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AMEN

The Association of Mechanical Engineers

NEWSLETTER

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"Happy new Year and best wishes for the Year 2008

AME

DEPARTMENTAL TOUR

College trip as was always said to me is a wonderful experience which teaches a person tonnes of things and adds a lot to his or her experience. I found all these perspectives materializing in the departmental tour.

The tour started quite early on 2nd of the December and we were told to assemble near the basket ball court at 5:30 am. As was expected most of the people arrived by 6:00 only. Even then one student was absent who was later found sleeping in other's room locking his own room. He could be spotted by chance only. Any way bus left the campus at 6:30. Lucknow express did give its sign of the misery that it was going to cause to us even at the Kanpur Railway station. Train coming from Lucknow was around 30 minutes late. It was around 4:30 hours late in Pune and we faced quite a lot of difficulty in attending the visit of Tata Motors at 1:30 which was postponed to 2:30.

Next day was much better. We visited Geometric Ltd. and Fluent India. Hospitality at Geometric was the best that we could get in the tour. Internship opportunity was talked about in both companies. 5th December was a free day in Pune and many of the students went to Lonawala and Khandala on a one day sub trip.

Pune to Goa was a journey by bus and with all the experience of the periodic jerks in the bus we reached Goa with all the bones intact surprisingly. 6th Dec was a free day in Goa and the call of beaches was answered by us in groups. Visit to National Institute of oceanography was scheduled next day. We met Scientists from NIO who are doing research on Autonomous Under water Vehicle and Autonomous Surface vehicle. NIO is a constituted laboratory of the council of Scientific and Industrial Research (CSIR)

We left Goa on 8th Dec by train and reached IIT Bombay by 7:00 am on the next day conquering a relatively empty local train on Sunday. On the same day in evening was the interaction session with the IIT Kanpur alumni. It was scheduled in Transocean house, Hiranandani at 4:00 pm. Session was very much informative and interactive. Mr. Ashok Sinha, CMD of BPCL was the chief guest.

Next day was a free day and people went to different places like Water Kingdom, Elephanta caves, for Mumbai Darshan etc. 11th witnessed the visit to L&T in which we were exposed to the vastness of Mechanical Engineering. Machines of the size of a house, boilers larger than a room different types of milling machines, lathes etc were explained to us.

After L&T it was the turn of BARC. Bhabha Atomic Researc centre was the most sought after place to be visited in the whole tour and it turned out to be most hilarious too. Going inside the outer concrete shield of thickness 2.5 meters and looking at the core of the reactor was in itself a wonderful experience. The difficulties that we had faced due to the security checking and the two hours of wait were all superseded as we experienced that once in a life time feeling.

The official part of the tour came to an end with the BARC visit and we left for IIT Kanpur on the very next day.

PUZZLES

Q1) Which one of these letters is the odd one out?

$\xi \; I \; \chi \; \theta \; Y \; \Psi$

Q2) One Princess is in dilemma. Her wicked Uncle has decreed that she must marry one of his sons Tiny Tim or Midget Mike. She must say one statement. If that statement is true, she must marry Tim. If it is false, she must marry Mike. What did she say to ensure her single status?

MUMBAI TOUR

BARC

Right from the start of winter industrial trip, I was excited about the visit to Bhabha Atomic Research Centre (BARC). Though we reached the campus quite early, the visit started a bit late. Entering a high security region made us to submit our gadgets like mobile, iPod etc and we moved "quietly". Our bus (provided by BARC) took us to the nuclear reactor building of "Dhruva" where we were intimated with the building sections and their relevance in proper functioning of reactor. Then we were shown the control panel room of the reactor where we were elaborately explained about "reactor controlling systems" by our escort Mr. Pankaj.

And then came the "once in a lifetime" moment when we were taken to the chamber where beyond the 2.5 m thick cylindrical shell, 65.6 MJ of nuclear energy was being generated per second. That chamber is at 6mm Hg above atmosphere for safety and longer life of electronic equipments inside. Through the prototype fuel rods we got the feeling of how it actually works.

Before having lunch, we visited an exhibition on peaceful uses of nuclear power in BARC library. We had lunch and proceeded to the heavy engineering workshop. We were familiarized with various modern manufacturing technologies. **Rakesh Ranjan**

Alumni Interaction Session

Alumni interaction session took place on 9th of the December and Mr. Ashok Sinha, CMD of BPCL was the chief guest. He told us about his personal experience with the BPCL and about the change in the working strategy required as per the Technology. Before 10 years he did not view R&D as a perspective future but now one can't ignore the impact that it is going to make. DRPG Dr. Sudhir K jain were also present at the occasion. Many of the alumni put forward the statement that one should go by heart (interest) in the matters of career decision. Then he too remarked "I have been telling this for 23 years". Mr. Himanshu Tewary coordinated the session. Mr. Abhishek put forward his ideas on different thinking. Mr. Praveen Tripathi cited two case studies one of which was of Mrs. Renu Gera presently project officer at UNICEF. This post requires handling of emergency situation which according to her was taught to her by non other than IIT Kanpur. CEO's from many companies were present and they answered the questions raised by the students on the need and requirement of management degrees. It was generally agreed that a degree from a management institution helps only in securing first job. The biggest strength of IIT students is that they know exactly what they don't know and so there is a feeling of unrest among them to strengthen those lacking fields. Overall it was very effective session. **Abhishek Ranjan**

PUNE & GOA

TATA MOTORS

We started off our industrial trip with Tata Motors, Pune on 2nd December, 2007. We could not reach there on time as our "superfast" train was 3 hours late. However we saw enough of company's plant in the limited time of 2 hrs. Tata motors plant in Pune deals with both manufacturing and assembling part of vehicle production. Nowadays they are more inclined towards offloading some of their manufacturing work to local vendors to increase their capacity. First of all we went to Production and Engineering department which deals with manufacturing of dies in press shop, thermocol prototyping etc. Then we went to gear assembly plant where we saw all types of gears being manufactured and assembled in a gear box. Our next destination was commercial vehicle assembly plant where chassis of different buses were assembled on the same line. Finally, we saw assembly plant of newly launched Tata Winger. It was a nice experience to see how theory and lab work turns out in industrial practice. **Prateek Agarwal**

Geometric ANSYS

Geometric Ltd. deals in designing all the softwares and software modules that deal in 2D or 3-D designing. Its clients are designing solutions seeking companies, for eg- CATIA. Also they develop softwares that give a simulation of a part so that most of the testing can be done in design phase itself, and hence there is no need of making the parts again and again if they fail while testing, because the "virtual part" can be modified accordingly. Students having a passion for designing and solving geometric and mathematical problems will find this field exciting and challenging.

Fluent, is a subsidiary of ANSYS, that deals mainly in creating animated simulations of experiments and phenomenon. It involves development of products that are simulation driven, for e.g. the rear view mirror of a car is to be designed so that it creates minimum noise when air strikes against it. The company has now broadened its scope and now it not only deals with simulations in fluid dynamics but also in structural, thermo and electro-magnetic simulations as well. We visited both these companies on 4th Dec. **Satyarth Dixit**

NIO

In NIO we got the opportunity to visit the NIO museum which houses different kinds of marine species ranging from the eel to the squid. There were also oceanic rock samples and fossils which are storehouses of various minerals and metals. We were especially exposed to NIO's underwater vehicle- MAYA. This cylinder shaped vehicle is deployed in the ocean for observations over a fairly large horizontal range. It is equipped with sensors and transmitters to transmit data to the monitoring station using RF signal. On the whole it was a nice educational experience of the oceans.

Shubhankar Ghosh