Dronacharya College Of Engineering
November Newsletter, 2007

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In This Issue ....

ISSUE OF MECHANICAL DEPARTMENT

From Editor's Desk :

The College monthly newsletter aims at mirroring with full fidelity recordable activities, in various spheres, in general and Department-vise achievements on different fronts in particular. November is a crucial month for intensifying the pre-examination academic pursuits and it is heartening to note that students as well as faculty are whole-heartedly involved to evolve to show the best results and attain maximum merits in the University Examination Results.

Special classes are being conducted separately for weak and brilliant students. The entire academic environment is unprecedented, charged with a sky soaring spirit of soul- stirring motivation and making ceaseless endeavour towards the desired amelioration, enhancement and escalation of examination results. A spirit of healthy competition has been generated since the memorable night of a grand, epoch-making and unforgettable Get-together of the entire Dronacharyan family held at the panoramic venue-varuna, the Navy Club, near Palam, New- Delhi and where an academically stimulating announcement was made by our ***Hon'ble Chairman, Dr. Satish Yadav***, regarding a special Award for the best Department of the College. This rhetorical statement has gained momentum of a mandatory means of motivation and we hopefully anticipate a grand revival of our amazing, enviable and unforgettable achievements on the academic front.

Editor, (Dr. R. C. Narula)

From HOD's Desk :

I am glad to know that November, 2007 issue of the newsletter from Mechanical Engineering Department is being websited. Engineering faculty should possess knowledge of the latest technical developments and continue to keep in touch with industry in an active capacity and must impart knowledge, show how to use knowledge and how to generate knowledge. They must ask many searching questions by playing the role of management and yet provide constructive consultation in their role as teachers. All failures must be analyzed carefully to allow students to learn lessons from them since failures are our best and most vivid teachers.

They will also help a student to mature and to become tolerant of others and teach him humility. A successful faculty team of the Department should know what to do (have knowledge), how to do (have skill) and most importantly have the will (have desire) and passion to do it. An effective way to resolve problems is to be soft on people and hard in problems. Our alumni are our brand ambassadors and keep our image high. The Department is endeavoring its level best to become ***Grade-I Department in the Engineering Colleges of Haryana*** under the patronage, leadership and guidance of our worthy ***Principal, Dr. B M K Prasad***.

Head of the Department, (Dr. S. K. Bagga)

Live Projects Undertaken By Students :

Design, Fabrication and Testing of Road Monitor

A six wheeled contraption ever built to enhance the driving conditions and provide a fast and efficient way of road maintenance, catering to the type of climatic changes and high rate of carbon and dust particles being expelled into our atmosphere and the ever growing population of automotives, the ROAD MONITOR proves to be one solution to a number of problems faced by the society.

Loaded with collapsible linkages and night light signaling system and cursory speed between 0 to 60 kmph. as the mandatory requirement defined by the regulatory authorities of our country.

Team Members
Mechanical VIII Semester

- Akant Khanduri (6002)
- Deepak Jindal (6221)
- Goldi Gupta (6227)
- Samarth Ghadge (6254)

This project was adjudged not only the ***Best Project Award by the college but also by the Faridabad Industrial Association (FIA), Faridabad*** in which a number of Engineering College students' projects participated, held on ***21st April, 2007***.

Design and Fabrication of Community Solar Water Heater

Hot Water is required for many purposes and the sun can be used effectively, efficiently and economically to provide the heat. Solar water heaters generally employ a solar collector and a storage tank. Solar water heater is a reliable and renewable energy technology used to heat water. Sunlight strike and heat an absorber surface within a solar collector or an actual storage tank. The hot water is stored in a separate preheat tank.

It consists of:

- an absorber that is painted black and from which heat is removed by a heat transfer fluid
- a cover which is transparent to solar radiation
- insulation at the back and sides of the absorber
- a casing to project the absorber and the insulation

Team Members
Mechanical VIII Semester

- Kuldeep Verma (6234)
- Pardeep Singh (6246)
- Piyush Vats (6247)
- Ravish Chitkara (6251)
- Rohit Yadav (6252)

Design and Fabrication of Refrigerator with Heating and Cooling Applications

Refrigeration is the use of mechanical or heat-activated machinery for cooling purposes. The use of refrigeration equipment to produce temperatures below 1500C is known as Cryogenics. When refrigeration equipment is used to provide human comfort, it is called air-conditioning. This project focuses primarily on refrigeration application, which covers such diverse uses as food processing and storage of biomedical applications viz: blood and tissue storage and the extraction of heat from condenser is used for heating the food items and acts as an Oven.

It consist of:

- Compressor
- Expansion Valve
- Oven
- Condenser
- Evaporator

Team Members
Mechanical VIII Semester

- Sameer Khanna (6255)
- Varun Satija (6262)
- Vikas Gupta (6264)
- Kamal Sethi (6671)

Technology Update:

Finite-time thermodynamics and thermo-economic optimization studies in thermal systems

The finite-time and finite size are considered to be the major constraints in the optimization of the real systems. In classical thermodynamic analysis, these constraints are not considered because of the inherent assumption of reversibility. Finite Time Thermodynamics provide a fundamental starting point for the optimization of real systems. In real practice, all processes are irreversible and take finite time. So a more realistic bound on the performance of heat pump or refrigerator system is needed which takes into account the irreversibility present in the system. Finite Time Thermodynamics extends this equilibrium thermodynamics to quasi-static processes which happens in finite time, generate entropy and provide more realistic approach than provided by equilibrium thermodynamics. Optimization studies using Finite Time Thermodynamics are very much useful on the performance of end-reversible and irreversible refrigerator and heat pump.

Student's Viewpoint About The Department :

"One who develops people is superior to one who gets things done by them"

I take pride on being associated with the Department of Mechanical Engineering of Dronacharya College of Engineering. During my 4 years degree course of B. E. Mech. Engineering found the faculty members disciplined, hard working, sincere and pains-taking not only in academic but also in shaping the overall personality of the students. This Department has state-of-art labs facilities. Under the supervision and guidance of ***Prof. S. K. Bagga*** a number of projects were completed. He believes in development of students with innovative ideas, involvement in R&D activities and enhancement of capability with 360o orientation. I salute to the faculty of this Department for building my career and life and wish to associate with them in years to come.

Tanushree Sen

"Personality is to a person what perfume is to a flower"

I am very happy to be associated with the Mechanical Engineering Branch of Dronacharya College of Engineering. This department has well equipped labs. Faculty and staff are disciplined and they not only teach us but also counsel and build our skill, knowledge and character. The Faculty members groom us for personality development, motivation, communication skills, attitude and behaviors, do's and don'ts during the course of interview, self esteem and confidence building etc. to enable us to have good jobs in reputed organizations. By acquiring above attributes I got my placement with ***M/s Satyam Computers Ltd.*** through Campus Selection and wish to be associated with the Department for a long run.

Ramandeep Singh Dandona

"Genius is mainly an affair of Energy"

I am happy to express my views about the Mechanical Engineering Branch where I not only earned value based engineering education but also shaped my character and personality through the synthesis of science and spirituality. After crediting these qualities ***M/s Infosys Ltd.*** has selected me through campus placement.

I wish to be associated with the HOD, faculty, staff and college for any kind of service in the future.

Gaurav Sharma

"All good things which exist are the fruit of originality"

I take this opportunity to express my views about the Mechanical Engineering Branch of Dronacharya College of Engineering. The faculty always encourages us to do the work efficiently, to develop power of initiative and create new things. Qualities of personality and character have helped me to get selected with M/s Satyam Computers Ltd. through Campus Placement.

I am really thankful to our respected Head of Dept. and faculty for shaping my personality and career.

Akhil Gambhir

"Education is the chief deference of Nations"

It gives me immense pleasure to be associated with the Department of Mechanical Engineering where I gained not only the technical knowledge (theoretical and practical) but also developed my personality. I got placed with M/s Infosys Ltd. through campus selection.

I am really thankful to my H.O.D., Prof. S. K.Bagga, for grooming and nurturing me overall.

Avinash Kumar