TOWERS OF STRENGTH

COMPANY NEWS

THE CONCEPT

The vast river network in Europe — not least in Germany, France, The Netherlands and Belgium — represents more than ever a very attractive way of transporting bulk goods and grains. Vigan developed its pneumatic tower concept 30 years ago and has been improving it ever since. The system allows the fast and efficient unloading of barges ranging from 500 to 4000 tonnes. It is generally mounted on a fixed gantry, although mobile systems are also possible, and capacities range from 100 to 600 tonnes per hour. Recently, there has been a surge in interest in Vigan's tower concept: its versatility, low-energy consumption and tailor-made concept sparking this renewed interest.

The heart of the system is the multi-stage Vigan-designed turbine. It is driven by a high-revolution electrical motor with frequency inverter steering. This configuration keeps the energy consumption low, from 0.6 to 0.8 kWh/ton discharged.

The powerful vacuum created by the turbine sucks in the cargo at an impressive rate. The tower is a very versatile unloading tool, not least due to its vertical and horizontal telescopic tube system. At the near end is the suction nozzle, an ingeniously designed coaxial tube system permitting air to come into the cargo and transporting it through airlift into the vertical and horizontal telescopic tube.

The elbow between the vertical and horizontal tube system is of the highest wearing resistance (more than eight million tonnes of grain with the same elbow has been recorded). Both the vertical and horizontal telescopic tube systems are steered by electrical hoists. The boom carrying the suction tube system is mounted and connected to the receiving bin with a powerful self-regenerating filter, reducing dust emissions to nearly zero. For maximal reach when unloading hatches, the receiving bin is mounted on a slewing ring. The boom is elevated by an ultra-safe hydraulic jack so there is no risk of breaking.

OPERATION

Barges destined for fluvial transport will generally carry loads up to 4,000 tonnes, with average loads of 2,000 tonnes. The boom length of the Vigan tower is fully compatible with these barge sizes. Pneumatic unloading has the benefit of operating close to full capacity throughout the vessel. Once cargo levels are too low for proper operation, the operator brings a Bobcat in the vessel through a dedicated hoist system mounted on the boom. Cleaning the barge with the Bobcat, it is still that same single operator controlling the complete unloading operation.

The ship can be moved a minimal amount of times without having to interrupt the unloading operation. The total number of manipulations is kept to a minimum, safety is guaranteed and there is no risk to damage the barges whatsoever.

EFFICIENCY

Pneumatic barge unloaders have the highest unloading efficiency throughout the complete unloading cycle. They run at 75-80% of their maximal capacity, with just a single operator managing the whole operation. Spare parts cost works out less than €0.04 per tonne discharged.

Customers throughout Europe and the wider world have become more aware of the benefits of Vigan tower unloaders. Over the past six years alone, more than 10 units were sold in Germany, France and Belgium to unload river barges.

Our equipment will definitely further reduce the heavy truck transport near our cities and improve the handling efficiency of the companies involved in handling and conversion of cargo. The future is looking bright.

For more information, contact: vigan.com

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