

MATERIALS AND STRUCTURES SYMPOSIUM (C2)  
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Author: Mr. Ai Bang cheng  
China, siyuanbuaa@163.com

THERMAL PROTECTION TECHNIQUE ADVANCE IN RESEARCH OF HYPERSONIC VEHICLE  
SHARP LEADING EDGE

**Abstract**

The sharp leading edge of scramjet endure long and severe thermal environment, which makes the thermal protection technique on the sharp leading edge to be the key technique. The leading thermal protection technique was developed and the latest technique advance of leading thermal protection was introduced. The design method of leading thermal protection for sharp leading edge was introduced. The sharp leading edge leading thermal protection structure was designed, fabricated and tested. The results indicated that the application of leading thermal protection technique for sharp leading edge can reduce the temperature of the stagnation point, reduce the thermal stress of the leading edge.