

Alternative Fuel Feeding Systems



- Meters a wide variety of waste materials.
- Reduces the need for non-renewable fossil fuels such as coal.
- Simple, compact package.
- Easy integration into existing installations.
- Short pay back period.

For lowering emissions of greenhouse gases produced for the use of fossil fuels the Schenck Process Alternative Fuel Feeding System provides the environmentally friendly solution. Key to the system is the ability to meter a wide variety of waste materials to the main burner and calciner of a cement or lime kiln thus reducing the need for non-renewable fossil fuels such as coal. Replacing only 5 tons per hour of fossil fuel, by operating a Schenck Process Alternative Fuel Feeding System 24 hours a day, is the equivalent of removing nearly 20,000 cars from the road annually.

The Schenck Process Alternative Fuel Feeding System design includes all the critical features necessary to maintain precise accuracies, meet a wide range of feed rates, and maintain a consistent flow of material to the kiln. Accuracies of $\pm 1\%$ within a range of 1:20 and feed rates from 0.25 to 10 tons per hour help produce an even and pulsation free conveying of fuel through the blow-through rotary feeder. This consistency and the overall environmental impact of the alternative fuel feeding system make it a logical fit for cement and lime manufacturing operations.

System Capabilities:

- Reception
- Storage
- Conveying
- Weighing & Feeding

Waste Materials Fed:

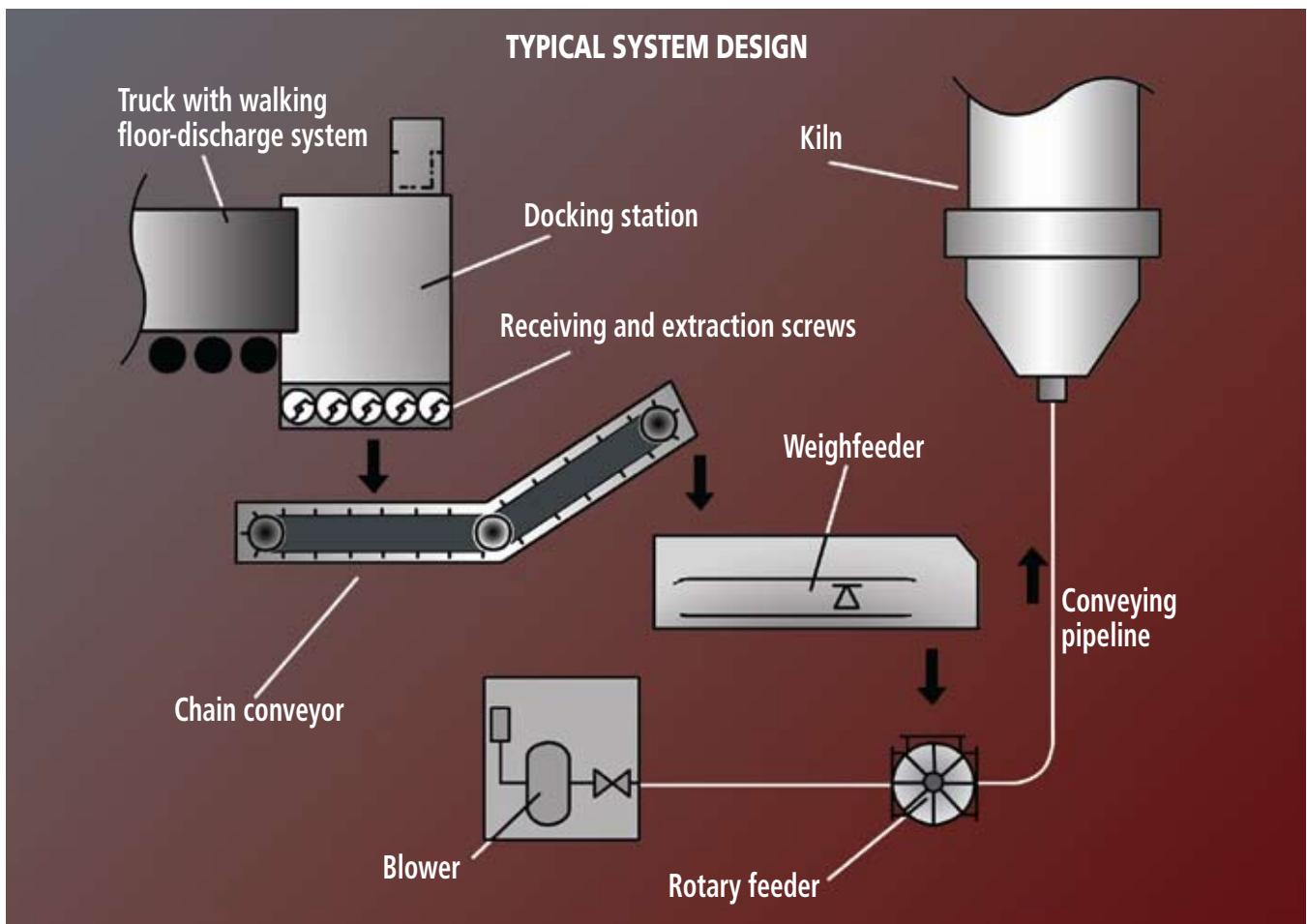
- Biomass
- Cardboard
- Construction Waste
- Dried Sewage Sludge
- Paper
- RDF (Refuse Derived Fuel)
- Sawdust
- Shredded Plastics
- Tires

Equipment

Schenck Process offers a modular alternative fuel feeding system that takes you from waste material reception to burning in the kiln. Typical alternative fuel feeding systems include the following equipment:

- Docking station with live bottom bin for semi-trailers.
- Chain conveyor.
- Weighfeeder.
- Blow-through rotary feeder.
- Rotary piston blower.
- Pneumatic conveying line.
- Measuring, control, and supervisory electronics for continuous operation.

Schenck Process – World leader in the supply of Alternative Fuel Feeding Systems.



The semi-mobile system features a small footprint so no special foundations are necessary and can be set up on virtually any firm surface where a truck can drive. Placement of the system is possible next to the kiln or up to a distance of 300 feet from the burner. Dismantling and reconstructing in any other part of the plant can be done within a short period of time.

System Component Options

From fuel material reception and storage to burning in the kiln Schenck Process can design an Alternative Fuel Feeding System to meet your specific needs.



Walking floor trailer docking station

RECEPTION AND STORAGE:

Our variety of fuel reception and storage options include:

- SacMaster® bulk bag discharging system.
- End loader to hopper.
- Walking floor trailer docking station or tipping truck station.
- IntraBulk bulk reception unit for dump trucks.
- Storage hall with reclaimers.
- 16 or 20 cubic meter circular bins.



Conveying long distances

CONVEYING:

Configurations are dependent upon fuel particle size, conveying distance, and location of fuel introduction to the system.

Pneumatic

- Particle sizes less than 50 mm.
- Dust proof conveying.
- Can be injected to existing multi-channel or new burner.

Mechanical

- Larger or difficult particle size.
- For conveying long distances and large amounts.
- Fuel can be dumped into preheaters and calciner towers.



High capacity screw conveyor

TRANSFER:

Moving the fuel from reception or storage to the next stage.

- Chain conveyors.
- High capacity screw conveyors.
- Trough or specialty type belt conveyors.



Precision weighing and feeding

WEIGHING AND FEEDING:

Continuous weighing and feeding products designed to handle multiple fuel types.

- MECHATRON® loss-in-weight feeders.
- MULTIDOS® weighfeeders.
- DMO weighfeeders.



Burning alternative fuels

BURNING:

Fuel can be burned at a conventional fuel burner or into a kiln or precalciner tower.

- Success is based on matching the burn location to the fuel characteristics and feed rates.

Benefits of a Schenck Process Alternative Fuel Feeding System:

- Energy savings – 18 months or less payback is typical.
- Reduction of CO₂ produced from fossil fuels.
- Utilization of renewable or waste fuels.
- Reduction of landfill volumes.
- A small footprint requiring no special foundations.
- Mechanically meter waste materials in excess of 20 tons per hour.

Alternative Fuel Feeding Installations:



Weighfeeder



Docking station



Blow-through rotary feeder



Bulk reception unit

Schenck Process

746 E. Milwaukee Street
Whitewater, WI 53190
800-401-9702 or Fax: 262-473-6884
E-mail: mktg@schenckamericas.com
Web site: www.schenckamericas.com

