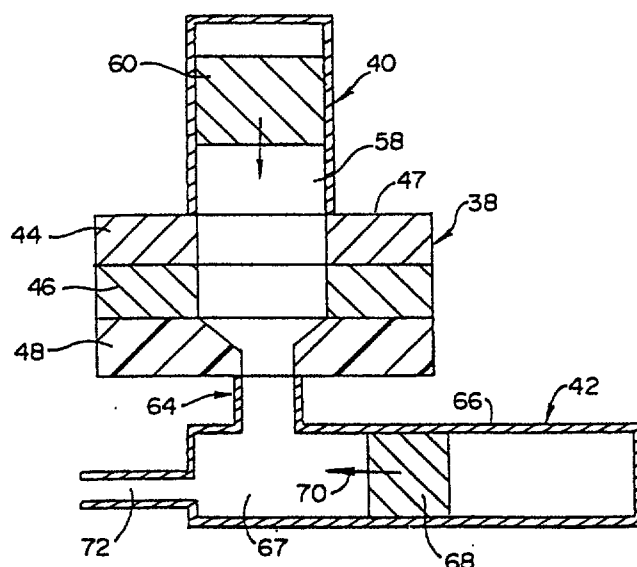




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(54) Title: MICROWAVE PROCESSING SYSTEM FOR POLYMERS



(57) Abstract

Polymer processing systems and methods which use microwave energy to achieve extremely rapid, efficient melting and/or softening of polymer materials. After rapid melting and/or softening is achieved, the molten polymer may then be pressurized for transport to an injection mold, an extrusion die, or the like, as desired. Microwave melting occurs so rapidly, that significant reductions in cycle time would be achieved by the present invention. Additionally, the use of microwave energy for melting is economically advantageous, because microwave energy sources are generally less costly and use energy more efficiently than conventional melting systems.