

ABSTRACT

A process for producing sintered titanium-graphite having improved wear resistance and low frictional characteristics is described (Fig. 2). The said process which produces titanium-graphite composites having a triphasic structure with controlled porosity and a graphite lubricating film, comprises sintering a mixture of titanium and graphite powders in which the percentage of graphite may vary from 4 to 8 percent at temperatures from about 800°C. to 1600°C, for about 1/2 to 2 hours, under a compaction pressure of 0.17 to 0.62 MPa. The composites have applications in biomedical engineering and other fields of engineering due to their biocompatibility, strength and improved wear resistance.

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A process for producing sintered titanium-graphite having improved wear resistance and low frictional characteristics is described. The said process which produces titanium-graphite composites having a triphasic structure with controlled porosity and a graphite lubricating film, comprises sintering a mixture of titanium and graphite powders in which the percentage of graphite may vary from 4 to 8 percent at temperatures from about 800°C. to 1600°C, for about 1/2 to 2 hours, under a compaction pressure of 0.17 to 0.62 MPa. The composites have applications in biomedical engineering and other fields of engineering due to their biocompatibility, strength and improved wear resistance. (Fig. 2 is to be published)