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(54) Title: FIBER REINFORCED CERAMIC MATRIX COMPOSITE PISTON AND CYLINDER/SLEEVE FOR AN INTERNAL COMBUSTION ENGINE

(57) Abstract

A piston (18) and cylinder/sleeve (30) pair for an internal combustion engine. The pair has low coefficients of thermal expansion for closer parts tolerances without the danger of seizing and/or breakage/cracking inherent with prior art pistons and cylinder/sleeves. The piston (18) is formed of a structural fiber reinforced ceramic matrix composite material and then a combined first erosion-resistant and self-lubricating material is applied to a surface of a skirt portion of the piston (28). The cylinder/sleeve (30) is formed of a structural fiber reinforced ceramic matrix composite material and then a second combined erosion-resistant and self-lubricating material is applied to the surface of the cylinder/sleeve (30).

