Resource Converting, LLC

Dryclone™ Air Drying Systems

Resource Converting LLC (RCI) has developed a patented, Dryclone™ Air Drying Technology. The Dryclone™ System is a non-thermal drying system for wet semi-solid biomasses. The Dryclone™ System is the only drying system of its kind and is changing the way municipalities and corporations are drying municipal and agricultural feedstocks all over the world.

Introduction

The high moisture content of biomasses such as agricultural waste, municipal solid waste, and sludge has always been a limiting factor in secondary use of these materials. Thermal drying is a cost intensive and energy intensive process while conventional mechanical drying methods are often unable to reduce moisture sufficiently. As a result, drying has often been the most difficult step in any of these processes. The Dryclone™ System changes that.

Until now, expensive and time-consuming sorting of Municipal Solid Waste was needed to separate dry material from wet. The material that was already dry could be used as fuel for a variety of purposes, including Waste to Energy. The remaining wet material was not used and resulted in an expense for disposal. With the RCI Dryclone™ System, this sorting is no longer needed since the Dryclone™ System can dry out all the material to a uniform level of sub 15% moisture, making it excellent for a wide variety of applications.

The Dryclone™ System separates the water mechanically from the feedstock using a high velocity air stream and non-thermal heat, which preserves the value of the finished product. As an additional advantage, the feedstock is reduced in particle size, increasing surface area during the process. These capabilities, coupled with high-volume throughput capacity, make the Dryclone™ System the only commercially available system of its kind.

The RCI Dryclone™ System can reduce moisture content to <15% while reducing particle size, at a rate of up to 15 tons per hour for each twin-line System.

The Dryclone™ Technology

- Wet material is fed into an air stream and accelerated to high velocities before entering the first of several Dryclones™.
- The combination of air velocity and impact in the Dryclones™ act on the feedstock to dry it and reduce its size.
- The number of Dryclones™ will vary depending upon initial moisture, degree of drying, throughput and quality of the feedstock.

Advantages of the RCI Dryclone™ System

- Non-Thermal Drying
- Low Operational and Maintenance Costs
- Easily Scalable
- Easy to Operate
- High Volume Throughput
- Highly Efficient
- Low Cost Per Ton
- Long Operational Life
- Fast, Efficient Startup and Shutdown

FEEDSTOCKS

- Municipal Solid Waste
- Municipal Bio Solids
- Agricultural Waste
- Animal Manure
- Nut Waste
- Feed Additives
- Spent Grain
- Green Waste
- Paper Sludge

- Any other feedstock that needs to be dried or reduced

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RCI

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