



**K. J. Somaiya College of Engineering
Vidyavihar, Mumbai – 400 077**

Mechanical Department

News Letter

July–December 2016

Head Speaks.....-



I take this opportunity to express my sincere regards, and profound sense of gratitude to our College Management and the Principal for their inspiring guidance and continuous encouragement to upgrade and enhance facilities in the department. I am delighted to place on record that academic year 2015-16 has been an exciting year in the department. The measure academic development that had happened in the department was the introduction of the course 'An Approach to Energy Economics' conducted by Prof. Andrew Hunter of the Cornell University for M Tech (EE) students. I am grateful to Management and the Principal for providing such an excellent opportunity for the students to get benefited by such an experienced professor. I would be failing in my duty if I do not make a special mention to the nerve centres of this course, Prof. A G Bhave and Prof. Prashant Jain. Without their selfless effort this course won't have been possible. Apart from this Prof. Luckman Mahmood needs a special mention for receiving a grant worth Rs. ~37 lacs from DST-SERB/EMR for his project on 'Oxide mixtures as heat transfer fluids for solar thermal applications'.

Department also contributed significantly in academics i.e. Autonomy Curriculum Development and NBA /NAAC preparation with due help from Prof. R R Lekurwale, publications (9) and administrative activities. A system of academic audit also was introduced and

implemented in this semester. The recent conferment of autonomy will certainly help in furthering this philosophy of teaching-learning. Our focus is on quality projects and innovative activities. We have promoted the Institute Industry Interaction and faculty development through higher studies and research work. Department also supported students by creating opportunities for better placement. We are also keen to explore the possibilities to accelerate our research program (Total Funding in 2015-16) and encourage our Faculty/staff and student to tackle new challenges in the years ahead.

Our students are not only showing their individual creativity but they are also successful in group activities of the department. Students have been encouraged to participate in real life projects at national as well as international level to achieve a global outlook. Currently students of the department are working on five multidisciplinary mega projects i.e. Orion, Robocon, Redshift, ETA and Onyx. Since their inception these projects are being assessed at national and international events and students are consistently improving on the quality of their output. These activities serve as incubators of new ideas and develop confidence to play for win. Understanding the fact that lessons in engineering cannot be confined to only class room teaching, the education in this institution has always tried to reach beyond the curriculum.

We want to increase interactions with our alumni in coming years with an intention to enhance quality of education and industry institute interactions. We are always ready to work hand in hand with our alumni to ensure the performance of our students as an ultimate winner. Incremental improvement in this direction and change of our mindset will definitely bridge the gap between industry and institute. Thus, we are hoping that with our new pedagogy, we will be able to bridge the gap between industry and academia.

As a result, learning will now begin to take precedence over getting an academic qualification. I wish to place on record, the appreciation and contribution of management, principal, faculty, staff and students at all levels, without which the progress achieved, would have been unattainable. I look forward for their strong support in development and progress of our department.

I wish all the faculty members, staff and students a semester full of achievements.

With thanks and regards,

Dr. Siddappa S. Bhusnoor
Professor and Head

Departmental Activities

- Training Course on CNC milling programming is scheduled in KJSCE. Total 22 candidates participated and the fund of Rs 32500/- is generated. (August-2016)
- Dr. Andrew Hunter of Cornell university, USA taught a course "An approach to energy economics" in the MTech- Energy Engg program 1st semester. This was the first foreign faculty to teach a course in our Department.



- Prof. N. S. Chandrashekhar has completed the departmental project of design and fabrication of a machine for creation of tactical objects using digital light processing Technology. He has got the fund of rs. 260000 from UGC for the same.

Parent Proctor Meeting

The Parent Proctor Meeting was organised on September 17, 2016 in the new seminar room of the department. Prof.V M Khaparde welcomed the parents and introduced them with the Proctorial System existing in the college. The HOD then addressed the gathering wherein he deliberated on the importance of attendance and the University rule prevailing in this regard. Prof. V H Shinde spoke on the Audit Courses that are now part of the curriculum under autonomy. Prof. P S Yelpale presented the result analysis for the previous semester and Prof. A K Gangrade presented a report on the placement of students which is improving year by year. Prof. B M Pradhan, Prof. Shivangi Thakkar and Prof. V G Dhore and Prof.S R Nikam presented an account of departmental councils and their activities. Finally the HOD responded to the queries of the parents. A total of 13 parents participated in the meeting.

Faculty Development Activities

Departmental funded projects and research proposals

- Dr. K. N. Patil submitted minor research proposal for Development of the Triple Utility Solar Concentrator Based Vapor Absorption System of amount 4,95,000/-
- Dr. N. R. Gilke submitted minor research proposal for Development of Self Contained Cabinet for Vaccination Box by Solar PV based System of amount 2,30,000/-
- Minor research project entitled "Development of laboratory scale unit for solar powered biomass pyrolysis for bio-oil production" submitted to Mumbai University by Prof. A.P. Bhaduria and Dr. A.G. Bhavne
- Dr. Lukman Mahammad submitted minor research proposal for Manufacture and testing of Aluminum alloy metallic

foams for improved impact properties of amount 417000/-

- Dr. S. S. Bhusnoor submitted minor research proposal for Control of Fine Particles from Engine Exhaust using Particle Transport Mechanisms of amount 500000/-
- Dr. K. N. Patil and Dr. R. R. Lekurwale submitted minor research proposal for Design and Development of Novel Floating Carriage for Salt Generation Trough Solar Concentrator of amount 340000/-
- Prof. V. G. Dhore has submitted minor research proposal for Enhancing the compressive strength of hydraulic cement through the addition of ferromanganese slags and lime fines of amount 342000/-
- Dr. R. R. Lekurwale has submitted minor research proposal for Design and development of low cost abrasive water jet machine of amount 380000/-
- Dr. Luckman Mohmood and Dr. K. N. Patil have submitted research proposal for Development of oxide mixtures for heat transfer applications in Concentrating Solar Power plants of amount 36,91,000/-
- Dr. K. N. Patil has submitted a research proposal for Plastic to liquid fuel, a novel process to create the Metal Matrix Composite product by Powder Injection Molding route along with faculty in VJTI of amount 6994688/-

Patents filed

- Prof. A. A. Prabhudesai has filed patent on Radiator Grill with amendment in USA, Germany and Japan in April 2016.
- Prof. A. A. Prabhudesai has filed patent on Radiator Grill with amendment in South Korea in May 2016

Student Enrichment Programmes

- A special lecture on how to develop Research Aptitude for Ph.D Scholars by Dr. Vishal Sardeshpande in July-2016.
- A special lecture on Rankine cycle simulation for SY Mech students by Mr. K. Dey and Mr. H. Raut, IITB in september 2016.
- Expert lectures on "Carbon sequestration in thermal power plants" arranged for Dr. Andrew Hunter in Power Plant Engg (BE Mech elective)- 8 & 10 Aug 2016 (1 hour each)

Workshop/conferences attended by faculty

- Prof Abhishek Bhadauria, R. B. Pansare, Shilpa Bhambure, Manoj Palsodkar, Sandeep Chopade and Priyanka Patil Attended Two Days Workshop on " Evaluation and Teaching " for creating QB conducted by Dr. Anuradha Deshmukh, collaboration and special initiative, Yashwant Chavan Maharashtra Open University, Nashik on 22nd Oct. and 23rd Oct. 2016 at KJSCE, Vidyaviar, Mumbai.
- Prof. Abhishek Bhadauria Attended One Day Workshop in association with BARC, IIT Bombay, Indian Railway and SVR InfoTech on "VSSC ISRO's FEASTSMT FEA TECHNOLOGY" jointly organized by ISRO and Mechanical Engineering Department, VJTI, Mumbai under TEQIP-II held on 8th Nov. 2016.
- Prof. Abhishek Bhadauria Attended Two Days Solar Energy Workshop / Seminar on Concentrating Solar Thermal (CST) Technology under UNDP-GEF Project Concentrated Solar Heat Ministry of New and Renewable Energy, Government of India organised by World Renewal Spiritual Trust "India One" Solar Thermal Power Plant on 26th Nov. and 27th Nov. 2016 at Abu Road (Rajasthan).

Paper Publication/ Presentation

- **Dr. S. S. Bhusnoor** has published the paper in Journal of Aerosol Science titled “**Thermophoresis deposition studies for NaCl and diesel exhaust particulate matter under laminar flow**”
- **Dr. S. S. Bhusnoor** has published the paper in International Organization of Scientific research Journal titled “**Study of Influence of Low Temperature and Low Relative Humidity Drying on Drying Kinetics of Food Stuffs**”
- Prof. A.K. Ganfrade published a paper in "Indian Journal of Tribology – July2016" (IJT-2016) Under the Aegis of Tribology Society of India (TSI) Research Paper : IJT-2016-Page 14-20 titled “**Performance analysis of conical fluid film hydrodynamic journal bearing for various aspect ratio**”.
- **Prof. Prashant Jain** has published a paper in International Research Journal of Advanced Engineering and Science, ISSN: 2455-9024 titled “**Assessment of Cattle Dung based Bio-Energy Potential and Emission Mitigation for Maharashtra**”
- **Prof. Prashant Jain** has published a paper in International Research Journal of Advanced Engineering and Science, ISSN: 2455-9024 titled “**Feasibility Analysis of a Community Biogas Power Plant for Rural Energy Access**”
- **Prof. Shivangi Thakkar** has published a paper in International Conference on ‘Smart Strategies for Digital World - Industrial Engineering Perspective’ by IIIE, at Shri Ramdeobaba College of Engineering & Management, Nagpur titled “**Green Procurement Modelling using Fuzzy Logic and MCDM Methods**”

Student’s Academics Jan - May 2016 Toppers

Second Year

No.	Name of Student	%
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1	Neel Chanchad	9.51
2	Ronak patil	9.465
3	Farhan kazi	9.415

Third Year

No.	Name of Student	%
1	SHAIKH ASIF ASLAM MUMTAZ	9.65
2	NERURKAR OMKAR VIKAS VRINDA	9.56
3	Shenoy	9.

Final Year

No.	Name of Student	%
1	MEHTA JEET MAHESH MANISHA	9.75
2	TALIM GAURI ANITKUMAR DIPTI	9.67
3	LOKHANDE MAHESH RAMDAS PUSHPA	9.63

Placement

Departmental Placement record:

Sr. No.	Name of Company	Students Placed	Salary offered
1	ACCENTURE	27	3.5
2	INFOSYS	11	3.2
4	GODREJ AND BOYCE	6	5.5
5	GRINDWELL NORTON	1	3.5
6	VOLTAS LTD.	4	3.5
7	WISDMLABS	1	3.5
8	MEDIA.NET	3	2.64

9	CARTESIAN CONSULTING	3	4.75
10	BLUESTAR LTD.	2	5.2
11	VPHRASE	2	3.3

Student's Achievement

- One MTech-EE student joined IITB and another BARC for PhD (both of 2014-16 batch).

Congratulations.....

- Prof. S. S. Bhusnoor has completed his Phd in June-2016 from IIT, Bombay
- Prof. S. R. Nikam has completed his Phd in June-2016 from IIT, Bombay

Student's Projects

Team Onix

**Bro Shohrab Mistry
(Team Captain)**

Team Onyx is a team of 30 interdisciplinary undergraduate students who are driven by curiosity and a love for flight. Through sheer hard work, research and dedication the members of the team, design, fabricate and fly model aircrafts. The team participates in national and international competitions like Boeing National Aeromodelling Competition, SAE etc.

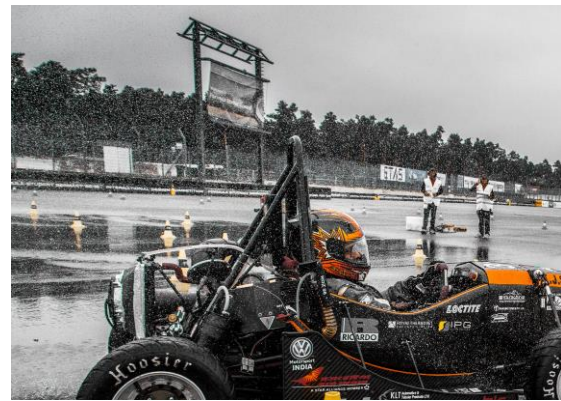
This academic year the team focused on Boeing National Aeromodelling Competition-Mumbai and Boeing National Aeromodelling Competition-Kanpur. The team participated with one model in Mumbai and three for Kanpur. The problem statement hinted towards the design for micro glider models. All the planes were manufactured using Balsa Wood. Two of the designs have a box type body (span 500mm, 720mm respectively) with a stable and high lift airfoil, restricting the weight to fewer than 500gm. The third plane is a swept wing ribbed plane, while the fourth is a one metre wing span glider model. The team also conducted an orientation for the students for

brief introduction of the team and Aeromodelling. The team is further planning to conduct a workshop on "Basics of Aerodesign and Aeromodelling"

For the next academic year the team is gearing up for international competitions like SAE, AIAA, etc. , along with the national competitions, the design of which will start soon.

Team Orion

Season 2015-2016 has been one of the most successful seasons in the history of Orion Racing India. A lot of man hours were put into the 10th car from ORI, Rigel. Moving on to Formula Student Germany in August 2016, ORI created history by being the only ever Indian team to win an individual event at any international Formula Student competition, bringing home the FSG16 Cost Award.



For the coming competition season in August 2017, ORI's prototype will run a completely new engine and sport swanky aerodynamic wings on the front and rear. The only goal for the team is to get faster and faster every year. The team looks forward to greater success with the upcoming race season, under the mentor-ship of Samir Somaiya, as always.



Industrial Visits

Prof. A. G. Bhawe arranged an industrial Visit of Power Plant Engg students to Tata hydropower plant at Bhira on 22 Oct. 2016.



Events by MESA

EVENT: “Bridge The Gap”, Abhyantriki - 2016

The event “Bridge the Gap” was organised by the mechanical council on September 01, 2016 during the Technical fest of the college - “Abhyantriki - 2016”. The event was organised on the 5th floor of Bhaskaracharya Building, K.J. Somaiya College of engineering.

There were 8 participating teams from various colleges who participated in the event. The event commenced at 11:30 am when the teams were given time to complete making of a Deck Arch bridge made using Ice cream popsicles sticks and glue with a maximum size limit of 1000 X 150 X 300 mm which would be tested for max weight loading capacity.

The testing of the bridges made by the participants started around 12:30 pm. The testing was done by adding various weights over the bridge so as to check its strength.

The event concluded at 3:30pm with declaration of the winner- Shriram and his team from Sabu Siddique College of Engineering, Mumbai. They were awarded Rs. 4000/- worth prize by the Student Council.

Departmental Responsibilities

Class Advisors:

FE: Prof. Shilpa Bhambure

SE: Prof. Shilpa Bhambure

TE: Prof. V. M. Khaparde

BE: Prof. V. M. Khaparde

ME: Prof. S. N. Bansode

Time Table Incharge:

Prof. Shivangi Thakkar, Prof. Atul Saraf

Department Alumni Incharge:

Prof. Prashant Yelpale, Priyanka Patil, Chitra Menon

Web Site Incharge:

Prof. V. V. Bhosale

Departmental News Letter:

Prof. Prashant Jain, Priyanka Patil

Placement Co-ordinator:

Prof. A. K. Gangrade

Laboratory Co-ordinator:

Prof. Ramola Sinha

R & D Co-ordinator:

Dr. K. N. Patil

Chief Proctor: Prof. Prashant Jain

B.E. Projects: Prof. V. M. Khaparde

Dept. Library Incharge: Prof. Shilpa
Bhambure

A Word from the Newsletter Team

Reporting of departmental activities and events is the main objective of a newsletter. We hope you would appreciate this endeavor of ours and enrich us with your valuable feedback.

Editor

Prof. S. S. Bhusnoor, HOD

Executive Editors

Prof. Prashant Jain

Prof. Priyanka Patil