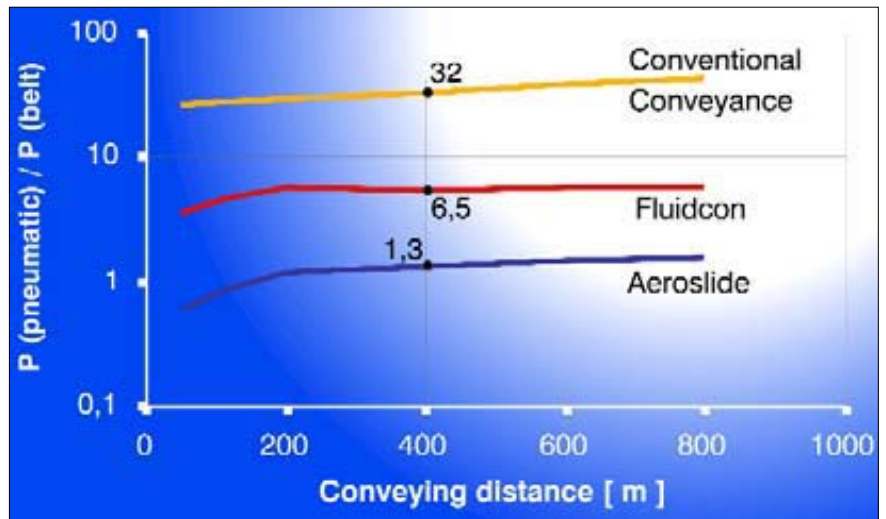
pneumatic conveyance



innovative engineering

Claudius Peters FLUIDCON...

Claudius Peters Technologies GmbH, Germany and Claudius Peters Technologies S.A., France are part of the Technologies Division of Claudius Peters Group GmbH, headquartered in Buxtehude, near Hamburg, offering technologies in the field of materials handling and processing, providing turnkey and semi-turnkey systems to a wide range of industries. Claudius Peters Group GmbH is a wholly owned subsidiary of Langley Holdings plc, a privately controlled UK engineering group, with regional offices in the Americas, Europe, China and the Far East.

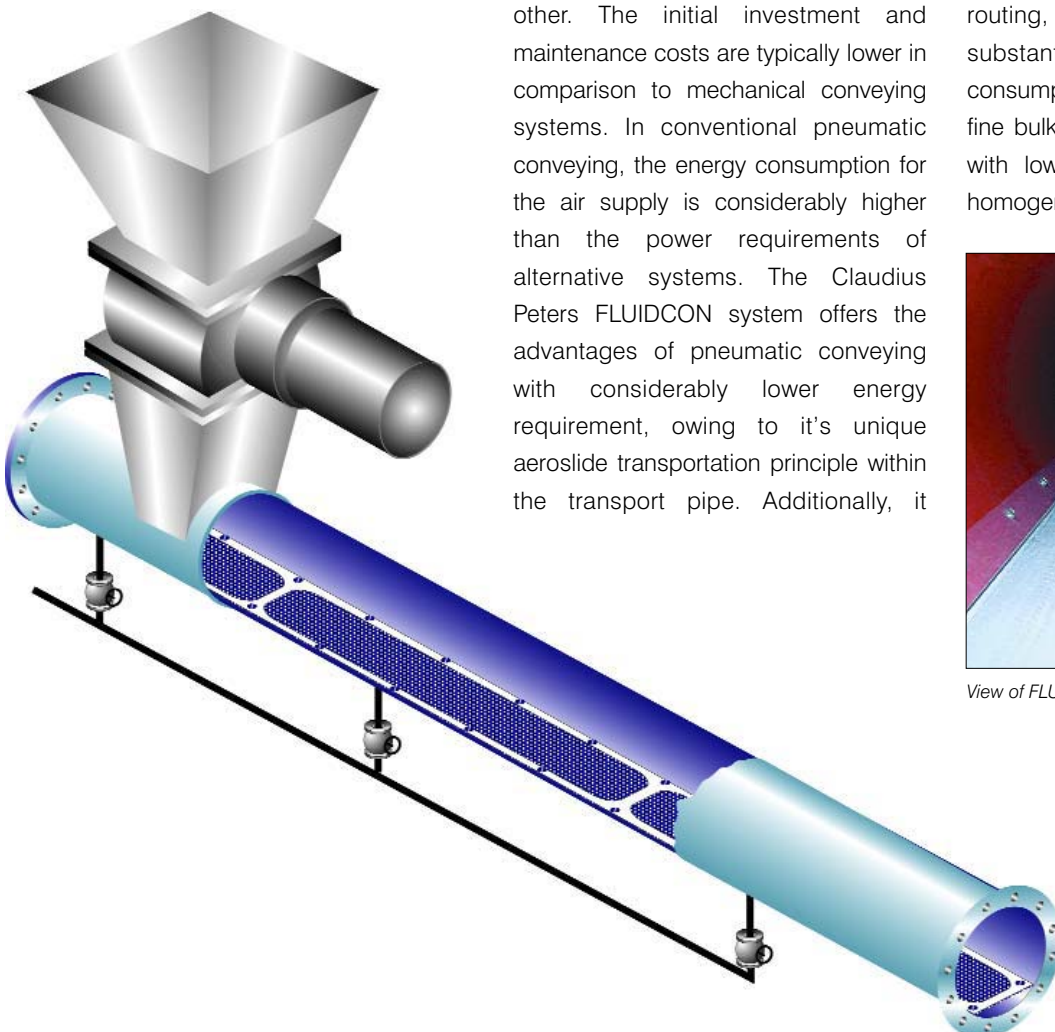


Energy consumption comparison for conveying 100 t/h cement over different transport distances in relation to a belt conveyor

FLUIDCON - The evolution of pneumatic conveyance

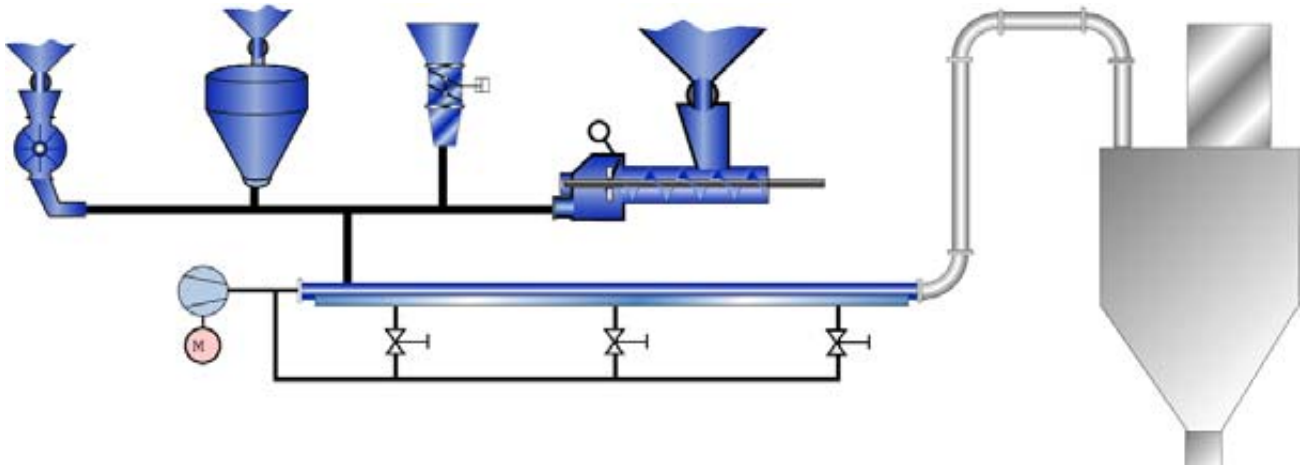
Pneumatic conveying has always been an acceptable means for transporting fine materials from one location to the other. The initial investment and maintenance costs are typically lower in comparison to mechanical conveying systems. In conventional pneumatic conveying, the energy consumption for the air supply is considerably higher than the power requirements of alternative systems. The Claudius Peters FLUIDCON system offers the advantages of pneumatic conveying with considerably lower energy requirement, owing to its unique aeroslide transportation principle within the transport pipe. Additionally, it

provides a dense phase system with increased bulk material load. Depending on the transport pipe routing, the FLUIDCON system can substantially reduce power consumption, and be used to convey all fine bulk solids which can be fluidised with low air velocities, and expands homogeneously during the process.



View of FLUIDCON aeration tube

...is there a better conveying technique?



FLUIDCON, is a conveyor pipe that can be partially or completely fluidised over the horizontal length of the pipe (the aeroslide principle). This air is used to fluidise but not transport the material.

The material transport air travels perpendicular to the fluidisation air (the conveyor pipe principle) and passes in an axial direction. The pressure loss of the transport air flow substitutes for the

inclination of an aeroslide. The Aeroslide Principle turns the bulk solids into a fluid state with minimal internal friction and insures that the solids remain fluidised away from the bottom of the pipe and into the gas flow. These optimum conveying conditions allows the transportation of solids with lowest axial driving gas velocities in the feed point and acceleration section of the pipe. Therefore, it is possible to convey materials with minimal differential pressure and inclined uphill up to 30° with the FLUIDCON system.

Advantages of FLUIDCON

- Reduced operating costs - substantially less energy consumption compared to conventional pneumatic conveying.
- High Availability - the system is easily started or restarted even when solids remain in the conveying line.
- Gentle Material handling - this is due to lower conveying velocities starting at approximately 2-3 m/s and ending at approximately 5 - 10m/s.
- Alternative feed systems - with a reduction in the conveying pressure, Claudius Peters X-pumps (screw pumps) can be installed instead of conventional pressure vessels to insure savings in height and capital costs.

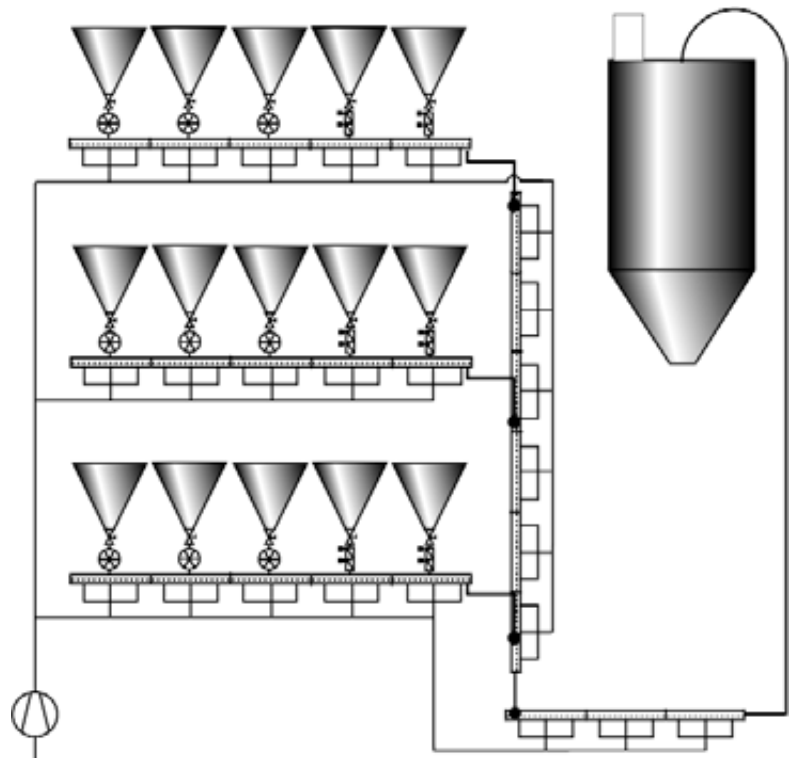


FLUIDCON transport system at Holcom Plant Lägerdorf for 230 t/h cement

Claudius Peters FLUIDCON System... ...there is nothing better

The Claudius Peters FLUIDCON System has proven to be a valuable alternative in bulk materials handling applications. Additionally this type of system can be utilised in ash removal plants. This system is particularly suitable for the removal of fly ash from a baghouse or ESP. The fly ash discharge points are connected to a common FLUIDCON conveying pipe and the ash is continuously removed and can be conveyed long distances. The application of the FLUIDCON system for the conveying of dust below filter installations offers the following advantages compared to other conveying installations:

- Lower investment cost
- Lower gas and solids velocities
- Lower conveying pressure
- Reduced wear
- Lower power requirement
- Lower installation height
- Simplified material feeding



FLUIDCON transport system at E-on Farge Plant

... systems you can rely on

- CALCINING . COOLING
- DISPATCH . DOSING
- DRY BLENDING . DRYING . GRINDING
- PACKING . PNEUMATIC CONVEYING
- PULVERIZED FUEL SUPPLY
- SILO SYSTEMS . STOCKYARD SYSTEMS
- ALUMINA HANDLING SYSTEMS
- TURNKEY PROJECTS

The information contained within this brochure is deemed to be correct at the time of going to press. Due to the policy of continued improvement, we reserve the right to change any specification without prior notice. ERRORS & OMISSIONS EXCEPTED



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