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Modelling and simulation of spark ignition engine using water addition and validated through experimental investigations (Conference Paper)

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Abstract

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A four-stroke cycle, 4-cylinder gasoline engine (CAMPRO engine) with and without water addition to the working substances is modelled and simulated successfully using GT SUITE software and validated through experimental investigations. GT Power, one of the servers of GT SUITE is used to simulate the CAMPRO engine. CAMPRO engine is manufactured by the Malaysian Automotive Manufacturer PROTON. The main objective of this work is to find ways to reduce NOX emission from an SI engine without much sacrificing the performance of the engine. The generation of NOx emissions is a function of the combustion temperature, highest near stoichiometric condition when the temperature is at the peak value. Overall result indicates that water addition leads to an increase of the performance of the engine and a reduction of the emission produced by the engine.

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CAMPRO GT SUITE Modelling Simulation Validation Water Addition

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