

slave trade during these years, and its final demise at the beginning of the nineteenth century.

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Michael McCarthy. *Ship's Fastenings: From Sewn Boat to Steamship*. College Station, TX: Texas A&M University Press, www.tamu.press, 2023. (Second Edition). xii+239 pp., illustrations, appendix, notes, bibliography, index. US \$75.00, hardback; ISBN 978-1-64843-104-3.

Except for the dugout, every watercraft throughout history required some type of fastenings to join its constructive elements. These fastenings might seem like a minor technical detail when looking at a ship at large, but they are of critical importance to the construction and determine and/or limit many parameters of the ultimately built ship, for example, size and seaworthiness. Imagine a major ocean liner with its steel plates sewn together like the hull of a birch bark canoe or Greenlandic kayak. Michael McCarthy needs to be lauded for bringing the history of this critical element of shipbuilding history into the limelight and providing a highly detailed and nuanced history of ship's fastenings.

The first edition of *Ship's Fastenings* was published in 2005 and fortunately, this edition (2022) is a real second edition and not just a reprint. With Michael McCarthy being a member of the Department of Maritime Archaeology at the Western Australian Maritime Museum who has led several excavation projects, it is no surprise that there is a certain emphasis on the early periods of maritime history, but the book covers the full timespan up into the first half of the 20th century and the Second World War.

Focusing on a single technological detail of maritime design and construction instead of the whole ship allows the author to achieve a very high analytical depth and to illustrate how improvements within the technology of a single construction element shaped the whole industry as well as how the limitations of a certain technology for this single construction element prohibited other developments. Unfortunately, this analytical depth is not fully maintained for later historical periods and the chapters on fastening methods for iron and steel ships lack the level of detail to be found in the chapters on fastenings for wooden ships. This is not surprising, given Michael McCarthy's expertise, and maybe not so much a critique on the book but an encouragement for another author to continue McCarthy's work with a study of steel ship fastenings that will focus on the various riveting and welding techniques.

In addition to discussing the fastenings themselves, the author also discusses how the types of fasteners affected topics like insurance, etc. and

thus, puts his main argument into a larger context. When he discusses the topic of Muntz Metal as a copper alloy used for sheathing of hulls, however, McCarthy diffuses his research focus, although it is an interesting story that has rarely been touched by other maritime historians and deserves attention.

The suggested retail price of US \$75.00 feels expensive, even for a hardback with more than 300 pages and 111 illustrations, but when thinking about the potential market for such a book, a comparably high price seems acceptable or at least, unavoidable. The presence of an index as well as a most useful bibliography, makes this a reference book on the subject and thus, a research tool. If there is one criticism that needs to be mentioned, it is the somewhat inconsistent quality of the illustrations. They range from crystal clear schematic drawings of certain types of fasteners to reprints of historic illustrations with limited detail to greyish photographs where it is sometimes hard to figure out why the specific illustration has been selected. The question for the publisher is, why not a comprehensive set of schematic drawings of all types of ship's fastenings discussed in the book. This would have made the content of the book somewhat more accessible. Perhaps a suggestion for a third edition?

Ship's Fastenings can be easily commended to any maritime historian and/or archaeologist with an interest in the development of shipbuilding up to the advent of steel ships. Understanding the genesis of fastenings allows readers to understand the development of ships at large. The book also needs to be commended to ship model builders and everybody involved with the preservation and restoration of historical watercraft. Finally, I would even suggest using the book as a textbook or at least as a recommended read in classes dealing with history of technology, as it provides a fine example, why and how the development of certain small technologies were a prerequisite for the development of large technologies or why the lack of certain small technologies could become a prohibitive factor for large technologies.

As opposed to many other books within the wider field of maritime history, the author is definitely not aiming for a general readership as a secondary audience. His is a purely academic book that covers a highly specialized topic in great depth—written by a specialist for an audience of specialists. Both author and publisher should be applauded for deciding to make the information available to new readers in a second revised edition. Rarely are such highly specialized analyses republished after the first edition and, while they might become available via digital repositories, being able to buy a copy of the book is different from having to read it on the screen.

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