PUBLICATIONS

Heat engines and their fuels in serving the community

Eric M Goodyer

Landfall Press

ISBN 9780952018681

£40 incl DVD;

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This publication presents an account of the historical developments within the heat engine-fuel partnership, incorporating a number of anecdotes. The engine types considered include piston (2- and 4-stroke), gas turbine, ramjet and rocket, plus some unconventional designs. The book also outlines the theoretical physics and chemical bases on which thermodynamics and combustion are built to explain the performance of fuels burning within heat engines to generate either mechanical power or fluid thrust. As well as being of general interest, this publication may also be useful to those contemplating a career in the energy industry. Electronic versions of this book and two additional booklets are included on an accompanying DVD.

Shared earth modeling

Michel Perrin, Jean-François Rainaud

www.editionstechnip.com

ISBN 9782710810025

€75

Over the last two decades, 'earth modelling' has become a major investigative tool for evaluating the potential of hydrocarbon reservoirs. Earth modelling must now face new challenges since petroleum exploration no longer consists in only investigating newly identified resources, but also in re-evaluating the potential of previously investigated reservoirs in the light of new prospecting data and of revised interpretations. Earth models incorporate a variety of different interpretations made on various types of data at successive steps of the modelling process. However, current modelling procedures provide no way to link a range of data and interpretations with a final earth model. For this reason, sharing and exchanging information about the model building process is at present a major difficulty. Recently, the term 'shared earth modelling' has been used to express the idea that earth models should be built in such a way that experts and end users can have access, at any time, to all the information incorporated into the model. This information does not only concern the data, but also the knowledge that geoscientists produce by interpreting this data. Accordingly, practical solutions must be studied for operating a knowledge-driven approach of shared earth modelling.

Energy management in business

Kit Oung

www.gowerpublishing.com

ISBN 9781409452454

£55

Written on the basis of 'energy reduction', this book covers four important aspects of managing energy – strategy for successful implementation, available tools and techniques, generating sustainable quick wins and active management involvement. It offers distilled practical concepts with real-life case studies chosen to build insight, illustrate and allow managers and engineers to relate a broad range of energy reduction opportunities. Energy management in business places the process firmly in the context of commercial and industrial business practice. It is an excellent companion for any organisation seeking ISO 50001 certification and a reduced energy consumption, as well as those that simply wish to better understand the options, strategies and risks that every business faces.

The caravan goes on

Frank Jungers

www.medina publishing.com

ISBN 9781909339194 (hardback); 9781909339187 (paperback)

£24.95/£12.95

The caravan goes on is the story of Frank Jungers, former President, Chairman and CEO of Aramco, which later became Saudi Aramco, and his journey to leadership of the world's largest energy company. His account includes his face-to-face encounters with King Faisal and other Saudi leaders; his role in steering the company through major international crises which included the 1973 Arab-Israeli war; the dramatic oil price increases of the 1970s; the Arab oil embargo and the OPEC hostage incident of 1975. Central to Jungers' story is his role in helping to develop Aramco's Saudi workforce for the eventual transfer of company ownership from four US oil majors to the government of Saudi Arabia. He explains the unique nature of the ownership transfer, which was remarkably different from the bitter nationalisation process seen in Iraq, Libya, Iran and Venezuela. The story covers how Aramco, with its technological expertise and its access to international specialists, played a central role in the development of the Kingdom; its healthcare, agriculture, railroads, electric grid and other sectors of the Saudi economy. This personal, colourful and close-up view is required reading for oil-industry watchers as well as those interested in big business, geopolitics, America's role in the Middle East and the extraordinary transformation and emergence of modern Saudi Arabia since oil was discovered in its Eastern Province.

Managing nuclear projects

Jas Devgun

www.woodheadpublishing.com

ISBN 9780857095916

£140

This book focuses on the management aspects of nuclear projects in a wide range of areas with emphasis on process, requirements, and lessons learned. Part one provides a general overview of the nuclear industry including basic principles for managing nuclear projects, nuclear safety culture, management of worker risk, training, and management of complex projects. Part two focuses on managing reactor projects, with discussion on a variety of topics including management of research reactor projects, medical radioisotope production, power reactor modifications, power uprates, outage management and management of nuclear-related R&D. Chapters in part three highlight the areas of radioactive waste and spent fuel management, reactor decommissioning and remediation of radioactively contaminated sites. Finally, part four explores regulation, guidance and emergency management in the nuclear industry.

Modern gas turbine systems

Edited by Peter Jansohn

www.woodheadpublishing.com

ISBN 9781845697280

£210

Modern gas turbine power plants represent one of the most efficient and economic conventional power generation technologies suitable for large-scale and smaller scale applications. Alongside this, gas turbine systems operate with low emissions and are more flexible in their operational characteristics than other large-scale generation units such as steam cycle plants. Gas turbines are unrivalled in their superior power density (power-to-weight) and are thus the prime choice for industrial applications where size and weight matter the most. Developments in the field look to improve on this performance, aiming at higher efficiency generation, lower emission systems and more fuel-flexible operation to utilise lower-grade gases, liquid fuels, and gasified solid fuels/biomass. This publication provides a comprehensive review of gas turbine science and engineering.