

Powderizer Air Classifier Mill helps a Chilean company

The goal was clear. To find a solution that would improve product quality, while at the same time, lowering material processing equipment maintenance costs. Gist Brocades' (GB Chile) plant manager was given this task in 1997. He turned to a local manufacturer's representative who referred him to the U.S. firm, Zisko and Associates. Zisko got the ball rolling when they arranged for GB Chile's plant manager to observe operations at a U.S. sugar plant. The sugar plant was gaining excellent results and profiting through the use of a milling system. And so, upon the recommendation of Zisko and their own observations, Gist Brocades purchased a Sturtevant Model NSP-2.5 Powderizer air classifier mill.

Some History on GB Chile

GB Chile, previously known as Lefersa, is located in Santiago, Chile. It is one of Gilde Bakery's 250 plants which operate on five continents and employ over 26,000 people worldwide. Prior to Gilde Bakery's acquisition of the company in 2005, it had been owned by DSM and before that by Gist Brocades in the mid to late 1990's.

Gilde Bakery was officially renamed GB Chile in 2006. Since the Lefersa name has been widely recognized in the bakery ingredient industry for over 60 years, the Lefersa label continues to appear on their many products.

The Pre-Mix Product and the Process

Traditionally, Gist Brocades relied on hammer mills to reduce the sugar in a pre-mix product, including flour, salt and flavoring. The hammer mill method created several major problems, adversely affecting quality and leading to production shutdowns. The hammer mill screens would clog and the sugar would caramelize as a result of high temperatures, requiring downtime for maintenance. Also, there was concern about contamination from clogged sugar left behind due to the difficulty of cleaning the screens. The final product size of the sugar was marginally acceptable, yet bordered close to the coarse limit allowed for bakers' sugar.

The Solution

In 1997, Gist Brocades purchased a Sturtevant Model No. NSP-2.5 Stainless Steel Powderizer system which included the Powderizer mill, feed screw and bag house collection system. Since installing the new system, the company has experienced numerous benefits. Gist Brocades is now able to produce at the 800 kg per hour they need, while easily reaching product fineness requirements, with the option of future expansion for up to 2.5 metric tons per hour and much finer product, if desired. In ad-

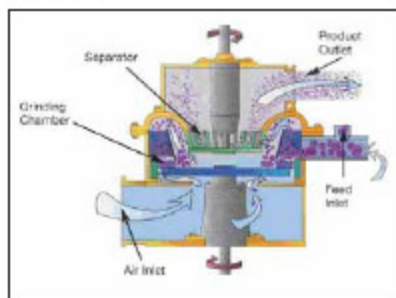


dition, because there are no screens used in the air swept mill, the major contamination and maintenance issues related to processing their heat-sensitive product were eliminated. The Powderizer uses an internal classifier to properly size particles, and the constant flow of air through the mill maintains low operating temperatures. Additionally, the Powderizer easily disassembles for cleaning and servicing. Other features of the Powderizer are the mill's reversible impact liner and the extended life of wear parts further lowering the company's material processing equipment maintenance costs. By using the Sturtevant Powderizer, Gist Brocades now recovers an average sugar particle output size which is much finer than by hammer milling with less risk of contamination, and at lower maintenance cost; better quality at lower cost.

How the Sturtevant Powderizer Air Classifier Mill Works

The Sturtevant Powderizer is a high speed impact mill with an internal air classifier. A rotor with hammers or pins is used to pulverize dry solids and a classifier wheel is used to size the particles before they exit the mill. Unground particles are rejected by the classifier wheel and then re-cycled back to the mill rotor. The feed is conveyed into the Powderizer using a screw feeder, and the milled product is pneumatically conveyed through the classifier wheel and collected in a bag house product collector.

Particle size is easily adjusted by increasing or decreasing the classifier speed, without mill shutdown. Machine capacity for the Powderizer ranges from 50 lbs/hr to 15,000 lbs/hr. Other system parameters are easily adjusted to



allow for tight control of product size for grinding and classifying 6x, 8x, 10x, 12x, 12xx and 14x sugar products to less than 5 microns.

Some History on Sturtevant

Sturtevant is a family owned company that has been in business over for 120 years. Throughout the years, Sturtevant has supported the food, grain, pharmaceutical, mineral and chemical industries with powder size reduction and air classification solutions. Among the Sturtevant array of products are Micronizer jet mills, Whirlwind/Side Draft/Superfine air classifiers, NSP Powderizer air classifier mills, Sim-pactor pin mills and various coarse size reduction lines/lab mills which include Jaw Crushers, Roll Crushers, Rotary Crushers, Sample Grinders and Hammermills.

On-Line Readers' Service
For further information about the
Sturtevant Model No. NSP-2.5 Stainless Steel
Powderizer System on
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