

NUMERICAL SIMULATION OF HYDROGEN-AIR TURBULENT DIFFUSION FLAME

M. Mahendhran, C. Balaji
Metacomp Technologies Pvt Ltd
No.14, Third Cross Street
Karpagam Gardens, Adyar
Chennai-600 020, India
Email : mahendhran@metacomptech.com

Abstract

The hydrogen-air turbulent diffusion flame - DLR H3 (benchmark test case at the International workshop on Measurement and computation of turbulent non-premixed flames, Naples, July 1996) [<http://www.sandia.gov/TNF/1stWorkshop/TNF1.html>], is numerically modeled using commercial CFD software CFD++. For simplicity, a 5 degree sector of the domain is considered. Good comparison is obtained for the non-dimensional quantities reported in the literature [Cheng T.-C., Fruechtel G., Neuber A., Lipp F., Hassel E. P. and Janicka J., 1995, "Experimental data base for numerical simulations of turbulent diffusion flames," Forschung im Ingenieurwesen, 61 (6), pp. 165-171].

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