Book review

Design in Modular Construction

M. Lawson, R. Ogden and C. Goodier. CRC Press, Taylor & Francis Group, Boca Raton, FL, USA, 2014, ISBN 978-0-415-55450-3, £60.00 hbk, 280 pp.

The authors bring together expertise in modular design, light steel structural design and concrete structural design to create a comprehensive reference book for modular construction, which focuses primarily on the design of volumetric units. This book sets out the economic and environmental case for this mode of design and construction, by discussing the balance of savings made through off-site construction and the resources needed to establish the production lines required. It details the important design regulations and requirements for specific markets where this type of construction has been successfully applied, such as different types of housing units, schools, hospitals and prisons.

Over the past few years there has been a developing interest in this mode of construction. However, the idea of increasing as much as possible off-site construction to reduce on-site fabrication, achieve production consistency and reduce waste is not a new one. This idea has its origins in the industrial revolution, resulting in the standardisation of components to

enable efficient mass production. The components under question have become increasingly complex over time, moving from the mass production of single construction and structural elements to two-dimensional panels and frames, and now volumetric modules, which can require all the expertise required to design complete buildings. In addition, as the assemblies of elements get larger and more complex, the need to design for easy transportation and installation forms an increasingly critical requirement.

With over 40 case studies that illustrate different applications of factory-produced volumetric units, the authors demonstrate the perhaps surprising capacity for modular construction to be used to create diverse, flexible and adaptable designs that can respond sensitively to both site and function.

Modular design and construction intensifies the normal relationship between architectural design, structural design, building physics, manufacturing processes, transportation requirements and installation strategies. *Design in Modular Construction* reflects this multidisciplinary design requirement by bringing together all these aspects in an accessible and holistic manner.

Rachel Cruise