

LX-3000

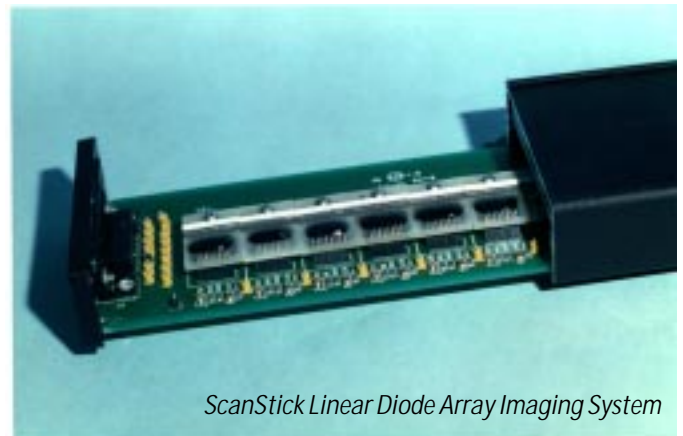


## Guardian™ Loose Material Radioscopic Inspection System



The Guardian automatic radioscopic system detects particles of high density matter in loose metal chips, granule or powder material. This advanced detection ability is accomplished through a combination of X-ray and machine vision technologies. A high resolution linear diode array (LDA) imaging system is capable of identifying high density inclusions of 0.15" or larger. Guardian uses a PC platform to control and maintain material flow, image analysis, and result reporting. The diagnostics software assists in system troubleshooting and maintenance. Guardian provides manufacturers with a complete 100% on-line, real-time product verification tool.

- ▶ 100% On-Line, Automatic Defect Detection and Removal
- ▶ Automatic Artifact Planter for System Verification
- ▶ Convenient Sampling Station
- ▶ Enhances Productivity and Guarantees Pure Product
- ▶ Optional SPC Package Communicates with LAN, Ethernet and other PC & PLC Networks
- ▶ Easy to Use and Set Up by Factory Personnel
- ▶ High Resolution Linear Diode Array Imaging



*ScanStick Linear Diode Array Imaging System*

## How it Works

Material is fed into the hopper from your conveyor line. The hopper funnels the material to a vibrator tray that distributes the product evenly across a flat seamless conveyor belt. A conveyor belt moves the material under the LDA imaging system, and it is automatically analyzed by Guardian. After the material is inspected defects are vacuumed away and good material enters a drum or exit conveyor.

### 1 Reliability Verification

The Automatic Artifact Planter verifies the performance of the defect detection system by automatically dropping high density artifacts into the material to be inspected.

### 2 Image Acquisition

The high resolution LDA imaging system receives X-ray transmission through the material and converts this light energy into a digital signal.

### 3 Defect Detection

Soft Guard™, the proprietary image processing program, evaluates the digital signal received from the LDA. High density material is detected based on preset software parameters.

### 4 Defect Removal

A defect removal system evacuates suspect material from the system's conveyor.

## Specifications

Power: 480VAC, 60Hz, 30A, 3 phase  
(400VAC, 50Hz, 30A, 3 phase)

Operating Temperature: 50 - 125° F (10 - 52° C)

Humidity: 80% Non-Condensed

Air: 100 psi, 45-50 CFM continuous

Radiation Enclosure: 4' X 14' X 6' High  
(1219mm X 4267mm X 1828mm High)

Shipping Weight: 6,700 lbs (2,881 kg)

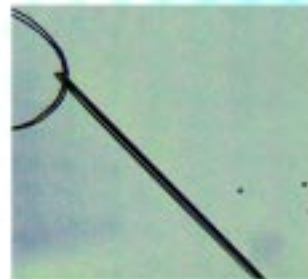
## Optional Equipment

SPC Software Package

Weight Scale

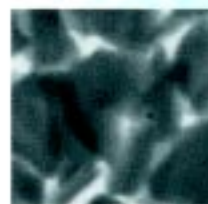
Custom Paint

Custom Floor Layout

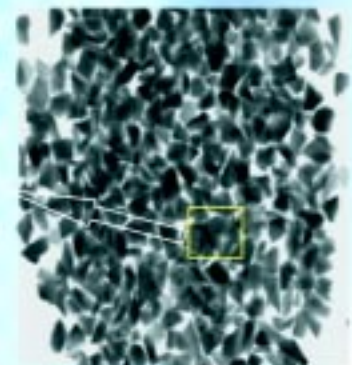


*A sewing needle in comparison to .015" high density artifacts used for x-ray system performance verification.*

## Vanadium Aluminium Chips



0.015" Defect Example



← 7" Field of View →

*Suspect material detected by the LDA imaging system.*



MG226/2.25 Constant Potential X-ray System