A PROJECT REPORT [06ME85]

ON

EXHAUST MONITORING AND CONTROL UNIT FOR PORTABLE GENERATOR ENGINES

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ABSTRACT

Stationary reciprocating internal combustion engines are widely used around the world in a variety application including natural gas production, natural gas transmissions, power generations ,combined heat and power generation, pumping, and carbon dioxide production for green houses.this engines can spark ignited or compression ignited. As demand for distributed generation of electricity increases, stationary engines have been found to be very reliable for prime power, backup or emergency standby power and for peak power.

Exhaust gases , due to incomplete combustion of fuel in diesel engine results in formation carbon mono-oxide, NO_x, SO_x, particulate matter, soot and smoke. These products of incomplete combustion are reduced by various methods such as exhaust gas recirculation , catalytic converters, ammonia injection method ,particulate traps etc

Present methods of reduction of emissions, not only require change in the engine design but also decrease the efficiency and power output of engine, with the increase in concerns on environmental pollution and health of peopleThe norms on emissions are more stringent.

Theproject is mainly concerned with the reduction of effects caused by emissions bydiesel engine in its vicinity and also concerned with the application in underground mines and generators infront of shop.This project comprises of ***exhaust chamber ,baffle plate, particulate trap, air supply unit,*** by this the back pressure of the exhaust gases must be less . it will accommodate the small levels of back pressure and which can run with lean mixture.Indication systems are also planned within the system

Comparative study has been done with and without exhaust chamber .The results have shown that the concentration levels have been reduced.