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Emission characteristics of diesel engine fuelled with biogas and *n*-propanol-biodiesel-diesel blend under dual fuel mode

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Abstract : Experimental work focuses on utilizing *n*-propanol-biodiesel-diesel blend as pilot fuel for biogas operated dual fuel diesel engine. The engine performance and emissions characteristics of dual fuel mode were analysed and compared with conventional diesel fuel. It is inferred from the test results that NO_x-smoke opacity emission were drastically reduced under dual fuel mode as compared to diesel. The higher HC emission level was noticed with biogas-diesel under dual fuel mode as compared to diesel operation. The utilization of oxygenated additives such as *n*-propanol and biodiesel improves the emissions characteristics from diesel engine. However, BTE were found to be lower under dual fuel mode as compared to diesel mode.
Keywords : Biogas; HC; dual fuel; NO_x; CI engine; emission.

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