

[54] CERAMIC STRUCTURES AND PROCESS FOR PRODUCING THE SAME

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[57] ABSTRACT

A ceramic structure excellent in resistance to mechanical and thermal impacts can be obtained according to a process comprising a first step in which optional-shaped substrates composed of a ceramic material are subjected to primary firing, a second step in which the said substrates are coated with a substance capable of being made porous by secondary firing, a third step in which the said substrates are laminated each other so as to form fluid passages between the substrates, and a fourth step in which the laminated substrates are subjected to secondary firing to be chemically bonded to form a unit structure by means of the said substance capable of being made porous, thereby uniformly coating the said unit structure with the said substance which has been made porous.

Further, the thus obtained structure is immersed in, for example, an alumina type ceramic solution and then subjected to tertiary firing to adhere the alumina type ceramic to the pores and surface of the ceramic layer on the said structure, whereby an inexpensive ceramic structure can be produced.

6 Claims, 5 Drawing Figures

