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**Snap-Acting Bimetallic Disc (SABMD) Behavior and Fabrication Process** MAUREEN SMITH, CHRIS WONG, MOIRA FOSTER, MATTHEW MOELTER, THOMAS GUTIERREZ, NATHAN HESTON, California Polytechnic State University — Shallow bimetallic shells rapidly transition between concave and convex equilibrium states with variations in temperature which can be described by a hysteresis cycle. They are widely used as low-cost temperature control devices, and are commonly referred to as snap-acting bimetallic discs (SABMDs). Despite their popular application, experimental literature is lacking that describes the relationship between their shape and temperature. Here, we describe a fabrication process that we've used to create large (∼75 mm) SABMDs, and share the results of our heat treatment study that suggest a method to fine tune a disc's snapping temperatures. We present profile measurements that show the thermal deformation of a disc as its temperature varies prior to transitioning. Finally, we offer the first experimental evidence showing the dependence of characteristic snapping temperatures on original room temperature disc shape and compare these results to the Wittrick model.

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