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Titolo	Modern construction handbook // Andrew Watts
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Descrizione fisica	1 online resource (505 p.)
Disciplina	690
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Modern Construction Handbook -- Frontmatter -- Contents -- Introduction -- Introduction to fourth edition -- Structure and envelope -- Parametric design -- 1. Materials -- Steel -- Aluminium -- Copper, zinc, lead -- Stone -- Glass -- Concrete -- Fibre reinforced concrete -- Ceramics -- Timber -- Polymers -- Material testing -- 2. Walls -- Trends in facade design -- Generic wall types -- Metal -- Glass systems -- Concrete -- Masonry -- Fibre reinforced polymers -- Timber -- 3. Roofs -- Trends in roof design -- Metal roofs -- Glass roofs -- Concrete roofs -- Timber roofs -- Fibre reinforced polymer roofs -- Fabric systems -- 4. Structure -- Material systems for structures -- Elements of structures -- Braced frames -- Portal frames -- Loadbearing boxes -- Trusses -- Arches and shells -- Space grids -- Floor structures -- Stairs -- 5. Environment -- Environmental studies for envelopes -- Analysis for design -- Low energy material systems -- Active design -- Support services -- Performance testing of facade material systems -- Performance testing of roof material systems -- 6. Applications -- 1 Working with industry: manufacturers and fabricators -- 2 Triangular panels for twisted facades -- 3 Twisted panels with flat glass for curved facades -- 4 Solar shading louvres -- 5 Double-skin facades -- 6 Precast concrete panels for facades of complex geometry -- 7 Exoskeleton facades of complex geometry -- 8

Diagrid structures -- 9 Hybrid systems forming facades of complex geometry -- 10 Opaque cladding interface with full-height glazing -- 11 Complex curved glazed roofs -- 12 Large-scale glazed facades -- 13 Panelisation of complex building surface geometry -- 14 Opaque rainscreen cladding -- 15 Full-height glazing with GRP-clad structural frame -- 16 GRC cladding interfaces -- 17 Full-height entrance glazing -- 18 GRP louvres on stick glazing system -- 19 GRC cladding -- 20 Windows in GRC cladding -- 21 Windows and unitised glazing with GRC cladding -- 22 Unitised glazing with GRC cladding -- 23 Complex glazed roofs with supporting steel structure -- 24 Glazed roofs with complex geometry -- 25 Louvres and stick glazing -- 7. References -- Glossary of terms -- Authorship -- Photo credits -- Index -- Backmatter

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## Sommario/riassunto

Das „Modern Construction Handbook“ hat sich zu einem Klassiker der Baukonstruktions-Literatur entwickelt. In den USA ist es die Grundlage vieler Architektur-Studiengänge. Systematisch erschließt es in den Kapiteln „Material“, „Wand“, „Dach“, „Tragwerk“, „Umwelt“ und „Anwendungen“ die Materie und ermöglicht dem Leser eine effiziente und klare Orientierung. Für die vierte Auflage wurde ein Großteil der 3D Darstellungen aktualisiert, ebenso sind die technischen Informationen auf den neuesten Stand gebracht. „Anwendungen“ zeigt aktuelle Entwicklungen, etwa über die individualisierte Fabrikation von Bauteilen, und stellt Konstruktions- und Materialinnovationen vor. Ein kompaktes, systematisches, mit Informationen prall gefülltes Handbuch, das sich an Studenten wie an junge Praktiker richtet. Modern Construction Handbook has become a modern classic of building construction literature. In the USA, it is used as a reference work for many architectural courses. With the chapters "Material", "Wall", "Roof", "Structure", "Environment" and "Applications" it systematically explores the subject and provides a clear and efficient structure to the reader. For the fourth edition, many of the 3D illustrations have been updated and, likewise, the technical information has been brought up to date. "Applications" showcases current developments, such as those relating to mass customization manufacture of components, and presents material and construction innovations. A compact and systematic handbook filled with information, produced for students and young architects alike.

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