

## Grind Analysis with Basler racer GigE Cameras – Automated Particle Measurement for Accurate Quality Control



### Customer

- Boulder Imaging
- Product: SCG Series Grind Gage
- Location: Louisville, CO, USA
- Industry: Coated Surfaces and Chemicals
- Implementation: 2013

### Application

Powders are important constituents in lots of coatings like lacquers, paintings, etc. These powders are fabricated by grinding. For the user of the coating it is crucial that the distribution of the coating ingredients on the finished surface is homogeneous and free of blemishes or faults. But no coating is better than its worst ingredient. Accurate, repeatable and retrievable grind analyses are critical to paint, coatings and chemical manufacturers as insufficiently or over-ground materials can cause loss of productions, higher costs and rework.

A grind gage measures the fineness of grind in a dispersion. The resulting properties of the dispersion vary based on the size of individual particles and the degree to which they are dispersed. Historically, grind analysis is highly subjective when performed by human inspectors. Standard testing methods involve subjectively factoring out outlier particles and writing down a reading, then wiping away the sample, leaving no way to verify the result. Hence, there was a need for an automated system.

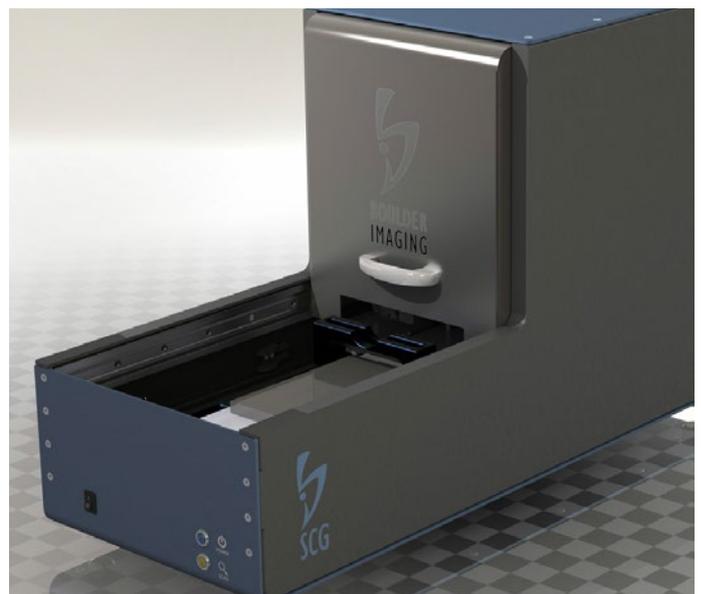
### Solution and Benefits

As an alternative to subjective grind analysis, Boulder Imaging developed a fully automated SCG series grind gage inspection system designed to automatically spread pigment dispersion in a highly uniform fashion. The SCG provides accurate, repeatable and retrievable grind analyses that are independent of the human operator, eliminating subjectivity in grind gage inspections.

The SCG automates every step of the process, from a highly repeatable drawdown of the sample, to a precisely timed image capture, and an algorithmic statistical analysis of particle size. The result is stored, along with the raw image data for retrieval, verification and comparison, long after the original has been wiped clean.

Initial target markets for the SCG include coatings and ink manufacturers, later expanding to industries including cosmetics, adhesives, dyes, resins and food.

The SCG incorporates Basler's racer series line scan camera for imaging.



*Grind gage inspection system from Boulder uses Basler racer cameras*

“The racer series provides excellent image quality at a variety of resolutions, a GigE and a camera link interface, making it the right choice for the SCG Series,” says Ryan Luttrell, Boulder Imaging Production Manager. He adds that the compact size and industrial design made it a natural fit for the Boulder Imaging product.

## Technologies Used

- Basler raL6144-16gm
- Boulder Imaging’s core Vision Inspector software platform

## More Information

[www.boulderimaging.com](http://www.boulderimaging.com)

<http://www.boulderimaging.com/products-and-applications/surface-inspection/grind-gage-and-drawdown/>



*Basler racer L6144-16gm Camera*

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