Raymond® Hybrid Turbine Classifier for RB Bowl Mills

Upgrade for critical particle size control & improved processing

- **Improves classification efficiency**
- **Proves for more accurate particle size control**
- **Meets NFPA 85F requirements**

The increase in demand for finer solid fuel products led to the development of the hybrid turbine classifier that combines Raymond's proven static classifier technology with a turbine classifier.

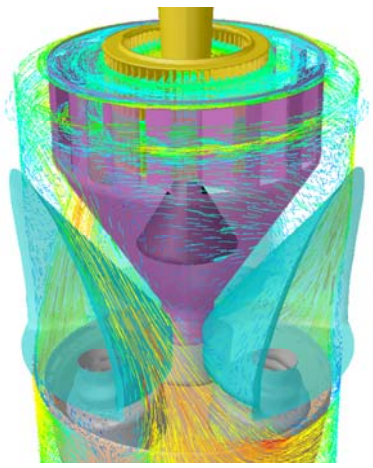
Overview

The Raymond® Bowl Mill is the worldwide industry standard for simultaneously pulverizing, classifying and drying coal and petroleum coke used to fuel cement, lime and power plants, as well as other industrial process applications. Pulverized fuel fineness requirements may range from 70% to 95%, or more, passing 200 mesh (74 microns).

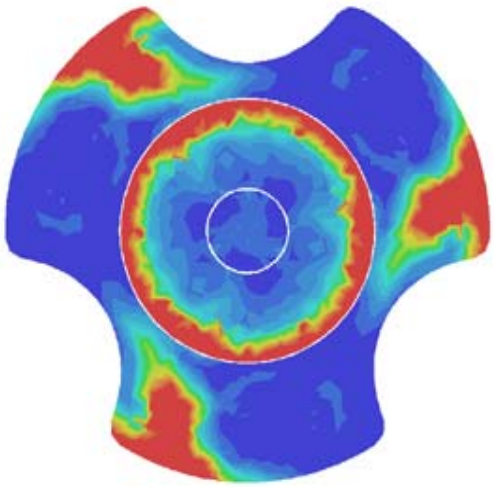
The Raymond® hybrid turbine classifier's patented design possesses significant advantages that enhance the performance of the mill, making it possible to consistently produce pulverized fuel which is compatible with today's combustion technology.

Advantages

- Improves classification efficiency
- Provides for more accurate particle size control, resulting in a steeper product size distribution
- Upgrades the bowl mill to produce a pulverized fuel with a higher fineness which increases the mill capacity
- Meets NFPA 85F requirements



The flow pattern inside the bowl mill concentrates the pulverized fuel stream into three distinct currents illustrated in the Computional Fluid Dynamics (CFD) model. This segregation disrupts the efficiency of separation for either static or dynamic classifiers. The hybrid equalizes the distribution of the pulverized fuel as it is introduced to the turbine rotor, optimizing the classification process. The results is a more efficient separation, giving the bowl mill the ability to generate a finer product at improved levels of production.



The following operational advantages can be realized with the use of the hybrid turbine classifier.

- The mill is now capable of producing pulverized fuel having a lower top size, resulting in better controlled flame and combustion process with reduced emissions and unburned carbon.
- The steeper particle size distribution produced by the mill facilitates combustion of solid fuel possessing a coarser average particle size without sacrificing system performance or process capacilities. Mill capacity can be increased and overall plant efficiency improved.

This design can also be applied to RS/RP pulverizer models or extrapolated to other manufacturer's equipment.

Raymond® RB Bowl Power Requirements

Mill model	Classifier power
453	5
493	5
533	8
573	8
613	11
633	11
673	15
733	18
753	18

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