

Bunkers – essential reading for the shipping industry

> **Knowledge of the issues that surround the choice, purchase and use of bunkers will become significantly more important as shipping moves towards the IMO global emissions targets from 2020–25.** *Bunkers: an analysis of the technical and environmental issues* is the fourth in a series published by Petrosport specifically about ship fuel.

Bunkers is aimed at a wide audience “including marine engineering students, seagoing engineers, technical managers, members of the legal profession, insurers, owners and charterers of ships, fuel suppliers, environmentalists, abatement and marine technologists, as well as those involved with surveying, inspection and testing of marine fuels.”

It succeeds admirably. Chris Fisher, who worked on the earlier editions, and co-author Robin Meech, who compiled the environmental, markets and future marine and abatement technologies sections, have succeeded in addressing the readers’ needs.

Bunker consumption will lead to many factors changing the markets. Trading patterns are continuing to shift to the Asian region. Slow steaming continues to be adopted by “more vessel operators at even lower speeds” and, importantly, newer vessels are being designed with less power but the ability to operate across a range of speeds.

Energy-efficiency measures will also have an impact on bunker demand, and the authors say: “Some of the most effective [measures], such as improved monitoring of data and the training of crews, can achieve real savings for minimal cost.”

Efficiency is covered in detail in a subsequent chapter where the authors detail the gains that can be expected from some of the technologies available.

The bunker market supply and demand forecast acknowledges the overtonnage in most fleets and difficult financial position shipowners face. In their base case outlook, some key assumptions include that the global cap on emissions of 0.5% will not come into force until 2025 because there will not be enough suitable fuel from refineries. A key assumption is that, after then, the adoption of scrubbers will become more widespread.

A marine fuel production chapter provides a fascinating insight into the refining process and what ends up in residual marine fuels. This section illustrates and explains the importance of blending for the marine market. Specifications for marine fuels illustrate some of the difficulties ship operators have when trying to buy distillate and residual fuels. On one hand, the ISO 8217 standards from 2005 (ISO 8217:2005) have been widely accepted in the marine industry. Subsequently there have been revisions to this in 2010 and 2012. These have not been highly regarded and there has been a degree of controversy in the changes between the standards of ISO 8217:2005 and ISO 8217:2010/2012, which the authors point out in their discussion of market reaction to changes in specifications, which are quite technical.

The scientific case for sulphur emission reductions and how these were incorporated



into MARPOL Annex VI is reviewed in the environment chapter. The two existing emission control areas in North America and northern Europe aside, the authors round up the prospects for additional ECAs in other areas and comment on the practicality of implementation and possible introduction dates.

For example, in Singapore, although an ECA may “only impact a small sea area, an ECA would be within the government’s policies on greener seas and hence may well be adopted”, perhaps by 2015.

The discussion on alternative fuels provides something of a reality check for the adoption of LNG. It may be suitable for some but there are compelling drawbacks that the authors spell out in what seems to be a fairly balanced view regarding the use of gas for ship propulsion.

Technical sections delve into details of abatement technologies, including scrubbers, sampling measurement and metering, and fuel treatment systems, and provide a great deal of useful information for engineers as well as shore-side staff.

Bunkers is well written and benefits from clear graphs and plentiful diagrams and photos to illustrate the text, as well as comprehensive tables. Readers seeking to dip in and out of the chapters to satisfy their needs and interests will benefit from the detailed table of contents and the index – but the book is best read cover to cover. ■

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> **Bunkers: an analysis of the technical and environmental issues**

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Published by Petrosport Limited, 2013

ISBN: 978-1-908663-02-3

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