

**Visvesvaraya Technological University, Belgaum**



**A Project report on  
"CLINICAL E-INCINERATORS"**

**(Sponsored by Karnataka State Council for Science and Technology)**

**Submitted in partial fulfillment of the requirements for the degree of**

**BACHELOR OF ENGINEERING.**

**In**

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**By**

**NAME**

**POOJA V SHETTY**

**RAKSHA**

**RAMYASHREE**

**HEMACHANDRA K**

**USN**

**4SF08EC032**

**4SF08EC036**

**4SF08EC038**

**4SF09EC404**

**Under the guidance of**

**Mr. S. DAYANANDA SHETTY B.E.,M.I.E. *IT Tech.***

**Professor**

**Department of E&C**



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**Department of Electronics and Communication Engineering**

**Sahyadri college of Engineering and management**

**NH-48, Adyar, Mangalore-575007**

## ABSTRACT

**Incineration** is a waste treatment process that involves the combustion of organic substances contained in waste materials. Incineration of waste materials converts the waste into ash. The ash is mostly formed by the inorganic constituents of the waste, and may take the form of solid lumps.

Waste management in hospitals has become a common headline topic. We hear daily about declining landfill capacity, problems in deploying new incinerators, and efforts to increase recycling. Hospital waste is characteristically heterogeneous in nature by containing both infectious and non-infectious wastes and the present day incineration involves the following complications

- The incineration process releases toxic chemicals into the air, which can pose health problems to residents living in the vicinity of the facilities. Additionally, medical waste is often incinerated and its byproducts have been linked to the release of dioxins, which have been linked to cancer.
- The byproducts of incineration are disposed of in landfills and can cause long-term pollution of leaching metals into the soil and water.
- Residents living in the vicinity of municipal solid waste incinerators may be at higher risk of developing certain forms of cancer.

Our project **CLINICAL E-INCINERATORS** works on the principles of Control Engineering and aims at burning the medical wastes electrically and converting into ash in a module of particular dimension through high-voltage produced in the power circuit which is being controlled by the control circuit. Pulse width is taken as the parameter to control the voltage.