

method has high accuracy and practicality on the research of vortex-induced vibration suppression of streamlined box girder.

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REFERENCES

- JTG/T D 60-01. (2004), "Wind-resistant Design Specification for Highway Bridges", Beijing: China Communications Press. (in Chinese).
- Larsen, A., Savage, M., Lafrenière, A., et al. (2008), "Investigation of vortex response of a twin box bridge section at high and low Reynolds numbers", *Journal of Wind Engineering and Industrial Aerodynamics*, **96**(6), 934-944.
- Li, Y. L., Hou, G. Y., Xiang, H. Y., Zhou, P., Liao, H. L. (2011), "Optimization of the vortex induced vibration for steel box girder of long span suspension bridges by wind tunnel test", *Acta Aerodynamica Sinica*, **29**(6), 702-708.
- Liu, J. X. (1995), "Vortex induced vibration and its control in responses of bridge to wind", *China Journal of Highway and Transport*, **8**(2), 74-79.
- Menter, F. R. (1994), "Two-equation eddy-viscosity turbulence models for engineering applications", *AIAA Journal*, 1994, **32**(8), 1598-1605.
- Sarwar, M. W., Ishihara, T. (2010), "Numerical study on suppression of vortex-induced vibrations of box girder bridge section by aerodynamic countermeasures", *Journal of Wind Engineering and Industrial Aerodynamics*, **98**(12), 701-711.
- SUN, Y. G., Liao, H. L., Li, M. S. (2012), "Mitigation measures of vortex-induced vibration of suspension bridge based on section model test", *Journal of Southwest Jiaotong University*, **47**(2), 218-223.
- Thijs, D., Bert, B., Erwin, K., et al. (2010), "Aerodynamic study of different cyclist positions: CFD analysis and full-scale wind-tunnel tests", *Journal of Biomechanics*, **43**(7), 1262-1268.
- Xian, R., Liao, H. L., Li, M. S. (2008), "Calculation of spanwise vortex-induced vibration responses of long-span bridge girder", *Journal of Southwest Jiaotong University*, **43**(6), 740-746.
- Xian, R., Liao, H. L., Li, M. S. (2009), "Analysis of vortex induced vibration of large-scale section model of girder in wind tunnel", *Journal of Experiments in Fluid Mechanics*, **23**(4), 15-20.
- Xu, H. T., Liao, H. L., Li, M. S., He, Y. (2009), "Wind tunnel test study of sectional model of Baling River Bridge", *World Bridges*, **30**(4), 30-33.
- Zan, S. J. (1987), "The effect of mass wind angle and erection technique on the aeroelastic behaviour of a cable-stayed bridge model", *NAE-AN-46*, NRCC.
- Zhu, S. Y., Li, Y. L., Shen, J. X., Zhang, Y. (2015), "Optimization of vortex-induced vibration of flat steel box girders at large attack angle by wind tunnel test", *China*

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