The COVER-PIL 600 automatic stretch-hooder from French manufacturer Thimon offers multiple possibilities of layout and sizes when wrapping bag stacks and other types of load. With film thicknesses from 40 microns, it is capable of wrapping as many as 140 pallet loads per hour and more, depending on the application. Further details of this and other latest bag palletising/load securement technologies are described on p12.

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Schäfter+Partner now part of Kreisel; powder tankers loaded by aeromechanical conveyor; Thiele Technologies acquires Dutch palletizer manufacturer Symach; aluminium silos extension at Car’s Flour Scotland; Bernhard Scherer no longer chairman of Zeppelin Systems

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Latest TOPAS sets benchmark for highspeed FFS bagging; powder screening with integrated metal detection and sampling; three milling processes from one machine; X-ray technology attains new food safety levels; self-cleaning magnet for non-freeflowing products

Twin blow tank arrangement for low-velocity conveying of foundry sand supplied by NEU International Process of France. Additional information is given about this company’s NEUPHASE slow-speed dense phase conveying system which is suitable for handling fragile as well as abrasive materials. Further details outlining other recent innovations in pneumatic conveying systems and components can be found on p14.

The French designed and manufactured Liftvac takes the pipe conveyor concept a stage further, providing both gentle and hygienic enclosed transfer of food powders, nuts, diced vegetables, pulp and even delicate confectionery. Other advantages include low energy consumption and ease of cleaning, as described on p11.

Bulk logistics operator Alfred Talke has opened an advanced liquids packaging line at Zwijndrecht, Belgium, with automated drum and IBC filling systems supplied by Feige Filling of Germany. It is now possible to fill and pack about 100 drums hourly with toxic and/or explosive chemicals delivered to the site by road tankers. Senior executives from Feige and Talke are shown on the occasion of the official opening (see p12).

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44 (0) 870 710 8881
Low-velocity dense phase conveying

The following article* outlines the capabilities of the French-designed NEUPHASE system which has achieved worldwide recognition: also on this page we briefly outline other news and developments relating to pneumatic conveying systems and components.

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**SYSTEMS NEWS**

Bentonite dense phase pneumatic conveying

Air-Tec system, Calenzana di Reno, Italy, has developed the patented EASY LOAD system designed to load mills for the rotary moulding industry. Key advantages are the total absence of dust pollution combined with compact equipment dimensions. Product is normally fed into the pneumatic pipeline from a silo up to three different destinations. Flow rates of 1.5Vh can be achieved over a distance of 100m, which means 1.8kg for each form in the case of bentonite adopted by a leading food producer for a product change is required. This can then be carried out automatically.

Method of movement

With NEUPHASE, the product is moved in a wave-like form through the pipe. Typically (in a horizontal pipe), the product will move extremely slowly and continuously, with waves of product moving gently along the top. The mass in which particles are conveyed depends on their physical characteristics and, particularly, on their dimensions. With granular products, the natural spaces between each particle are used to assist product movement. For powdered products (where there is virtually no space between the particles), secondary air is introduced in small quantities via injectors to keep the product moving.

Advantages of low velocity

Most pneumatic conveying systems, even slug phase systems, use relatively large quantities of air. Extensive research has clearly indicated that, by increasing the solid-to-air ratio and decreasing compressed air consumption is dramatically reduced. Development has proven that solids ratios (in kg) in excess of 150:1 are obtainable with the NEU system. NEUPHASE can reduce air consumption and, hence, energy consumption by 25% to 50% or more.

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**COMPONENTS NEWS**

Sanitary filter receiver

Coperion K-Tron will introduce its new Sanitary Filter Receiver (SFR) in early May at the Powder Show, Rosemont, IL. The SFR provides automatic separation of product material from the conveyor air for vacuum and pressure conveying sanitary applications in batch and continuous processes. It is specifically designed for stringent food applications requiring quick clean-out and to reduce food contaminants and/or the cross-contamination of allergens.

Multi-port switch

Also to be unveiled at the Powder Show will be the latest version of Dynamic Air's Multi-Port Switch which was introduced last year. This device automatically diverts granular materials from a single source, such as a pneumatic conveying system, to as many as 15 different bins, hoppers or silos. The full- bore design permits unrestricted material flow to minimize material degradation and pressure drop for improved performance and to reduce the energy required for conveying. The unique design uses a Geneva drive system for reliability and exact trouble-free positioning. There are no dead spots for material to collect, making the unit suitable for applications where cross-contamination is a major concern. In addition, wearing parts can be replaced quickly with ease.

Vacuum receiver with pneumatic dump valve

Pneumo Europe, Whitstable, UK, has introduced a vacuum receiver with a pneumatically actuated dump valve for use with dilute phase pneumatic conveying systems. The receiver is constructed from stainless steel, the unit is of clamp-together design that facilitates fast, tool-less disassembly for filter cleaning and maintenance. Its modular construction allows for addition of cylinder segments for increased holding volume. The flap-type dump valve is actuated by a pneumatic cylinder via manual contact closure, or programmable controls based on weight gain, elapsed time or other parameters selected by the user. Unlike conventional filter receivers that employ multiple small filter elements, the new device employs a single, large-diameter filter cartridge facilitating rapid filter changes and automatic reverse pulse jet cleaning of the filter element to maintain conveying efficiency during operation.

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**Latest Multi-Port Switch from Dynamic Air:**

- **Air-Tec system**
  - www.air-tec.com
- **Dynamic Air**
  - www.dynamicair.com
- **Fluid Airsystems**
  - www.fluidairsystems.com
- **NEU International Process**
  - www.neu-process.com
- **Coperion K-Tron**
  - www.coperionktron.com
- **Fluid Airsystems**
  - www.fluidairsystems.com
- **Flexicon Europe**
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- **NEU International Process**
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  - www.nol-teceurope.com

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*This is an abridged draft of an article written for EuroBulkSystems by Françoise Monnal, commercial department, NEU International Process.*