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VAN AALST BULK HANDLING BV

(International Trade Centre) Engelandlaan 56
2391 PN Hazerswoude-Dorp - The Netherlands

www.vanaalstbulkhandling.com

Head office:

tel: +31 172 213 341 fax: +31 172 232 804
e-mail: info@vanaalstbulkhandling.com

USA, Van Aalst Bulk Handling Co:

tel: +1 402 362 615 3 fax: +1 402 362 715 3
e-mail: dgeorge@vanaalstbulkhandling.com



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Making your own Lucky

by **Ruhail Thobhani,**
Lucky Cement, Pakistan

Pakistan's largest producer and leading exporter of cement, Lucky Cement, has always taken pride in being a pioneer when it comes to introducing new and innovative practices in the cement industry, especially in Pakistan. To attain its market position, the company has not just relied on its core product, cement, but has also seized every opportunity to become a market innovator by providing value-added services to help its customers. Such measures are another reason why Lucky Cement has become a leading brand of cement both domestically and abroad.

Gearing up for exports

As it established an export-oriented infrastructure on a self-finance basis, Lucky Cement has given a new dimension to Pakistan's cement industry. It is the country's first company to export sizeable

Pakistan producer Lucky Cement has emerged as a leading exporter of cement to Africa, the Middle East, South Asia, contributing substantially to the country's total exports to non-traditional markets. However, the company has not only relied on the "good luck of the markets" as the establishment of its own export infrastructure, with considerable investment in its Karachi Port terminal, has been key to its export success. In that sense, Lucky Cement is indeed making its own luck.

automatic shiploaders at Karachi to enable fully-automatic silo-to-vessel loading when the vessels arrive at port



Van Aalst supplied the shiploader for Lucky's terminal in Karachi



Lucky Cement has also installed four 6000t cement storage silos at the port, capable of storing 24,000t of cement. The extraction of cement from bulk tankers and reloading it into vessels is processed through vacuum pumps and compressors which operate through powerful generators.

quantities of bulk cement and is the only cement manufacturer to have loading facilities and a storage terminal at Karachi Port. This state-of-the-art project is based on latest European technology and, according to Lucky Cement, is the first of its kind in the Southeast Asia and Middle East regions, designed specifically to transfer bulk cement to the vessels in the shortest amount of time, making it efficient and reliable. The terminal is equipped with logistics to carry bulk cement, which is transferred to the port from the company's Karachi plant via its fleet of specially-designed, 75t capacity cement bulkers. These are capable of off-loading bulk cement into carrier ships directly through a unique compressor system installed on each vehicle. To reduce the vessels' idle time and making the cement shipments timely, in line with customer requirements, Lucky

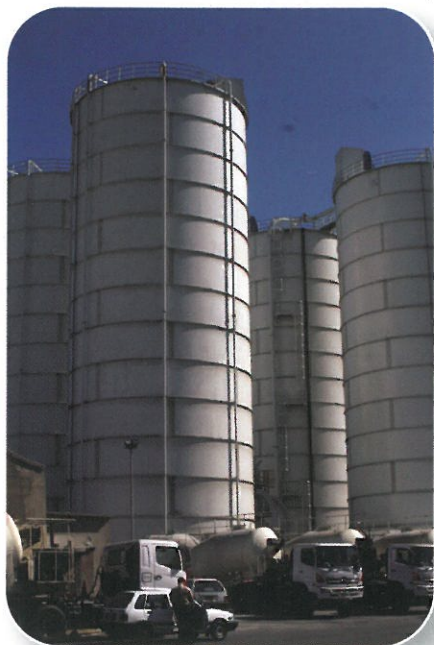


Cement has also installed four 6000t cement storage silos at the port, capable of storing 24,000t of cement. The silos are of the flat-bottom design by Van Aalst Bulk Handling. No support legs, reinforced ring beam or cones are needed in this design which lowers costs. The silos were fabricated in Pakistan, while the fluidised floor reclaim parts, filters and control panel are delivered from The Netherlands. From the silos, cement is extracted by a pneumatic conveyor unit and blown to the jetty at a capacity of 500tph. The vacuum pumps and compressors are



Lucky Cement – innovation

One of the key factors which played a major role in the exponential growth of Lucky Cement and gave it a remarkable edge over its competitors, is the idea of transport of loose cement from plant to sea ports in bulk quantities through specialised and unique vehicles called 'Bulkers'. The first-of-their-kind, these bulkers are also capable of offloading loose cement into carrier ships directly through a unique compressor system installed on each vehicle – thus playing a major role in increasing export capacity of the company and making it a market leader in the country. The first bulk transporting system was rolled out from factory in February 2007 when it started off with only 29 vehicles. Today, Lucky Cement has its own fleet of around 77 bulkers and a fully-equipped workshop to cater for the maintenance requirements of these vehicles. There is also a state-of-the-art online tracking system for efficient control of the movement of these bulkers throughout their routes.



Left: silos with truck deliveries.
Right: rapid cement loading in progress



operated by powerful generators. The conveyor unit carries the cement through an underground pipeline to the shiploader. This underground pipeline ensures that no obstruction is caused in the harbour. When a ship arrives in the dock, the shiploader is connected to this pipeline and loads the ship via its loading arm. Lucky Cement has set up automatic shiploaders at the site to enable fully-automatic silo-to-vessel loading when the vessels arrive at port. This system of discharging cement from the silos to the vessels at very fast discharge rates enables a very rapid loading time while ensuring cement availability at the port at any time. Depending on the size and construction of the vessels, the loading capacity of the terminal is 12,000tpd.

Via the loading arm, the cement and transport air enters the ship.

Via a second pipeline on the loading arm, the transport air is extracted out of the hold and the cement is dropped to the bottom of the hold. On the shiploader, the extracted transport air is filtered, and the clean air released into the open. The captured dust in the filter is re-injected into the loading line again. The facility plays a major role in increasing the company's export capacity and making it a market leader in the country. The entire system is designed on the basis of a programmable logic control (PLC) system. All processes go through a fixed repetitive sequence of operations which involves logical steps and decisions. PLCs are used to control time and regulate the system.



While the cement factory is located far from the harbour, the cement is delivered to the port in bulk trucks

Skilled workforce delivers record performance

A strong workforce of skilled individuals, including engineers, technicians and labour, is employed at the company's Karachi port terminal. With this specialised workforce, Lucky Cement is also capable of loading around 2000tpd of bagged cement and 3000tpd in sling bags.

This record loading rate is achieved with the help of its well-trained stevedores who maintain the load rate and use their capabilities to the maximum.

Pioneering advantage

As a result of the above investments, Lucky Cement has a first-mover advantage in capacity building, exploring export markets, offering innovative solutions for the transport and infrastruc-

ture of bulk cement handling and providing better quality cement, while at the same time, being cost effective.

made to measure