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LOST FOAM & SAND CORES STAGE MANUFACTURING TECHNOLOGY

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ABSTRACT OF THE DISCLOSURE

A method of casting a workpiece having internal cavities uses a combination of sand core and lost foam techniques. A core of bonded granular material in the desired configuration of the voids of the workpiece is formed. The core has oppositely facing first and second surfaces with a pattern of channels extending between them. The pattern of the channels is in the desired configuration of walls for the cavities of workpiece. A first foam layer of destructible material is preformed and secured to the first surface of the core overlying one side of the channels. A second foam layer of destructible material is preformed and secured to the second surface of the core, overlying an opposite side of the channels. The assembly is placed in a refractory mold cavity, and granular refractory material is packed around the assembly. Molten metal is poured into the mold cavity into contact with the first and second foam layers, which decompose, causing the molten metal to flow into the channels, forming metal walls for the workpiece in the channels and in the spaces previously occupied by the foam layers.

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Figure 1



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