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# Vortex Shedding-Induced Fatigue Analysis for High-Mast Lighting Towers

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## Abstract

The high-mast lighting towers that are subjected to cyclic wind loadings (due to vortex shedding action) tend to fail due fatigue failure. From past studies, based on the testing and finite element analysis, it was found that geometry of the mast arm and base connection are highly influencing on the fatigue performance of the high-mast lighting towers, and also, the design of this wind sensitive structures is mainly governed by wind-induced fatigue. This study investigates the wind-induced fatigue behavior of high-mast lighting towers under the effect of mast arm wall thicknesses and base connection geometry