

University Specialists Training and Scientific Projects Development concurrently (one realization example)

Prof. Dmytro A. Zubov,

System Engineering Department of East Ukrainian National University named V.Dal
dzubovua@mail.ru, Ukraine, 91034, city Lugansk, kvartal Molodezhny, 20a

Abstract

In a paper the practice and theoretical ways symbiosis in university specialists training was shown on the air temperature long-term forecasting method scientific project basis. The method of the average decade air temperature long-range forecasting on the polynomial robust inductive models basis and the analogue principle (the average month model's structure is used for the average decade prognosis) usage was developed by System Engineering department (East Ukrainian National University named V.Dal) specialists and implemented into Ukrainian hydrometeorological centers. During this project realization, specialists enhanced their knowledge in the artificial intellect, inductive modelling, computer's soft and hardware branches and, improved one's professional skills.

Key words: university, specialists training, scientific project, forecasting.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Collaborate to Create Tomorrow's Innovative Leaders

Dr. M. Adithan

Director, Academic Staff College, VIT University, Vellore - 632 014, Tamil Nadu
Formerly Professor and Head, Dept. of Mechanical Engineering, TTTI (now NITTTR), Chandigarh

Abstract

Active collaboration between Corporate and Academia is the need of the hour in to-day's knowledge economy. Creativity and Innovation should be viewed as a continuous process of designing and developing new ways in which industry organizations and academia can partner together to put into place focused academic programmes and training for the wholesome development of our wonderful country through our young and energetic youth.

This paper discusses some of the characteristics of innovative leaders. Innovative leadership is the highest form of leadership because of the huge contributions it makes in the lives of their employees, customers and community. Innovative leaders take their organizations and companies to far greater heights and to exciting destinations.

What institutions can do to encourage new approaches for introducing innovations in their class rooms? A few approaches are suggested in this paper. Importance of low cost innovation is also stressed. The synergistic and symbiotic relationship between industries, academia and government alone will ensure the development of tomorrow's innovative leaders.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Tube Making in Hard-to-Work Materials

Er. Sukhwinder Singh Jolly¹ and Er. DS Bedi²

¹ Associate Professor, Sri Sukhmani Institute of Engineering and Technology, Dera Bassi ó 140 507 (India)

² Ex-Professor Emeritus, Institute of Engineering and Technology, Bhaddal ó 140 108 (India)

Abstract

The philosophy of moving the metal rather than removing and simultaneously reducing the forming forces and press capacity led the metal working industry to localize the deformation zone to a small volume of the work piece, thus saving in the materials and energy for getting the final shape. In this paper study of the process of tube making in hard-to-work materials has been carried out and deformation zone is localised to a small volume of the work piece. The condition of volume constancy has been satisfied. Total energy consumed in the deformation has been found out and various process parameters has been plotted to see the trend of graphs. Various conclusions with explanation has been stated. It has been observed that with the increase in % age reduction, there is increase in power consumption. As the Diameter of the roller increases, there is increase in power consumption, similar phenomenon has been observed in the case of flattening of rollers. It has been observed that as the initial stock thickness of the tube increases, due to this the volume of the material to be removed increases with increase in %age reduction.

Keywords: Tube making, hard-to-work materials, roller diameter, percentage reduction.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

Cost reduction through Total Productive Maintenance

Amit Kumar Gupta¹, Rachin Goyal²

¹ Assistant Professor, Mechanical Engineering, Chandigarh Engg. College, Landran (Mohali) Punjab; akg329@yahoo.co.in;

² Assistant Professor, Mechanical Engineering, Chandigarh Engg. College, Landran (Mohali) Punjab; rachin4u2@yahoo.co.in.

Abstract

Remarkable improvements have occurred recently in the maintenance management of physical assets and productive systems, so that less wastage of energy and resources occur. In order to achieve world-class performance more and more companies are replacing their reactive strategies for maintenance with proactive strategies like preventive and predictive maintenance and aggressive strategies like total productive maintenance (TPM). Total Productive Maintenance (TPM) is a methodology helps in reducing the need for further capital investment. This paper shows the cost reduction in consumption of oil after implementation of TPM in an automobile manufacturing company. On the basis of results a database has been prepared which can be further used.

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education

LabVIEW Based Simulation of SVC in Single Machine Infinite Bus (SMIB) System

Er. Shweta Mann¹, Er. (Mrs.) Lini Mathew², and Dr. S Chatterji³

¹ME Student, Department of Electrical Engineering, National Institute of Technical Teachers Training & Research, Chandigarh

²Assistant Professor, Department of Electrical Engg., National Institute of Technical Teachers Training & Research, Chandigarh

³Prof. & Head, Department of Electrical Engineering, National Institute of Technical Teachers Training & Research, Chandigarh

Abstract

Power system engineers are currently facing challenges to increase the power transfer capabilities of existing transmission system. Flexible AC Transmission System (FACTS) controllers are capable of power flow balancing and thereby using the existing power system network most efficiently. FACTS controllers by virtue of their fast response can improve the stability of an electrical power system by way of helping critically disturbed generators to give away the excess energy gained through acceleration due to a fault or disturbance. Static VAR Compensator (SVC) is a key shunt connected FACTS controller and is widely recognized. It serves as an effective means to enhance power system stability. In the present work the authors have made an attempt to simulate the SVC by incorporating LabVIEW for a Single Machine Infinite Bus System (SMIB).

Main aim of the present work is to analyze the response of an SVC controller in a Single Machine Infinite Bus System by simulating it in LabVIEW. LabVIEW is a new research tool which is capable of representing dynamic systems in block diagram form, along with a provision of simulation of the system behaviour in total. This also reduces system complexity from a developer's standpoint, and thus allows concentrating on the application details. These facilities are not available in the traditional means of measurement techniques and tools. Results obtained are encouraging and indicate that the proposed simulation model is very near to the physical simulation.

Keywords: FACTS, Power system stability, Transient stability, Transient stability limit, Static VAR Compensator, SMIB system

For Full Paper: Kindly subscribe the Journal of Engineering & Technology Education