航空学报
ACTA AERONAUTICA ET ASTRONAUTICA SINICA
ISSN 1000-6893
CN 11-1929/V



航空学报 » 1996, Vol. 17 » Issue (5) :110-113 DOI:



# 机轮制动力矩的变结构控制

张陵[1], 诸德培[2], 张瑜[2]

1. 西安交通大学工程力学系, 西安, 710049;2. 西北工业大学飞机系, 西安, 710072

# VARIABLE STRUCTURAL CONTROL OF BRAKING MOMENT

Zhang Ling[1], Zhu Depei[2], Zhang Yu[2]

1. Dept.of Engineering Mechanics,Xi'an Jiaotong University,Xi'an, 710049;2. Dept.of A ircraft Engineering ,Northw estern Polytechnical University,Xi'an, 710072



摘要 从力学与非线性控制理论综合应用的观点出发，对机轮滑行制动过程中制动力矩的控制问题进行了理论分析与研究，提出了一种新的制动力矩加、卸载解析条件表达式。通过对机轮制动时机轮－地面系统力学模型的动力学仿真，定性地描述了具有此种制动力矩控制方式的防滑制动系统动态特性

关键词： 防滑制动系统 制动力矩 变结构控制

Abstract： Based on the view of combining nonlinear mechanics with modern control theory, a study is carried out on the control of braking moment for a wheel and tyre during its taxiing and braking. A new analytical expression is proposed for the increasing or decreasing condition of braking moment . With the dynamic simulation on the mechanical model described in the paper, the dynamic properties of the antiskid braking system(ABS) on the condition as stated above are illustrated qualitatively .

Keywords： antisk id braking system braking momene variable structural control

Received 1994-12-09; published 1996-10-25



引用本文:

张陵;诸德培;张瑜. 机轮制动力矩的变结构控制[J]. 航空学报, 1996, 17(5): 110-113.

Zhang Ling;Zhu Depei;Zhang Yu. VARIABLE STRUCTURAL CONTROL OF BRAKING MOMENT[J]. Acta Aeronautica et Astronautica Sinica, 1996, 17(5): 110-113.