



Aerodynamic Stability of Bluff Afterbodies

By Md Gholam Yazdani

LAP Lambert Acad. Publ. Jul 2011, 2011. Taschenbuch. Book Condition: Neu. 220x150x9 mm. Neuware - Most of the structures are designed for load and aesthetic purpose. The aerodynamic design of structures are secondary design criteria. As such mostly the structures are made as sharp cornered body or bluff body shape. Since the structures are made with stronger and lighter materials, they are susceptible to flow induced vibration. In this book aerodynamic stability, specially galloping, stability of some bluff bodies is discussed. Galloping is a flow induced vibration characterised by a high amplitude and low frequency oscillation. The afterbody shapes which are discussed for the galloping oscillation are a Square, two trapezium and a triangle. All the above shapes are generated from square cylinder. Square cylinder is known to be susceptible to galloping oscillation. Fro that reason, square cylinder is added in this discussion to calibrate the experimental set-up. From the wind tunnel experiment, it has been found that besides the sign of slope of the angle of attack versus the normal force coefficient, its magnitude plays an important part in deciding the galloping stability. Water tunnel flow visualization is also included to explain the physics of flow. 152 pp. Englisch.



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