

Dry Bulk Sorbent Injection Systems

SORB-N-JECT™ Technology

for SO₂, SO₃, Hg, HCl
Emissions Mitigation



Increased legislation and mounting regulations are leading electric generating facilities to seek reliable, cost-effective methods of reducing pollutants in stack emissions.

Reducing Emissions Via Chemical Sorbent Injection

Nol-Tec Dry Bulk Sorbent Injection Systems mitigate SO₂, SO₃, Hg, and HCl emissions, effectively and efficiently.

Custom-engineered Sorb-N-Ject™ systems continuously transfer sorbent materials from storage silos to injection ports on boiler flue gas ducts. The injected material reacts with the pollutants in flue gas to reduce emissions. Sorb-N-Ject™ systems include special features to prevent common problems and maintain continuous production.

- Proven Technology
- Simple, Flexible Design
- Redundant Design
- Easy to Install
- Controlled Feed
- Self-Diagnostic Controls
- Clean
- Precise

A Typical System

Although system configurations vary with each application, a typical installation includes several storage silos sized to hold the appropriate inventory of dry sorbent material. The silos are filled pneumatically from bulk trucks or railcars, and include attachments such as bin vents and level probes.

Depending upon physical plant layout, pneumatic delivery systems can be used to transfer product from the storage silos to intermediate receiving bins located closer to the duct injection locations.

The injection system begins at the discharge of the silo or receiving bin. Aeration promotes material flow. An automatic valve opens to gravity feed the product into a continuous loss-in-weight feeder. This feeder meters sorbent into a positive pressure dilute phase conveying line. The product conveys through a splitter valve to individual duct injection lances. To increase efficiency, an in-line mill may be used to reduce the particle size of certain sorbents.

At the conveying line splitter, an automatic sensing system is employed to detect any plugs in the injection

lines. If a plug is detected, the affected injection line is automatically purged to ensure continuous material flow to all injectors.

Nol-Tec systems include redundancy throughout, so product flow remains uninterrupted. Precautions are taken to eliminate potential problems associated with moisture ingress and dust emissions. Where applicable, variable speed controls are used for motors to keep the operation flexible.

System electrical controls include PLCs with operator interfaces (HMIs) as well as a DCS interface and motor control centers.

Typical Sorbent Materials

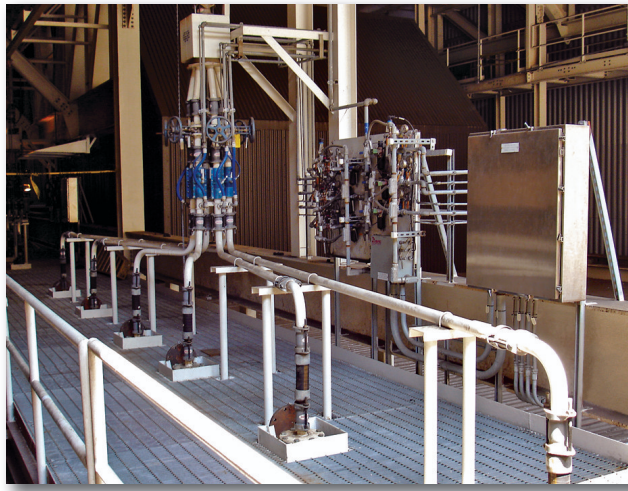
- Hydrated Lime
- Trona
- Sodium Bicarbonate
- Powdered Activated Carbon



SORB-N-JECT™ Technology

For more information on Sorb-N-Ject™ Technology, please contact:

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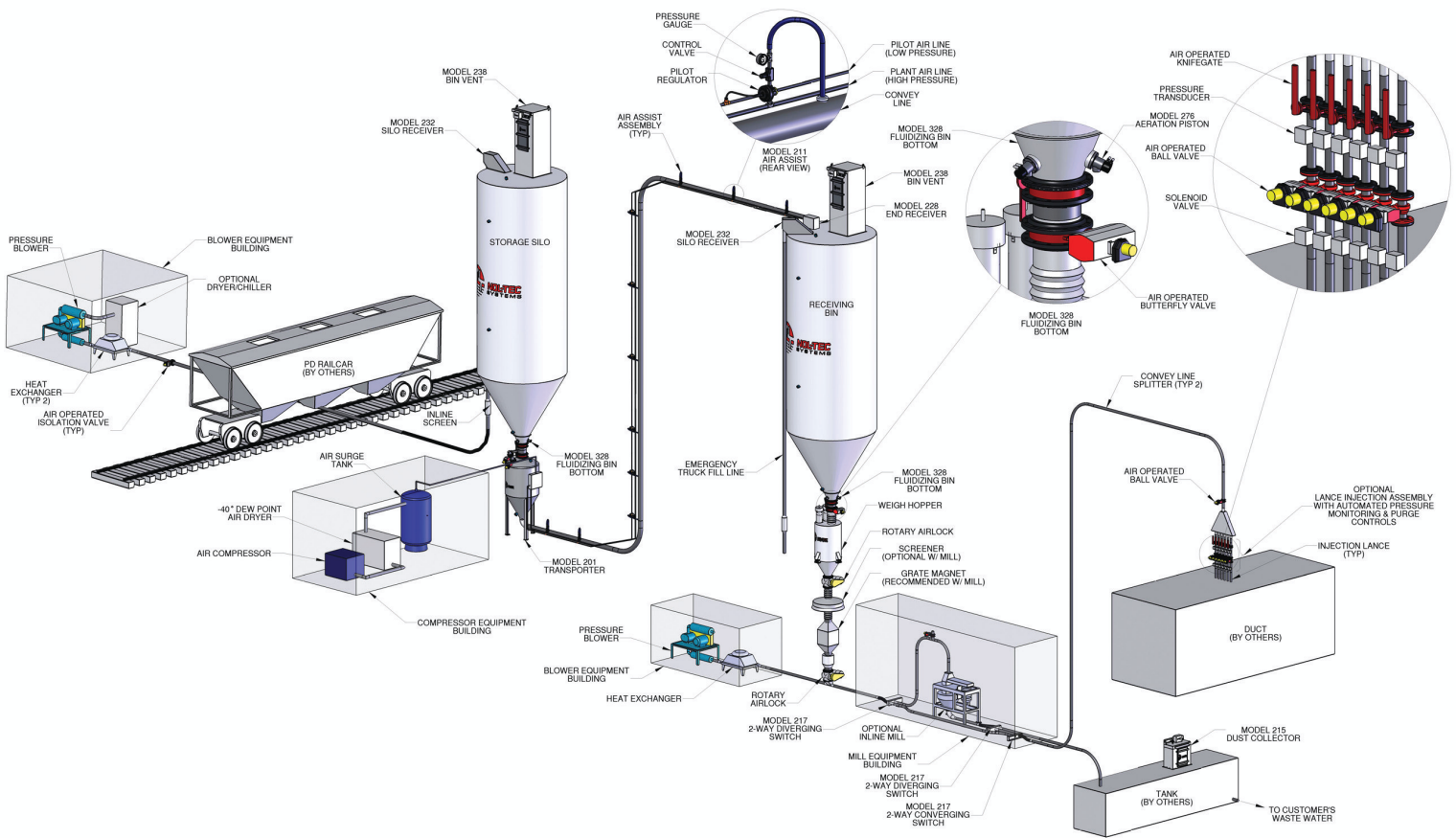


Injection Lances



Continuous Loss-in-Weight Feeder

TYPICAL PROCESS FLOW



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