

Can Crushing under Pressure

Concepts

Explanation:

This demonstration is based on the concept of reducing the air pressure inside the can before placing it in the water tray as well as filling the can with steam. Upon cooling then the pressure inside the can reduces allowing the higher air pressure outside the can to crush the can upon cooling.

This demonstration is primarily done in two parts the first driving the air out of the can and filling it with steam during heating. In the second phase the steam/air inside the can is cooled reducing the pressure by temperature effects as well as condensation of the steam back to the liquid phase.

Sources:

If you have other explanations, concepts, or ideas for this demonstration please share them by contacting our Chem Demo team (bedell@nku.edu; sieveb1@nku.edu). We will pass them on to the community and credit you with the ideas.