Record Nr. UNINA9910299620203321 Autore Bahadurinizhad Mahdi **Titolo** Wind Towers: Architecture, Climate and Sustainability / / by Mehdi N. Bahadori, Alireza Dehghani-sanij, Ali Sayigh Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-05876-2 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (218 p.) 621.042 Disciplina 697.9 Soggetti Renewable energy sources Architecture Building Renewable and Green Energy Architecture, general **Building Construction and Design** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Introduction -- The History of Baudgeers -- The Architecture of Baudgeers -- An Analytical - Numerical Study of the Performance of Conventional Wind Towers -- An Analytical - Numerical Study of the Performance of New Designs of Wind towers -- Performance Evaluation of New Designs of Baudgeers Compared to the Conventional Ones --Designing, Constructing and Testing Conventional Baudgeers and New Designs -- Conclusions and Recommendations -- Pictures of Baudgeers. Sommario/riassunto This unique volume provides the only holistic treatment of wind towers, a core aspect of sustainable architecture in hot, arid climates. The authors explain how traditional incarnations of these structures

provide significant decreases in energy consumption through their use of renewable wind resources to cool buildings and water storage facilities. Beginning with the underlying scientific principles, the design and operation of wind towers is explained in depth, and suggestions

for optimization are provided, supported by the authors' findings from recent analytical studies.