

TORSIONAL RESONANCE SUPPRESSION VIA POLE-ZERO ASSIGNMENT

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ABSTRACT

Torsional resonance in a 2-mass rotary system is suppressed via active compensation. To achieve this requires two compensators namely forward or input and feedback compensators. The former provides desired performance of the overall system. The latter suppresses resonant behaviour of and stabilizes the system. The design approach is transfer function synthesis based on pole-zero assignment. The CB-segment method is applied for testing stability. The test result confirms stability robustness.

KEY WORDS

torsional resonance, active compensation, pole-zero assignment, robustness, 2-mass rotary system.