

Estd: 2008



NADIMPALLI SATYANARAYANA RAJU INSTITUTE OF TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

SONTYAM, ANANDAPURAM, Visakhapatnam - 531173

Report on Thermodynamics Guest Lecture

The Mechanical Engineering Department has organized one day guest lecture (27-09-2016) on Thermodynamics by Dr.Kiran Kumar K., PhD (IIT Kharagpur), Assistant Professor, Department of Mechanical Engineering, NIT Warangal, INDIA.

The detailed Topics covered by him are

Objectives:

To impart the knowledge of the thermodynamic laws and principles so as to enable the student to prepare an energy audit of any mechanical system that exchange heat and work with the surroundings. Distinguish between point function and path function with respect to energy, work and Heat.

Time (9.00 a.m to 9.30 a.m)

System, Control Volume, Surrounding, Boundaries, Universe, Types of Systems, Macroscopic and Microscopic viewpoints, Concept of Continuum, Thermodynamic Equilibrium, State, Property, Process, Cycle, Work and Heat, Point and Path function. Zeroth Law of Thermodynamics –Concept of Temperature

Time (9.30 a.m to 10.00 a.m)

He explained the first law of thermodynamics, which is also the energy conservation principle, and should be able to apply to different thermodynamic systems. To learn the applications of steady flow energy equation to the various mechanical components. Throttling and free expansion processes, nozzle importance of second law statements, the use of Maxwell's relations and thermodynamic functions, Elementary Treatment of the Third Law of Thermodynamics.

Time (10.00 a.m to 10.30 a.m)

Pure Substances, p-V-T- surfaces, T-S and h-s diagrams, Mollier Charts, Phase Transformations
– Triple point at critical state properties during change of phase

Time (10.30 a.m to 11.00 a.m)

Practical examples related to thermodynamic laws and principles, Work and Heat, Point and Path function, Triple point and Dry Ice manufacture.

Photographs during Guest Lecture



Poster

Finally **Dr. Kiran Kumar K.** thanked the Management, and Staff of Mechanical engineering Department of **NSRIT** for giving the opportunity to give a guest lecture on thermodynamics.

Mr. P.V.S.Murali Krishna, Assoc.Prof. and HOD of Department of Mechanical Engineering in **NSRIT** finally gave the vote of thanks for giving the wonderful lecture on Thermodynamics; He also said that it had benefitted to all 2nd year students and backlog students in thermodynamics from 3rd and 4th year.