ON THE CONTROLLABILITY OF LAMINATED BEAMS WITH VENTTSEL-TYPE BOUNDARY CONDITIONS

ABSTRACT

This work examines the boundary controllability of a Timoshenko laminated beam system subject to Venttsel-type boundary conditions. The controllability is established through the derivation of a suitable observability inequality for the adjoint system, which is then utilized within the framework of the well-known Hilbert Uniqueness Method (HUM) from control theory. To obtain the observability inequality, we employ a combination of techniques from semigroup theory, refined spectral analysis and by contradiction following the so-called "compactness-uniqueness" argument of Zuazua.

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