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INVESTIGATIONS ON LEAN BURN SPARK IGNITION ENGINE USING HIGH INTENSITY SPARK PLUGS

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Abstract

Experiments were conducted to determine the performance characteristics of a single cylinder four-stroke S.I Engine using various spark plugs like conventional short reach plug, platinum tipped plug, extended multi-electrode plug and extended multi-electrode plug with Platinum- Iridium (Pt-Ir) coating. A high energy 12 volts battery spark ignition system with provision for spark retard was incorporated. The characteristics of various spark plugs with respect to engine performance, emissions and lean misfire limit have been investigated. Maximum Brake Torque (MBT) conditions were maintained while noting the performance characters, which were around 25^0 before top dead center (BTDC).

Keywords: High compression ratio, spark plugs, peak pressure, emissions.

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