THE MODAL SHOP
AN MTS COMPANY

NON-DESTRUCTIVE TESTING

METAL STAMPING

RESONANT INSPECTION OF AUTOMOTIVE PARTS

PROBLEM

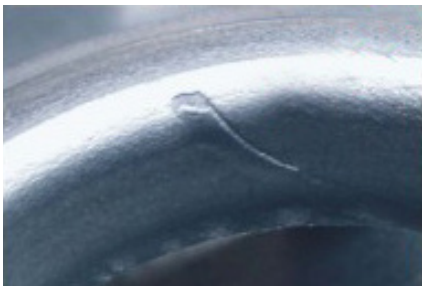
An automotive parts supplier of air bag propellant diffusers was experiencing cracks during the drawing process. Customer complaints eventually caused manufacturing to require 100% visual inspection.

SOLUTION

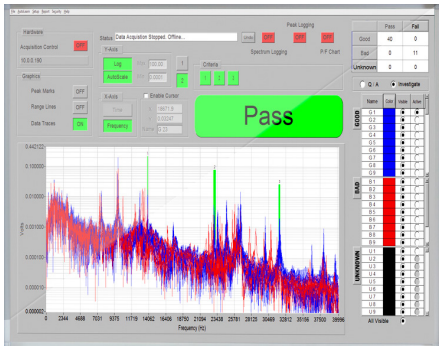
To keep up with the high throughput rate of stamping operations, the extremely fast, RAM-NDT resonant inspection technique was implemented to detect frequency shifts by “ringing” flawed parts. The system objectively determines whole part inspection automatically at approximately three seconds per part using an industrial conveyor and a synchronized industrial impactor to ring the parts. The quality analysis and control system listens for frequency shifts with a measurement microphone capable of discerning variances at more than twice that of human hearing.

BENEFIT

100% objective, whole part quality inspection is ensured and keeps pace with the stamping operation. The subjective errors and costs of visual inspection were eliminated and both customer confidence and satisfaction increased. The inspection system paid for itself in less than fourteen months.



Crack formed during drawing process



NDT-RAM Software

NDT Auto System