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KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
Indian Institute of Science Campus, Bengaluru - 560012


LIST OF B.E. PROJECTS SANCTIONED UNDER 39th SERIES OF STUDENT PROJECT PROGRAMME : 2015-2016

93) **SAPTHAGIRI COLLEGE OF ENGINEERING, BENGALURU**

Sl No.	Project proposal Ref. No.	TITLE OF THE PROJECT	BRANCH	NAME OF THE GUIDE/S	STUDENT1 & TEAM LEADER	SANCTIONED AMOUNT (Rs.)
405.	39S_BE_1911	NEXT GENERATION E-VOTING SYSTEM FOR ELDERLY AND BLIND USERS	ELECTRONICS AND COMMUNICATION ENGINEERING	MR. KARTHIK N C	ANURAG GOSH	4,000.00
406.	39S_BE_1916	IDENTIFICATION OF ARTIFICIALLY RIPENED FRUITS USING PROBABILISTIC NEURAL NETWORK	COMPUTER SCIENCE AND ENGINEERING	PROF.KAMALAKSHI NAGANNA	MS.NALINAKSHI K	3,000.00
407.	39S_BE_1920	DETECTION OF ABANDONED OBJECTS AND RAISE A VISUAL ALARM IN PUBLIC PLACES	COMPUTER SCIENCE AND ENGINEERING	PROF.KAMALAKSHI NAGANNA	MR.KARTHIK	3,000.00
408.	39S_BE_1924	AGGREGATE CRYPTOSYSTEM FOR SCALABLE DATA SHARING IN CLOUD STORAGE	INFORMATION SCIENCE AND ENGINEERING	PROF.PRERANA CHAITHRA	MS ROOPASHREE A	3,000.00
409.	39S_BE_1925	POLLUTION STUDY ON POLYMERIC SURGE ARRESTER	ELECTRICAL AND ELECTRONICS ENGINEERING	DR.K.N RAVI	MR. V NAVEEN	3,000.00
410.	39S_BE_1928	STUDY ON THE CHEMICAL COMPOSITION AND IN-VITRO EVALUATION OF THEIR PHARMACOLOGICAL ACTIVITY	BIOTECHNOLOGY ENGINEERING	DR ANANDA S	NETHRAVATHI M	6,000.00

KSCST : 39th Series of Student Project Programme : List of Projects sanctioned : 2015-2016

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VISHVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANASANGAMA, BELGAUM-590018



**PROJECT REPORT
ON
"POLLUTION STUDY ON POLYMERIC HOUSED SURGE
ARRESTER"**

Submitted in the partial fulfillment for the award of the degree of
**BACHELOR OF ENGINEERING
IN
ELECTRICAL AND ELECTRONICS**

Submitted by

VAISHAK CHANDRAN

ISG12EE053

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Associate Prof. of EEE

Dr. K.N.Ravi,
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For the academic year of
2015-16

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
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Department of
ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE

Certified that the project work entitled "**Pollution study on Polymeric Housed Arrestor**" carried out by **VAISHAK CHANDRAN** bearing USN [ISG12EE053], **V NAVEEN** bearing USN [ISG12EE052], **UMAKARTHIK H.S.** bearing USN [ISG12EE051], **HARIKISHOR M.G.** bearing USN [ISG12EE019], bonafied students of **Sapthagiri College Of Engineering** in partial fulfilment for the award of **Bachelor of Engineering** in department of **Electrical and Electronics Engineering** of **Visvesvaraya Technological University, Belagavi** during the academic year 2015-2016. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide

Mrs. A.M.Leela
Associate Professor
(Guide & Seminar Coordinator)

Signature of the HOD

Dr. K.N.Ravi
Professor & H.O.D
(Guide & Head of the Dept.)

Signature of the Principal

Dr. Aswatha Kumar M
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INTRODUCTION

Electric power supply should ensure reliability and continuity to the utility concerns. Hence the power lines and substations are to be protected and operated against over voltages such that the numbers of failures are as few as possible. At the same time the cost involved in the design, installation and operation of the protective devices should not be too high. Hence a gradation of system insulation and protective device operation is to be followed, keeping in view the importance of the various equipment involved.

Generally, substation contains transformers, switchgears, and other valuable equipment with non-self-restoring insulation, which have to be protected against failures and internal destruction. Surge arrester are widely used in power distribution and transmission network to protect system against atmospheric surges as well as over voltages due to switching or other mechanical operations. Usually these protection devices have a useful life that varies from 20 to 25 years, even in critical operation conditions.

Polymeric housed arresters composed of zinc oxide (ZnO) arresters are usually subjected to environmental and electrical stress. In tropical regions, these devices are subjected to high moisture levels, high temperature and high isokeraunic indices which emphasizes the moisture infiltration is the principle cause of failures in porcelain surge arrester.

Polymers have been in use for high voltage insulation applications, such as, line insulators and cable terminators, for the last 20 years. Their use as zinc oxide arrester housing for outdoor electrical system is very recent. The advantages of choosing polymer instead of porcelain as the housing material for arresters are, light weight, shorter length of arrester possible due to the use of an insulated mounting bracket reduced risk of shattering and explosion of the housing during arrester failure, improved resistance to moisture ingress due to the close fitting provided by the polymer, etc. Currently available arresters use either an EPM or an EPDM polymer, and it is expected that silicone rubber housed arresters will be available shortly.