Book review

Highway Engineering-Pavement, Materials, and Control of Quality

Athanassios Nikolaides. CRC Press, Taylor & Francis Group, Boca Raton, FL, USA, 2015, ISBN 978-1-4665-7996-5, £69.00, 825 pp. + index

As a reader, I find *Highway Engineering-Pavement, Materials, and Control of Quality* is a complete book covering all aspects of road pavements – from constituent materials, to design and maintenance; management to recycling. The author has taken a great care in giving an appropriate balance between theory and practice. This book will be a valuable resource for civil engineering students as well as researchers and practitioners working in asphalt and pavement engineering. As a bonus, readers will also find in-depth explanations of major standards from the USA, UK, EUROPE and Australia on material characterisation, design, and management.

The first seven chapters of the book deal with the constituent materials such as soil, aggregate and bitumen, together with design for different types of asphalt mixture. The comprehensive accounts with ample pictures, images, charts, and tables will enable the reader to gain an in depth knowledge.

In the author's opinion, the dedicated chapters on production, transportation and compaction (chapter 8) and quality control

(chapter 9) will be of great use to everyone involved in this area. The breakdown of activities with descriptions of the methods, inspection and test requirements for quality control are illustrated in detail. The presentation is simple and easy to follow, which is excellent in comparison with other major books available on this theme.

Chapters 10 to 14 cover layer descriptions of pavements, pavement analysis, traffic assessment and pavement design. A significant number of figures, formulae and tables are used to explain the concepts in detail. However, it would have been useful to have included a few examples on each of these topics.

In the author's opinion, the most comprehensive part of this book is the assessment, maintenance, and rehabilitation sections presented in chapters 15 and 16. They provide an in-depth explanation of pavement distress, and their causes/failure mechanisms, diagnostics and prognosis techniques as well as appropriate maintenance and rehabilitation strategies. The pavement management in chapter 16 is a natural flow of the theme from chapter 15. The book ends with a chapter on pavement recycling (chapter 17) which is very useful as there is lack of any text/reference book on this emerging issue.

Mujib Rahman