

Candy Stamp Force Testing

Industry: Industrial

Summary

Customer Need / Challenge

- Manufacturers of hard shell candies often stamp text or logos on the candy shells.
- Stamping too hard breaks the candy shell. Stamping too light results in an uneven or incomplete imprint.

Interface Solution

- A test apparatus uses an Interface Model WMC Mini Load Cell attached to hydraulic actuators to measure the compression force required.

Results

- Engineers determine specific force needed to properly apply the imprint without breaking the candy shell.

Materials

Interface Products

- WMC Sealed Stainless Steel Mini Load Cell rated at 5 to 25 pounds-force (lbf)
- 9330 High Speed Data Logger

Additional Materials

- Compression Test Apparatus

How It Works

- 1 A hard shell candy is placed in a support under the test apparatus.
- 2 An Interface Model WMC Mini Load Cell is mounted between the hydraulic actuator and the candy being tested.
- 3 Force applied by the hydraulic actuator bends the top of the sealed load cell while the resistance from the candy bends the bottom of the load cell.
- 4 The two ends of the load compress toward the center where gages strain gages convert the applied force to an electrical signal.
- 5 Electrical signals are sent to the Interface Model 9330 and displayed in lbs. A USB connection to a laptop running the included graphical software shows the force profile as the load is applied.
- 6 The test engineer continues to apply hydraulic force until the shell cracks.

