

## VIGAN's key logistical role in the world's food chain

Billions of tonnes of cereals circulate around the world every year to feed the world's growing population.

Grains are mainly carried in bulk by sea and via inland fluvial transport, and are then transported overland by truck or train, bringing the cargo to its final destination. This is where VIGAN comes in, by offering continuous ship-unloading and loading solutions, whether pneumatic or mechanic means.

The main products handled by VIGAN equipment are all types of cereals and oilseeds, raw materials for animal feeding and products such as alumina, soda ash, chemicals and/or fertilizers.

Free-flowing characteristics are important, but VIGAN has also developed technologies to handle products which may be slightly compacted, such as soybean meal. VIGAN's expertise also includes the handling of delicate products such as malt for breweries and cocoa beans for chocolate, as well as wood pellets and many other free-flowing cargoes.

Indeed, VIGAN's special handling technology preserves all the physical and

chemical characteristics of the products during their transport.

Challenges for the grain bulk logistics are: energy, labour and demurrage costs, while safeguarding the quality of the discharged product and ensuring reliability over long period in demanding environment. VIGAN offers tailor-made solutions to meet these challenges.

VIGAN's equipment offers a fast return on investment by optimizing the operational costs:

- ❖ low energy consumption: 0.6–0.8kW per unloaded tonne;
- ❖ highly efficient cleaning of the vessel or barge hold: maximizing discharge efficiency (75% and more) leads to minimized demurrage costs;
- ❖ reliability results in low maintenance

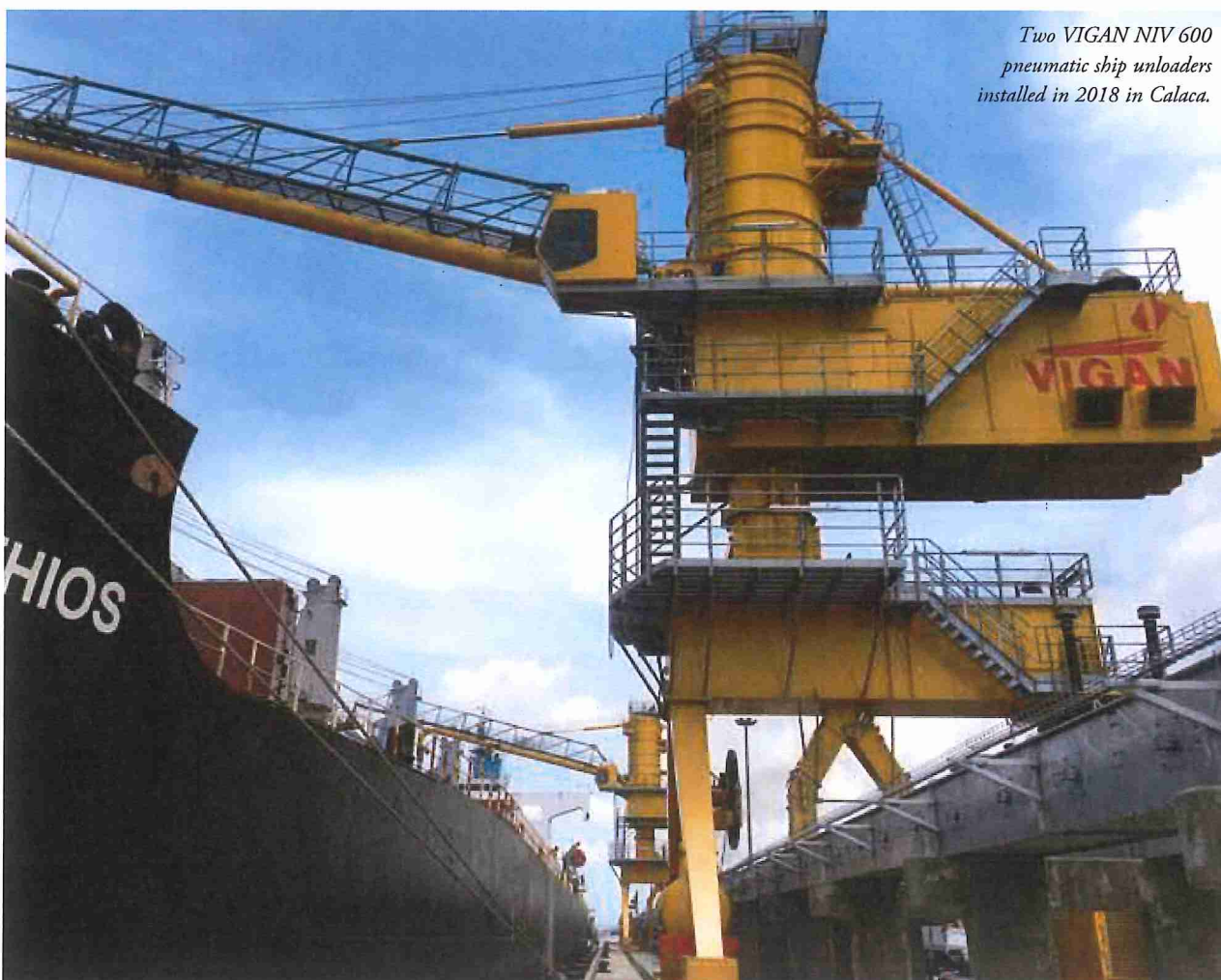
cost and time out reduction;

- ❖ durability (machines with a life expectancy of 30 years and more) and cost efficiency lead to long-term investment with short term pay-back; and
- ❖ ease of operation (simple high tech) means limited manpower and low operating cost.

Since its creation in 1968, VIGAN has



*VIGAN pneumatic ship and barge unloaders supplied in 1997 and 2015 in Batangas.*



*Two VIGAN NIV 600 pneumatic ship unloaders installed in 2018 in Calaca.*



honed its CSU (continuous ship unloader) expertise, as well as its know-how and is thus able to advise its customers worldwide about efficient unloading operations.

The vast majority — 99% — of VIGAN's production is for the export market, helping not fewer than 100 countries to feed their populations.

#### VIGAN: PARTNER FOR THE PHILIPPINES

While it has an important place in global rice and corn production, the Philippines is not self-sufficient in terms of wheat, due to its climatic features, and it is therefore among the world's leading wheat importers.

Rice is the main staple food of the population, currently estimated at 105 million people, but wheat and protein are on the rise in the diet of the Filipino consumer.

VIGAN entered the market in 1989 with the sale of a portable grain pump type 80.

Since then, VIGAN has sold 22 machines in the Philippines, among which five are heavy-duty machines.

In 2015, VIGAN installed a pneumatic unloader for barges in Batangas (Philippines) for the company Suntrak Corporation, a grain logistics company affiliate of Monde Denmark Nissin Biscuit, one of the country's leading manufacturers of instant noodles, biscuits products and packaged baked goods.

The pneumatic barge unloader has a capacity of 250tph (tonnes per hour), and is equipped with a motor of 130kW (0.52kWh/t).

The former VIGAN gantry that was installed on the same site in 1997 is still in operation. VIGAN recently equipped it with a frequency inverter allowing a power

consumption saving of  $\pm 20\%$ .

Local soybean meal production remains insignificant relative to overall need and the industry is also dependent on imports.

This year, VIGAN has installed two NIV 600tph/500kW pneumatic grain ship-unloaders at Calaca Harvest Terminal Inc. in Calaca, for the discharge of grain and soy meal from vessels up to 50,000dwt, with a boom length of 30m, calculated from a slewing centre.

These machines are mounted on a mobile self-propelled gantry on rails, with a rail span of 12 metres. The gantry is equipped with a chain conveyor of 18 metres long with two outlets and two chutes for the feeding of two wharf conveyors.

The machine is equipped with two electric motors of 250kW each, with two VIGAN centrifugal four-stage turbo blowers with direct coupling between turbo and motor axle. The turbo blower electrical motors are driven by a frequency inverter.

#### A 'CUTTING NOZZLE' FOR SOYBEAN MEAL HANDLING

For non-free flowing materials, such as soybean meal, VIGAN highly recommends the use of its cutting nozzle. This cutting head is a very efficient tool and requires a minimum amount of power. The standard suction nozzle is designed for free flowing products naturally flowing to the suction point allowing high unloading efficiency. In order to achieve good performances on non-free flowing materials, a cutting nozzle should be used. This cutting head is an efficient tool to disintegrate the caked product and restore its flow properties. It requires low power because of the reduced but active action surface. This cutting tool usually operates on meals and other cargoes with bad flowing behaviour; in conjunction with a front-end loader breaking the product walls and pushing less flowing material all around the nozzle.

The cutting nozzle is supplied with a support on the wharf for quick disconnection from the vertical telescopic.



*Cutting nozzle especially designed for Calaca Harvest Terminal Inc.*

