

Fluid Bed Dryer

Coal Systems



Introduction

Schwing Bioset now offers drying technologies for moisture removal in a variety of coals. Extremely high thermal efficiencies are achievable with the use of a fluidized bed in the process. Due to the intimate, continuous mixing of solids in the bed, a very homogeneous treatment and rapid heating (or cooling) process can be built to suit your requirements.

Benefits:

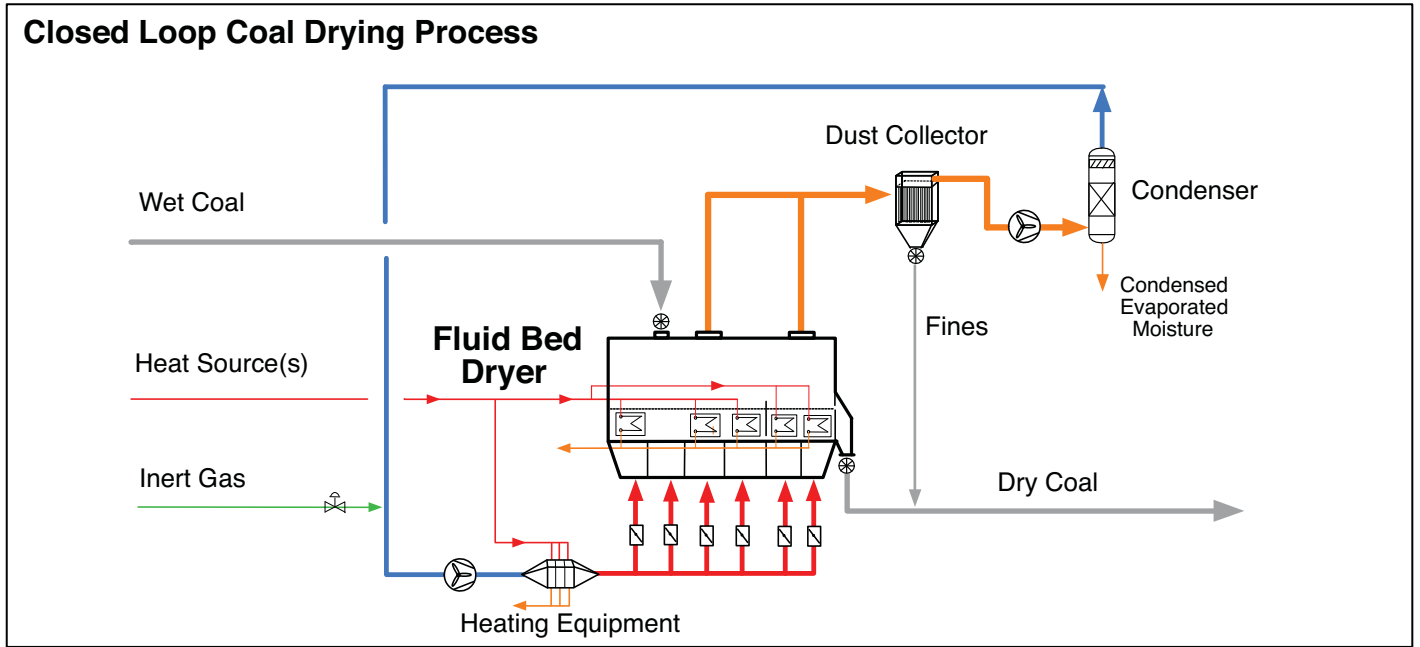
- Removes surface moisture in a controlled fashion and improves downstream handling and flowability of coal
- Makes use of a wide variety of low or high temperature thermal energy sources – steam, condensate, waste heat
- Multiple treatments can be combined in one unit – drying, cooling, classifying
- Can be configured to work in open or closed drying gas loop
- Closed loop configuration in which oxygen is controlled to low levels is possible for reactive types of coal such as lignite
- Inert gas sources such as flue gas, nitrogen, carbon dioxide and others can be used to further enhance the inherent operating safety
- The natural classification effects in a fluidized bed can be enhanced, if desired, as dust and oversized material fractions can be isolated and removed
- Particle size reduction in more friable coals such as lignite occurs in the process
- Process requires a minimum of moving parts – in fact, within the fluidized bed there are no internal conveyance mechanisms needed

Applications:

- Excess surface moisture removal in coals prior to combustion
- Removal of excess surface and internal moistures in coals prior to gasification
- Beneficial use of low temperature and otherwise unusable energy sources at power generation plants
- Technologies are well-suited to retrofitting in existing facilities or in tandem with new sites

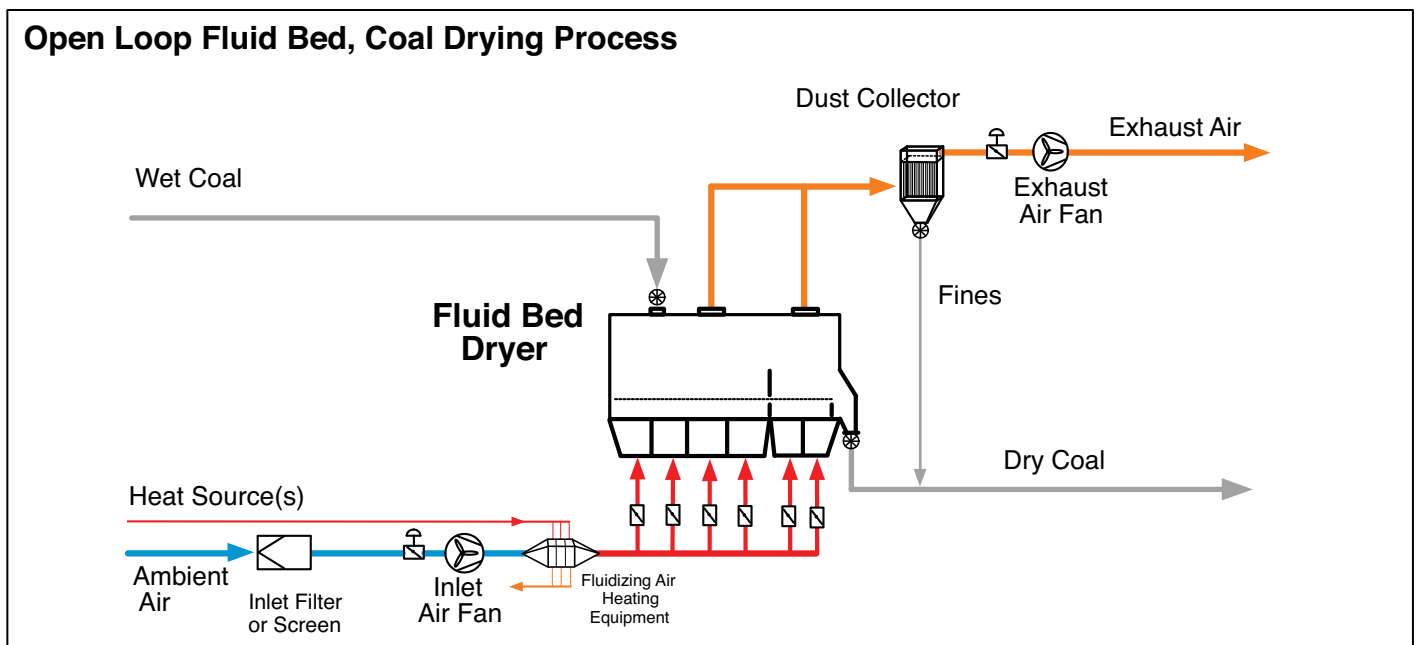


Coal Drying Process



A variety of designs and features are available to achieve your performance targets:

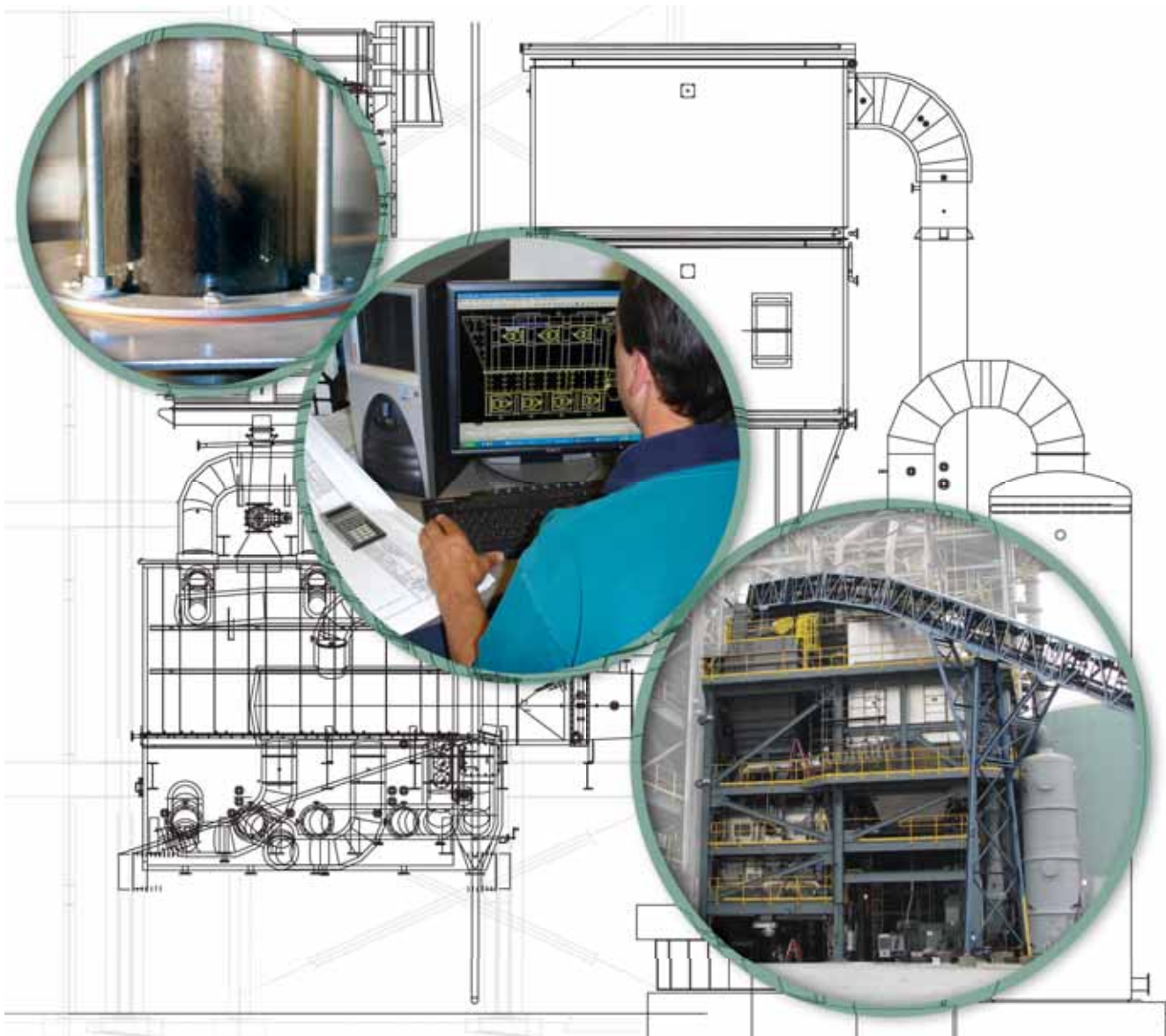
- Open or closed loop configurations
- Direct and indirect heating arrangements
- Fluid bed designs with or without internal heating
- Use of inert gas for enhanced safety
- Heat can be provided from a variety of sources: steam, condensate, waste heat, etc.
- Enhance dust and oversize material removal
- Self-cleaning and maintenance access features



From Concept to Completion

Schwing Bioset can provide the necessary engineering support, equipment, and project execution services to ensure your project's success. We offer:

- Feasibility, engineering and lab studies based on your material and project requirements
- Project scope and equipment supply tailored to your preferences
- In-house expertise in upstream and downstream solids conveying and storage
- Equipment layout and arrangement assistance
- Field assistance in erection and commissioning phases
- Spare parts



The Features You Need



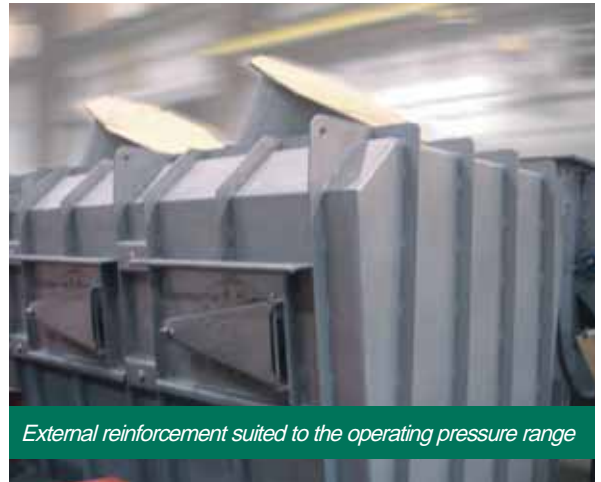
Gas distribution plate designs to enhance material flow and minimize back-sieving



Adjustable bed level and underflow gate



A variety of surface finishes are available



External reinforcement suited to the operating pressure range



Quick opening inspection and access doors



In-duct venturis for continuous flow measurement and control

Solids Processing and Handling Solutions

Sliding Frame



Sliding frame systems, whether used as truck receiving, truck loading, or as intermediate storage, offer a flexible means of storing materials while eliminating bridging and simplifying maintenance. Available in any capacity, with any number of outlets and material discharge rates, sliding frame technology represents the ultimate in design flexibility.

Bioset Process



To address the growing need for Class 'A' biosolid solutions Schwing Bioset also offers the Bioset lime stabilization process. Approved to operate at temperatures lower than specified in the EPA's 503 regulations, the Bioset process offers municipalities a low cost Class 'A' system that is affordable to operate and easy to maintain.

Sludge Pumps



Schwing Bioset, Inc. (SBI) is a recognized leader in piston pump technology. SBI units pump inorganic materials up to 90% dry solids content and pressures over 3,000 psi. The versatile pumps have been used in both large and small industrial and mining applications since 1984 and remain a preferred technology over screw, bucket and belt conveyors when conveying paste, sludge and slurry.

Container Wagon



Schwing Bioset's Container Wagon was developed to transfer dumpsters in and out of buildings with low clearances that prevented transport trucks from delivering containers to the needed location. Simply deposit the dumpster onto the Container Wagon and it shuttles the dumpster into position.

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