

LPG/柴油双燃料发动机性能试验 Engine Performance Employed Diesel/LPG Dual Fuels

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摘要: 通过加装液化石油气(LPG)供给系统和设计LPG电控多点喷射系统,对295T型直喷柴油发动机进行了改装,并在相同条件下,以改装后的发动机为试验装置,分别燃用柴油和LPG/柴油双燃料进行了台架性能试验。试验结果表明:LPG/柴油双燃料发动机的动力性能比原机动力性能有较大幅度提高,经济性明显改善。LPG/柴油双燃料发动机的排放性能与原机相比:Nox排放量有一定减少;CO排放量和原机接近;HC排放量在低负荷阶段增加较多,而在高负荷阶段接近。The systems including an electronic control unit (ECU), liquefied petroleum gas (LPG) supply system and LPG electronic control injection system were developed, by which a 295T DI diesel engine was successfully refitted. Subsequently, taking respectively diesel oil and LPG / diesel as fuel, under the same condition, performance tests of the modified engine were carried out. Results indicated that the refitted engine's power performance increased in a quite big range, economy performance became better, and Nox emission was lower; the CO level is closed to that of the prototype diesel engine; but the HC emission level was higher in low load stage and was lower in full load stage compared with prototype diesel engine. The research results also prove that our refitting scheme is feasible.

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