

# Visvesvaraya Technological University

Belagavi



TIAMTE – 2015  
National Conference on  
**Trends and Innovations in  
Automation, Materials and  
Thermal Engineering**  
**(TIAMTE - 2015)**

Date: 21<sup>st</sup> – 22<sup>nd</sup> May 2015

Organized by  
**Industrial Automation & Thermal  
Power Engineering**  
Department of PG Studies  
**Visvesvaraya Technological University**  
Mysuru – 570 029

IN ASSOCIATION WITH  
**INTERNATIONAL JOURNAL OF RESEARCH  
IN ENGINEERING AND TECHNOLOGY  
(IJRET)**

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## VTU - Belagavi

Visvesvaraya Technological University is named after a great Indian engineer, scholar, statesman and the recipient of highest honor 'Bharata Ratna' Sir. M. Visvesvaraya. University is establishing a trend of outstanding excellence since 1998. It has carved a unique niche for itself in the highest echelon of technological education in India. VTU is one of the largest Technological Universities in India, having 201 colleges affiliated to it with under graduate course in 28 disciplines and PG Program in 71 disciplines. Every year more than 50,000 students graduate from this University who are the next generation technical leaders, thinkers, innovators and scholars. VTU has research programs leading to the award of M. Sc. (Engg.) by research and Ph.D. High caliber academic initiatives coupled with technological support have made the VTU a pioneer University in bringing about technological knowledge revolution in the state of Karnataka.

## VTU Department of PG Studies- Mysuru

It has started in the academic year 2011-12 with good campus environment which is facilitating the smooth running of education imparting. It has currently five PG courses namely Industrial Automation, Thermal Power Engineering, Computer Science, Digital Electronics & Communication Systems, Structural Engineering. It has MCA and MBA with specialization of HR, Finance and Marketing.

## BOSCH Centre

Visvesvaraya Technological University has established the VTU-Bosch Rexroth Centre of Competence in Automation Technology in collaboration with Bosch Rexroth AG – Germany at its extension centre Mysore. The Centre aims at training industry personnel and students of Engineering, Diploma and ITI Colleges in the Automation field to enable Industry personnel, faculty and student to have hands on experience and up gradation of knowledge and skills which is an essential element for the growth of Industry.

## E-Learning Centre

In today's advanced world, e-Education is the process of learning where computers are used at each possible steps of the process: enrollment, instruction design, content delivery, evaluation, assessment and support. Technology enhanced learning (TEL) has the goal to provide socio-technical innovations for e-learning practices to the individuals and organizations, independent of time, place and pace.

## About the conference

**TIAMTE-2015** will be the most comprehensive conference focused on research activities in the field of Automation, Materials and Thermal Engineering. The conference aims to provide a forum for researchers, academicians, and students to discuss the role of Engineering and Technology for Techno-economical and Techno-eco friendly manufacturing methods to enhance the performance of engineering devices. The conference also intends at integrating experience of Academicians, Industry leaders, Technology Advisors and Innovators towards effective knowledge creation. The conference will highlight various issues, which would limit negative impact of rapid industrialization on environment. The conference would like to build a network among the people in related but separate fields of activities. Keeping these factors in view, the conferences will provide a unique platform for Academicians, Research Scholars and Industry professionals to contribute to the growth of the society the whole. The conference will focus on today's technical challenges, research updates and innovations that are shaping the future of Mechanical Engineering.

## Topics:

Authors are invited to submit original and unpublished research articles for presentation in the following topics:

### > Automation Engineering:

- Automation in Manufacturing
- Aerospace Technology
- Mobile Technology
- Robotics & Applications
- Nanotechnology
- MEMS/NEMS
- Micro & Nano Electronic Devices
- Sensor Technology

### > Materials Engineering:

- Composite materials
- Advances in Materials
- Ceramics
- Polymers
- Corrosion

### > Thermal Engineering:

- Biofuels/Biodiesel
- Computational Fluid Dynamics
- I C Engines
- Renewable & Non Renewable Energy Sources
- Heat Power Engineering
- Advances in Automotive Engineering
- Thermal analysis

## Paper Submission:

Technical Papers on the related areas listed in the topics are invited by email or post. Authors are required to send original and unpublished research work in the format of International Journal of Research in Engineering and Technology ([www.ijret.org](http://www.ijret.org)) to [TIAMTE2015@gmail.com](mailto:TIAMTE2015@gmail.com).

It should be limited to six pages in MS WORD format including text, figures, tables and references. The authors should mention their affiliation with addresses, email, and telephone numbers along with the abstract in the first page of the paper.

Acceptance of the paper will be communicated to the corresponding author. All accepted papers will be published in the Conference Proceedings. Selected papers will be processed for plagiarism checkup through anti-plagiarism software. The accepted papers will be peer reviewed and published in International Journal of Research in Engineering and Technology (IJRET). Both academia and industries are invited to present their papers dealing with state-of-art research and future developments. Authors of the accepted paper must register and guarantee that at least one of the authors will attend the conference and present the paper.

#### Important dates:

Last date for submission of full length paper:

**20<sup>th</sup> April 2015**

Notification of Acceptance: **4<sup>th</sup> May 2015**

Camera Ready Paper Submission: **9<sup>th</sup> May 2015**

Conference dates: **21<sup>st</sup> – 22<sup>nd</sup> May 2015**

#### Registration:

Registration Fee for Conference:

P.G. Students: **Rs. 750/-**

Research Scholars: **Rs.1000/-**

Academician: **Rs.1500/-**

Industry: **Rs.2000/-**

Registration fee will be accepted in the form of **DD** in favour of **Finance Officer, VTU, Belagavi** and Payable at **Belagavi**

#### Address for correspondence

**Conveners**  
TIAMTE – 2015

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Vice Chancellor, VTU, Belagavi

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Registrar, VTU, Belagavi

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VTU Regional Centre, Mysuru-570 029

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**Mr. Srinivasa M.B.**, Asst. Prof., CSE

#### Technical Committee

**Dr. S. Mohan Kumar**, Professor, MCE, Hassan

**Dr. Narendranath**, NITK, Suratkal

**Dr. Samuel**, IIT, Madras.

**Dr. S. Basavarajappa**, UBDTCE, DVG.

**Dr. Sudheer Prem Kumar**, Professor, JNTU-H

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## National Conference on Trends and Innovations in Automation, Materials and Thermal Engineering (TIAMTE - 2015)

Date: 21<sup>st</sup> – 22<sup>nd</sup> May 2015

### Registration Form

Name of the Author/s: \_\_\_\_\_

Designation: \_\_\_\_\_

Qualification: \_\_\_\_\_

Experience in years: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Mobile No: \_\_\_\_\_

E-mail: \_\_\_\_\_

Title of the paper: \_\_\_\_\_

### Details of Registration Fee

Demand Draft No: \_\_\_\_\_ of Rs. \_\_\_\_\_

Bank: \_\_\_\_\_ Date: \_\_\_\_\_

Payable at Belagavi

**Accommodation Required:** Yes / No

Date & time of arrival:

Date & time of departure:

## ENTREPRENEURIAL WORKSHOP AT VTU, KALABURAGI

Triggering the young minds pursuing technical/professional education (B.E., M.B.A., M.C.A., M.Tech.) to aspire entrepreneurship rather than employment formed the theme of the workshop aptly titled “ಉದ್ಯಮಿ ಆಗು... ಉದ್ಯೋಗ ನೀಡು” under the aegis of Keonics in association with Visvesvaraya Technological University’s (VTU) Postgraduate Centre and Regional Office, Kalaburagi at its Seminal Hall on 12 and 13 March 2015 with 600 student participants from all colleges coming under the ambit of Regional Office, Kalaburagi attending 2 sessions of 3 hours each a day.

Sessions were split into three modules delivered by Expert speakers from M/s. Varnaaz, Bangalore: (1) motivational session on overcoming psychological barriers of students in being entrepreneurs; (2) Live Case Study of entrepreneurs from IT Park, Kalaburagi; and (3) Opportunities in the field of Electronics and Information Technology.

Prof. Baswaraj Gadgay, Special Officer, VTU PG Centre and Regional Office, Kalaburagi presiding over the function asserted that he is taking forward the vision of Prof. H. Maheshappa, Hon’ble Vice-Chancellor, VTU that the students of this region should not just technically or professionally trained, but be *industry-ready*. Furthermore, Prof. Gadgay also said this is just the beginning of such workshops at Regional Office, Kalaburagi.

Mr. Bandu G. Sasalatti, General Manager, Keonics addressed the students and assured of Keonics’ unfailing support and assistance in providing incubation facility and mentoring interested candidates. Mr. R. Uday Kumar, Assistant Manager, Keonics called on students to count on them. Mr. Venkat Ramani, Mr. Rajkiran, and Mr. Dinesh Badagandi of Varnaaz delivered the sessions followed by the live experience of Mr. Suresh I. S. of Wellspring Career School, Mr. Mohd. Sadroddin of Eccentric Tutulege, and Mr. Sharan of InfoThink Technology in setting up the unit.





One day workshop on  
SIGNIFICANCE OF 3D PRINTING FOR  
ACADEMIA & RESEARCH"

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Raiceev Institute of Technology  
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Signature and seal of Head of Institution

**Chief Patron:**

**Dr. H. Maheshappa,**  
Vice Chancellor, VTU, Belgaum.

**Patrons:**

**Dr. K.E. Prakash,**  
Registrar, VTU, Belgaum.

**Dr. H.G. Shekharappa,**  
Registrar (Evaluation),  
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**Organizing Chair:**

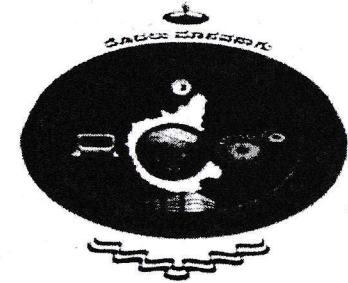
**Dr. K.M. Ravikumar**  
Special Officer/PG Coordinator,  
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(Sujay)  
to discuss



**Visvesvaraya Technological University,  
Belgaum.**

**In Association with**



Workshop on  
**SIGNIFICANCE OF 3D PRINTING FOR ACADEMIA  
RESEARCH**  
8<sup>th</sup> March 2014

**Address for Correspondence:**

Department of PG Studies,  
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Mysore



# Visvesvaraya Technological University

Department of Post Graduate Studies, Mysore Region

Workshop on "Significance of 3D Printing in Academia and Research"

Date : 08.03.2014

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16	Ravikumar	Asst. Prof	NIE, Mysore	9845618229	rbnie_mech@gmail.com	<i>[Signature]</i>

Beavanur

The Kickoff Ceremony of the LEAD PRAYANA-2015 by Deshpande Foundation in Collaboration with Visvesvaraya Technological University, Belagavi was held on 24th January 2014 at 10.30am at Senate Hall, “Jnana Sangama”, VTU Belagavi.



The event was kicked off in the presence of and 106 Lead Prayanies-2015. Dr.H.Maheshappa addressed the Participants and said, the youth have to develop the traits of Vision, Identifying and communicating, Motivate and Empower, effective and strong and commit themselves of the goals, also quoted John Maxwell words “A good leader is a person who takes a little more than his share of the blame and a little less than his share of the credit”. He also said ‘Live to Leave a Legacy’ in this Leadership Journey.

Chief guest Mr.Vivek Pawar shared his Personal Experience and also mentioned communicating from heart is leadership and CEO of Deshpande Foundation Mr. Naveen Jha insisted on the ‘Make in India’ Campaign and stated that India needs makers in the society. Some Lead [LEADERS Accelerating Development] of the past Prayana shared their experience with the 2015 Lead Prayanies.

The Incubation center for the new gen ideas of leading to Entrepreneur has been setup at the VTU campus, Belagavi and the Dr.H.Maheshappa urged the Crowd to use the same and get incubated.



## REGISTRATION FORM

VTU-VGST

**Faculty Development Programme on  
Selection, Design, Analysis &  
Operation of Steam and Gas Turbines**

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

Address : \_\_\_\_\_

E-Mail: \_\_\_\_\_

Accommodation Required:  Yes  No

Date : \_\_\_\_\_ Place : \_\_\_\_\_

### DECLARATION BY THE APPLICANT

The above mentioned information is true to the best of my knowledge and belief. I agree to abide by the rules and regulations of the VTU-VGST FDP. I shall attend the Programme for the entire duration.

Signature of the Applicant

Mr./Ms.....

.....  
of Department of ..... is deputed  
to attend the "FDP" from 8 to 11 July 2015.

Signature of the Principal /  
Head of the Institution with Seal

Date : \_\_\_\_\_ Place : \_\_\_\_\_

### CHIEF PATRONS

**Dr. H. Maheshappa**

Hon'ble Vice-Chancellor, VTU, Belagavi

**Dr. S. Ananth Raj**

Consultant, VGST, Bengaluru

### PATRONS

**Dr. K. E. Prakash**

Registrar, VTU, Belagavi

**Dr. H. G. Shekharappa**

Registrar (Evaluation), VTU, Belagavi

**Dr. V. D. Mytri**

Member-EC, VTU, Belagavi

Principal, AIET, Kalaburagi

### CONVENOR

**Dr. Baswaraj Gadgay**

PG Coordinator / Special Officer

VTU PG Centre and Regional Office, Kalaburagi

### ORGANISING COMMITTEE

**Mr. Kailash B. A.**

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**Mr. Babu Reddy**

Asst. Professor, Dept. of MMD

**Mr. Anandkumar S. Malipatil**

Asst. Professor, Dept. of TPE

**Mr. Ambadas**

Asst. Professor, Dept. of MMD

**Mr. Ganesh T.**

Asst. Professor, Dept. of TPE



**VTU & VGST Sponsored  
Faculty Development Programme on**

# Selection, Design, Analysis and Operation of Steam & Gas Turbines

**08 to 11 July 2015**

**Programme Coordinator**

**Dr. Venkatesh M. Kulkarni**



Organised by

**Dept. of Thermal Power Engineering  
Visvesvaraya Technological University**

Postgraduate Centre and Regional Office  
Kusnoor Road, Kalaburagi-585105 - Karnataka - India  
www.vtu.ac.in www.vtukalaburagi.org

## ABOUT VTU

VTU, one of the largest technological universities in India, with 201 colleges affiliated to it, offers UG and PG programmes in 28 and 71 disciplines respectively. The intake at UG level is about 67,000 students while at the PG is 13,000 students. The University has 13 QIP centres in various affiliated colleges and 16 extension centres for offering PG programmes and over 2,305 departments recognised as research centres. Presently, over 1800 researchers are registered for Ph.D. and over 180 students registered for M.Sc. (Engg.). The University has the distinction of accomplishing the herculean task of integrating various colleges previously affiliated to different universities, with different syllabi, procedures, & traditions under one umbrella.

## ABOUT VTU PG CENTRE, KALABURAGI

The VTU Postgraduate Centre offers seven programmes comprising M.B.A., M.C.A., and M.Tech. in Construction Technology (Civil Engg.), Computer Science and Engg., Machine Design (Mech. Engg.), Thermal Power Engg. (Mech. Engg.) and VLSI Design and Embedded Systems (E&C Engg.). Established in 1998, the Regional Centre started PG courses in 2010. At the moment, more than 600 students and over a dozen and a half researchers are pursuing PG courses and Ph.D. respectively in different disciplines/streams. In a short span of time, the PG Centre is fast turning into a Centre of Excellence in professional and technical education in the Hyderabad-Karnataka area with state-of-the-art infrastructure and teaching facilities.

The 17.03 acre Campus with a breathtakingly beautiful water body spewing laser-lit colour fountains creates just the right ambience required for effective learning. Next to the PG block, the Campus boasts of a sprawling library with text and reference books, access to both off- and online journals for students and the research scholars as well. The Campus also has digital valuation facility, separate hostels for boys and girls with mess, full-fledged staff quarters, cafeteria, and guest house.

## ABOUT VGST

Vision Group on Science and Technology (VGST) was constituted in October 2008 under the Chairmanship of

distinguished scientist Bharat Ratna Prof. C. N. R. Rao VGST is an apex advisory body to recommend Science and Technology Programmes relevant to the mandate of DST. VGST endeavours to encourage and promote Science and Technology education and research in the State. VGST plays a pivotal role in catalysing, strengthening educational institutions to meet scientific and technological needs.

## PREAMBLE

The energy is necessary for economic production and hence the economic growth of a country, measured in terms of Gross Domestic Product (GDP), is dependent on the energy generation. Currently, India's energy needs are met through fossil fuels like coal, hydro energy and nuclear energy. The electrical power in large scale is generated with the help of turbines. Coal fired power plants use steam turbines to generate electrical power while space vehicles use gas turbines to generate propulsive power. Gas turbines that combust the natural gas or diesel fuel are also used in remote locations or large backup power supply requirement.

The topics on Steam and Gas Turbines are common content in almost all university syllabi as far as study in Thermal Power Engineering is concerned. It is an attempt through the present FDP to train the faculty of engineering and allied courses so that the faculty can handle the *Steam and Gas Turbines* subject with ease. The programme also highlights the recent developments in the industrial field and the contents are well designed to help the practicing engineers as well.

## OBJECTIVES OF FDP

The purpose of the programme is to create awareness about the recent developments in various Steam and Gas Turbine technologies and also to focus on the rapid curricular changes in technology. The programme also aims at imparting innovative teaching methodologies and to familiarise interdisciplinary approach in Thermal Power Engineering.

## RESOURCE PERSONS

Many well-known industry practitioners, professional scientists, researchers, and faculty from the pioneering institutions will be addressing the participants of the Programme. The resource persons will share the state-of-the-art technical know-how in their respective domains of research and guide the participants in the methodologies of research.

## WHO SHOULD ATTEND

Faculty of engineering colleges and/or research scholars working in the field of Mechanical Engineering and related domains can participate and benefit from the Programme. Participants will be paid II Class Sleeper return train fare or the bus fare whichever is minimum as per VTU-VGST norms from their place of work to Kalaburagi.

## ACCOMODATION

Accommodation will be provided to the outstation participants on request and on first-come-first-serve basis.

## REGISTRATION

Registration is FREE to all faculties from AICTE recognised/VTU affiliated institutions.

## IMPORTANT DATES

Programme Dates :	08 to 11 July 2015
Last Date for submission of Registration Form :	02 July 2015
Intimation of Selection:	03 July 2015

Selected candidates will be informed through E-mail only.

## ADDRESS FOR CORRESPONDENCE

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VTU Postgraduate Centre & Regional Office, Kalaburagi

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**VTU-VGST Sponsored**

# **Faculty Development Programme**

**ON**

*Selection, Design, Analysis and Operation of Steam and Gas Turbines*  
(08 July to 11 July 2015)



**Department of Thermal Power Engineering**  
**Visvesvaraya Technological University**  
Postgraduate Centre and Regional Office,  
Kusnoor Road, Kalaburagi-585105

## Our Sincere Thanks to

- Vision Group on Science and Technology
- VTU, Belagavi
- VTU, PG/RO, Kalaburagi

## **Thanks to**

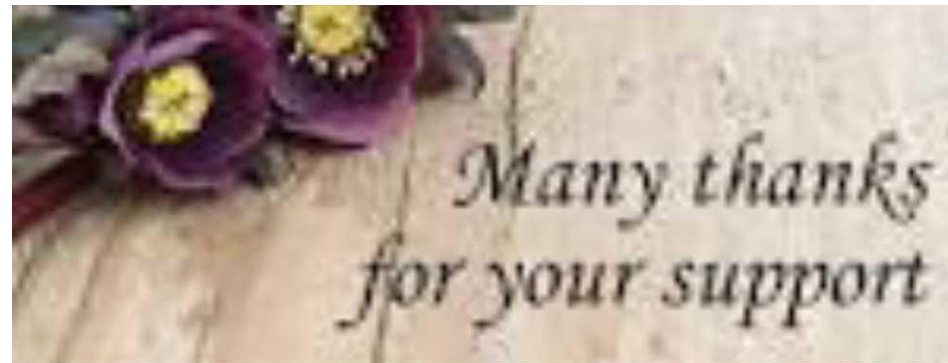
- The Management, VTU, Belagavi
- Special officer/ PG coordinator, VTU-Kalaburagi
- FDP Coordinator
- All the HOD's, faculties, staffs and Ministerial staffs



**Thanks to the Prime mover of The Programme**

- **Resource Persons** from various Institution and Industry

- **Participants from all over Karnataka**



**REPORT ON FACULTY DEVELOPMENT PROGRAMME**  
***(08 July to 11 July 2015)***

The Faculty Development Programme (FDP) was organized by Visvesvaraya Technological University ,PG centre Kalaburagi in association with Vision Group on Science and Technology (VGST) Government of Karnataka. The FDP was organized for 4 days from 08<sup>th</sup> July to 11<sup>th</sup> July 2015. The FDP program received an overwhelming response with 50 participants from engineering colleges affiliated to Visvesvaraya Technological University (VTU) across the width and breadth of Karnataka.

The major focus of the Programme was to create awareness about the recent developments in various Steam and Gas Turbine technologies and also to focus

on the rapid curricular changes in technology. The Programme also aimed at imparting innovative teaching methodologies and to familiarise interdisciplinary approach in Thermal Power Engineering. The programme enabled participants to develop competence in research and pedagogy. For some senior faculty members this program worked as a refresher and for some it was an eye opener.

**Date wise brief Report of the FDP program is given below with the Conclusion at the end.**

### **Date: 08th July, 2015 Inaugural Session**

The Faculty Development Program was inaugurated on 08th July, 2015 by **Dr. V.D.Mytri**, Member-EC, VTU, Belagavi and Principal, AIET, Kalaburagi along with **Shri. R.S.Doddamani** Rtd. Chief Engineer ( KPCL) and **Dr. venkatesh M.Kulkarni**, Convenor, FDP and special officer.

In the augural speech **Dr.V.D.Mytri** EC-member VTU Belagavi shared few upcoming activities undertaken by VTU. He further added that VTU will provide special benefits to faculty members in various disciplines by funding the research projects to encourage quality research. Sir further shared his vision of taking VTU to the global standards with the help of its affiliated colleges/institutions. This can be done through:

1. Development of Faculty
2. Development of Students
3. Quality Research and Resource Development

Shri **R.S.Doddamani** Rtd. Chief Engineer ( KPCL) shared his views with the faculty participants that if faculty wants to develop themselves and their students, then attending such faculty development programs would enhance their skills of teaching concepts practically.

Dr. **Venkatesh M.Kulkarni** in his welcome speech highlighted the importance and objectives of organizing faculty development programs. He briefed the participants about the topics chosen for FDP and highlighted the reasons and importance of the same.

Dr V.D.Mytri, Shri. R.S. Doddamanion ,Dr.Venkatesh M.Kulkarni, on Inaugural  
Day 08<sup>th</sup>July 2015.

**Date:08th July, 2015 Subject:** Power plant overview, Current trends in steam power plant Technology **Resource Person:** Shri. R.S.Doddamani Rtd. Chief Engineer ( KPCL).

About 40 participants attended the FDP on Power plant overview, Current trends in steam power plant Technology.The resource person Shri. R.S.Doddamani in this FDP started his discussion with the very basics of Power plants. He shared few very important aspects of the infrastructure of modern society and the essentials of power plants to be constructed so as to achieve a higher level of reliability. He mandated the companies involved in this industry to contribute to society by realizing higher performance and lower cost. Secondly Sri.Basavaraj Allimatti Triveni Turbines,Bengaluru discussed in detail the practical design aspects of Steam turbines.He concluded with some design aspects on rotor dynamics and shaft stability considerations.





R.S.Doddamani Rtd. Chief Engineer(KPCL) on 08<sup>th</sup>july 2015



## Sri.Basavaraj Allimatti, Triveni Turbines,Bengaluru on 08<sup>th</sup>July 2015

**Date:09th July, 2015 Subject:** Turbomachinery design aspects of steam turbines **Resource Person:** Dr.O.D.Hebbal

Here on this day the resource person Dr.O.D Hebbal discussed for the various requirements to be satisfied, a suitable design solutions are necessary for mechanical steam turbine drives. He emphasized to have a basically sound and uniform design concept. He stressed to establish and adhere to well-founded principles of mechanical design, a philosophy for safety & reliability, consequently a uniform design approach for all steam turbines. Secondly Dr.G.K purohit put an insight on understanding of material degradation in steam environments. He also discussed about identification and development of viable materials for use in steam turbines. Lastly Dr. venkatesh M Kulkarni highlighted the importance of research and gave idea about research process involved in Cooling of Gas turbines.





Dr.O.D.Hebbal, PDA college of Engg.Kalaburagi On 09<sup>th</sup>July 2015



## Dr.Venkatesh.M.Kulkarni, VTU,RO/PG kalaburagi. On 09<sup>th</sup>July 2015

**Date:10th July, 2015 Subject:INDUSTRIAL VISIT TO *Raichur Thermal Power Plant, Shakti Nagar.***

Visit started with welcome address by Executive Engineer Shri.Chennappa Munnavalli of Raichur Thermal Power Plant. He gave brief introduction about Thermal Power Station. He also explained Principle of thermal power station & also introduced to other engineers and technical staff to participants.

The industrial visit to RTPS was informative and helpful in providing real life exposure. Industrial visit proved to be learning and fruitful experience for all the participants. Around 40 participants participated in the industrial visit. The main point discussed during visit to RTPS is: Details of Various Thermal Power Plant equipments (Working principle and application).



Shri.Chennappa Munnavalli, Executive engineer, RTPS, Raichur on 10<sup>th</sup>July 2015





Participants at RTPS ,Raichur on 10<sup>th</sup> July 2015



Participants at RTPS ,Raichur on 10<sup>th</sup> July 2015

**Date:11th July, 2015 Subject:** CFD analysis of Gas turbines.**Resource Person:** Shri. S.Goureesh ,Worley parsons Ltd.Hyderabad.

About 40 participants attended the FDP on CFD analysis of Gas turbines.The resource person Dr.Gowreesh initiated the day with basics of CFD and highlighted the importance of research and gave idea about using CFD as research tool. He discussed about how traditional design by analysis methods are increasingly being supplemented with automated design systems and the use of optimisation systems .He told how fluid machinery can now be modelled and analysed to an unprecedented level using CFD on powerful multi-processor computers or clusters.



Dr.S.Gowreesh, Worley parsons Ltd.Hyderabad. on 11<sup>th</sup> July 2015



Valedictory Function on 11<sup>th</sup> July 2015. Dr.Venkatesh M. kulkarni, Prof.M.Basawaraj,Dr.G.H.Purohit



Distribution of Certificates on 11<sup>th</sup> July 2015

## **Conclusion:**

The FDP for Engineering faculty members, was **Organised by Department of Thermal Power Engineering** VTU PG Centre and Regional Office, Kalaburagi in collaboration with Vision Group on Science and Technology (VGST) (Gok), was attended by 50 faculty participants from Engineering institutes of VTU during 08-11 July, 2015 .

The 4 day FDP program at VTU,PG/RO, Kalaburagi was termed very good to excellent by majority of the participants. Thanks to the combined efforts of **Dr. S. Ananth Raj**, Consultant, VGST, Bengaluru, **Dr. H. Maheshappa** ,Hon. Vice Chancellor of VTU Belagavi, **Dr. K. E. Prakash** ,Registrar of VTU, **Dr. H. G. Shekharappa**, Registrar(evaluation) of VTU,**Dr. V. D. Mytri**, Member-EC, VTU, Belagavi and Coordinator of FDP Dr Venkatesh M Kulkarni, supported by Mr. Kailash B. A. (Dept. of TPE) Mr. Babu Reddy (Dept. of MMD) Mr. Anandkumar S. Malipatil (Dept. of TPE) Mr. Ambadas (Dept. of MMD) Mr. Ganesh T. (Dept. of TPE)

### **Dr. Venkatesh M. Kulkarni –Coordinator of FDP**

Professor, Department of Thermal Power Engg.  
PG Coordinator/Special Officer  
VTU PG Centre and Regional Office, Kalaburagi