RWS-160 ROBOTIC WHEEL INSPECTION SYSTEM

National X-Ray Corp. continuously researches and integrates the latest technology in X-ray Inspection Systems to produce high performance inspection systems that match the specific needs of the customer application. The RWS-160 Robotic Wheel Inspection System is an excellent example of this unique ability. Designed, manufactured and implemented in a customer cooperative environment, the RWS-160 has proven itself to exceed the customers expectations in every catagory or performance. Highly evolved technologies coupled with operational simplicity make this system a trouble-free partner on the foundry floor. Implementing a simple numeric keypad data entry system the operator is free to concentrate on the actual inspection task, not on how the system works. Data collected during the inspection system, ACCEPT, REJECT, RETEST, is automatically logged into the database and can be retrieved from any authorized networked computer system. Utilizing all of these features, along with the high-end, proven robotic manipulation system, make this system the ideal Non-Destructive

Features

- Advanced analog, or optional digital panel, image intensifier system coupled to high resolution, no-burn camera module
- Ultra-compact overall design minimizes floor-space requirements
- 160 kV X-Ray energy or higher depending on application needs
- Wide dynamic operating range
- Large INPUT, EXIT and REJECT tunnels allow a wide range of wheel sizes without mechanical doors
- Heavy Duty, proven robotic wheel manipulator allows complex angle views
- System requires only standard electrical and air supplies
- Wide range of optional sub-systems available that include...
- Advanced Image Processing module IMPS III
- Image archiving, LAN ready, internet mail compatible, printing ready
- Digital image detectors (film-less) in various formats (a-Si panels, CMOS detectors, Linear Detectors)
- Complies with all Federal, State and Local Regulations

EXCELLENCE IN REAL-TIME AND DIGITAL X-RAY SYSTEMS

RWS-160 System Specifications

Application Range

•Penetration of up to 6” of Al, or 0.75” Fe
•Test Sample weights in excess of 200 lbs
•Wheel Size ranges are 12” to 20”
•ASTM E-155 & others

Inspection Enclosure

The RWS-160 Wheel Inspection System is manufactured in compliance with all federal, state and local radiation safety regulations (CFR 1020.40). There are no mechanical doors involved in the routine operation of the system. There are two (2) tool-accessible maintenance doors provided for ease of routine maintenance purposes and these are fully safety interlocked. When opened, the interlocks disable x-ray production and automated robotic motion. The front maintenance access door contains a lead-glass (Pb) window to allow the operator to view the interior of the enclsoure during inspection routines.

Dimensional Data (approximate):
•Enclosure only: 100” W x 120” H x 120” D
•Entry and Exit Tunnels: 60” W x 48” D x 48” H
•Lead-Glas Viewing Window: 12” W x 16” H
•Maintenace Access Doors: 2 each
•Control Console:
•Double Bay: 46” W x 32” D x 77” H
•Approximate Weight of entire system: 15,000 lbs

Robotic Manipulator

•Fanuc, Model R-2000 iA
•6-Axis type
•Capacity: 360 lbs

Wheel Identification System

A closed-circuit camera system displays the next wheel in the inspection cue on the Control Console viewing monitor. The operator identifies and enters the wheel information into the Operator Input Keypad.

Dual Bay Control Console

The control console contains all necessary components for system control:
•Microprocessor-based X-ray Controller
•Operator/System Interface (GUI)
•Wheel ID input keypad
•ACCEPT, REJECT, RETEST
•Wheel Identification Monitor

Operational Modes

•The RWS-160 can inspect wheels in Batch or Index Modes, i.e. the operator must identify the next wheel in the cue in the Index Mode (allows random wheel feed to the system) or, as in the Batch Mode, no identification is required from one wheel to the next.

X-ray System

•160kV YXLON/Philips MG165/MGC41
•YXLON/Philips Dual 0.3mm focal spot tubehead

Imaging System

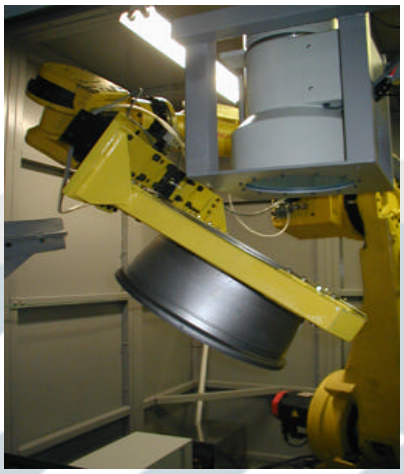
The imaging system is matched to your particular application requirements:
•Basic System includes a 9” Image Intensifier
•Optionally:
  •Digital or Analog Image Intensifiers
  •Digital Panel Technology (a-Si, CMOS, etc.)
  •Direct View Digital Systems
  •Linear Detector Technology

Options

•Image Processing
•Image Archiving
•PC Network Capability
•Interior Full-Area Viewing Camera

Utilities

•440 VAC +10%, -15%, 50/60 Hz, 40A
4-Wire (L1, L2, L3, Ground)



The interior of the RWS-160 system as seen from the maintenance access door.

National X-Ray Corp. reserves the right to change product specifications, without prior notice, as part of an ongoing product improvement program.

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