

Quality Control

Coating Integrity

- Coating Thickness
- Coating Weight
- Metal Exposure
- Copper Sulfate
- Pencil test
- Blush Test
- Scribe Test
- Adhesion

Dimensions

- Thin Wall/Thick Wall
- Starting Gage
- Lid/Seam dimension compliance
- Drop and Damage
- Plug Diameter
- Flange Width
- Finished Height

Metrics

- Plant Quality Survey
- Competitive Can Survey

- Can Weight
- Axial Load
- Lid Buckle
- Dome Reversal

Beverage

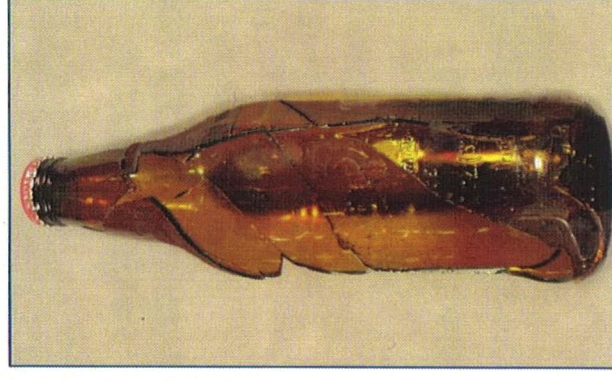
- Metal Pickup
- CO₂ Loss
- Dissolved Oxygen



Briem Engineering
4134 Rider Trail North
St. Louis, MO 63045



MATERIAL AND METALLURGICAL ENGINEERING SERVICES FOR THE BEVERAGE INDUSTRY



Failure Analysis

Aluminum Cans

- Beverage Can Leakers (Seam, Sidewall, and Rivet)
- Score Panel Reversals
- Stress Corrosion Cracking
- Corrosion Initiation
- Bottom Reversals
- Lid Buckles
- Seaming Chucks
- Interior Coating Defects
- Mechanical Damage



Failure Analysis Glass and Aluminum Bottles

- Crown Leaks
- Thread Engagement
- Crown Torque Assessment
- Curl Evaluation

Forensic Analysis

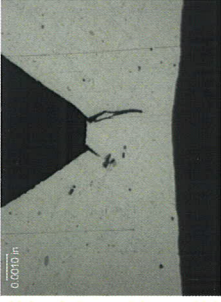
- Briem Engineering provides technical expert testimony

Case Histories



Customer experienced lid panel score failures.

Briem Engineering performed a failure analysis using a scanning electron microscope and metallographic examination. The failures were due to "transgranular stress-corrosion cracking".

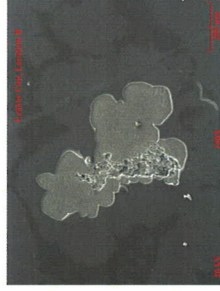


Briem Engineering determined the cause of seam leaks using optical microscopy, metrology and metallography techniques. Briem determined that the seam leaks were caused by improper tooling setup.



A beverage company turned to Briem Engineering to determine the cause of sidewall leaks. Briem employed stereo microscopy, metallographic examination and scanning electron microscopy. The sidewall leaks were

caused by contaminants which reduced coating adhesion, allowing the initiation of internal corrosion.

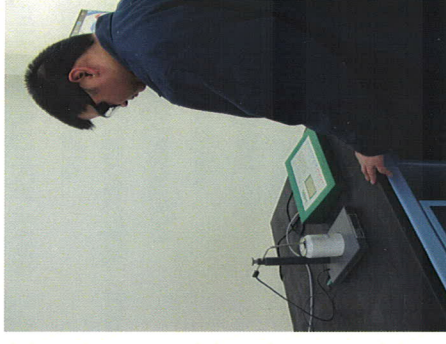


Techniques Available

- ISO 17025 Certified Metallurgical Laboratory
- Scanning Electron Microscope with Energy Dispersive Spectroscopy
- Chemical Analysis
- Metallography/Microscopy
- Mechanical Testing
- Metrology
- Fractography
- Mitutoyo Contracer

Personnel

- Metallurgical Engineers
- Materials Engineers
- Chemists



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MATERIAL TESTING & ENGINEERING

4134 Rider Trail North St. Louis, MO 63045
(314) 298-3773 www.briemeng.com