

INJECTION MOLDING CYLINDRICAL MANIFOLD INSERT AND METHOD

ABSTRACT OF THE DISCLOSURE

Injection molding apparatus and method wherein a number of cylindrical inserts or plugs each having a curved melt duct therethrough are accurately aligned and securely mounted in spaced cylindrical openings through a melt distribution manifold. An alignment and retaining pin made of a very strong material extends from a bore in the manifold into a bore in the insert. The manifold is heated and the inserts and pins are cooled prior to insertion into place to provide very tight fits when they are at the same temperature which very accurately aligns the melt ducts through the inserts. The combination of the inserts fitting tightly in the openings and the strength of the pins is sufficient to withstand the rearward forces from the pressurized melt being injected through the curved melt ducts to retain the inserts in place.

FIGURE 1