

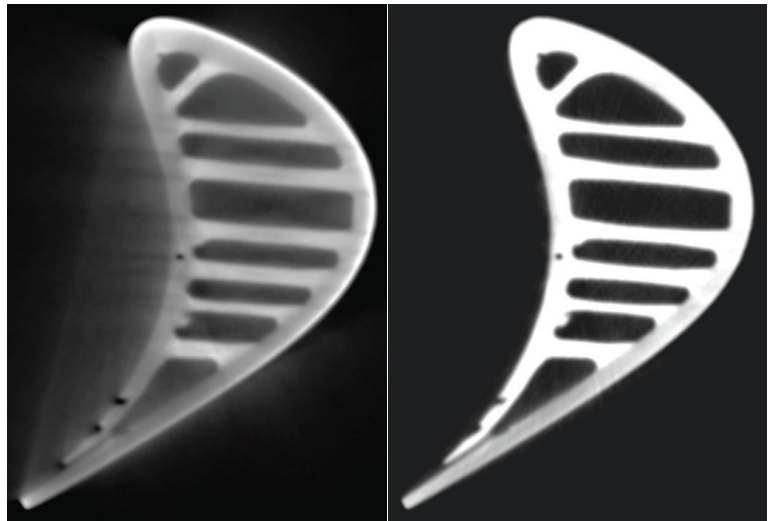
scatter|correct

Unique tool for high quality scatter reduced industrial CT scans acquired in significantly shorter scan time

Key features & benefits

- Low artifact high precision performance of fan beam CT combined with up to 100 times faster* inspection speed of cone beam CT
- Provides significant quality improvement not only for high scattering materials such as steel and aluminium, but also for composites and multi material samples
- Better material penetration length at same energy level or same CT quality with less complex CT equipment
- Proprietary GE technology - exclusively available as option for the industrial mini- and microCT scanner phoenix v|tome|x c and m as well as upgrade package for installed m systems

*) While a typical fan beam CT scan of 1000 slices requires 1 minute per slice = 1000 minutes, a cone beam CT scan requires only 10 minutes.



Conventional cone beam CT with scatter radiation artifacts

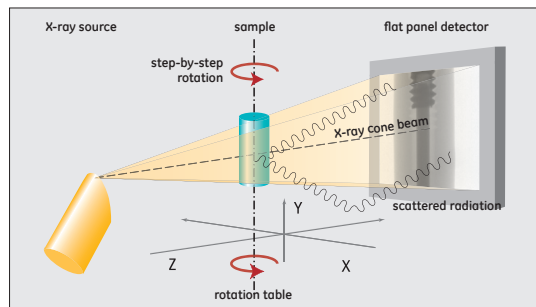
Advanced scatter|correct cone beam CT



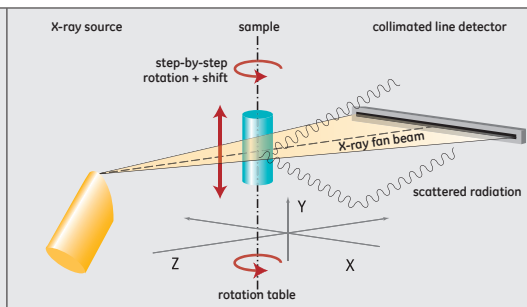
The problem: scattered radiation decreasing CT speed or quality

At industrial **cone beam CT**, a high dynamic flat panel detector capturing thousands of slices parallel is being used for generating volumetric data of the whole scan part comparatively fast in just one 360° rotation. Until now, X-ray scatter resulting in spurious X-rays meeting the detector array from directions not along the source-detector path **negatively impacts the CT quality**.

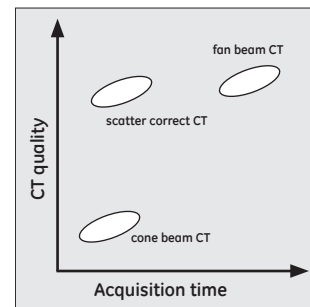
To significantly reduce scattering artifacts at high X-ray energy, **fan beam CT** with collimated line detector arrays has been the ultimate solution for decades. Due to acquiring data for only one CT slice at a time and vertically shifting the sample in the fan beam to repeat the procedure few hundred times, this CT technique **requires hours instead of minutes per CT scan**.



Conventional **cone beam CT** with scattered radiation hitting the detector

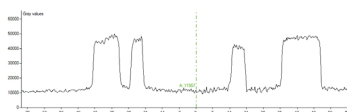


Scatter artifact reduced slice-by-slice **fan beam CT**

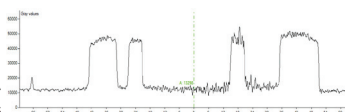


Relation between acquisition time and CT quality

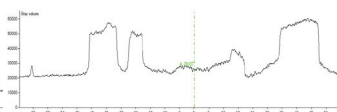
The solution: scatter|correct for high speed, high quality CT scans



Conventional fan beam CT
2 hrs. scan time



scatter|correct optimized
9 min. scan time*



Conventional cone beam CT
9 min. scan time

*) scatter|correct requires one initial correction scan per part type

For industrial process control, excellent CT quality at high sample throughput is evident.

GE's proprietary scatter|correct option is a combination of hard- and software advances allowing users to scan large sample batches in reasonable time as well as significantly reducing scattering artifacts to improve the precision of failure analysis and 3D metrology inspection tasks.

scatter|correct - Your Advantages

- GE's proprietary scatter|correct functionality allows customers to gain CT quality never before reached with industrial flat panel based cone beam CT
- Combining high precision fan beam CT quality with high throughput of fully automated cone beam CT
- Clearly improved quantitative volume evaluation, e.g. automatic defect recognition or precise 3D metrology of difficult to penetrate multimaterial objects
- Significantly increased inspection productivity allowing CT to migrate from R&D applications to serial inspection on the production floor
- Comparable CT performance by using less complex less energy microCT



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