

A process for the conversion of a liquid paraffin-containing hydrocarbon which comprises the steps of (a) partially combusting a mixture of the liquid hydrocarbon and a molecular oxygen-containing gas in a reaction chamber with a catalyst capable of supporting combustion beyond the normal fuel rich limit of flammability, the mixture having a stoichiometric ratio of hydrocarbon to oxygen of greater than the stoichiometric ratio required for complete combustion to carbon dioxide and water, to produce a product stream and a carbon deposit in the reaction chamber; (b) periodically replacing the liquid hydrocarbon and molecular oxygen-containing gas mixture in step (a) with a fuel-rich carbon containing gas stream for a period of time sufficient to effect substantial removal of the carbon deposit from the reaction chamber.