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# Experimental investigation on engine performances, combustion characteristics and emission of exhaust gases of VCR engine fuelled with cottonseed oil methyl ester blended with diesel

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51 bar,  
higher H<sub>tr</sub> is observed as 10.12 %/deg. increase in H<sub>tr</sub> is obtained as 0.07 % for B30 at

BMEP of 4.64 bar when compared to diesel. Ignition delay decreased by 13.16% for B100, by the increment of blend proportions when compared to diesel, at BMEP of 4.64 bar. Lower smoke, HC and CO emissions are observed when increasing the blend proportions, whereas the nitric oxide emissions increases due to the better combustion resulted in higher temperatures. At BMEP of 4.64 bar, the CO emissions are reduced to 25.24% for neat biodiesel when compared with the diesel.

KEYWORDS: Cottonseed oil methyl ester cylinder pressure emission heat release rate VCR Engine

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