

Solutions at GE Inspection Technologies

**Business Overview** 

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## Our Company

A global leader in technology-driven inspection solutions that deliver productivity, quality, and safety to our customers

## **GE Inspection Technologies**

- > A leader in NDT
- > Strong product brands
  - Agfa NDT
  - Krautkramer
  - Seifert
  - Hocking
  - Everest VIT
- > A team of over 1,000 employees
- With a Worldwide Sales Team
  - Direct Sales in 40 countries
  - Representatives & Distributors in over 120 countries
- > Application Centers around the world
- > A Global Services team

## A member of the GE Family

#### A tradition of leadership

- > Founded by Thomas Edison in 1878 as the Edison Electric Co.
- > 13 global businesses
  - Strong industrial leaders
  - Leading medical technology
  - Financial strength
- > Sharing technologies and processes
- > \$134 billion in revenue in 2003
- "World's Most Respected Company" in 2004 for the 6th straight year\*









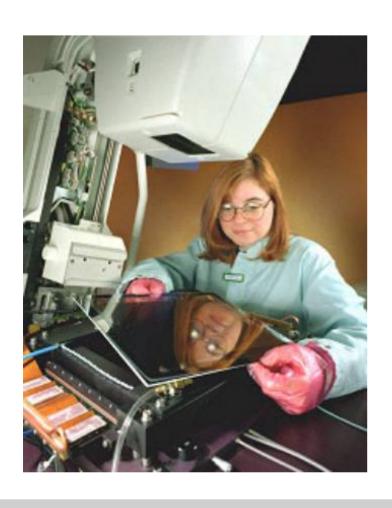






<sup>\*</sup>Financial Times/PWC World's Most Respected Companies survey

## Supported by GE Global Research



- > A leading research facility
  - 2,100 PhDs and Researchers
  - Located in the United States, Germany, India, and China
- > Housing one of the world's foremost NDT labs
  - Radiography, ultrasound, eddy current and other modalities
  - Focused on next generation of sensors, instrumentation, and imaging software development

## **Broad Industry Focus**









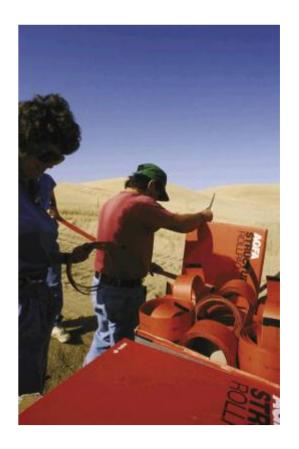




## Our Products

## Agfa Film Systems

- > Complete range of X-ray films, with highest speed and sensitivity
  - Optimum image quality
  - Consistent production and processing quality
  - Wide choice in packaging
- > State-of-the-art processing equipment:
  - Small film volumes to high productivity demands
- > Optimized chemistry:
  - The best possible image quality
- > Quality Assurance tools:
  - Allowing compliance and monitoring of the film process



GE Inspection Technologies is the exclusive worldwide provider of Agfa NDT X-ray Film and associated equipment

## Agfa eco Film System



#### Significant advantages without sacrificing quality

- > Economical advantages
  - High film throughput capacity
  - Less chemistry consumption and packaging cost

- > Ecological benefits
  - Less chemistry
  - Less wash water use
  - Less silver in waste
  - Less packaging waste
  - Less energy consumption

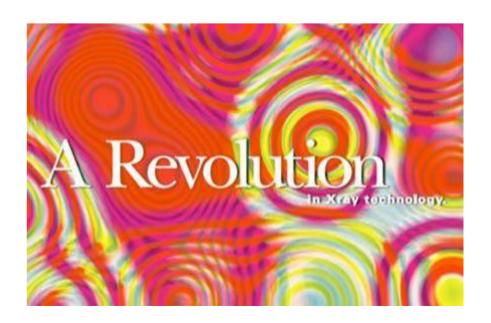
## Seifert X-Ray Tubes and Generators



- > Portable ERESCO MF3 System
  - Easy handling of all units: 160 300 kV
  - Shortest exposure time due to real DC output
  - High current power mode and low energy application
  - 100% duty cycle, even in rain or high ambient temperature
  - Long tube life due to proven intelligent automatic warm-up
- > Stationary ISOVOLT HS System
  - Broad range of variants: 160 450 kV
  - High stability and accuracy
  - Precise reproducibility
  - Extremely low ripple
  - High dose rate output

## Digital X-Ray Solutions

- > Film Digitization (FD)
  - Fast and accurate film scanning
- > Computed Radiography (CR)
  - Fast and accurate image scanning
  - Reusable phosphor plates
  - Shorter exposure times
  - Higher throughput
  - Designed for convenience
- > Digital Radiography (DR)
  - No consumables
  - High volume applications
- > Image review and archiving
- > Automatic Defect Recognition



#### Krautkramer Ultrasonic Products

- > Flaw Detectors
  - Detection, location, and evaluation of material defects
  - Performance and features benefit diversified applications

- > Thickness Gauges
  - Measure wall thickness from one side
  - Precision parts and components subject to wear or corrosion







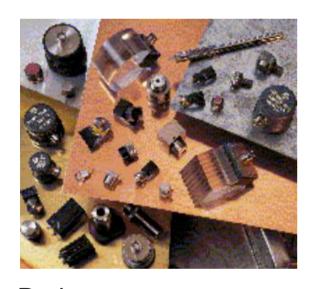
### Krautkramer Ultrasonic Products



Phasor XS™
Portable Phased Array
Ultrasonic Flaw Detector

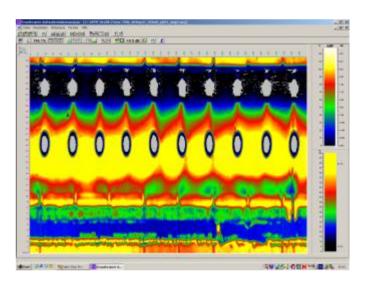
- Battery powered
- Portable
- Rugged
- •< 4 kg
- •Real-time sector image
- •Menu-driven
- Data capture

#### Krautkramer Ultrasonic Products



#### > Probes

- Broad range of models for standard and special applications
- Advanced piezocomposite and phased array technologies



- > Application Software
  - Documentation, evaluation, statistics, and reporting test results

## Hocking Eddy Current

#### Detection of surface cracks

 Rapidly inspect complex geometries and shapes

#### Metal sorting

Verify heat treatment and composition of metals

Monitor corrosion of aircraft skins

# Easy integration into automatic sorting equipment

- > Interfacing and controls
- Hardness sorting and crack detection of rotosymetrical components



GE Inspection Technologies is the exclusive Hocking representative in North America and Germany

#### Krautkramer Hardness Testers



- > UCI Hardness Testers
  - Best for small parts and finegrained materials
- > Rebound Hardness Testers
  - Test large parts and coarsegrained materials
- > Optical Hardness Testers
  - Best for thin parts and finegrained materials
- > Wide variety of UCI Probes and Impact Devices

## **Our Solutions**

## **Applications Centers**

## Highly skilled and experienced dedicated team

- > Covering a wide range on NDT modalities
  - Radiography and Radioscopy
  - Ultrasonic Testing
  - Eddy Current
- Solving inspection application problems quickly
- > Providing industry-specific expert recommendations for specific problems
- Designing, manufacturing, and testing custom-made products for unique applications



## Seifert X-Ray Systems



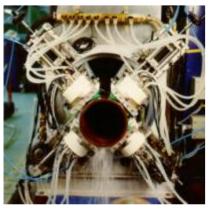
- > Universal Inspection Systems
  - Fast and efficient
  - Excellent detail recognition with image enhancement
  - Broad range of workpieces and application scenarios
- > High Speed Inline Inspection Systems
  - Full integration into production line
  - Automated Defect Recognition
  - Reliable mechanics
- > Fully-Customized Systems
- > 3D CT Systems

## Seifert Analytical X-Ray Systems

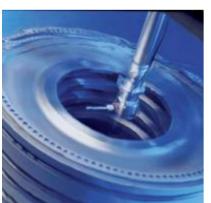
- > Standard Equipment
  - X-ray diffraction tubes
  - X-ray generators
  - Software and accessories
- > Standard Systems
  - Phase Analysis Quantitative and Qualitative
  - Texture and Stress Determination
- > Customized Systems
  - Single Crystal Orientation for aerospace turbine blades
  - Residual Stress Determination for automotive crankshafts
  - Automatic Orientation for semiconductors Silicon-Ingots



## Krautkramer Ultrasonic Testing Machines









- > Turnkey inspection solutions for production, lab and mobile installations
- Rugged and dependable systems for quality and process control applications
- > Broad industry segment experience
  - Aerospace components
  - Automotive parts
  - Bar, billet, rod and profile
  - Railroad wheels, axles and rail
  - Strip and plate
  - Tube and pipe
- > Innovative phased array technology improves inspection productivity

## Our Services

#### Field Service

#### An experienced global team

- > From emergency interventions with configurable response times to planned and unplanned maintenance
- > Supporting all our products
- > Focus on minimizing downtime
- Maintaining optimum performance levels



# Equipment Repair and Calibration Services



#### Supporting all product lines

- Film processors, ultrasound equipment, eddy current, and X-ray products
- > Traceable calibration certification
- Calibration to factory, customersupplied, or industry-standard specifications
- > On-site calibration services available

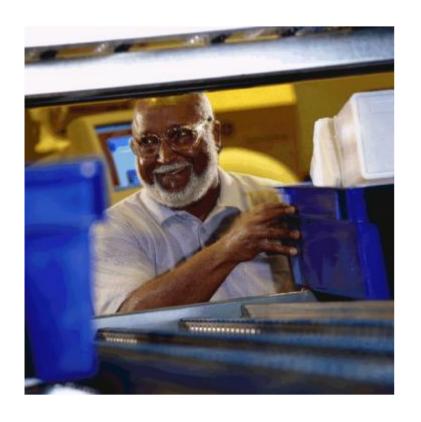
## **Training Programs**

# Global recognition and broad NDT expertise

- > Radiography:
  - Digital and film interpretation
- > Ultrasonic Inspection:
  - Levels 1, 2, 2B and 3
- > Eddy Current:
  - Levels 1 and 2
- > Customized programs



## Parts fulfillment services and programs



# Focused on bringing operational benefits

- Timely delivery to keep equipment and systems up and running
- > Upgrade programs
- A cost-effective solution for achieving high-impact operating results

## GE Inspection Technologies

Focused on helping customers achieve their safety and quality productive targets by:

- > Leading and investing in NDT technology
- > Delivering proven products, applications and services
- > Building on strong industry segment experience
- > Having a worldwide sales and service team



GE imagination at work