ASHOKRAO MANE POLYTECHNIC,VATHAR

Electrical Engineering Department

NEWSLETTER: ELECTRICA

VOL-9: ISSUE-I JULY 2023 TO NOVEMBER 2023

INSIDE

THEME-NEUTRAL SECTION OF TRACTION SYSTEM

VISION

Commitment for excellence in the field of Electrical Engineering and empowering students in technical, social aspects for betterment of society.

MISSION

- Impart strong fundamental and applied technical knowledge in the Electrical Engineering.
- Organize expert lectures, workshops, industry visits for knowing new technology.
- Educate graduate students in research, scholarship and intellectual life
- Produce competent and skilled electrical engineers to meet ongoing industrial requirement.

CHIEF EDITOR:
Mr.B.V.KUMBHAR

EDITOR COMMITTEE:
1.Mrs.A.A.PETHKAR
2.Mr.A.A.KADAM
3.Mr.P.R.PATIL
4.Ms.T.D.DONGALE

ABOUT INSTITUTE

Shri Balasaheb Mane Shikshan Prasarak Mandal Ambap's, Ashokrao Mane Polytechnic Vathar (AMPV) was established in 2008 and is located near Kolhapur. This Institute has AICTE approval for the Six Diploma courses. AMPV has emerged as a leading technological Institute to promote Technical Education for rural communities. It provides modern educational facilities to mould young and talented students who can compete in the global arena. Institute endeavours to offer a holistic education with values and ethics imparted to students allowing them to pursue successful careers growth. This institute is a perfect destination for Quality & Outcome based technical education. The aim of AMPV is to rank among leading institutes of India

ABOUT DEPARTMENT

The Department of Electrical Engineering is established in the year 2010 with a sanctioned intake capacity of 60 students. The Department has been accredited by National Board of Accreditation (NBA) and also consistently awarded with excellent remark by MSBTE, Mumbai. To cater to the ongoing Industrial demand, the Department has well equipped Laboratories with extra facilities and also having a smart classroom with e-learning facility. Department leads to implement Energy conservation techniques in the institute and also as a part of green energy, promote the use of non – conventional energy sources. The department has an enthusiastic team of qualified and experienced teaching and non-teaching staff. One of the strengths of the Department is that it's faculty has published different papers in reputed national & international journals & contributed in Research & Technology.

MESSAGES

MESSAGE FROM PRINCIPAL'S DESK

PROF.Y.R.GURAV
PRINCIPAL,
ASHOKRAO MANE POLYTECHNIC, VATHAR

Dear Readers,

Best wishes for the New Year, It's a very prestigious moment to interact with the readers. This Newsletter is an initiative taken by Electrical Department with a specific purpose. The contribution made so far by it's teachers, students, academicians and industrialists has compelled it to promote them in the area of Electrical Engineering. Newsletter is also acting as a medium to convey messages about its vision and values along with future strategies and plans.This Newsletter has a unique theme i.e Neutral section of Traction system. I appreciate the editing team, which is putting efforts in compiling various news about Diploma Education System in Electrical Department along with the views and information about theme and distribute it to a cohesive community of stakeholders - students, faculty, parents, administrators, institutes, industry and community at large relevant to Newsletter.

MESSAGE FROM CHIEF EDITOR'S DESK ....

Mr.B.V.KUMBHAR
HEAD,DEPARTMENT OF ELECTRICAL ENGINEERING
ASHOKRAO MANE POLYTECHNIC, VATHAR

Dear all..

I am very much pleased & satisfied that our Electrical Engineering Department has always remained the first choice & first preference of the students while taking admission in AMPV. With huge excitement I am very glad to present the edition of our half yearly Newsletter 'Electrica'.We strived to make our Newsletter as a platform to showcase the multifaceted talents of our students and faculties. I am very much pleased that the empower our students technically as well as ethically by conducting curricular & extra curricular activities like Expert Lectures, Industrial Visits etc. Similarly the Department pays special attention on faculty development also I feel proud that our faculty members have participated in various FDPS & STTPS. Also the faculty members & students who directly & indirectly contributed for this Newsletter. I hope the readers will enjoy this. Once again thanks to all.

DEPARTMENTAL ACTIVITIES

Engineer's Day Celebration

On the occasion of Engineer's day on 15 Sept. 2023 Department has organized Poster Presentation Competition & Component Finding Competition .Hon Principal Prof.Y.R.Gurav visited & inaugurated the function.

INDUSTRIAL VISITS

Industrial visit of final year students to RYB Power Systems C-46,Shiroli MIDC on 30.09.2023 .

Industrial visit of final year students to Associated Industries Corporation W 59 ,MIDC Shiroli on 06.10.2023 .

Industrial visit of second year students to Radhanagri Hydro Power Plant on 13.10.2023 .

EXPERT LECTURES

An Expert lecture on “Recent Trends in Switchgear” for final year students on 05.10.2023 by Mr.S. S.Hujare, Assistant Engineer, MSEDCL.

An expert talk on “How to gain self confidence & self esteem” by Mr.S. V. Gharage on 21.10 2023.

Interaction with TY students on “How to face competitive exam” by Mr.S.R. Bhosale,RTO Kolhapur on 25.10.2023.

The Technical Expert lecture organized on “Role of reactive power in power system”by Mr.D.S.Patil for second year students on 03.11.2023.

FACULTY VIEWS...

Mrs.A.A.PETHKAR
LECTURER, ELECTRICAL ENGINEERING DEPARTMENT

OVERHEAD SUPPLY SYSTEM FOR TRACTION SYSTEM

In dc traction, supply to OHE can be provided from both ends so that voltage drop can be reduced and in such a case substations operate in parallel. In case it is felt necessary, say for sake of convenience in maintenance, to have some boundary of supply between two substations, it can be had simply by means of insulated overlap. There will be no damage in this case even if pantograph bridges the OHE.

But in single phase ac traction above arrangement is not permissible because adjacent substations tap different phases of the three- phase system so as to equalize load on the three phases. So momentary passing of pantograph under insulated overlap will result in short circuit between two phases of the supply system and damage the pantograph and OHE. This situation is avoided by interposing a small length of OHE, called the neutral section.

Mr.A.A.KADAM
LECTURER, ELECTRICAL ENGINEERING DEPARTMENT

Pantograph

The pantograph is located on the roof of the train and collects the electricity needed power the train. Since pantographs make direct contact with the overhead power lines in order to obtain electricity, their usage environment is always changing due to the speed of the train and external weather conditions. As such, pantographs need to be able to maintain a constant level of quality and collect a constant level of electricity without damaging the overhead power lines. In order to achieve this, a lot of expertise goes into the mechanism and materials used to make pantographs.

STUDENTS VIEWS...

Mr.P. R. PATIL
Student TY (EE)

Neutral Section of Traction System

There are two types of traction system AC and DC. This system provides high starting torque, high acceleration and retardation. Straight electric traction system has hightraffic holding capacity and flexibility in operation which is suitable for urban areas. Regenerative braking is possible in case of this electric traction system. Electric traction is the locomotion in which driving force is obtained from electric motors. It involves utilization of AC electric power for traction system. For traction purposes mostly 3 phase induction motors and d. c. series motors are used.AC Traction system in India uses 25KV,Single phase for its operation. The overhead equipment is fed from R-phase for a distance of about 45km then by B-phase and then by Y-phase and the cycle continues. These sections of each phase are insulated from each other using an insulator. This insulator section is called Neutral Section.

Ms.T. D. DONGALE
Student SY (EE)

Automatic Working of Circuit breaker in neutral section of traction system

In early days, pantographs were dropped during neutral section to cut supply system. sometimes it arises problem of power failure. Nowadays, circuit breakers are used to cut supply instead of pantographs. It helps to minimize problem related to power failure. The locomotive is disconnected during the neutral section. For this purpose the motorman operates the circuit breaker manually. But, by operating this circuit breaker automatically, Man-made mistakes can be eliminated. It can be proved to be a ray of hope for future automation. It is Highly reliable while navigating neutral sections. It has many advantages like transient disturbances and sparking are avoided due to reliable operation of circuit breaker.

Achievments...

STUDENTS ACHIEVEMENTS

Academics

TY ELECTRICAL ENGINEERING

Gajaraj Dattatray Kadam
83.56 %

Kiran Prakash Patil
81.17%

Manmohankumar Choudhary
80%

SY ELECTRICAL ENGINEERING

Mayuri Bajirao Dhokale
88.21%

Disha Sandip Kudalkar
86.79%

Mahesh Manik Ghatage
86.61 %

Non-Academics

Component Finding

Aayush Dhanaji Pawar
Winner

Disha Sandip Kudalkar
Runner

Poster Presentation

Mahesh Manik Ghatage
Winner

STAFF ACHIEVEMENTS

Mr. B.V.KUMBHAR is Appreciated with Best Performance in Academic year 2022-23 by Ashokrao Mane Polytechnic, Vathar

Mr. A.A.KADAM isAppreciated with Best Teacher Award in Academic year 2022-23
by Devadan bahuddeshiya sevabhavi sanstha Kupawad, Sangli

OTHER ACTIVITIES

Participated students in 3 days soft skill training organized by institute during 20 September to 22 September 2023. The Trainer for this training was Mrs. Tanushree Shinde-Ghosh from RUBICON Skill Development Pvt.Ltd.

SCHOOL CONNECT PROGRAM

Under the campaign of school connect programme of Maharashtra State Board of Technical Education ,the staff members visit the nearby schools & create a awareness about diploma education among 10th class students.

SOCIAL ACTIVITY

Department actively participated in national level campaign “AMRIT KALASH YATRA” in marking the culmination of “MERI MAATI MERA DESH” on the auspicious occasion of National Unity Day organized by NSS.

Independance Day Celebration 15/08/2023

SUCCESS STORY

Mr.Dhiraj Ramachandra Patil
Owner Adhira Lights, Ashta

I had taken admission in Academic Year 2016-17 in Electrical Department. I completed my Diploma March 2019. After completing my education, I decided to become an entrepreneur & accordingly registered my firm in Jan. 2021. It was a small scale firm initially but now 16 workers are working in my firm. And the credit goes to AMPV. This college developed the entrepreneur qualities in me, ignited my mind with all leadership skills & thats why today I am a successful businessman

CONCLUSION

This Newsletter is a unique and a versatile. In nature as it covered a unique theme Technozeal which is now a days in trends. Along with it, this Newsletter contains the views of students & faculties on the theme, the various activities, performances of its students & staff as well as the details of the trainings, visits & participated to the program outcomes among the students.

Theme of the next Issue : WIRELESS TRANSMISSION SYSTEM

HAPPY NEW YEAR 2024

The responsibility of the authenticity of the information in this Newsletter lies with the author. Views expressed by the authors are solely theirs; they are neither the views of Electrical Engineering Department nor are they endorsed by Electrical Engineering Department. Queries, comments, feedbacks and information may be sent to electricaldept2021@gmail.com. Edited, Printed and Published by Mr. B. V. Kumbhar, H. O. D.-Electrical Engineering, Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon,416112,Website - www.amietv.org

Thank you!