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| Nota di contenuto | Front Cover; Sustainability, Energy and Architecture: Case Studies in Realizing Green Buildings; Copyright; Contents; Preface; Authors' Biography; Chapter 1 - Dutch Efforts Towards a Sustainable Built Environment; 1.1 INTRODUCTION; 1.2 PASSIVE HOUSES; 1.3 TYPES OF CASE STUDIES; 1.4 THE VELDHUIZERSCHOOL EDE; 1.5 CHRISTIAAN HUYGENS COLLEGE: AN ENERGY PLUS SCHOOL; 1.6 CONVENTIONAL DUTCH BUILDING DESIGN; 1.7 ENERGY SAVING TECHNIQUES; 1.8 NOVEL DESIGN AND EXAMPLES; 1.9 THE TNT GREEN OFFICE; 1.10 SUSTAINABILITY; 1.11 DIVERSE SUSTAINABILITY MEASURES; 1.12 RESULTS OF GREENCALC+ AND LEED ASSESSMENT REFERENCESChapter 2 - Low Energy Approaches to Design-Led Schemes - Five Case Studies; 2.1 INTRODUCTION; 2.2 CASE STUDIES 1 AND 2 - OVERVIEW; 2.3 CASE STUDY 3 - OVERVIEW; 2.4 CASE STUDIES 4 & 5 - OVERVIEW; 2.5 CONCLUSION; Chapter 3 - Sustainable Construction Materials; 3.1 INTRODUCTION; 3.2 DEMAND FOR CONSTRUCTION MATERIALS; 3.3 MATERIAL RESOURCES; 3.4 RENEWABLE MATERIALS; 3.5 RECYCLED MATERIALS; 3.6 LIFE CYCLE ANALYSIS; 3.7 EMBODIED ENERGY; 3.8 GROSS ENERGY REQUIREMENT; 3.9 PROCESS ENERGY REQUIREMENT; 3.10 EMBODIED CARBON; 3.11 NATURAL BUILDING MATERIALS 3.12 SHORT ROTATION RENEWABLE MATERIALS3.13 SUMMARY; REFERENCES; Chapter 4 - The Sustainable Corporate Image and Renewables: From Technique to the Sensory Experience; 4.1 |

INTRODUCTION; 4.2 SUSTAINABLE INNOVATION, OR THE TRIED AND TESTED; 4.3 THE 20TH CENTURY, THE CORPORATE IMAGE AND SUSTAINABILITY; 4.4 THE TECHNO-CENTRIC SUSTAINABLE BUILDING IN THE 21ST CENTURY; 4.5 THE SUSTAINABLE WORKING SHED, LION HOUSE, ALNWICK, NORTHUMBERLAND, UK; 4.6 EXPERIENCING RENEWABLES IN BUILDING SKINS; 4.7 THE RESPONSIVE SKIN AND CORPORATE IMAGE
4.8 INCREASING FACADE LAYERS: DOUBLE SKIN FACADES AS A PASSIVE MEASURE AND A CULTURAL MESSAGE4.9 SUSTAINABILITY AS HAPTIC EXPERIENCE; CONCLUSIONS; REFERENCES; Chapter 5 - Residential Deep Energy Retrofits in Cold Climates; 5.1 INTRODUCTION; 5.2 BUILDING MATERIALS AND ASSEMBLIES; 5.3 VENTILATION AND AIR MOVEMENT; 5.4 CASE STUDIES; 5.5 VISION: DEEP ENERGY RETROFITS AND NEIGHBORHOOD ENERGY SYSTEMS; 5.6 WHAT CAN WE DO TO IMPROVE THE TEACHING OF ARCHITECTS?; Chapter 6 - Sustainable Building for a Green and an Efficient Built Environment: New and Existing Case Studies in Dubai; 6.1. INTRODUCTION
6.2. CLIMATE CHANGE: CITIES AND BUILDINGS6.3. IMPORTANCE OF SUSTAINABLE/GREEN BUILDING; 6.4. SUSTAINABILITY REGULATIONS AND LAWS CONTRIBUTING TO CARBON EMISSIONS REDUCTION; 6.5. TAXONOMY OF A SUSTAINABLE BUILDING; 6.6. GREEN BUILDINGS IN DUBAI, UAE; 6.7. CONCLUSIONS; REFERENCES; Chapter 7 - The LED Lighting Revolution; 7.1 INTRODUCTION; 7.2 FROM LED CHIPS TO FIXTURES; 7.3 OPTICS; 7.4 FIXTURE BODY; 7.5 ADVANTAGES AND FEATURES; 7.6 COMPARISONS WITH TRADITIONAL LIGHTING; 7.7 ARCHITECTURAL/GENERAL ILLUMINATION APPLICATIONS; 7.8 CASE STUDIES; 7.9 FUTURE/NOVEL DESIGNS POSSIBLE WITH LEDS
7.10 CONCLUSIONS

Sommario/riassunto

Addresses what constitutes a sustainable building, suggesting bases for benchmarks, and explains the most important techniques and tools available to engineers and architects exploring green building technologies.
