عنوان مقاله:

Analytical study of biodiesel spray characteristics under high injection pressure

محل انتشار:

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خلاصه مقاله:

Performance and population characteristic of compression ignition engines depend strongly on spraybehavior. In this study, the dynamic of biodiesel fuel is characterized by using analytical and empirical correlation. Effect of high pressure injection (100, 200, 300 MPa) on spray structure (penetration, angle and volume of spray) is measured and discussed for two situations having different densities. Increasing injection pressure leads to an increase in exit velocity. Spray tip penetration and volume under small ambient density are longer and larger, respectively compared to the high density condition. Increase of injection pressure is followed by an enhancement in spray tip penetration but spray angle is not so much influenced by injection pressure.Also, air entrainment is analyzed with the quasi-steady jet theory. The computed parameters at the nozzle exit were compared with experimental results

کلمات کلیدی:

Biodiesel, Spray characteristics, High pressure