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# 静电加速器中输电带张力与转速的最佳关系

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**摘要** 采用输电带的静电加速器运行时，一般通过调节输电带张力来减小输电带的抖动。本工作采用一个简化的计算模型，导出输电带在运行过程中发生抖动的基本规律。结果表明：输电带张力、输电带所带电荷密度和输电带的转速间存在一使输电带抖动最小的最佳关系。

关键词 输电带 振动 张力
分类号 TL52

## The Optimal Relation Between Belt's Tension and Velocity in an Electrostatic Accelerator

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**Abstract** The vibration of the charging belt is reduced by adjusting the belt's tension while an electrostatic accelerator is running. The paper presents a simple calculation model to derive the basic law of the vibration of the charging belt. The results show that the tension is relevant to the belt's charge and velocity, and exist an optimal relation between the belt's tension and velocity by which the vibration will be reduced to the least. Calculation is carried out and applied to the faci lity. The effects are rather good.

**Key words** charging belt vibration tension

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通讯作者

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