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(57) Abstract :
The invention discloses a device for automated tuning of vibration dampers in bridges comprising sensors (101), actuators (102), a control unit (103), and a vibration damper assembly (104). The sensors monitor real-time structural vibrations, transmitting data to the control unit (103), which processes vibration characteristics and dynamically adjusts damper parameters through actuators (102). This ensures continuous optimization of vibration control under variable loading conditions. The system enhances structural safety, reduces manual maintenance, and provides remote monitoring capabilities, offering a reliable solution for modern bridge engineering.

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