

# MECTRON SQ-7500

## Munitions SURFACE INSPECTION

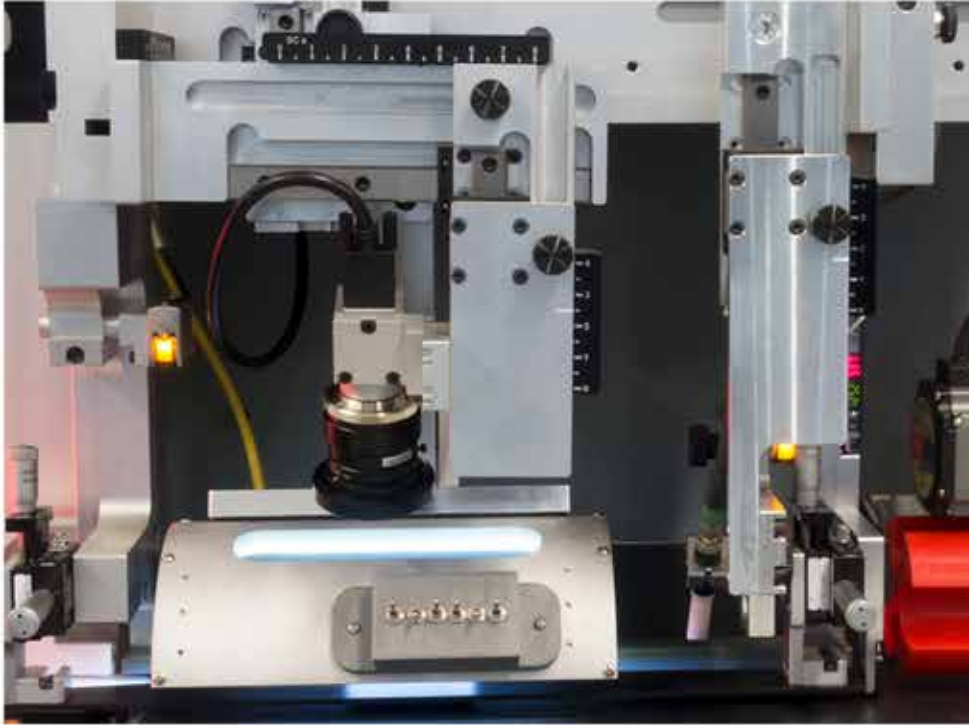


Patent Pending

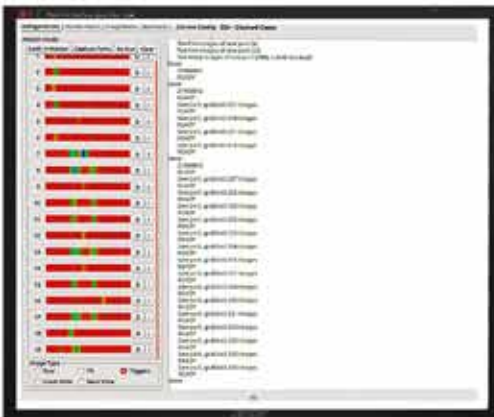
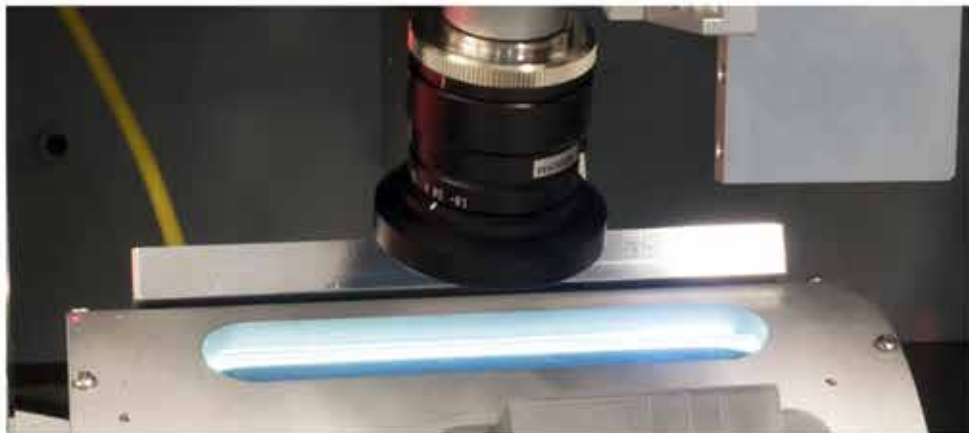
Mectron Inspection Systems  
400 S. Industrial Drive  
Saline, MI 48176  
Phone: (734)944-8777  
Fax: (734)944-8778

[www.MectronInspection.com](http://www.MectronInspection.com)

# SQ-7500 Surface Qualifier



Mectron's Surface Qualifier (SQ-7500) is a camera based system that utilizes statistical learning software developed by Mectron for inspection of cylindrical parts. A conveyor system is used to traverse the parts through the inspection area and simultaneously rotate the part for full coverage. Each part passes under the illumination tunnel where up to 400 images are captured per second. A GPU (Graphics processing unit), with over 2,000 cores, processes the 98,850 data points per image taken and is hundreds of times faster than the CPU. The GPU uses statistical learning software on the 400 images and 39 million data points per second to discern between the good and bad parts inspected.



The system first runs good parts called a master set. Running the master set allows the system to collect data. The machine uses this data along with statistical learning techniques to make fast and highly accurate determinations about the parts. After the masters are set up, the software has further subjectivity in both setting an acceptance threshold and changing the method of inspection. The software allows the user to alter the formula for inspection in a user friendly and easy to understand format.



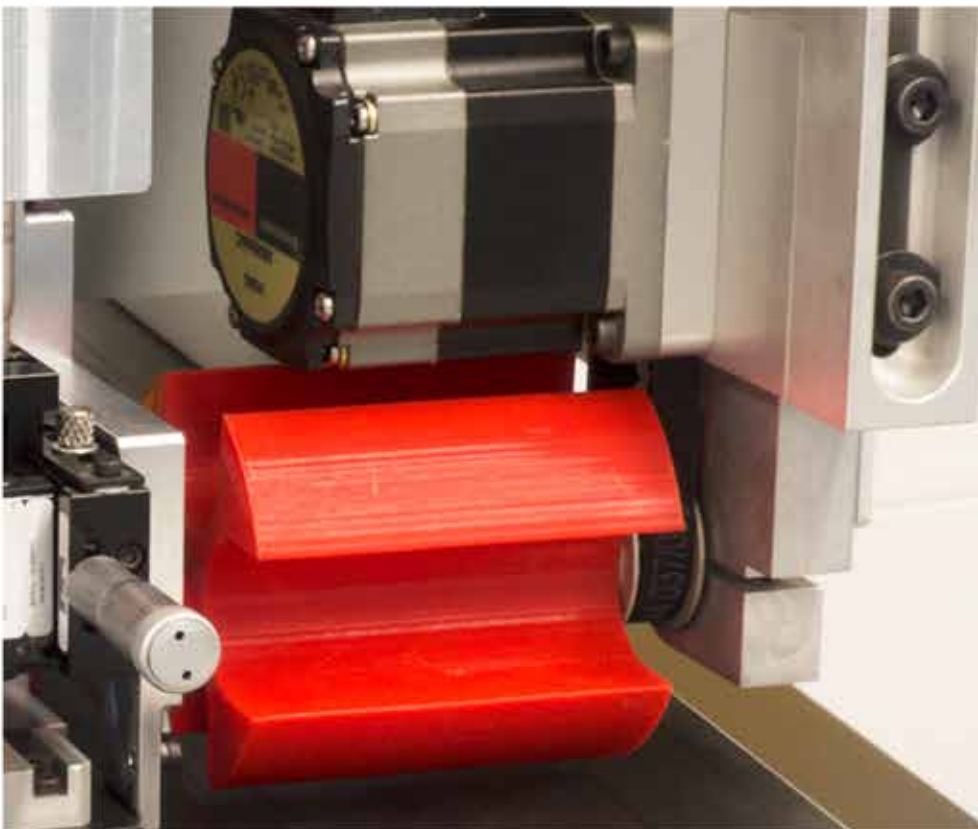
# CCD Camera for part end inspection



## High-Resolution Camera Proprietary Software

The head inspection is done using a high-resolution CCD camera with Mectron proprietary software. The software provides a variety of flexible tools to inspect features of the head such as: letter recognition, flash hole, primer pocket and primer depth. The camera is triggered by an optic sensor and takes a picture of each part to ensure all defects are found. The customized lighting of the part allows all details to be analyzed by the software quickly and accurately.

# Rotary Gate



After each station has made a determination about the part, a servo driven rotary gate is activated for good parts only. Positive acceptance allows for a fail safe operation.

# Mectron SQ-7500 Qualifier®

Since 1968, Mectron Inspection Systems has designed and manufactured systems for automatic testing of industrial parts. The Mectron name has been built on technology, customer service and inspection systems that provide capabilities for supplying zero defect products.

Mectron Inspection Systems has become an integral part of providing manufacturers the means by which they can consistently supply and satisfy their customers with 100% inspected and certified parts.

The Mectron Qualifier® Q-Series Inspection Systems are systems you can count on for Quality Assurance.



## Surface Inspection Criteria

### Munitions

- Dents
- Split case
- Scratches
- Corroded
- Stained

### Deep Draw

- Lamination
- Chevron's
- Scratches
- Dents
- Burn marks

Mectron Global Offices  
[www.MectronInspection.com](http://www.MectronInspection.com)

[sales@MectronInspection.com](mailto:sales@MectronInspection.com)