

COMPARATIVE ANALYSIS OF THERMODYNAMIC PERFORMANCE OF A CASCADE REFRIGERATION SYSTEM FOR REFRIGERANT COUPLE (R717-R744) &(R290- R744)

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¹Nhavi Ajay., ²Prof. Dave Hiteshkumar

¹P.G. Scholar, ²Assistant Professor

Department of Mechanical Engineering, Parul University, Vadodara, Gujarat, India²

Abstract: Present time Global warming is many effect to environment and uses of High refrigerant use in Refrigerant system more harmful effect on environment. In this project, compare Natural refrigerant pair(R717-R744) & (R290-R744) refrigeration pairs for high output. And best pair to optimize design and operating parameter of the system study operating parameter evaporator temperature effect, condensing temperature effect, temp difference in cascade lower temperature cycle and higher temperature cycle and also exergetic efficiency for both refrigerant pair.It is calculated by computer simulation with the calculation software EES (Engineering Equation Solver).

Keywords: Eco-friendly refrigerant, ozone depletion, global warming, cascade system, Co-efficient of performance.