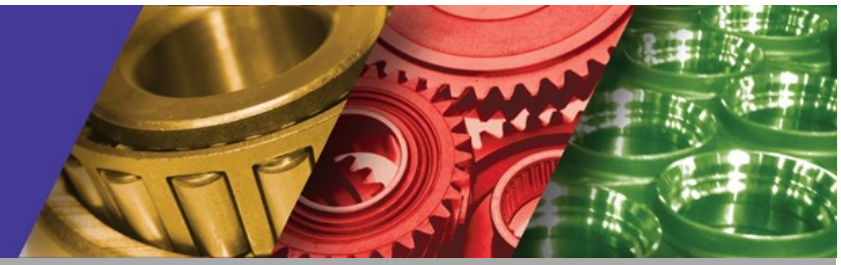

Test Type: Flaw Testing

Case Study – Fastener Flange Test

Equipment: The CR-11 or InSite CT and Eddy Current Probe

Customer Problem

A manufacturer of fasteners had been finding cracks in the flange area after forming. Due to the high production line rates, it was impossible to perform individual inspection of the parts. (Some fasteners are used for critical structural applications, while others are used for aesthetic purposed. In either case, product quality is key).

The Solution

The customer decided to install an eddy current test system to perform an in-line inspection of all parts being manufactured. A single channel, single frequency eddy current test instrument and probe were integrated into a bowl fed material handling system. The eddy current test probe was installed in a fixed position and the fasteners were brought into the system using a rotating turntable. When each fastener was positioned in front of the probe, it was briefly rotated while the probe scanned for flaws on the flange OD. A high sampling rate and differential filter were used to keep up with the production line speeds. A sorting chute controlled by the eddy current test instrument's industrial I/O was used to separate the flawed fasteners from the good ones.

Figure 2 shows the fastener test station with feeder, turntable, and accept/reject chutes. Figure 3 shows the eddy current test station integrated into the factory line.

The Criterion NDT CR-11 or InSite CT eddy current test instruments are capable of performing this type of testing.

For more information visit our website at www.criterionndt.com or call Criterion NDT at 253-929-8800.

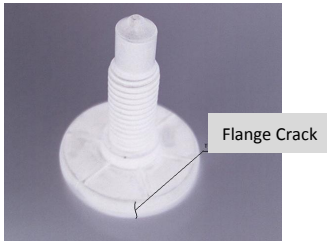

Figure 1 - Fastener with flange crack

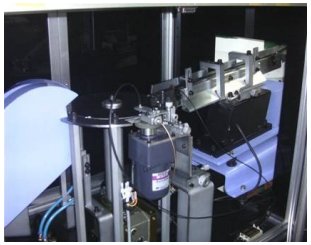

Figure 2 –Eddy current station

Figure 3 – Production view of eddy current test station