Book review

DESIGN AND INSTALLATION OF MARINE PIPELINES

Mikael W. Braestrup, Jan B. Andersen, Lars W. Andersen, Mads B. Bryndum, Niels J. R. Nielsen and Curt Christensen, Blackwell, Oxford, 2005, ISBN 978 0 6320 5984 3, £95.00, 384 pp.

This book provides an excellent and readable reference on the design and installation of marine pipelines. It follows two recent textbooks entitled *Pipelines and Risers*, by Yong Bai (Elsevier Ocean Engineering Series) and *Sub-sea Pipeline Engineering* by Palmer and King (Pennwell Publishing) and complements them from a more practical position. It has a comprehensive list of terms and abbreviations and is well referenced, providing pointers which allow the reader to pursue further texts and standards in greater depth.

The text is split into eleven chapters. Following the opening introductory chapter, the objectives for the design are reviewed in chapter 2, covering the overall functional requirements and environmental impact, the flow calculations and the geotechnical and environmental site investigations, leading to the final route selection. In chapter 3 the book introduces materials. The first aspect is the sub-sea soil characteristics (natural or engineered), the second deals with pipeline steel. This section also touches on sacrificial anodes and materials for coatings, fittings, etc. Chapter 4 deals with the loads, which are

divided into functional, environmental, accidental and installation loads. Risk and safety are dealt with in chapter 5 and the design aspects are covered in chapter 6. Although chapter 6 is a good reference for the design of steel pipelines, we were a little disappointed that the subject of smaller plastic pipes was not covered and the issue of scour adjacent to pipelines was also omitted. Chapters 7 and 8 deal with fabrication, and installation, and chapter 9 discusses the quality control aspects and documentation throughout the design and installation process. The last two chapters cover flexible pipe structures and the operation of pipeline systems, including commissioning, inspection, maintenance and repair.

As one may expect, with a book covering all aspects of marine pipelines, some of the information is repeated or available elsewhere and at times does not go into sufficient detail. The collection of information is, however, helpful and the commentary provides highly practical and useful context and an excellently accessible source of information. The book is not packed with too many equations, which is good as they would spoil a good read and are available in the references. This is an excellent book worthy of space on any practising offshore engineer's or contractor's bookshelf.

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