



LIME INJECTION SYSTEM FOR ELECTRIC ARC FURNACE (EAF) STEEL PLANTS

IMPROVED EFFICIENCY

In today's electric arc furnace (EAF) steel plants, operating more efficiently increases the competitive advantage of that plant. One way to improve operating efficiency is through the installation of a lime injection system from Storage & Transfer Technologies (STT), a wholly owned subsidiary of Carmeuse. Our system stands out in the industry through a partnership with Schenck Process. This combines lime handling expertise (STT) with proven dense-phase conveying experience (Schenck Process) along with raw material experience (Carmeuse) to ensure you get one of the most reliable systems on the market. This means you can feel confident with a safe, accurate and consistent lime supply to your furnace.

KEY CONSIDERATIONS

Traditionally, lime has been added to the EAF by "dropping it" into the top (5th hole) via super sacks, conveyors or bucket cranes. However, these methods can create many issues such as waste through the baghouse, dusting around the shop floor, and less control of the application. Because of this, installing a lime injection system is becoming a common practice and has many benefits to the steelmaker including:

- Improved safety through less dust around the work area
- 7-15% reduction in lime consumption due to not losing lime through the baghouse
- Improved slag chemistry from better process addition control
- Energy savings through reduced melting power
- Cost savings on consumables (electrodes and refractory)
- Less CO₂ emittance due to lower methane consumption required

THE STT DIFFERENCE

MEETING YOUR NEEDS

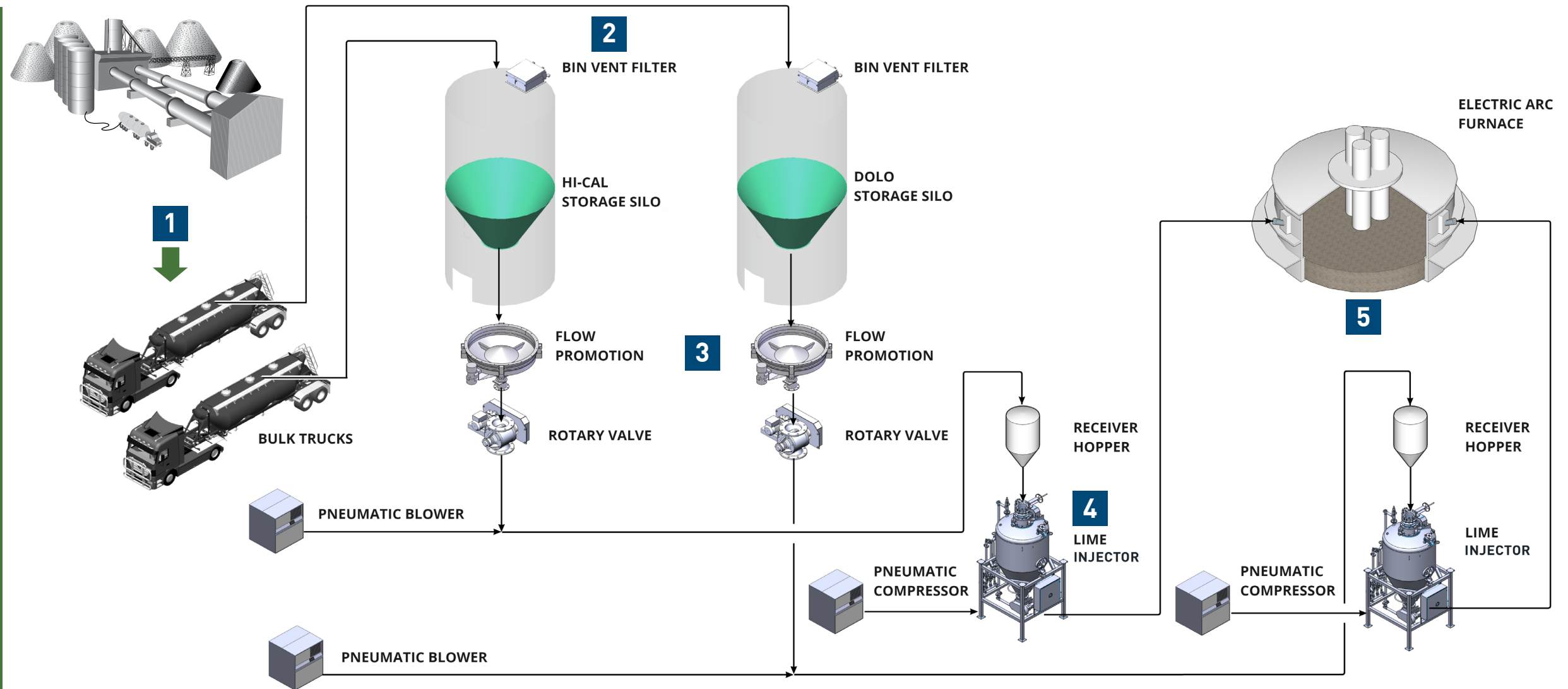
STT provides onsite evaluation, designs to suit your needs, works with your existing approved contractors, accomodates current equipment, and offers project oversight, startup services, training and aftermarket support.

BENEFITS

To get lime efficiently to the furnace, it starts with an understanding of the source. Raw material expertise from Carmeuse ensures that your system is designed to accommodate the high calcium or dolomitic lime available to your plant. Our test facility can be configured to your site layout and then run with your specific lime prior to installation to ensure confidence that you get the right system matched to your raw material supply.

Lime sizing can vary which affects flow and chance for plugging, thus causing inconsistency and/or gaps in production. To overcome this issue, we partnered with Schenck Process and their proven dense-phase lime injector. Schenck Process injection systems are widely used in steel for injection of coal and activated carbon. This design has been proven to provide accurate, reliable and consistent supply to the furnace even with variations in material size.

STT combines this knowledge together with our expertise in lime handling equipment to offer a complete lime injection package that you can count on.



1 Analysis of Lime

This essential process helps us understand chemical and physical properties that will ensure proper design of a system.

BENEFIT—a proper system design in relation to the available raw material supply, improving cost effectiveness and minimizing downstream plugging issues.

2 Bin Vent Filter

This unit can be retrofitted on an existing silo with a compact, low-profile, top-access body design.

BENEFIT—lightweight, tool-less, hinged top-access door provides clean air-side access to filters and requires no tools during cartridge replacement reducing maintenance costs.

3 Flow Promotion

Utilization of bin activators, aeration bottoms, air pads, and/or impactors to prevent product buildup, bridging, or ratholing.

BENEFIT—keeps lime moving freely, effectively, and consistently, eliminating disruptions.

4 Lime Injector

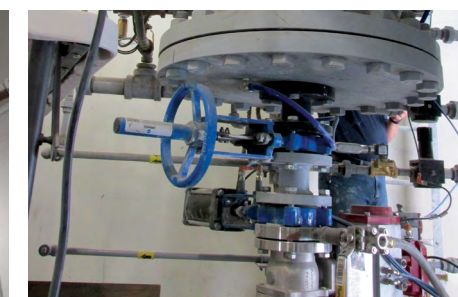
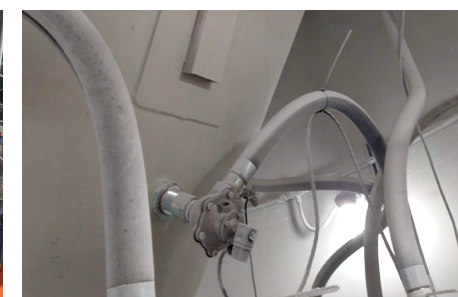
Designed to effectively inject solid materials into processes and can be controlled by volume or weight.

BENEFIT—accurate, repeatable and reliable, not affected by material size changes, providing consistent, uninterrupted supply to the furnace.

5 Injection

An injection system designed for any furnace configuration and injection block manufacturer preference.

BENEFIT—precise process control, compatible to other injection equipment, providing ease of operation and maintenance.



AFTERMARKET SOLUTIONS

Proper design of a lime handling system will add to the ease of operating the system; however, maintenance must be carried out on your lime system to ensure it continues to run efficiently. STT is dedicated to ensuring your lime storage, handling, slaking and/or lime injection system continues to work correctly for years to come. We offer a variety of solutions to improve the efficiency and lifecycle of your system, including:

- System Retrofits and Upgrade Solutions
- Onsite Audits
- Automation and Controls
- Replacement Parts and Components



A strategic partnership that provides expertise in lime injection systems for the steel industry.

Schenck Process is a global provider of sustainable products, integrated solutions, and services in mission-critical applications for bulk materials. Headquartered in Darmstadt, Germany, the Group has around 3,100 employees with a presence in over 21 countries across 6 continents focused on the food and mining markets, alongside chemicals and performance materials, and infrastructure and energy.

The product offering includes solutions for industrial weighing, feeding, conveying, pulverizing and classification, screening, mixing and blending, and associated digital applications.

For more information visit: www.schenckprocess.com

OUR NAMES HAVE CHANGED. **OUR COMMITMENT TO QUALITY REMAINS.**



LET US HELP PROVIDE A SOLUTION FOR YOUR NEEDS.

STT is the expert in handling lime that designs, installs, and maintains systems to achieve peak performance for your application so that you are confident that your operations will run more efficiently. As a member of the Carmeuse Group, we are knowledgeable in lime, have over 50+ years of diverse experience, offer state-of-the art products, and partner with customers throughout the lifecycle of their system and equipment. To speak with one of our experts, contact us at:

SALES@STTSYSTEMS.COM

+1-905-875-5587

STTSYSTEMS.COM

CANADIAN HEAD OFFICE:
8485 PARKHILL DRIVE
MILTON, ON L9T 5E9, CANADA

US HEAD OFFICE:
3600 NEVILLE ROAD
PITTSBURGH, PA 15225

STT operates as a wholly owned subsidiary of Carmeuse, a leading manufacturer of lime, limestone and mineral-based products.