



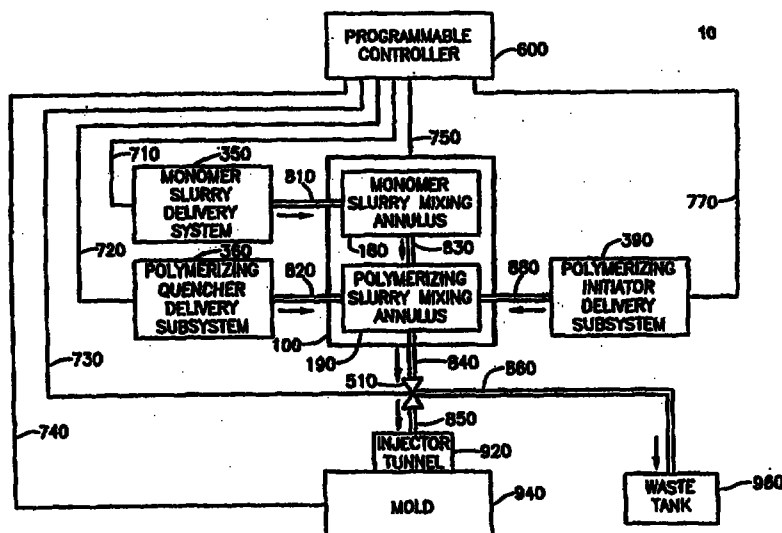
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(71) Applicant: BOARD OF REGENTS OF THE UNIVERSITY OF TEXAS SYSTEM [US/US]; 201 West 7th Street, Austin, TX 78701 (US).			
(72) Inventor: BARLOW, Joel, W.; 7139 Valburn Drive, Austin, TX 78731 (US).			
(74) Agent: RUSSELL, Douglas, D.; Taylor Russell & Russell, P.C., Building One, Suite 1200, 4807 Spicewood Springs Road, Austin, TX 78759 (US).			

(54) Title: MIXING AND DISPENSING SYSTEM FOR RAPIDLY POLYMERIZING MATERIALS



(57) Abstract

A mixing and dispensing system (10) for combining organic chemical components to produce a rapidly polymerizing material for molding and encapsulating small and delicate devices, such as electronic components. A mix head (100) incorporates a high-speed rotary mixer having magnetic coupling for mixing and injecting low viscosity polymerizing materials into a mold (940). The chemicals fed to the mix head is from chemical handling equipment which eliminates the need for material control valves and enables low feed line pressures. A chemical handling subsystem uses tubular containers provided by the material manufacturers that mount on dispensing equipment, and do not require special storage, handling, or mixing. A cycle time of between 6 and 12 seconds to achieve complete polymerization, eliminates the need for curing ovens. The chemicals used are not premixed, but are combined in the mix head (100). Because of the low viscosity of the polymerizing materials, damage to electronic interconnections during encapsulation are reduced.