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## 超燃冲压发动机燃烧效率取样探针设计

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### The Design of Combustion Efficiency Sampling-Probe in Scramjet Engine

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- 摘要
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**摘要** 分析了超燃冲压发动机燃烧效率取样探针设计的技术难点,设计了一个超燃冲压发动机燃烧效率取样靶子,对取样探针的流场特性、燃气化学反应在探针中的快速冻结等进行了分析,所设计的取样靶子由16个取样探针组成,与取气瓶、色谱仪等配套使用,可测量超燃冲压发动机的燃烧效率。

**关键词:** 燃烧效率 超燃冲压发动机 燃气分析 取样探针

**Abstract:** Key technology in the design of combustion efficiency sampling-probe of scramjet engine was analyzed. A water-cooling sampling-rake with sixteen-point sampling-probe was designed and made. Flow character, chemical reaction frozen in the probe and the availability of the system was analyzed. This sampling analysis system can be used to test the combustion efficiency of scramjet engine.

**Key words:** combustion efficiency scramjet engine sampling analysis sampling-probe

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