# FlawView X Ray Void Detection

Below are results from a case study where we showed that FlawView automatically detected and characterized voids in a metallic test article.*

We analyzed image files that were produced from the test article by an X ray scanner. The scanner produced grayscale images, with each image showing the scanner's penetration through a 1,000 pixel by 1,000 pixel slice of the test article.
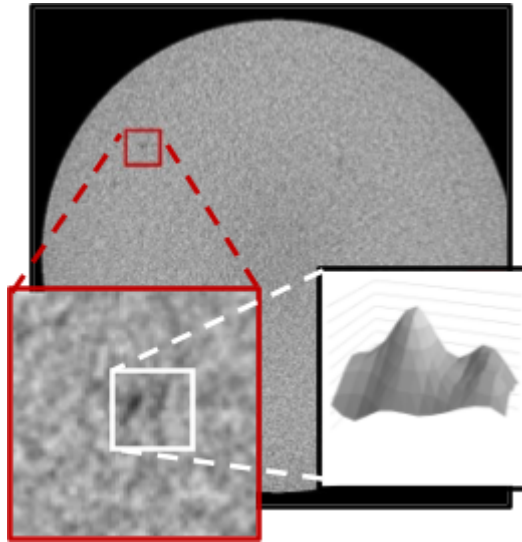
Results

- ☐ FlawView automatically located void regions in each image file by producing "alert maps"
- ☐ FlawView automatically produced alerted region "chips" showing void alerted pixels in detail, like the lower left image in the above picture.
- ☐ FlawView automatically produced each void's image, row, and column location as well as its detected significance level.
- ☐ **FlawView ran at a rate below four seconds per image** (in a test environment, reduceable to less than one second per image in operational environments.)
- ☐ We used FlawView output to readily characterize each void's shape, as shown in the lower right image in the above picture.
- ☐ **We used only three images to configure FlawView**. FlawView required no other training data.
- ☐ **FlawView configuration took less than a day**, running our FlawView Analyst Development Kit on a conventional laptop computer. Our analyst required no prior training, other than basic knowledge of Excel.

We would like to learn about flaw detection challenges you face. For more details and contact information, please visit **www.flawview.ai**.

* Jacob Hochhalter from the University of Utah kindly provided image files and valuable insights for this case study.