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Performance Test on Flat Fin Automotive Radiator using Nano Fluids

J. Madhu Kiran[1]*,T.VenkateswaraRao[2], T.V.S. Siva[1], R.Umamaheswara Rao[3]

[1,3]Dept. of Mechanical Engineering, Sasi Institute of Technology andEngineering, Tadepalligudem, A.P-534101, India.
[2]Dept. of Mechanical Engineering, BonamVenkataChalamayyaEngineering College, Odalarevu,Amalapuram, Andhra Pradesh-533210, India.

Abstract : In this paper experimental investigation performed on automobile radiator using water and water based Nanofluids (Al_2O_3/CuO). Two Nanofluids of concentrations0.5 & 1% by volume were taken to conduct experiments. The sizes of the Nano particles used in this present work approximately 50-100nm. Fluid inlet temperature and velocities were varied to study the Heat Transfer Rate using water and water based Nano fluids. From the results it is clear that Nanofluids enhances the heat transfer rate compared to pure water. By varying the fluid temperature and velocities enhancement in heat transfer rate observed both in pure water and Nanofluids. Comparision also done between two Nanofluids Al_2O_3&CuO. CuO shows slight increase in heat transfer rate compared to Al_2O_3.
Key words : Nano fluid, Radiator, Heat transfer.

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