"CONTROL & MONITORING OF DIESEL GENERATOR USING MICROCONTROLLER"

SPONSORED BY

KARNATAKA STATE COUNCIL FOR SCINCE AND TECHNOLOGY

PROJECT REPORT

In partial fulfillment of the requirements for the Award of the degree of

"BACHELOR OF ENGINEERING"
IN
"ELECTRICAL & ELECTRONICS ENGINEERING"

Submitted By

CHETHANA H.B.
(4AI06EE400)

RAJITH T.R.
(4AI06EE402)

SURESHA M.
(4AI06EE404)

SYED YUSUF
(4AI05EE404)

UNDER THE GUIDENCE OF

Mr. B.KANTHARAJ B.E., M.E., L.M.I.S.T.E.,
Asst.Prof, Dept. of E&E Engg.
A.I.T, Chikmagalur

DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENGINEERING

ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY
(Affiliated to Visvesvaraya Technological University, Belgaum)
CHIKMAGALUR-577102

2008-2009

ABSTARCT

Today we are facing a power crisis due to increasing power demand which is due to increasing population and industrialization. In India major source for power generation is conventional energies in particularly thermal, hydro, which is highly uncertain in nature. Hence it quite difficult for the government to meet the increasing power demands every year, resulting in power cuts, but this is highly objectionable in hospitals, industries and in commercial utilization.

Hence we have to depend on generator sets run by diesel engine to meet power cuts. But when the power goes to start the generator set sometimes it is required to be started manually. Hence in this project we made an attempt to overcome this difficulty and the result is automatic starting, controlling and monitoring of generator set.

Here, during block out period, the generator is started automatically with some time delay, similarly the generator is stopped automatically when the power is restored and also the various parameters of diesel generator and load is monitored and display their values in real time.

In this project we designed a circuit which is based on the microcontroller P89V51, ADC and driver circuit to operate high current hardware parts such as contactors, cranking relay and fuel cutoff valve. Another important feature of this project is the controller circuit communicates with external computer via RS232 cable using UART and it displays various parameters of diesel generator and load. Currently this project is designed for 75KVA Diesel Generator and this can be applied to any capacity by changing only contactors of particular capacity.