



## Technology and Use of Real-Time Micro / Nanofocus Radiography

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### Abstract

- Fundamentals of X-ray
- The Importance of X-ray in the Industrial World
- X-ray inspection is a beneficial quality assurance tool to the developers, manufacturers and users of the different industries.
- X-ray Tube Technology

There are several types of X-ray tubes commonly used today

- Conventional - Large X-ray source, typically film only No geometric magnification (1x)
- Microfocus - Small X-ray source, film and real-time, High geometric magnification (1300x)
- Nanofocus - Small X-ray source, film and real-time High geometric magnification (2400x)
- Multifocus - Small X-ray source, film and real-time
- High Resolution - X-ray for Today and Tomorrow

A New Generation of X-Ray Tube Technology

**FXE-160.50** – MicroFocus - NDT and  $\mu$ CT applications

**FXE-160.51** - Multifocus - NDT and  $\mu$ CT applications in the world of Sub-micron structures

**FXE-225.48** – High Power Microfocus High Power X-ray for NDT and  $\mu$ CT applications

TXI (True X-ray Intensity) Control

X-ray Systems

Real-Time X-ray Technology and System -It's not just X-ray tubes...

A Real-Time Microfocus X-ray Inspection System usually comprises the following components:

- X-ray Tube
- Radiation Protection Cabinet
- Manipulation Systems
- Energy Supply (Generator)
- Vacuum System
- Image Processing System
- Easy Exchange of Rod Anodes and their use
- Digital Detector Technology