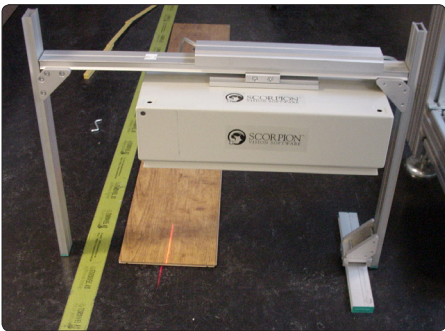# Scorpion Vision Software®
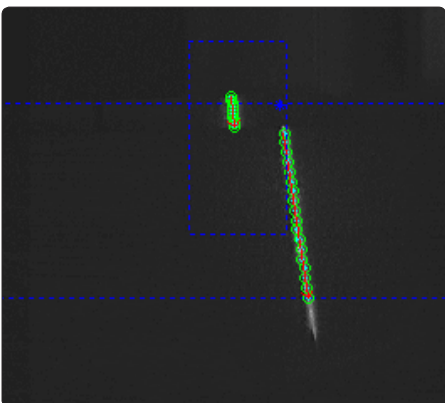# Laser Length Measurement System

The Scorpion Laser Length Measurement system is a general purpose length measurement system.

Here it is used for in-line measurements of lamella lengths. The system assumes that the other end of the object has a fixed position and direction during the measurement.

In-line measurements of lamella lengths

The camera is mounted directly over the part of the object being measured. The laser light illuminates the object with a line. Since the laser is mounted in a 45 - 60 degrees angle versus the object, the laser line will shift position at the end of the object. The image from the camera will look like the image below, where the shift in position is clearly displayed.


Shift in position displayed

The systems will detect the two lines, select the line on top of the object and measure the position of the end point.

System Description

The Scorpion Laser measurement system consists of the following parts:

- Junction box with camera and laser. The camera is positioned in one end of the Junction box and the laser in the other.
- Firewire Interface card
- RealVNC for remote operation
- Scorpion Vision Software CD and a license key
- Scorpion Laser length measurement Profile
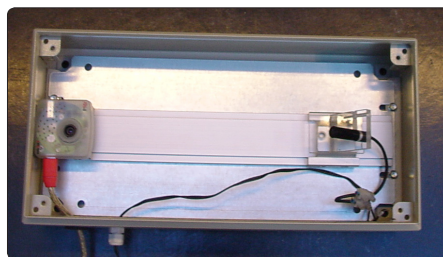
Junction box with camera and laser

The system is connected to a Personal Computer with a firewire cable. The system can communicate with external systems using RS232, OPC and TCP/IP by sending start and stop, status and measurement data.
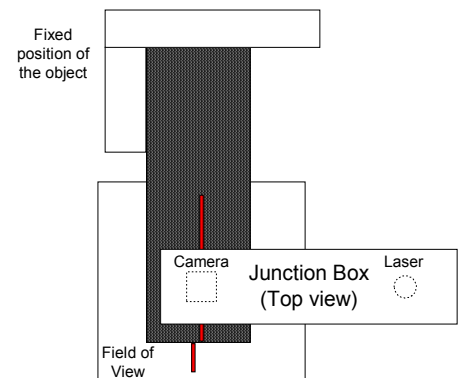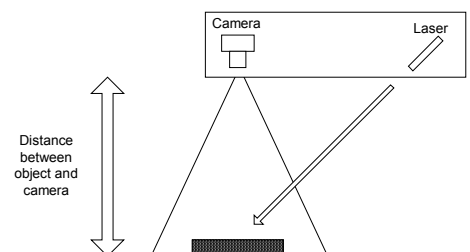
Scorpion Laser Length Measurement profile

The Laser Length Measurement profile is contained in a zip file to easily being updated or verified over e-mail and internet.

Scorpion Vision Software CD

Scorpion Vision Software is distributed on a CD with the following contents: Scorpion Vision Software, system requirements, Scorpion setup program, camera drivers, and documentation and support programs.
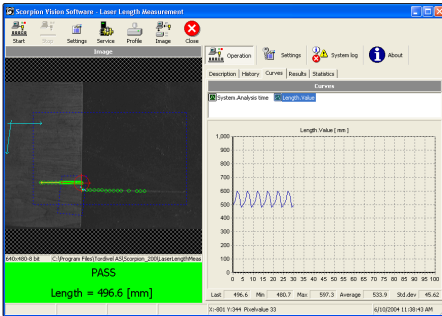

Scorpion Vision Software CD

The laser measurement box is positioned as shown in the drawings

User Interface

The following information is available in the user interface:

- Camera image
- Inspection result with indicator panels
- Description - Web page that contains a short description of the identification task
- History - displays the latest inspection results

- Curves - give a graphical view of measured values
- Results - show measured values of the latest inspection
- Statistics - give a periodical view of the inspection results

Scorpion Laser Length Measurement System User Interface

Technical Data

Junction Box System
- Elfa Junction Box with mounting plate
- Montech profiles
- Sundry accessories

Camera System
- Monochrome Firewire Camera, VGA
- 4,5 m FireWire cable
- Unibrain Fireboard Red IEEE-1394 Interface card

Laser System
- Imatronic laser, 5mW, with 40 degree fan angle line optics
- Power Supply, 5Volt

Software
- Scorpion Vision Software
- Scorpion Laser Length Measurement system profile
- Scorpion Setup program
- Camera drivers
- Support programs

Communication
- RS232 - PLC
- TCP/IP
- OPC including Siemens Profibus
- Advantech IO Modules
  - o RS485
  - o TCP/IP

Data Export
- Number
- TCP/IP
- RS-232

Remote Operation
- RealVNC over tcp/ip

Operating System
- Windows 2000 / Windows XP

Minimum Requirements
- Intel Pentium III 800 MHz
- 128 MB of RAM
- 10 MB free hard drive space

Language Support
- English

Specifications might change without any notification.