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ABSTRACT

METHOD TO FORM MULTI-MATERIAL COMPONENTS

The invention shows how powder injection molding may be used to form a continuous body having multiple parts, each of which has different functional properties such as corrosion resistance or hardness, there being no connective materials such as solder or glue between the parts. This is accomplished through careful control of the relative shrinkage rates of these various parts. Although there is no limit to how many parts with different functional properties can make up an object, special attention is paid to certain pairs of functional properties that are difficult and/or expensive to combine in a single object when other manufacturing means are used.

Figure 4