

High Speed Camera in can manufacturing process

Application

Automatic can manufacturing machine. Bends and welds pre-cut and pre-printed metal sheets into seam-welded tubes.

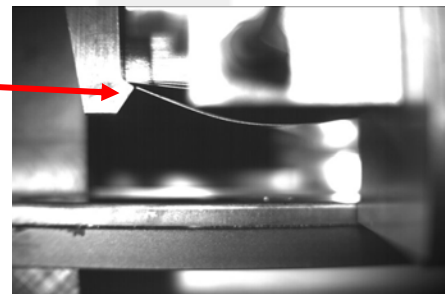
Subject

Standard machines run with approx. 300 tubes per minute, while modern machines offer a process speed of up to 600 tubes/minute. As seen on many mechanical processes, parts and elements start to vibrate resp. swing when operated at high speed. Vibration can cause all sorts of disturbing malfunctions like intermitted failures, time offsets etc., leading to substantial troubleshooting costs due to stand still time of the machine or bad quality of the cans. To maintain the nominal speed, special attention has to be given to the sheet metal feeder, the bending station as well as to the welding station in order to have a reliable performance guaranteed.

Solution

By using one MOTIONeer high speed camera, the sheet metal feeder could be optimised and adjusted to eliminate any kind of lockouts in the feeding process.

High Speed Camera records bending process of sheet metal



How was AOS Technologies of service?

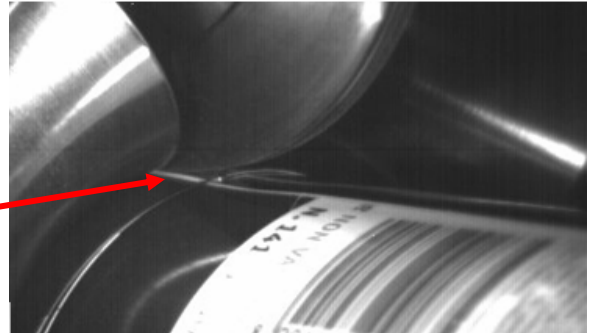
- Customer approached AOS with need for high speed recording
- AOS and customer did analysis of high speed camera requirement, lights and accessories to get optimal results.
- AOS provided complete turnkey setup for tests and evaluation with customer.
- After installation AOS maintains contact with customer for all questions regarding application or handling questions of the high speed camera.



Imaging for smart decisions

After several high speed recordings, the bending station was optimised in a way that the freshly bent sheet metal was maintaining contact to the guides all the times, allowing the grippers to safely grip the pre-bent tubes without fail.

The welding station is now getting the raw tubes in the right time – every time. A smooth operation was achieved due to adjusting the process based on the results provided by the high speed camera recording



Setup

- MOTIONeer monochrome, 2sec
- C-mount lens 25mm/f1.4
incl. 3mm extension tube for some close up recordings
- Handheld trigger device
- Laptop PC, Windows XP, FireWire PCMCIA card, 4.5m FireWire cable
- Light Kit (2 units @ 100W each)
- MANFROTTO magic arm + Tripod



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