

LAMINAR FLAME SPEED OF STOICHIOMETRIC NAPHTHYL/AIR MIXTURE

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Abstract: An improved data processing algorithm of experimental results on measurements of laminar flame speeds of premixed fuel/air obtained in a preheated spherical combustion chamber with a spark-ignition at its center has been described. The method has been demonstrated on an example of measurements of the laminar flame speed in the stoichiometric naphthyl/air mixture. Temperature dependences for the laminar flame speed in the stoichiometric naphthyl/air mixture have been obtained for the first time in temperature ranges 496–611 and 573–707 K at pressures of 110 and 200 kPa, respectively.

Keywords: naphthyl; laminar burning velocity; laminar flame speed; combustion characteristics; data processing algorithm

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