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Beer

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(54) **POROUS MEDIA HEAT TRANSFER FOR INJECTION MOLDING**

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CPC ***B29C 45/7331*** (2013.01); ***B29C 45/7312*** (2013.01); *B29C 33/3814* (2013.01)

(58) **Field of Classification Search**
CPC B29C 33/3814
See application file for complete search history.

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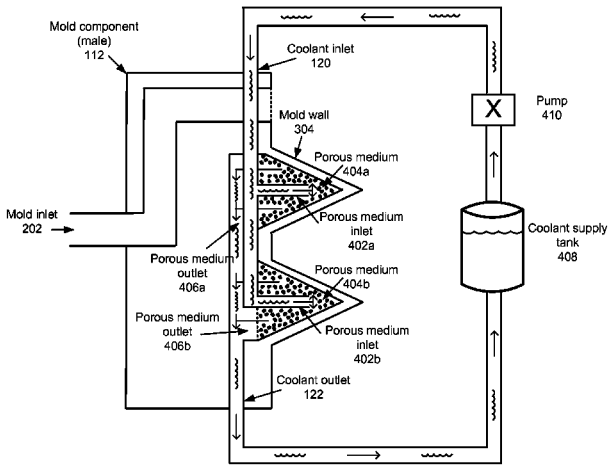
(57) **ABSTRACT**

The cooling of injection molded plastic is targeted. Coolant flows into a porous medium disposed within an injection molding component via a porous medium inlet. The porous medium is thermally coupled to a mold cavity configured to receive injected liquid plastic. The porous medium beneficially allows for an increased rate of heat transfer from the injected liquid plastic to the coolant and provides additional structural support over a hollow cooling well. When the temperature of the injected liquid plastic falls below a solidifying temperature threshold, the molded component is ejected and collected.

20 Claims, 6 Drawing Sheets