

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 S-PRI high speed camera, the sheet metal feeder could be optimised and adjusted to eliminate any kind of lockouts in the feeding process. 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..

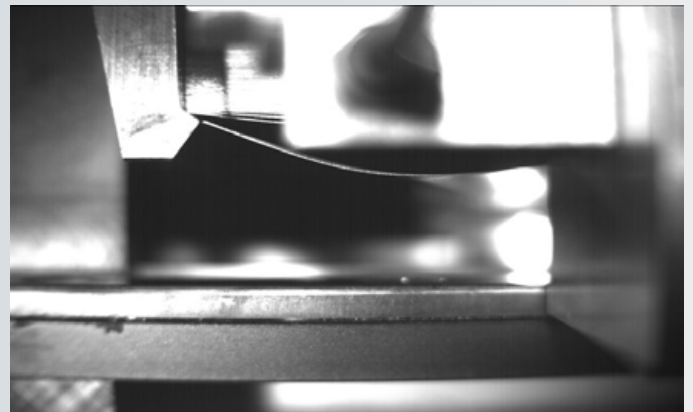
Customer benefits

- Reduced testing time of subsystems
- reduced testing time for the completed handling line
- less installation and finetuning (often at customer site)
- less malfunctions
- less downtime

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High Speed camera in front of can machine



Close-up of sheet metal feeder



S-PRI high speed camera

Scope of supply

- S-PRI high speed camera with option 1 (gain control)
- 25mm lens
- tripod
- 1 SmartLED compact light

Competitive advantage:

- small, compact camera size allows the camera positioned near the object, making sure the camera really sees the object
- solid, extruded all-aluminium housing, protecting the camera against mechanical impacts and malfunctions due to excessive electromagnetic noise (created by electrical motors, high amp power lines etc.)
- simple to setup (1 data cable, 1 I/O-cable)
- extremely powerful LED light to get good images instantly. No need to fiddle around with hot tungsten lights which provide useless images due to overheating

Customers:

- manufacturers of fast handling machines, i.e. for cans, cigarettes, pharmaceuticals (pills, tablets)
- system integrators of assembly lines
- maintenance- and trouble shooting teams for the above
- design engineers for the above

Your AOS Partner:

Specifications are subject to changes without prior notice – v0810