

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELGAUM- 590014**



A Project Report

On

**EXPERIMENTAL AND THEORETICAL INVESTIGATIONS TO STUDY
EFFECT OF ENGINE PARAMETERS (IT, IOP, CR) ON BIODIESEL FUELLED
COMPRESSION IGNITION ENGINE**

Project Report submitted in partial fulfillment of the requirement for the degree of

**Bachelor of Engineering in
Mechanical Engineering**

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ABSTRACT

The diminishing resources and continuously escalating cost of petroleum fuels in association with the alarming pollution levels from diesel engines has caused an interest in searching suitable alternative fuels to diesel engines.

Vegetable oils are renewable by nature and the non-edible category of such an oil can be used as an alternate fuel to C.I. engines. In this project Honge oil being locally and abundantly available, is selected as an alternative fuel. The biodiesel of Honge oil called HOME was procured and its properties were tested on a single cylinder diesel engine for different engine parameters of injection timing (IT), injector opening pressure (IOP), and different design of combustion chambers. Finally, its performance and emission characteristics were evaluated and compared with that of pure diesel and it was found to be an effective alternative fuel with comparable emission characteristics.