In this paper, we cover our studies on accelerating the molding process of a polymer by applying acoustic stress-wave time reversal. Tests carried out on an epoxy polymer mixed with a curing agent have shown evidence that the introduction of unfocused acoustic energy during the molding process will accelerate that process. The effects of focusing acoustic energy at a mold discontinuity while curing are explored. We also detail our investigations on focusing acoustic energy at a crack location by iteratively applying time reversal. Multiple types of media were tested.