SAMSON Equipment for the Cement Industry: Handling Clinker

**SAMSON Materials Handling Limited** (part of the AUMUND Group) has been providing equipment for handling and storage of dry bulk materials for over 50 years.

The company has extensive experience in designing solutions for the cement industry particularly in the handling and storage of fuels and raw materials for cement plants including clinker.

SAMSON strives to provide solutions that not only deliver a high performance but also focuses to minimise the spread of fugitive dust and the associated risks to the environment.

Handling of clinker is a very dusty process; however, by employing cleaner technologies, such as the SAMSON Eco Hopper, port operators can reduce environmental damage.

**Facts**

- Extensive experience in designing solutions for the cement industry
- Cleaner technologies for reducing environmental damage
- SAMSON equipment is employed at multiple points throughout the clinker handling and storage process.
SAMSON mobile equipment is a cost effective way to equip ports and terminals. It requires a smaller capital outlay than fixed equipment and provides greater flexibility as equipment can be employed at multiple locations, with limited or normally no third party approvals and can be moved off the berth when not in use, therefore freeing up space for other activities.

As international supply and demand for clinker varies the need for effective and flexible handling and storage options becomes more important. SAMSON mobile equipment is therefore well suited to variable markets as it allows producers to adapt to changes in volume and operate from multi-purpose berths.

**Equipment Portfolio**

SAMSON equipment is employed at multiple points throughout the clinker handling and storage process.

**SAMSON Shiploaders**

SAMSON Shiploaders can be used alone, in conjunction with other SAMSON equipment (Mobile Feeder/Truck Unloader or STORMAJOR®) or as part of a comprehensive shiploading system with integrated truck unloading units.

The port configuration and feed system will determine whether the shiploader is based on a standard, raised or narrow quay chassis design. Cascade type telescopic trimming chutes are generally chosen for clinker shiploading as they provide a contained fall of material into the vessel’s hold. A simple skirting device at the end of the chute reduces any dust generation and helps in the placement of product.

If enhanced dust control is required at loading points integrated Samson® Feeders including steel enclosures provide full dust filtration on the feeders, transfer points and enclosure to the boom.

**SAMSON Eco Hoppers**

SAMSON Eco Hoppers (ecological hoppers) are predominantly used for clinker imports as they provide an effective and efficient means of importing dusty materials at scale and with reduced environmental impact. Vessel-mounted or shore based crane grabs deliver the clinker from the vessel into the ecological hopper. As the grab is released integrated filter units located at 3 sides of the hopper are activated to capture and contain any dust. Dust retained by the filter unit is returned to the material stream by high-pressure jets of compressed air.

**Samson® Feeders**

**Samson® Feeders (Truck Unloaders)**

Samson® Feeders are an effective method to receive limestone and other minerals for processing into clinker at the beginning of the cement production process. They are also often used to receive clinker for further transportation such as ship loading or as a truck reception unit at a cement mill. These versatile units can either be stand-alone or connected to onward conveyors or other auxiliary equipment. For enhanced dust control Samson® Feeders are housed in rigid or canvas enclosures and accessed through the entry curtain. Additional dust containment and reduction measures are employed at each transfer point where required.
passes through flex flaps into the hopper the upward movement of displaced air closes the flaps and contains the dust within. Using an Eco Hopper for importing clinker helps keep costs down. The high performance filtration unit reduces air consumption and therefore reduces OPEX costs. The filtration units are easy to maintain and by decreasing the chance of clogging, maintenance time and costs can be kept to a minimum.

Eco Hoppers are a viable option for smaller or irregular shaped berths. A compact filter design allows for a smaller hopper size that increases flexibility in location. They can be wheel or rail mounted allowing for easy removal from the berth when not required.

Eco Hoppers are of a robust design with a reinforced tubular shroud and inlet grille to reduce damage from crane grabs. An integrated shroud minimises the effects of cross winds during grab discharge. The steep angle of the hopper reduces the risk of blocking and wear resistant liners extend the durability of the equipment. Access walkways surround the hopper for easy maintenance.

Eco Hoppers can discharge the clinker to waiting trucks (or onward conveyors) for transport to storage and/or processing. They provide peak rate discharge via a telescopic loading chute to trucks from 600 tph or up to 1500 tph to an auxiliary conveyor.

Major Clients
SAMSON Materials Handling has been providing equipment to the Cement Industry for many years. Clients include LafargeHolcim, Irish Cement, Cemex, Southern Province Cement Company, Saudi Cement, Cong Thanh Cement, Cement Industries (SABAH) Sdn Bhd and many more ...

How SAMSON stays Competitive in the Market
SAMSON benefits from being part of the AUMUND Group with Subsidiaries and Agents worldwide. With a dedicated research team located in Group Head Office and engineers and service centres around the globe the company keeps up to-date with the latest opportunities and threats in order to provide the best solutions to clients in the Cement Industry.

Recent Contracts
There is considerable interest in SAMSON Eco Hopper technology to support clean ports and reduce environmental impact. Recent contracts include an Eco Hopper for the SEA-Invest development of the new bulk terminal at the Port of Abidjan in the Ivory Coast and 4 SAMSON Eco Hoppers for the Kenya Port Authority in Mombasa and many more ...

Recent Technological Developments
Across the entire SAMSON range of products emphasis is given to researching and developing equipment that reduces operating costs and increases efficiency with advanced dust reduction systems. Modularised design and transportation of the new ranges will help us work towards these goals.

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