kemutec
Specialists in Powder Processing Technology

Kemutec Supplies Kek Cone Mills To Astra Zeneca

Kemutec is delighted to have supplied Kek cone type size reduction mill systems to AstraZeneca for several of their recently built tablet production facilities in the UK, Mainland Europe and further afield.

Tablet manufacture is based around the wet granulation process performed in mixer granulators. The wet granulated material is conventionally dried in fluid bed dryers. Linking the granulator to the dryer allows direct transfer from one machine to the other. The dryer process is much more efficient and easier to control if the wet granule feed has a consistent and narrow particle size distribution. Even though the particle size distribution is narrow, it is purposely kept fairly coarse to maintain fluidisation efficiency. It is for this purpose that Kek Cone Mills are sited

The Kek Size Reduction Cone Mill

www.KemutecUSA.com
215-788-8013

Kemutec supplies Kek brand Sifters and Mills, PPS Air Classifier Mills, Gardner Mixers and Blenders and Mucon Valves and Discharge Aids.

between the granulator and the fluid bed dryer to size the mixture during transfer to the dryer. Because of the innate minimal product dwell time in the Kek Cone Mills, their presence in-line has little impact on the transfer time but a big impact on drying efficiency.

The particle size of the dried granules needs to be further reduced to provide optimum performance during the subsequent compression into tablets. Modern high-speed tablet presses are very dependent on the quality of the product supplied to them. The size reduction step between drying the tableting, commonly referred to as dry granulation, is another application for which the Kek Cone mills are ideally suited. Dried product is transferred into IBC's for delivery to the dry granulation mill and then on to the tablet press.

For the dry granulation processes, the scope of Kemutec's involvement has developed beyond the cone mill itself. They now supply a package, which includes the IBCs, into which dried product is charged, a post hoist to lift the IBC's and to swivel them into position over the KEK Cone Mill. The correctly positioned IBC's are vibrated to induce and maintain product flow. An oscillating 'star' type rotary valve controls the discharge rate into the mill. At this stage other extra-granula r materials are, entered by feeders into the dried product stream as it descends into the mill. These include other ingredients, flow agents and lubricants to assist the tabletting process. Grinding / milling has long been recognized as an excellent way to achieve a homogenous dispersion of additives and other minor ingredients. The Kek Cone Mill produces a homogenous, correctly sized granule feed ready for tabletting. Milled product is collected in an IBC directly connected to the mill's outlet. A butterfly valve is used to isolate the mill outlet when an IBC is not in position. The IBC containing the milled product is subsequently tumble blended to ensure absolute homogeneity before the contents are charged to the tablet press.

AstraZeneca have so far purchased 14 Kek Cone Mills. In-line with Kemutec's policy of continually development, Kek Cone Mills have undergone some fairly radical changes. AstraZeneca have always been pleased with the way that Kemutec has been prepared to be flexible with their designs when meeting specific application requirements. Some mills have been hydraulically driven through remotely mounted power packs, some have been under -driven and all have been tailored in some way to meet AstraZeneca's requirements.

kemutec
Specialists in Powder Processing Technology

130 Wharton Road Bristol, PA 19007
Telephone: 215 788-8013
Fax: 215 788-5113
Email: Sales@KemutecUSA.com
Web: www.KemutecUSA.com