



# Clearing the air

using pneumatic systems to move bulk material

## VIGAN pneumatic bulk handling systems

VIGAN Engineering S.A. is a Belgian company located in Nivelles industrial area, about 30km south of Brussels, at the heart of the European Union. The company designs and manufactures port equipment for dry bulk handling, and is a noted expert in pneumatic bulk handling technology.

The main products handled by VIGAN equipment are all

types of cereals and oilseeds, raw materials for animal feeding, but also other free-flowing products such as wood pellets (which are an emerging and dynamic market), fertilizers, soda ash and alumina for instance. VIGAN's expertise also includes the handling of delicate products such as malt for breweries and cocoa beans.



The special VIGAN pneumatic technology preserves all the physical and chemical characteristics of the products during transport.

Since its foundation in 1968, VIGAN Engineering has been continuously improving its own expertise with state-of-the-art design of major components such as:

- ❖ VIGAN's multi-stage centrifugal **TURBO BLOWER** sucks the products by generating a depressurized air flow. Its operational principles are the same as those employed in turbo jet engines or turbines for power plants.
- ❖ VIGAN's **CYCLONE** separates the mixture air-product by centrifugal action so that only the air is sucked into the turbine. The products are then extracted by the airlock. Some air is sucked at the bottom of the cyclone to ease the downstream of the products into the airlock.
- ❖ VIGAN's **AIRLOCK** is one of the main parts of the machine. Its main goal is to evacuate the product while keeping the vacuum in the filter. Since any leak of pressure in the system would result in losses of efficiency, its design and characteristics are crucial. Thanks to its dimensions, it can handle high quantities of products with a relatively low rotational speed.
- ❖ VIGAN's **telescopic piping system**, which moves horizontally under the boom, and vertically from the boom into the ship holds. VIGAN has a constant focus on innovations, especially with regard to the wear-resistance of its piping, particularly on the Ni-Hard (nickel-chrome alloy) elbow which does not require any maintenance before 5mt (million tonnes) has been handled.

#### WIDE RANGE OF EQUIPMENT:

VIGAN offers a wide range of equipment so that customers can select the most convenient solution. Equipment includes:

- ❖ **portable pneumatic conveyors** also called 'grain pumps'. In 'suck only', 'suck & blow' or 'blow only' mode, their capacity range is 100–250tph (tonnes per hour). On quay or on a ship's deck, with required accessories, they are very adaptable and

can handle products in many different configurations: from vessel to truck, from silo to train, transshipment between vessels, and so forth.

- ❖ **pneumatic continuous barge and ship unloaders** are designed for a range of 160–800tph for all sizes of vessels. With stationary or self-propelled gantry on tyres or rails, with electrical or diesel engine and adapted boom length. Many options are available (operator's control cabin, radio remote control, winch for bulldozer, special fire and explosion protection panels, etc.).

VIGAN also manufactures mechanical handling machines:

- ❖ **SIMPORTER** mechanical continuous ship unloaders "SIMPORTER" able discharge up to 1,500tph from big vessels (Panamax, Capesize);
- ❖ **shiploaders**: which are designed according to the required loading capacity up to 1,200tph.

All VIGAN equipment is individually customized to meet any specific requirements. It is also suitable for a variety of applications, depending on ship size, the cargo, points of discharge and destination of cargo, and so on.

Thanks to highly professional relationships with its business partners specializing in complementary equipment, VIGAN is able to manage complete turnkey projects such as grain terminals providing pneumatic and/or mechanical ship unloaders, cranes, conveyors, weighing and bagging stations, storage silos and portable machines, as well as a proven experience to supervise engineering and civil works.

#### RECENTLY COMMISSIONED AND ORDERED VIGAN EQUIPMENT

- ❖ one NIV 400tph for South Korea (see picture on pxx);
- ❖ two NIV 600 for Tilbury/UK (see picture, top);
- ❖ one rail-mounted NIV 400tph in Taiwan (see picture, below);
- ❖ one ship unloader and one loader in the south of France.

Recently awarded contracts which are, at various development stages, under realization:

- ❖ six machines in Egypt;
- ❖ one grain loader in the Balkans;
- ❖ two mechanical unloaders in China; and
- ❖ several grain pumps over the five continents.

