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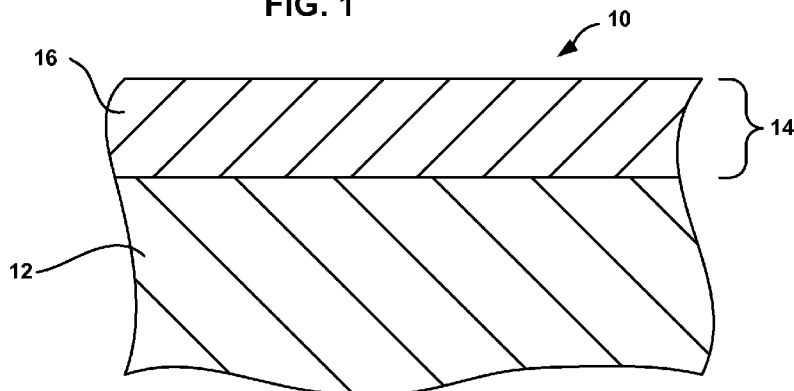
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(54) Title: COATING INCLUDING A RARE EARTH SILICATE-BASED LAYER INCLUDING A SECOND PHASE

FIG. 1



(57) Abstract: A coating including a bond layer deposited on a substrate. The bond layer includes a rare earth silicate and a second phase, the second phase including at least one of silicon, suicides, alkali metal oxides, alkali earth metal oxides, glass ceramics, Al₂O₃, TiO₂, Ta₂O₅, HfO₂, ZrO₂, HfSiO₄, ZrSiO₄, HfTiO₄, ZrTiO₄, or mullite. The coating may provide thermal and/or environmental protection for the substrate, especially when the substrate is a component of a high-temperature mechanical system.



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