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Biodiesel Is an Alternative Fuel for CI Engines

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Abstract : At this time when society is becoming increasingly aware of the declining reserves of fossil, it has become apparent that biodiesel is destined to make a substantial contribution to the future energy demands of the domestic and industrial economies. In this regard, the significance of biodiesel is technically and commercially viable alternative to fossil-diesel. There are different potential feed stocks for biodiesel production. This paper analyses the performance, combustion and emission characteristics of biodiesel from different feed stocks. Biodiesel fuel is considered as offering many benefits like reduction of greenhouse gas emissions and many harmful pollutants (PM, HC, CO etc.). This paper critically reviews the effect of injection timing on combustion and emission characteristics. An attempt has been carried out to discuss the effect of biodiesel in terms of combustion, emission and performance based up on composition and properties. The results of the study show that different chemical composition leads to variation in its combustion, performance and emission characteristics. Biodiesel produced from different aspired feed stocks reduces the pollutant emission and resistive to oxidation but exhibit poor atomization. As a conclusion many research needs to be carried out to understand the relationship between the types of biodiesel feed stock, performance conclusion and emission.

Keywords : atomization, biodiesel, greenhouse gas, oxidation
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