



Giving Powder Mixers the Eye

Hosokawa Micron have developed a light-emitting sensor which can be flush fitted into mixer walls enabling operators to continuously monitor the homogeneity and thus the quality of a powder mix without the need for sample taking. This saves valuable time, cost and improves overall product consistency. Over and under mixing can be easily avoided with each mixer batch can be optimised.

Light is emitted through a small 25mm dia sensor ,or eye, located in the mixer vessel wall on to material that is continuously passing the eye. By measuring the light reflection, the particle size, colour, density, roughness etc. can be determined. Information is continuously obtained about the mix composition and is shown on a graphical display in the form of a Mixing Index. This can be integrated into a remote control system or a local stand alone computer so continuous monitoring of the mix is achieved.

As the mixture is continuously monitored it is immediately clear when a homogenous mixture is obtained and thus problems associated with over mixing are avoided.

Under mixing, due to a change in raw material characteristics such as particle size and moisture are taken into account by the sensor.

Traceability is a key factor in today's quality control systems

and this eye enables operators to monitor the mixing system and to check product quality actually during the production process rather than after the event, which can prove expensive if the result is an out of specification batch. Reduction in laboratory analysis time is a further benefit of the mixing sensor.

The system has applications in many industries such as food, chemicals and pharmaceuticals which can all benefit from this "third eye". An ATEX version is also available should this be a process requirement.

