

Clean loading of fertilizers with DSH

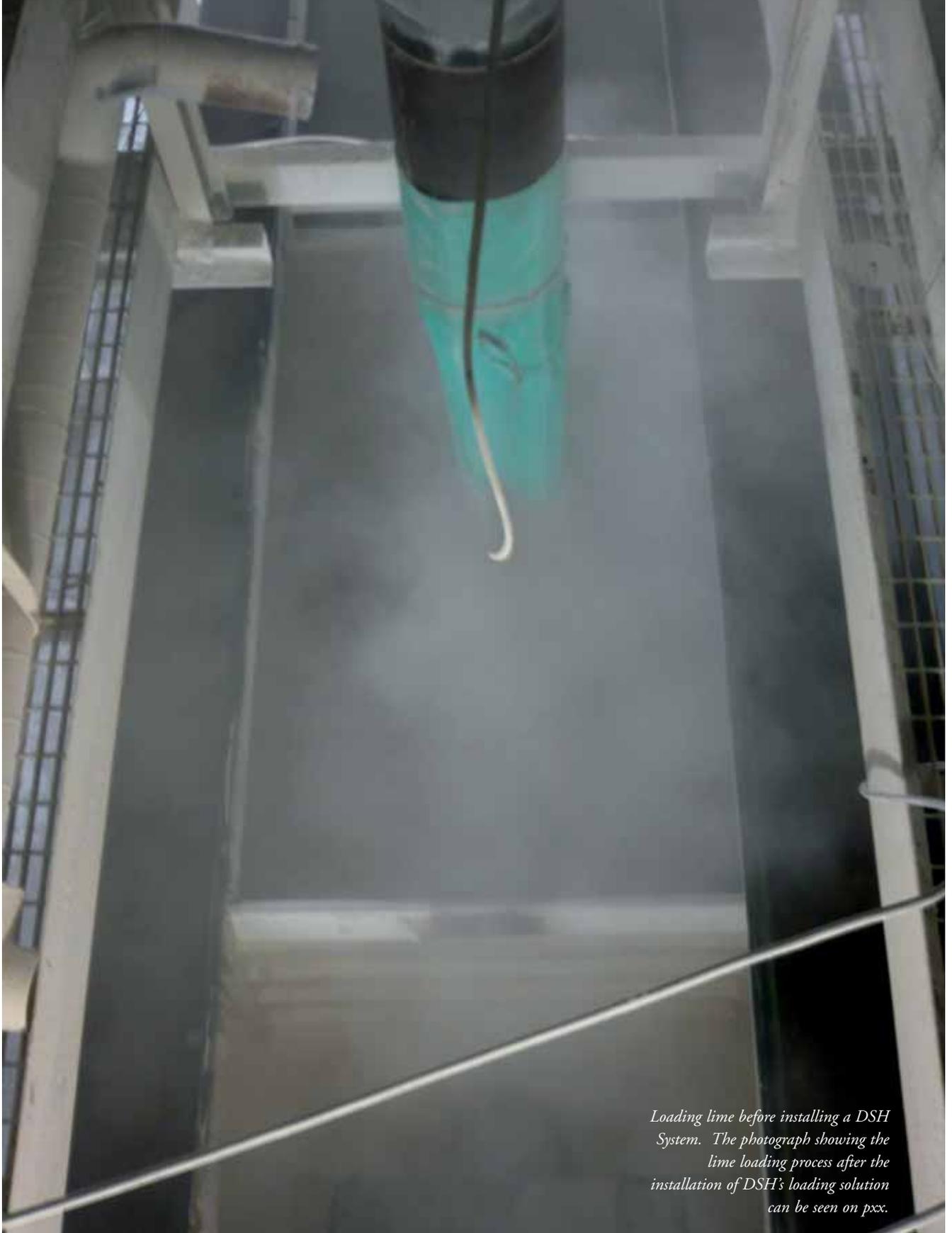
Loading lime after the installation of a DSH System. There is a marked difference from before the system was installed, as is shown in the photograph on pxx.

DSH Systems produces hoppers for bulk loading of dry goods including fertilizers, grains, stock foods, limes, sugar, salt and so forth.

The award-winning loading system from DSH Systems enables dust-free loading into a range of repositories such as trucks, rail cars, storage heaps barges and ships.

The patented DSH Systems dust suppression hopper allows dry, dusty, granular materials to flow coherently 'en masse' so that dangerous dust emissions are virtually eliminated.

A recent installation in the United Kingdom loading lime into rail wagons, demonstrates how using a DSH System can dramatically reduce dust while bulk loading.



Loading lime before installing a DSH System. The photograph showing the lime loading process after the installation of DSH's loading solution can be seen on pxx.

Bulk loading of fertilizers is a very dusty job as the airborne dust envelops working environments, neighbourhoods, plant and machinery and the emissions cause low visibility and dirty, dangerous and very unpleasant working conditions.

The DSH System was invented to provide a much-needed solution and achieves this result without the need for electricity, dust extraction or internal moving parts.

The DSH System offers positive product transfer control, unlike other handling and loading methods which entrain air, resulting in dust particles becoming airborne and leading to expensive problems and environmental and health and safety

issues. The DSH System reduces product wastage, thus increasing profit margins and can also eliminate the need for more expensive dust control methods. The DSH (dust suppression hopper) System is installed under a feed point where it is suspended above the target repository and kept at operating level.

At the point of loading or transferral, air is extruded from the hopper and the fertilizer is concentrated into a moving solid column falling through free air into any target repository while containing the dust fines in the centre of the column.

Extraction is unnecessary, cleaning and disposal costs are

reduced and the client receives a fully specified blend as product loss is minimal. Loading is faster, storage tonnages increase, dust explosion risk is mitigated and operations can be enabled closer to urban areas.

A large New Zealand fertilizer company originally operated in a designated industrial area in a rapidly growing city and a Marae (a Maori meeting house) is a neighbour. The company was aware that it couldn't continue to cause neighbourhood pollution and annoyance.

The company is a responsible member of the community so it searched for an effective solution. It installed one dust suppression hopper and undertook an evaluation with comparison tests. The results proved the benefits, so the company then altered its plant to incorporate several more hoppers on its site load-out. It now has DSH Systems installed in its fertilizer plants throughout New Zealand.

DSH Systems soon realized there was an urgent worldwide need for a simple dust solution.



Before – using a traditional loading spout.

The first hopper to be installed in a fertilizer plant in the USA went to Mosaic Crop Nutrition site in Savage, Minnesota. Lisa Brickey, warehouse manager needed an improved dust control system at her loading facility. An initial DSH hopper installation was quickly increased to five hoppers at her plant and her recommendations to her colleagues has now resulted in other installations at Mosaic Crop Nutrition plants in the USA and South America.

After installation of the first hopper was completed, DSH Systems received a copy of the following comments from Lisa:



After – using the DSH System.

“We’ve just installed a new DSH spout at our feed phosphate load out. Wow!! The dust control is amazing! We LOVE it! The spout was developed in New Zealand by an engineer at a fertilizer company. We’ll be taking out some spouts and putting this in. It doesn’t seem to matter how far the product falls, no more dust is created and the tube of product that comes out of the spout is narrower making it easier to load pneumatic trucks.

No electricity, no moving parts, dollar investment, results.... Priceless.” *Lisa Brickey, Mosaic Crop Nutrition, Minnesota.*