



BENEFITS OF ADVANCED PARTICLE ANALYSIS

FEECO has partnered with Microtrac, a leader in particle characterization, to offer advanced particle analysis capabilities, both during testing in the [Innovation Center](#), and as part of a system purchase.

The Innovation Center is equipped with an in-line PartAn 3-D PRO from Microtrac, giving us the ability to analyze multiple variables in real time without disrupting production. The integration of the PartAN 3-D PRO provides precision results in real time, without the delay, risk, or inaccuracy associated with manual sampling. This improved efficiency often translates to faster start-ups and fewer shutdowns.

In addition to improved production, the risks associated with manual sieving, such as lost tonnage and lower product quality are also mitigated.

HOW IT WORKS

The PartAn 3-D PRO can analyze particles in the size range of 15 μm to 35,000 μm , with 3D size and shape for particles ranging from 35 μm to 35,000 μm .

The unit uses a high-speed, high-definition camera to capture images of the particles in motion as they move past the camera. Through 3D Dynamic Image

Analysis (DIA), a number of particle characteristics are instantly measured, without disrupting the process.

The system can be integrated into various points in the process depending on what data is desired. The analyzer is capable of measuring 32 variables, with some of the most common including:

- Size
- Shape
- Thickness (unlike 2D DIA)
- Surface roughness (indicates poor flowability, or unwanted agglomeration)
- Density
- Transparency
- 3D capabilities

The pairing software system can be customized to report only on items of interest and even offers filtering, graphing, and data comparison capabilities.

PARTICLE ANALYSIS DURING TESTING IN THE INNOVATION CENTER

Advanced particle analysis is ideal in many test settings; whether you are developing a new product or process, or you want to test how a process change will affect product output, the ability to gather multiple

variables in real time provides a bird's eye view of process performance, streamlining these critical R&D stages. In combination with our Rockwell Automation Control system, material testing and process development has never been more intuitive.

PARTICLE ANALYSIS IN COMMERCIAL PRODUCTION

Implementing an advanced particle analysis system as part of your commercial process flow provides a number of benefits.

Real-time data makes maintaining product quality easier and more efficient than ever, helping you to maintain maximum product consistency and salability. This real-time data also allows you to immediately recognize a change in output specifications, reducing off-spec product and maximizing efficiency.

No matter what your goals, advanced particle analysis is an invaluable tool in streamlining the process and product development stages, as well as maximizing commercial production efficiency.

For more information on how particle analysis can benefit you, contact us today!

