

论文

MAXIMUM PRINCIPLE FOR THE OPTIMAL CONTROL OF AN ABLATION-TRANSPIRATION COOLING SYSTEM

SUN Bing(1), GUO Baozhu(2)

(1)Institute of Systems Science, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing 100080,China; Graduate School of the Chinese Academy of Sciences,Beijing 100049, China;(2)Institute of Systems Science, Academy of Mathematics and Systems Science, Ch

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摘要 This paper is concerned with an optimal control problem of an

ablation-transpiration cooling control system with

Stefan-Signorini boundary condition. The existence of weak

solution of the system is considered. The Dubovitskii and Milyutin

approach is adopted in the investigation of the Pontryagin's

maximum principle of the system. The optimality necessary

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关键词 [Ablation-transpiration cooling process.](#)

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Abstract This paper is concerned with an optimal control problem of an ablation-transpiration cooling control system with Stefan-Signorini boundary condition. The existence of weak solution of the system is considered. The Dubovitskii and Milyutin approach is adopted in the investigation of the Pontryagin's maximum principle of the system. The optimality necessary condition is presented for the problem with fixed final horizon and phase constraints.

Key words [Ablation-transpiration cooling process](#) [Stefan-Signorini problem](#) [weak solution](#) [optimal control](#) [ma](#)

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