

사장 케이블의 시간영역에서의 공기역학적 해석 Time Domain Aerodynamic Analysis of a Stay Cable

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Abstract : Time domain aerodynamic analysis of a stay cable is conducted to evaluate the performance of the nonlinear friction damper. Aerodynamic forces including the three components of static, buffeting and self-excitation are derived based on the airfoil aero-elasticity theory, and the effect of each component is analyzed. Derived aerodynamic forces are converted into the generalized form of the cable dynamic equation, which includes the effect of the sag. Finally the performance of the nonlinear friction damper is compared with the conventional linear viscous damper.