

Abstract

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Whirling Flames for Fuel Economy & Low NOX combustion

We present the results of a numerical and experimental investigations of turbulent whirling (i.e. vortex) gaseous flames in an asymmetric cylinder. The flame was found to be stable near the lean flammability limit of methane, which suggests enhanced fuel economy. The flame was also found to have lower rates of NO_x compared to other flame configurations at similar equivalence ratio.