This book was written for the Canadian Design and Construction markets to aid in the effective use of masonry as a modern form of construction. It is intended for use by senior undergraduate students, graduate students, and practicing designers. The majority of the content relates to structural applications, but there is substantial information related to planning, building materials, the building envelope, and construction that is of direct interest to architects and builders. Those familiar with basic reinforced concrete design may more readily understand the material related to structural design content.

This comprehensive coverage of masonry extends from ancient forms of construction to current usage. It provides a broad introduction to design involving planning, materials science, structural design with explanation of design load requirements, building envelope design, and construction related issues. This fundamental behaviour of masonry is covered in this textbook and is the basis upon which design in accordance with CSA S304.1-04 "Design of Masonry Structures" is introduced. A copy of the CSA S304.1-04 Standard is included at the back of the book. The authors’ extensive and detailed involvement with writing of this and other referenced CSA masonry standards provides unique insight into how they are applied. Applications are further explained with the aid of detailed design examples.

To reflect the significant changes to the seismic provisions of the National Building Code of Canada, this textbook has extensive coverage on effective design for the increased seismic loading.

Topics include:
Ancient masonry construction
Modern usages of masonry
Building design including loading requirements
Building envelope design for fire, acoustic, thermal and moisture considerations
Masonry materials
Behaviour of masonry assemblages
Reinforced beams and lintels
Flexural walls and arching
Walls under axial load and out-of-plane loading
Columns and pilasters
Shear walls
Infill walls and partitions
Masonry veneer and cavity walls
Construction considerations
Design methods for single-storey and multistorey buildings
Detailed design examples of a single-storey and a ten-storey load bearing building
FRENCH S304.1-04 STANDARD INCLUDED SEPARATELY