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(54) Title: METHODS FOR DEPOSITING ANTI-COKING PROTECTIVE COATINGS ON AEROSPACE COMPONENTS

(57) Abstract: Embodiments of the present disclosure generally relate to protective coatings on an aerospace component and methods for depositing the protective coatings. The protective coating can be anti-coking coatings to reduce or suppress coke formation when the aerospace component is heated in the presence of a fuel. In one or more embodiments, a method for depositing the protective coating on an aerospace component includes exposing the aerospace component to a cleaning process to produce a cleaned surface on the aerospace component and sequentially exposing the aerospace component to a precursor and a reactant to form a protective coating on the cleaned surface of the aerospace component by an atomic layer deposition (ALD) process. The aerospace component can be one or more of a fuel nozzle, a combustor liner, a combustor shield, a heat exchanger, a fuel line, a fuel valve, or any combination thereof.



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