



Holger Svensson

CABLE-STAYED BRIDGES

40 Years of Experience
Worldwide

WILEY-BLACKWELL

Ernst & Sohn
A Wiley Company

TEKSTI professori Aarne Jutila

Unique & useful

Review of Prof. Dipl.-Ing. Holger Svensson's book "Cable-stayed Bridge. 40 Years of Experience Worldwide"

The book consists of 7 main chapters. **Chapter 1**, 30 pages, introduces the fundamentals and aesthetic guidelines for bridge design. In this chapter very valuable comments on collaboration between architects and engineers, and the importance of a majority of engi-

neers in a bridge design competition jury, are presented.

Chapter 2, 94 pages, discusses the development of cable-stayed bridges. All types of cable-stayed bridges – steel, concrete, composite and special systems are covered. In **Chapter 3**, 46 pages,

es, different types of cables and anchorages, as well as cable sizing, dynamics and installation, are presented.

Chapter 4, 104 pages, is the largest one in the book. It discusses the preliminary design of cable-stayed bridges including action forces, dynamics, ship collision and design calculations. All essential equations for analysis are presented in simple ways and illustrated by numerical examples. Especially good is the section where wind actions and the basic theory behind is presented in an instructive way.

In **Chapter 5**, 36 pages, construction of cable-stayed bridges is presented and different construction methods are thoroughly discussed. In **Chapter 6**, 100 pages, a great number of realized bridges are presented, and detailed information on construction phases is given.

Finally, in **Chapter 7**, 2 pages, the future of cable-stayed bridges is briefly anticipated. On the last few pages there is a list of bridges discussed in the book, a comprehensive list of 337 references and a list of figure origins. The very last pages are devoted to the author's personal 40 years experience.

As a whole, the book is unique, instructive and certainly interesting and useful for both bridge engineers and students. The lifelong experience of the author with practical bridge design and construction can be seen clearly throughout the book.

For Finnish readers it is interesting to note that four Finnish bridges are mentioned or even discussed in detail: Lumberjack's Candle Bridge (Jätkänpöytä, Rovaniemi), Raippaluoto Bridge, Tähtiniemi Bridge (Heinola) and Saame Bridge (Utsjoki). Furthermore, a short CV and picture of Esko Järvenpää is also included.

Published 2012 by Ernst & Sohn GmbH & Co. KG.

Size A4. 454+18=472 pages. 18 tables. 1284 figures. Two DVD discs attached. ■