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Nota di contenuto	<ul> <li>Front Cover; Flow-Induced Vibrations: Classifications and Lessons from Practical Experiences; Copyright Page; Contents; Preface; 1</li> <li>Introduction; 1.1 General overview; 1.1.1 History of FIV research; 1.1.2</li> <li>Origin of this book; 1.2 Modeling approaches; 1.2.1 The importance of modeling; 1.2.2 Classification of FIV and modeling; 1.2.3 Modeling procedure; 1.2.3.1 Simplified treatment; 1.2.3.2 Detailed treatment;</li> <li>1.2.4 Analytical approach; 1.2.5 Experimental approach; 1.2.5.1 Test facilities; 1.2.5.2 Similarity laws; 1.2.5.2.1 Structural model; 1.2.5.2.2 Fluid model</li> <li>1.3 Fundamental mechanisms of FIV1.3.1 Self-induced oscillation mechanisms; 1.3.1.1 One-degree-of-freedom system; 1.3.1.2 Two- degrees-of-freedom system; 1.3.1.3 Multi-degrees-of-freedom system; 1.3.2 Forced vibration and added mass and damping; 1.3.2.1 Forced vibration system; 1.3.2.2 Added mass; 1.3.2.3 Fluid damping; References; 2 Vibration Induced by Cross-Flow; 2.1 Single circular cylinder; 2.1.1 Structures under evaluation; 2.1.2 Vibration mechanisms and historical review; 2.1.2.1 Vibration mechanisms; 2.1.2.1.1 Bending</li> </ul>

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Sommario/riassunto	In many plants, vibration and noise problems occur due to fluid flow, which can greatly disrupt smooth plant operations. These flow-related phenomena are called flow-induced vibration. This book explains how and why such vibrations happen and provides hints and tips on how to avoid them in future plant design. The world-leading author team doesn't assume prior knowledge of mathematical methods and provides the reader with information on the basics of modeling. The book includes several practical examples and thorough explanations of the structure, the evaluation method