预热对电控喷射甲醇发动机冷起动着火特性的影响

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摘要 针对电控喷射点燃式甲醇发动机低温起动困难的问题,研究了进气预热、燃油预热和电热塞预热几种辅助预热方式对点燃式甲醇发动机冷起动着火特性的影响, 并对几种预热效果进行了评价。研究结果表明,进气预热和燃油预热均不能保证甲醇发动机冷起动可靠着火, 采用电热塞预热可保证甲醇发动机低温下可靠起动。

关键词 动力机械工程,电控喷射,甲醇发动机,冷起动,预热,着火特性

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Effect of preheating on firing behavior of an electronically controlled injection methanol engine during cold start

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Abstract To overcome the difficulty of the cold start in the electronically controlled injection spark ignition methanol engine at low ambient temperatures, the effects of several auxiliary heating measures, including the intake air preheating, the fuel preheating, and the glow plug preheating on the firing behavior of the engine were investigated experimentally and then the results were evaluated. The results show that both the intake air preheating and the fuel preheating can not assure the reliable firing of the methanol engine during the cold start, but the glow plug will do.

Key words power machinery and engineering electronically controlled injection methanol engine; cold start preheating firing behavior

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