



ADITYA COLLEGE OF ENGINEERING & TECHNOLOGY

Permanently Affiliated to JNTUK, Kakinada, Approved by AICTE, New Delhi

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Aditya Nagar, ADB Road, Surampalem, 533437

Department of Mechanical Engineering

Project Title:	EXPERIMENTAL ANALYSIS ON HELICAL FLOW HEAT EXCHANGER	
Guide Name:	Mr. G Rajeswar	
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Abstract	PO's Mapping	PSO's Mapping
This article reports an experimental study of fluid flowing through concentric pipes by counter flow and parallel flow in helical flow heat exchanger. Heat exchangers play a major role in exchanging of heat or dissipating the heat to cold body. In helical flow heat exchanger, a helical plate is fixed over the inner tube which helps in increase the flow length of fluid passing through it and high heat transfer rate over the length of tube which helps in increasing the effectiveness of heat exchanger. As a part in our project work, we calculate the effectiveness of heat exchanger at different flow rates of hot and cold fluid flowing in the pipe.	PO1, PO2, PO6, PO8, PO9, PO10	PSO2

PO1: Engineering Knowledge	PO5: Modern Tool usage	PO9: Individual & Team Work
PO2: Problem Analysis	PO6: Engineer & Society	PO10: Communication Skills
PO3: Design & Development of solutions	PO7: Environment & Sustainability	PO11: Project Management & Finance
PO4: Investigations on complex problems	PO8: Ethics	PO12: Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	PSO2: The ability to work in manufacturing and other sectors' operations and maintenance plants	PSO3: As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises

Relevance to PO's and PSO's

PO1	Applied the subject knowledge in calculation for design and systems
PO2	Studied and analysed existing designs of heat exchanger
PO6	Designed and developed the helical path for the fluid flow
PO8	Design specifications are followed with ethics
PO9	Fabrication of the equipment is done by the team collaboration
PO10	Developed the communication with system designing and fabricating.
PSO2	Maintenance of heat exchanger for better performance is done.
PSO3	Entrepreneur skills attained

