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(54) Title: FLAMELESS COMBUSTOR

(57) Abstract

A combustor method and apparatus is provided. The method utilizes flameless combustion with one or more of three improvements to enhance ignition of the flameless combustor. A catalytic surface can be provided within a combustion chamber to provide flameless combustion at least in the vicinity of the catalytic surface at a temperature that is much lower than the autoignition temperature of fuel in air without the presence of the catalytic surface. Nitrous oxide or supplemental oxygen may also be used as an oxidant either instead of air or with air to reduce ignition temperatures. Further, electrical energy can be passed through the fuel conduit, raising the temperature of the conduit to a temperature above which the fuel will ignite when combined with the oxidant.

