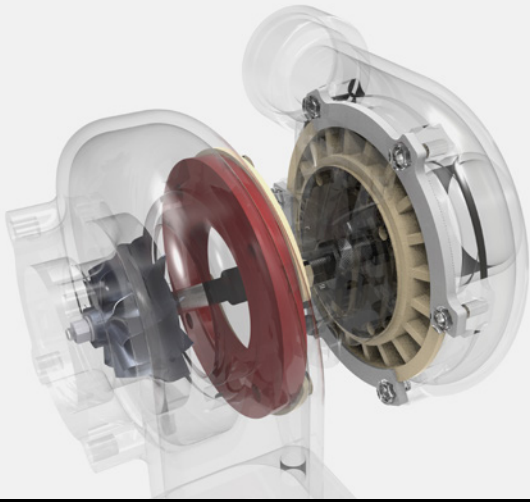




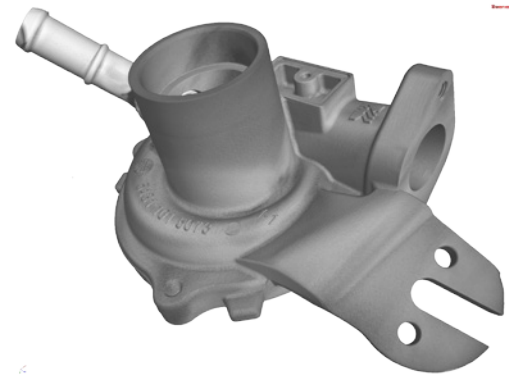
ApplicationFocus

CT – Turbocharger castings



Comprehensive quality inspection of turbocharger castings with CT

Improved fuel economy and enhanced vehicle performance: the common goals in the automotive industry requiring advanced research and development tools. Especially for turbocharger castings, the Nikon high voltage X-ray and CT range provides a comprehensive inspection of the inner and outer dimensions of castings including its structural quality. The high power 450 kV source penetrates dense materials allowing the quality of the castings to be checked in a non-destructive way. Furthermore, the dimensional data for surface forms and inside features is acquired faster than is possible with a CMM for both internal and external dimensions.



Customer challenges

- Dimensional inspection of assemblies with complex geometry
- Able to inspect a large variety of materials, shapes and sizes
- Avoid destructive testing of expensive prototypes and sample products
- Structural inspection of weld quality (voiding, cracks etc.)
- 100% inspection of life-critical components instead of sample based inspection
- Shorten pre-production development to go faster to market

Nikon Metrology's solutions

XT H industrial CT systems featuring micro-focus sources

- High voltage 320-450kV micro-focus sources to inspect dense castings
- Curved linear diode array detector (CLDA) for scatter-free detailed X-rays & cone beam inspection
- Part-to-CAD dimensional inspection with micron accuracy
- NDT structural analysis of void, cracks, inclusions
- Ability to fully automate process enabling fast 100% inspection of the parts
- Open-tube source guarantees low cost of ownership
- Full protective enclosure – compliant to CE and DIN 54113 radiation safety standards





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