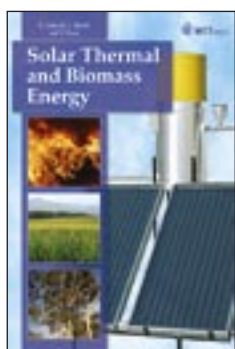




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Energy Resources Titles



NEW TITLE

Solar Thermal and Biomass Energy

G. LORENZINI and C. BISERNI, University of Bologna, Italy and G. FLACCO, Bologna, Italy

This book covers renewable energy sources. In particular, it reviews the state of the art in thermal solar techniques and biomasses. The first topic treated is solar radiation. Then the authors discuss the possible utilisation of solar energy through thermal solar techniques, starting with low-temperature techniques and moving on successively to medium- and high-temperature ones. This discussion includes, of course, explanations of those devices and materials employed in using those technologies.

The last part of the book covers biomasses. Starting with the definition of this wide-ranging field, the authors successively treat how to obtain energy from biomasses and all the environmental aspects linked to this topic. Very few books treat so broadly the state of the art in both thermal solar and biomass energy, especially the latter, a topic about which there is considerable confusion due to the very wide range of related technologies.

ISBN: 978-1-84564-147-4
e-ISBN: 978-1-84564-386-7
Published 2010 / 224pp / £85.00

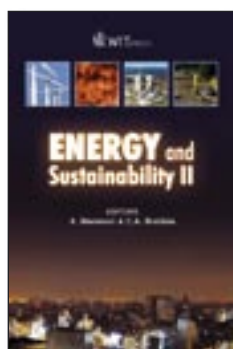
Energy and Sustainability II

Edited by: A.A. MAMMOLI, The University of New Mexico, USA and C.A. BREBBIA, Wessex Institute of Technology, UK

This book contains the latest research on this important topic presented at the second conference in the series. It discusses how the way in which our society exists, operates and develops is strongly influenced by the way in which energy is produced and consumed. No process in industry can be performed without a sufficient supply of energy, and without industry there can be no production of commodities, on which the existence of modern society depends.

The energy systems evolved over a long period, and more rapidly over the last two centuries, as a response to the requirements of industry and society, starting with the combustion of fuels and building up to the exploitation of nuclear energy and renewable resources. It is clear that the evolution of energy systems is a continuous process that involves constant technological development and innovation.

ISBN: 978-1-84564-191-7
e-ISBN: 978-1-84564-368-3
Published 2009 / 560pp / £213.00



JUST PUBLISHED

Petroleum Resources with Emphasis on Offshore Fields

O.T. GUDMESTAD, University of Stavanger, Norway, A.B. ZOLOTUKHIN, Gubkin Russian State University of Oil and Gas, Moscow, Russia and E.T. JARLSBY, Stavanger, Norway

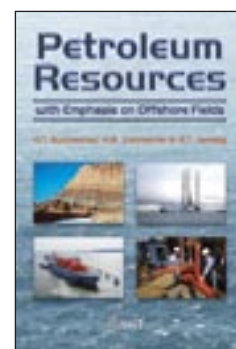
Lessons learned and experience gained from mature Norwegian offshore projects form the cornerstone of this timely new book, whose principle aim is to increase the reader's general understanding of the 'upstream' part of the petroleum industry - the locating of underground resources and their conversion to valuable products.

Starting with Chapter (1): The Geology of Petroleum Resources, the text follows the hydrocarbons from their origin in reservoirs through Chapter (3): Drilling, Well Design and Well Completion to Chapter (6): Hydrocarbon Off Take.

The authors address the large challenges facing the oil and gas industry in subsequent chapters on: Decommissioning; Safety Management; Environmental Management; Licensing and Fiscal Regimes; The Economics of Petroleum Operations and Investments; Responsibilities to Society and Business Ethics.

The book treats key aspects related to the development of petroleum resources. It is organized to allow the reader to review the different topics individually so that the book can serve as a reference book or as a textbook. It will be useful to readers who have a professional or student interest in the petroleum industry, and a modest level of prior knowledge of the technical and commercial aspects of the industry, including university students specializing in petroleum sciences; specialists from the industry who want to upgrade their competence; engineers in oil and gas companies and governmental bodies and institutions who would like to have a desktop reference book; people in the contracting industry serving the offshore market who want to understand how their contribution fits into the totality of developing oil and gas resources; and interested readers from the general public, such as teachers and policy decision makers.

ISBN: 978-1-84564-478-9
e-ISBN: 978-1-84564-479-6
Published 2010 / 288pp / £98.00



JUST PUBLISHED

Wind Power Generation and Wind Turbine Design

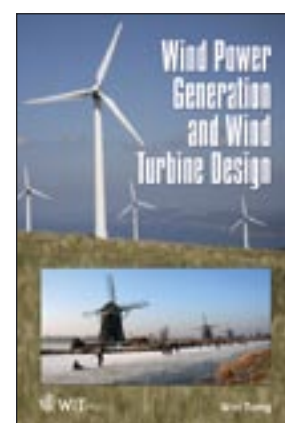
Edited by W. TONG, Kollmorgen Corporation, USA

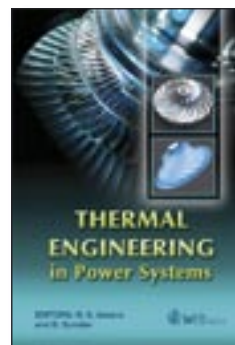
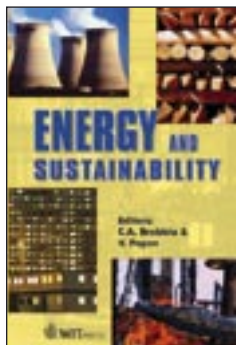
Provides the wind power industry and the energy research community with comprehensive up-to-date information on advanced design techniques and practical approaches for a form of energy that is becoming increasingly important. It addresses all the major concerns in wind power generation and wind turbine design and includes some of the more recent developments in the field. The book is a useful and timely contribution to the technical literature on wind power.

Along with the rising energy demand in the 21st century and the growing recognition of global warming and environmental pollution, energy supply has become an integral and cross cutting element of every country's economy. In recent years, more and more countries have prioritized sustainable, renewable, and clean energy sources such as wind, solar, hydropower, biomass, etc., as the replacements for fossil fuels.

Wind power is the fastest growing alternative energy segment, providing an attractive cost structure relative to other alternative energy. Wind energy has played a significant role in North American and European countries, and some developing countries such as China and India. In 2009, over 37 GW of new wind capacity were installed throughout the world. There is no doubt that wind power will play a major role as the world moves towards a sustainable energy future.

ISBN: 978-1-84564-205-1
e-ISBN: 978-1-84564-388-1
Published 2010 / 768pp / £298.00





BEST SELLER

Plate Heat Exchangers

Design, Applications and Performance

L. WANG, Siemens Industrial Turbines, Sweden, B. SUNDEN, Lund Institute of Technology, Sweden and R.M. MANGLIK, University of Cincinnati, USA

Heat exchangers are important, and used frequently in the processing, heat and power, air-conditioning and refrigeration, heat recovery, transportation and manufacturing industries. Such equipment is also important in electronics cooling and for environmental issues like thermal pollution, waste disposal and sustainable development.

The present book concerns plate heat exchangers (PHEs), which are one of the most common types in use. The overall objectives are to present comprehensive descriptions of such heat exchangers and their advantages and limitations, to provide in-depth thermal and hydraulic design theory for PHEs, and to present state-of-the-art knowledge.

The major part of the book concerns the basic design methods for both single-phase and two-phase flow cases, various flow arrangements, thermal-hydraulic performance in single-phase flow and for PHEs operating as condensers and evaporators.

ISBN: 978-1-85312-737-3
e-ISBN: 978-1-84564-294-5
Published 2007 / 288pp / £95.00



NEW TITLE

Power Supply, Energy Management and Catenary Problems

Edited By: E. PILO, Universidad Pontificia Comillas de Madrid, Spain

In recent years, energy efficiency has become a crucial concern for every transportation mode, but it is in electrified railways where energy savings have shown a bigger potential due to (i) regenerative braking, that allows converting kinetic energy into electric power, and (ii) vehicle interconnection, that allows other trains to use regenerated power. Power supply and energy management will continue to develop in the future.

This book gathers under a single cover several papers published in the Computer in Railways series (IX, X and XI) and focuses on power supply and energy management. Some of the discussed themes are: modelling, simulation and optimisation of AC and DC infrastructure, analysis of rolling stock consumption, and innovative approaches in power supply operation.

This book will be invaluable to management consultants, engineers, planners, designers, manufacturers, operators and IT specialists who need to keep abreast of the latest developments in the field.

ISBN: 978-1-84564-498-7
e-ISBN: 978-1-84564-499-4
Published 2010 / 208pp / £85.00

Energy and Sustainability

Edited By: C.A. BREBBIA and V. POPOV, Wessex Institute of Technology, UK

The way in which our society exists, operates and develops is strongly influenced by the way in which energy is produced and consumed. No process in industry can be performed without a sufficient supply of energy, and without industry there can be no production of commodities, on which the existence of modern society depends.

The energy systems evolved over a long period, and more rapidly over the last two centuries, as a response to the requirements of industry and society, starting with the combustion of fuels and building up to the exploitation of nuclear energy and renewable resources. It is clear that the evolution of energy systems is a continuous process that involves constant technological development and innovation.

ISBN: 978-1-84564-082-8
E-ISBN: 978-1-84564-287-7
Published 2007 / 464pp / £145.00

Thermal Engineering in Power Systems

Edited by: R.S. AMANO, University of Wisconsin-Milwaukee, USA and B. SUNDEN, Lund Institute of Technology, Sweden

Research and development in thermal engineering for power systems are of significant importance to many scientists who work in power-related industries and laboratories. This book focuses on a variety of research areas including Components of Compressors and Turbines that are used for both electric power systems and aero engines, Fuel Cells, Energy Conversion, and Energy Reuse and Recycling Systems.

To be competitive in today's market, power systems need to reduce operating costs, increase capacity, and deal with many other tough issues. Heat Transfer and fluid flow issues are of great significance to power systems. Design and R&D engineers in the power industry will therefore find this state-of-the-art book on those issues very useful in their efforts to develop sustainable energy systems.

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