

■ The Advisory Committee Meeting

The 23rd Advisory Committee meeting was held on 27th July 2013 at 10.00 am in the Institute. The Advisory Committee Chairman Shri. Vivek Sawant and other members Prof. B. M. Naik, Dr. D. G. Hapse, Dr. D. M. More, Prof. Dr. U. N. Gaitonde and Shri. N. A. Joshi were present. Hon. Shri. Balasaheb Wagh, President, K. K. Wagh Education Society felicitated Shri. Vivek Sawant and all other committee members. Shri. Vivek Sawant was congratulated on receiving Maxel Excellence Award for innovation. Vice President of K. K. Wagh Education Society, Shri. Kashinathdada Tarle, Trustee Shri. D. S. Shinde, Secretary Prof. K. S. Bandi, all Principals, Heads and senior staff of various Institutes of K. K. Wagh Education Society were present for the meeting.



An advisory Committee Meeting on 27th July 2013 in the Institute.

■ Punya Smaran Sohla

The joint Punya Smaran Sohla of Late Padmashri Kakasaheb Wagh, the social reformer Late Tatyasaheb Boraste and well-known Philanthropist Kakusheth Udeshi was organized on 22nd July 2013. Mr. Pralhad Patil Karhad (Ex-MLA & Chairman Niphad Sugar Factory) was the president of this function and Mr. Prakash Pathak was the Chief Guest. Mr. Pralhad Patil Karhad said that this is an occasion for retrospection. Technical education will be tool for future development, but we have to change our education system accordingly. Shri. Prakash Pathak emphasized on importance of education in life and for the development of nation by giving references. He also focused

on the quality of education in India and measures for enhancement. He appreciated the work done in initial days by Late Padmashri Kakasaheb Wagh, Shri. Madhavrao Boraste and Shri. Kakuseth Udesi. Both guests were felicitated at the hands of Hon. Shri. Balasaheb D. Wagh. Vice President of K. K. Wagh Education Society Shri. Kashinathdada Tarle, Trustee Shri. Changdevrao Holkar, Shri. Ashokbhai Marchant, family members of Shri. Ashokbhai Merchant, Shri. Narayandas Asher and Shri. Chandrakantbhai Mathuria, Trustee Shri. D. S. Shinde, Ex. Mayor of Nashik Shri. Dasharath Patil, Smt. Nilimatai Pawar, Sarchitnis, NDMVP, Nashik and Principal Dr. K. N. Nandurkar were present on the dias.



The Chief Guest Mr. Prakash Pathak delivering the speech.

■ Interaction of Mr. Vivek Sawant with Staff of Mechanical Engineering Department

Mechanical Engineering Department had organized an interactive session with Hon. Vivek Sawant, Chairman of our advisory committee of our Institute for the faculty of Mechanical Department on 27th July 2013. The event was focused on teaching learning process during which methods to improve the quality of teaching and learning were discussed. Hon. Balasaheb Wagh, Chairman of K. K. Wagh Education Society, Nashik graced the occasion.



Interactive session at Mechanical department

Expert Lecture by Prof. B. M. Naik on 'India Needs World Class Institutions'



Prof. B. M. Naik delivering an expert lecture on 'India needs world class institutions'.

An ISTE chapter of our Institute organized an Expert lecture by Prof. B. M. Naik on "India needs world class institutions" on 26th July 2013. Prof. B. M. Naik is well known academician, Ex-Principal of Shri. Guru Gobind Singhji Institute of Engineering and Technology, Nanded. He is Member of Academic council at Swami Ramanand Tirth University and an advisor to different Institutes for Quality improvement & management and innovation centers and Patents. He was the Ex-Chairman of ISTE (Maharashtra & Goa Section). He explained the need and importance of research based innovation in Universities and Colleges to keep India globally competitive. He also mentioned that the number of world class institutes is now a differentiating factor between developed and developing countries. To bridge this gap we need professionals and leaders in all walks of the life. With higher imagination we can take it to great heights on international plane. He has also focused on the topics like positions of Indian Institutes and Universities in Global World, Compatibility to opportunities and challenges in globalize world, Addressing local problems with an eye on International scenario. Along with this some academic strategies for successful institutions like Student centered institutions, new technologies in its laboratories and balanced

output of UG, PG & PhD were discussed in detail. Hon. Shri Balasaheb Wagh, President, K. K. Wagh Society, Principal. Dr. K. N. Nandurkar, Staff members from Engineering, Polytechnic and other Institutes of K. K. Wagh Education Society attended the program

Meeting with Mr. Rana Singh, Head (India Operations) Maxwell Technologies

On 23rd July 2013, meeting with Mr. Rana Singh, Head (India Operations) Maxwell Technologies was held to explore the possibilities of joint research in the field of ultra capacitors. Mr. Balasaheb Wagh, President, K. K. Wagh Education Society and Dr. O. G. Kulkarni, Mentor, Advisor and Consulting Engineer in Automation, Principal Dr. K. N. Nandurkar and heads of departments were present for this meeting.



Meeting with Mr. Rana Singh, Head (India Operations) Maxwell Technologies

FE Welcome Function On 22nd July 2013

The Applied Science Department organized a welcome function for all the newly admitted first year engineering students on 22nd July 2013. The function was arranged in six sessions and three venues according to the branches. Principal Dr. K. N. Nandurkar, Dr. S. S. Sane (H.O.D., Computer), Prof. A. M. Jain (Electrical Dept.), Prof. M. D. Kokate (E & TC Dept.), Prof. M. B. Murugkar (H.O.D., Mechanical), Prof. S. B. Chandgude (H.O.D., Production), Dr. P. D. Jadhao (H.O.D., Civil), Dr. V. S. Mane (H.O.D., Chemical), Dr. Mrs. P. D. Bhamre (H.O.D., I.T.), Prof. S. N. Kadlag (H.O.D., Science & Maths), Prof. Dr. S. S. Naik (Science & Maths Dept.), Prof. S. S. Joshi (Science & Maths Dept.), Prof. A. W. M. H. Ansari (Science & Maths Dept.) guided the students and parents in various sessions for their four year journey at KKWIEER. Considering the fact that, the revised FE structure and syllabus has been implemented from the academic year 2012-13, the guidance given by the faculty was proved to be more important for the students and parents.

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Principal Dr. K. N. Nandurkar addressing to newly admitted first year Engineering students.

Inauguration and Induction Programme for MBA Batch of 2013-14

MBA Department of our Institute organized an Inauguration and Induction programme for MBA batch of 2013-14 on 25th July 2013. Mr. Dhananjay Bele, President, NIMA, Mr. Pankaj Aher, Asst. Vice President, ABB Ltd., and Ms. Garima Galhotra, Divisional Manager, HR Mahindra and Mahindra guided the students on this occasion. The expert talk was given by Ms. Garima Galhotra on topic 'Campus to Corporate' and by Pankaj Aher on topic 'Expectations of Corporate from Management students' on this occasion.



Mr. Dhananjay Bele, President, NIMA speaking on occasion of Inauguration and Induction programme for MBA batch of 2013-14

Seminar By Tech-Rel Pune For Students

The demonstrative session by Tech Rel, Pvt., Ltd., Pune was arranged by Training and Placement section for final year students of this institute on 17th July 2013. The objective of this demonstration was to share the tricks for cracking the aptitude tests, PI and GD. Mr. P. Kadam, Director Tech Rel, Ms. Anu Sukhija, Vice-President, Tech Rel guided the students. Around 311 students from various departments of Computer, IT and MCA have attended this programme.



Mr. P. Kadam, Director Tech Rel, Pvt., Ltd., Pune delivering seminar for students

Expert Lecture/Seminar/Courses/Worshop Organized:

- Department of Electrical Engineering organized the following activities:
 - An expert talk on "Motivation" by Prof. Dr. B. E. Kushare on 5th July 2013.
 - An expert talk on "Electrical fundamentals with fun & joy" by Dr. Vishram Bapat on 22 & 23rd July 2013.
 - An expert talk on "Soft skill training" by Mr. Mahesh Joshi during 17-21 July 2013 for Electrical Engineering (Second Shift).
 - An expert talk on "Automation" by Mr. Nilesh Salgaonkar on 16th July 2013 and an expert talk on "Nanotechnology Based Solar Cell" by Prof. J. P. Shah on 9th July 2013.
- Department of Production Engineering organized motivational speech by Mr. Santosh Totre on "You are the Architect of your own destiny" on 13 July 2013. Same department organized an expert lecture of Prof. J. P. Shah on "Recent Trends in Robotics" on 27th July 2013.
- Department of Electronics & Telecommunication Engineering organized following activities:-
 - An expert talk Shri.S. V. Pundalik on Soft skills for B.E. E&TC students on 6th July 2013.
 - Seminar on "A bridge from education to industry for SE (E & TC), SE (ELTX), TE (ELTX) students on 8th July 2013 by Mr. Sanjay Chaudhary, Director of ELC, Bhusawal.

- c) Seminar on "How to prepare for CAT" by Mr. Sagar Nikam, Managing Director, Excellence Learning Centre Pvt., Ltd., on 18th July 2013.
- d) Seminar on "Placement Preparation for Aptitude, Interviews, Written Tests for companies" by of Mrs. Nandita Ray and Mr. Pradeep Kotwal from RAY Academy on 13th July 2013.
- e) Seminar of Mrs. Smita Bhamare, Director, Study Abroad Consultancy on "Study in Abroad & its Procedure" for BE (E & TC) students on 11th July and 18th July 2013.

- Department of Chemical Engineering organized an expert talk of Prof. J. P. Shah on "Nano solar cell" on 25th July 2013 for their students.
- Department of Information Technology had organized a video session for second year student on "Careers in IT". The video gave information on IT Business, different IT Products, Software Development Life Cycle, etc. Same Department had also organized one hour session on "Aptitude Test Preparation" by Mr. Pradeep Kotwal and Mrs. Nandita Ray for final year students on 15th July 2013 and a seminar on "Cyber Security" by Mr. Tanmay Dikshit (President, Solapur IT Services) on 26th July 2013 for their students.



- Visit to "Padsad" a school for Deaf and Dumb by Second year Computer Engineering Students in association with Raising Souls was organized on 30th July 2013. 15 students from SE B class visited the school, where they taught the students and also conducted various activities like Magic Show, Dancing and Craft Workshop and arranged interesting games for the students. Mrs. P. B. Gunjal and

Mr. P. S. Kolhe also accompanied the students. All students of the school enjoyed these sessions a lot and gave good feed back to our students.

■ **Seminars / Workshop / Training Attended By Staff:**

- Principal. Dr. K. N. Nandurkar and Prof. P. K. Shahababkar attended the Industry-Institute Interaction meeting organized by CII at Symbiosis Institute of Operation Management, Nashik on 05/07/2013. The issues such as faculty training in Industry and arranging expert's lectures by industry personnel for staff and students were discussed. Next meeting is scheduled in K. K. Wagh Institute of Engineering Education & Research, Nashik in the last week of August 2013.
- Prof. N. B. Gurule, Prof. A. B. Bhusnar and Prof. S. B. Gunjal of Production Engineering attended one-day workshop on "Syllabus Implementation of S. E. Production" at SIT Pune on 21st July 2013. Same departmental staff Prof. A. S. Kamble and Prof. S. B. Gunjal attended workshop on 'Research Methodology' at Matoshri COE, Nashik during 18th -24th July 2013.
- Prof. Dr. B. E. Kushare, Head of Electrical Engineering Department attended training on 'Transient protection & lighting protection' at OB Betterman, Germany during 22-27th July 2013.
- Prof. Rutuja Jadhav of Department of Computer Engineering attended workshop at PICT, Pune on 6th July 2013.
- Staff members of department of Information Technology attended Faculty Development Program organized by Board of Studies (IT) at Pune as per following details:

Sr.No.	Name of Staff	Topic	Date
1	Prof. Ms. Shilpa Mene	Fundamentals of Data Structures	12 th July 2013
2	Prof. S. K. Badjate	Discrete Structure	13 th July 2013
3	Prof. Ms. Smita G. Pachpande	Digital Electronics & Logic Design	19 th July 2013
		Computer Organization	20 th July 2013

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■ **Grants Received from AICTE under Modernization and Removal of Obsolescence (MODROB)**

Sr.No.	Department	Lab to be funded	Amount Rs.
1	MCA	Software & Project Lab	14,00,000.00
2	Electrical Engineering	Industrial Drives and Control	19,33,000.00
3	Civil Engineering	Material Testing Lab	12,00,000.00

■ **Industrial Visits Organized For Students:**

Date	Class	Name of Company
16/07/2013	TE Electrical	Takli Substation MSETCL
23/07/2013	SE Electrical	NTPS, Eklahare, Nashik
26/07/2013	TE Electrical	132KV Takli Substation, Nashik
26/07/2013	TE Electrical	Traction Machine workshop
28/07/2013	SE Electrical	Bieco Industris Pvt. Ltd., Nashik
28/07/2013	TE Electrical	Beico Industries, Gonde, Igatpuri

■ **Training & Placement :**

Name of the Dept.	Name of Company	No. of students selected
Mechanical Engg.	Glaxo Smithkline Ltd., Nashik	06
Production Engg.	KJK meister Honen Pvt., Ltd.	03
	Mahindra & Mahindra, Satpur	05
Electrical Engg.	Glaxo Smithkline Ltd., Nashik	03
MCA	Extensia Information Ltd.	01
	Ecom Software Services	01
	Disha Technical Solution & Services	01
	Plexus Software Solution	01
	Tulsi Institute of Computer Technology	01

■ **Other Achievements**

- Prof. Dr. K. N. Nandurkar delivered an expert talk on 'Research Proposal' during the one week workshop on 'Research Methodology' organized by Matoshri College of Engineering, Nashik.
- Prof. Dr. B. E. Kushare, Head of Electrical Engineering Department offered Electrical consultancy to Bosch Ltd., Trambak Rubbers, Times of India, Kandivali, Times of India, Airoli and Eatapharma.
- Dr. P. J. Pawar of Production Engineering Department delivered expert lecture at Govt. COE, Aurangabad on 6th July 2013 & at Matoshri COE, Nashik on 22nd July 2013.

- Prof. J. P. Shah of Electrical Engineering Department delivered expert lecture at SVIT Chincholi on 18th July, Expert Lecture at Sandip Polytechnic on 22th July and expert lecture at Loknete Gulve Polytechnic on 7th July 2013.
- Famous TV actors Mr. Amol Kolhe, Mr. Manoj Joshi and others visited the Institute on 12th July 2013 for promotion of their film and interaction with students.
- Prof P. K. Shahabdkar, Training and Placement officer conducted the Orientation programme on training and placement activities to various department of the Institute. He also demonstrated an ESPOIR Interview Software to various departmental students for enhancing the Interview skills.

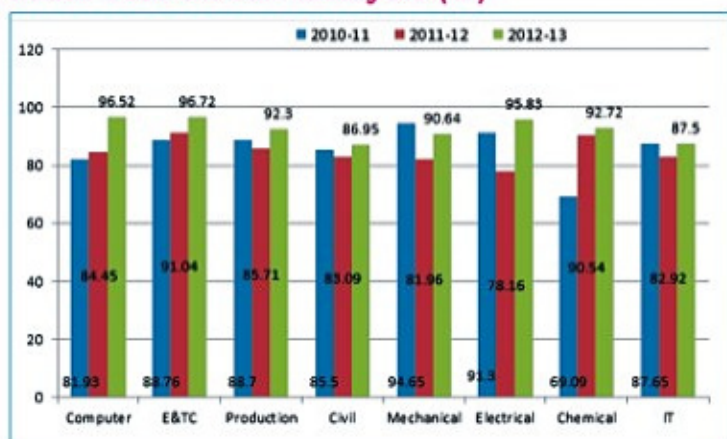
■ **FE Result Analysis**

Sr. No.	Rank Range	A.Y. 2010-11	A.Y. 2011-12	A.Y. 2012-13
		Intake-720	Intake-780	Intake-780
1	Total No. of Students Appeared	700	817	806
2	Total No. of Students All clear	346	448	485
3	No. of Students passed with Distinction	54	103	164
4	No. of Students passed with 1 st class	107	148	167
5	No. of Students passed with 2 nd class	180	181	153
6	No. of Students passed with pass class	05	16	01
7	No. of Students passed with ATKT	558	635	688
8	No. of Students failed	138	182	114

■ **First Year Admission Quality**

Sr. No.	Rank Range	A.Y. 2011-12	A.Y. 2012-13	A.Y. 2013-14
		Intake-780	Intake-780	Intake-840
1	1-10000	336	300	329
2	10001-20000	153	188	209
3	20001-30000	85	87	102
4	30001-40000	70	66	52
5	40001-50000	43	36	25
6	50001-100000	84	97	90
7	100001-110000	00	03	03
8	Other (J & K quota)	33	34	33
Total		804	811	843

Final Year Result Analysis (%)



Abstracts of Papers Presented by Staff during July 2013:

Effect of flux evaluation schemes in numerical simulation of shockwave-gas cylinder interaction

Prof. M. P. Ray

(Presented at International Conference at University of Wisconsin-Madison, USA during 15-17th July 2013).

Abstract:- Two-dimensional numerical simulations of the interaction of a planar shockwave (hereafter termed as "shock") with an isolated cylindrical gas in homogeneity (hereafter termed as "bubble") are performed in this work. The Euler equations are used as the basic flow model since the viscosity effects are negligible for most of the time of interest. A finite volume reconstruction-evolution methodology is used. Several high-resolution multi-fluid solvers are developed, using a fifth order weighted essentially non-oscillatory approach for spatial reconstruction and a third order Runge-Kutta scheme for temporal integration. Nine different inter-cell face flux evaluation schemes, comprising of exact and approximate Riemann solvers available in the literature are incorporated. The multi-fluid simulation capability is achieved using the ghost fluid method that uses the level set approach for the identification of the density interface. The simulations are performed for two Atwood numbers (-0.756 and 0.447) and two Mach numbers (1.22 and 3.0). The simulation results indicate that the flux evaluation schemes appear to have an impact on the evolution of the flow in the convergent geometry, which is not the case with the divergent geometry.

Optimum Design of PID Controller Using Teaching-Learning-Based Optimization Algorithm

Prof. G. G. Waghmare

(Presented at International Conference "AEOTIT-2013" at S. V. National Institute of Technology, Surat (Gujarat), India held during 1-3 July 2013).

Abstract:- This paper presents performance of the Teaching-Learning-Based Optimization (TLBO) on design of Proportional Integral Derivative (PID) controller for obtaining optimal control. The tuning performance of TLBO is investigated and compared with other population based optimization algorithms. Teaching-Learning-Based Optimization (TLBO) is a recently proposed population based algorithm which simulates the teaching-learning process of the class room. This algorithm requires only the common control parameters and does not require any algorithm-specific control parameters. Experimental results shows that TLBO algorithm is successfully applied to the PID tuning for improving the performance of the controller and shows a better tuning capability than other population based optimization algorithms for this control application.

Supplier Selection using ELECTRE - I & II Methods

Prof. S. R. Gangurde

(Presented at International Conference "AEOTIT-2013" at S. V. National Institute of Technology, Surat (Gujarat), India held during 1-3 July 2013)

Abstract:- This study presents an approach for solving the supplier selection problem from the perspective of strategic management of the supply chain. The suppliers are selected based on the various criteria such as release cost, quality, discount rate, on-time delivery, payments terms, technical superiority, financial & credit strength etc. The case study of the suppliers for pneumatic cylinder is selected for evaluation. The suppliers are evaluated using the multi-criteria decision making (MCDM) approach: 'Elimination and Et Choice Translating Reality' (ELECTRE). The overall objective of the supplier evaluation process is to reduce risk and maximize overall value to the purchaser.

■ Selection of Material for Press Tool using Graph Theory and Matrix Approach (GTMA)

Prof. Sudish Ray

(Presented at International Conference "AEOTIT-2013" at S. V. National Institute of Technology, Surat (Gujarat), India held during 1-3 July 2013)

Abstract:- Materials selection is a difficult task, due to the immense number of different available materials. Materials play a crucial and important role during the entire design and manufacturing process. In this paper; Graph Theory and Matrix Approach (GTMA) is applied for making decisions for press tool material selection. Material selection index (MSI) is considered to evaluate and rank the press tool material. The MSI is obtained from a press tool material selection attributes function which is obtained from press tool material selection attributes digraph. The digraph is developed considering important attributes required for selection of press tool material. It will help a decision maker solve the press tool material selection problem.

■ Investigation of Fast Output Sampling based Controllers for Non-linear Inverted Pendulum System

Prof. R. K. Munje

(Presented at National conference on Instrumentation, Control and Signal Processing, S. S. G. S. Institute of Engineering & Technology, Nanded, India during 8-9th July 2013)

Abstract:- Fast output sampling (FOS) techniques have attracted the interest of many researchers for the design of controller, as these methods are based on output feedback and are at the same time capable of assigning arbitrary dynamical characteristics to the closed loop system. In this paper, different techniques of FOS based controllers are investigated for non-linear system of inverted pendulum (IP). Different control laws are designed using linear model of IP system. The first control law is constructed based on past output observations. In second control law, past output observations along with past input is used for design purpose. However, in third case, discrete-time sliding mode control (DSMC) law in combination with FOS feedback is

formulated. Simulations have been carried out using non-linear model of IP system developed in MATLAB/ Simulink environment. Form simulations it is observed that, the performance of FOS feedback based DSMC is comparatively better than other two control techniques.

■ A study on features analysis and classification for automatic identification of musical instrument

Prof. D. M. Chandwadkar

(Presented paper in IETE National journal organized by IETE National Journal of innovation & Research on 27th July 2013)

Abstract:- In this paper a methodology with feature extraction and evaluation is proposed and assessed with a number of experiments, whose final stage is to detect instruments using isolated notes played by these instruments. We have used machine learning techniques for this purpose with which selection of effective feature set and proper classifier is a challenging task. A set of features is evaluated for recognition of these instruments out of monophonic musical signals. To achieve a compact representation, we used features characterizing only spectral properties of sound. Various classification methods are implemented and tested. Over a dataset of 259 notes from six musical instruments, Multilayer Perceptron (MLP) and Sequential Minimal Optimization Algorithm (SMO) show comparable results with success rates close to 97%. Feature selection and evaluation techniques are used to reduce the dimensions of the feature vector, giving good accuracy with less number of features.

■ The Performance of RAKE Receiver in Multirate Wireless Communication Systems

Prof. M. D. Kokate

(Published paper at International Journal organized by IJECSCSE, International Journal in July 2013)

Abstract:- In 3G multirate wireless communication systems such as UMTS, the enhancement of data rate is performed by reducing the spreading factor. This is made by using so called variable spreading factor (VSF) codes. Small spreading factor causes the



saturation of inter path interference (IPI) and near-far problem. This implies that amplitude of transmission signal has to be higher in order than constant energy per bit as required by the system. This amplitude differences due to different data rate transmissions make receiver to deal with near-far problem. This paper investigates various limitations of novel RAKE receiver architecture in frequency selective multipath fading channel.

Key Words: 3G, WCDMA, RAKE Receiver, Multipath Diversity.

■ Musical Instrument Identification using k-NN and SVM Classifiers for Different Features

Prof. Amrit Pal Kaur & Prof. D. M. Chandwadkar

(Presented paper in IETE National Journal by IETE National Journal of innovation & Research on 27 July 2013)

Abstract:- Though the basic structure for pattern recognition systems used for speech processing remain same for music signal processing, selection of effective features to be extracted and classification system to be used is very crucial job. Lot of research has been done on speech signal but music signal is different from speech signal, therefore for recognizing musical instrument there is a need of designing a different system. Here we have designed an automatic instrument identification system. In this paper, we discuss the role of various features for classifying musical instruments with two different classifiers. We have tried to identify musical instruments using monophonic signals. For experimentation we have used five musical instruments: Flute, Piano, Trumpet, Guitar and Xylophone. From each audio signal of the database we have extracted eleven features and these features are used for classification. It is observed that the identification accuracy depends on the features as well as the classifier used. This analysis helps to select the desired classifier with desired feature set. With a single feature (Cepstrum) classification accuracy of 96.13% is recorded using k-NN classifier. Classification accuracy of 98.89% is observed with all features used together and SVM as

classifier. The whole system is designed using MATLAB environment.

Key Words: Musical Instrument Identification; Classification; Feature extraction; k-NN Classifier; SVM.

■ Adsorption of 2-picoline from Waste by agro Coal ash: parametric, Kinetic, equilibrium & thermodynamic features

Prof. Daware G. B.

(Published in Journal "Desalination & water treatment", Taylor & Francis, doi-10.1080/19443994.2013.819152, on 12th July 2013)

Abstract: 2-Picoline is a derivative of pyridine. Due to the hazardous nature, the removal of 2-picoline from waste water is important. In the present study, the ability of agro coal ash as an adsorbent for the removal of 2-picoline from waste water in a broad range of concentration (50–300 mg/L) was investigated. The influence of various experimental parameters like initial pH, adsorbent dose, contact time, initial concentration and temperature on the removal of 2-picoline on agro coal ash were studied. The optimum conditions for the maximum removal of 2-picoline were found to be initial pH 6, contact time = 7 h and adsorbent dose = 2 g/L. Adsorption of 2-picoline followed pseudo-second-order rate kinetics. The Langmuir and Freundlich adsorption equilibrium isotherm models were analysed. The values of the change in Gibb's free energy (DG), enthalpy (DH) and entropy (DS) were calculated. Thermodynamic studies revealed that adsorption of 2-picoline on agro coal ash is an endothermic process.

Keywords: 2-Picoline; AGCA; Pyridine; Adsorption isotherms; Adsorption equilibrium

■ Forthcoming Event

Indian Society for Technical Education (ISTE) announces the Srinavasa Ramanujan Mathematical Competitions-2013 for Engineering and Polytechnic college students and teachers from India.

Prof. Dr. K. N. Nandurkar
PRINCIPAL

