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ANALYTICAL INVESTIGATIONS ON PROPERTIES OF REACTANTS [H_2 - AIR] AND PRODUCTS AT DIFFERENT EQUIVALENCE RATIO

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ABSTRACTs

The rapidly increasing worldwide demand for energy and the progressive depletion of fossil fuels has led to an intensive research for alternative fuels which can be produced on a renewable basis.

Hydrogen in the form of energy will almost certainly be one of the most important energy components of the early next century. Hydrogen is a clean burning and easily transportable fuel. Most of the pollution problems posed by fossil fuels at present would practically disappear with Hydrogen since steam is the main product of its combustion.

The various properties of hydrogen (specific heat, thermal conductivity, kinematic viscosity, density, prandtl no.) have been calculated at various equivalence ratios at different temperatures. Graphs of these properties have been plotted. The software of various property of hydrogen and calculation of all properties was developed using the turbo C language.

KEYWORDS: Computer Simulation, Mathematical Model, Delayed Entry Technique, Hydrogen Fuel