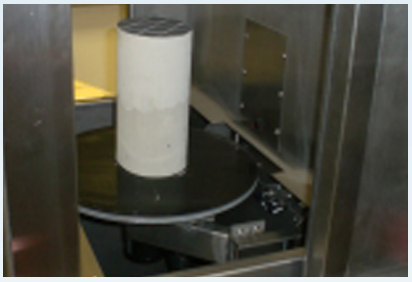
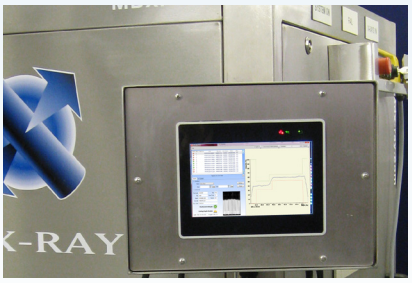
3DX-RAY

X-ray inspection of catalytic converters

Catalytic converter in MDXi-NT



Catalytic converter in x-ray chamber



Results graph indicating pass/fail for profile analysis and coating depth analysis

Manufacturing catalytic converters: x-ray inspection for quality and process control

When manufacturing catalytic converters it is important to be able to check the quality of the wash coat applied to the core substrate to ensure product quality and achieve high customer satisfaction.

It is also valuable to be able to monitor the manufacturing process and acquire information about process trends. This enables timely control therefore minimising the use of expensive materials and reducing wastage and scrap.

X-ray offers a non-destructive way of seeing inside objects. X-ray systems, with sophisticated image capture and processing software, can not only 'see' sub-millimetre details inside an object but can measure and analyse them providing valuable data for quality and process control.

3DX-RAY Ltd has developed and deployed a range of cost effective x-ray technology specifically designed to inspect catalytic converters and diesel particulate filters.

The MDXi x-ray system is capable of measuring substrate coatings/multiple washcoats to identify artefacts and defects (distributions, overlaps and voids) providing 100% inspection at full production line speed. The MDXi system options include robot compatibility and PLC control. They are proven to be industrially robust.

A comprehensive software suite is provided for analysis, data tracking and record recovery. Images can be viewed visually and/or used for automatic analysis. Rapid feedback from the system can be relayed to control the manufacturing processes.

3DX-RAY are able to tailor the MDXi software to meet specific customer applications and requirements.

MDXi offers the capability to detect, measure and analyse features hidden from view and confirm the quality and integrity of your product.

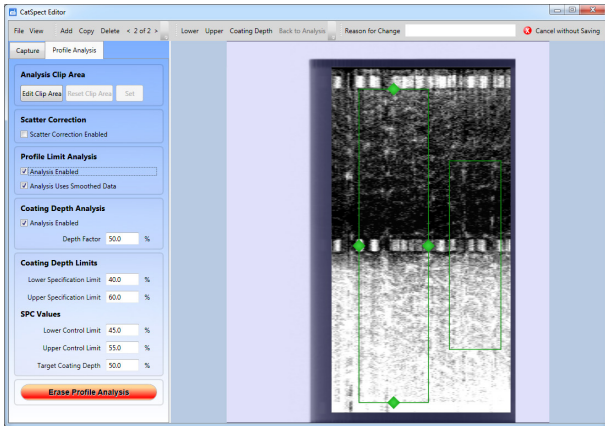
X-ray inspection of catalytic converters

Features

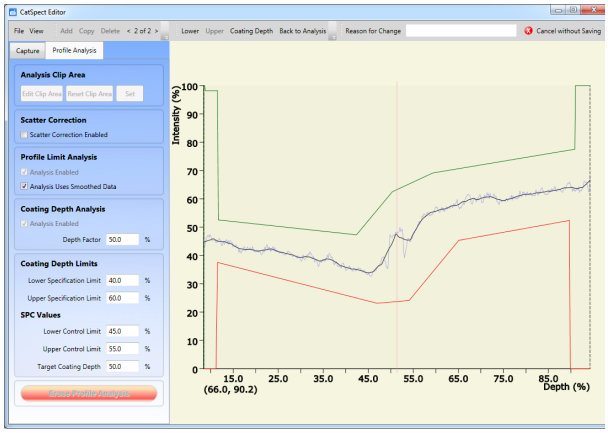
- Large inspection volume: 400mm x 420mm (diameter x height)
- Simple to integrate into new or existing factory systems
- Fully automated application specific software to meet SPC, SCADA and QC requirements
- In-line validation of product quality, at full production line speeds
- 'Stand-alone' or laboratory application capability
- View ash and soot distribution

Benefits

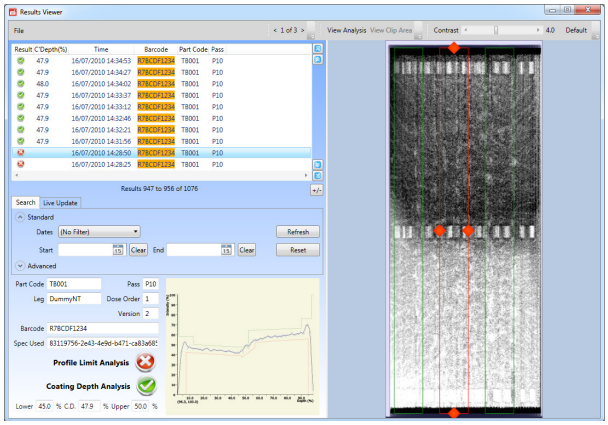
- Non-destructive ability to measure internal features
- Minimises waste and scrap
- Provides unique ability to non-destructively see internal features and defects
- Powerful laboratory tool improving the understanding of the manufacturing process and aftersales analysis
- Reduction in product development and evaluation cycles



Defining area of interest



Setting process control parameters



Analysis showing failed product

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An **IMAGE SCAN** company

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In the interest of product development 3DX-RAY Ltd reserves the right to change specifications without notice. Please visit our website for the latest version - www.3dx-ray.com.

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