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"Kadim oldur ki evvelin kimesne bilmeye"

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ENES DEPE*

ABSTRACT

This review examines İdris Bostan's work entitled *Osmanlı Deniz Teknolojisi* (Ottoman Naval Technology). The book examines certain types of ships used in the Ottoman navy between the 16th and 19th centuries, technological transformations in major naval vessels, the role of European experts in the modernization process, and the developments in cannon-casting technology. Although it is not the first study devoted to Ottoman naval technology, the work offers original and significant contributions to the literature on maritime, technological, and economic history through its meticulous analysis based on archival documents. This review discusses the scope of these contributions.

Anahtar Kelimeler: Ottoman Empire, Ottoman Ships, History of Technology, Naval Technology.

ÖZ

Bu değerlendirme, İdris Bostan'ın *Osmanlı Deniz Teknolojisi* adlı eserini ele almaktadır. Kitap, 16. ile 19. yüzyıllar arasında Osmanlı donanmasındaki bazı gemi tiplerini, başat gemilerdeki teknolojik dönüşümleri, modernleşme sürecinde Avrupalı uzmanların rolünü ve top döküm teknolojisini incelemektedir. Osmanlı deniz teknolojisi üzerine ilk çalışma olmamakla birlikte eser, arşiv belgelerine dayalı titiz analiziyle denizcilik, teknoloji ve iktisat tarihi literatürüne özgün ve önemli katkılar sunmaktadır. Bu değerlendirme, söz konusu katkıların boyutlarını da tartışmaktadır.

Keywords: Osmanlı İmparatorluğu, Osmanlı Gemileri, Teknoloji Tarihi, Denizcilik Teknolojisi.

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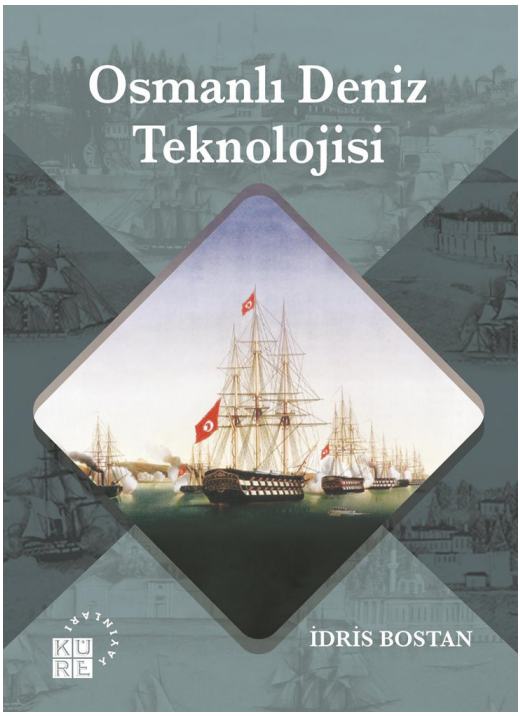

In recent years, numerous studies have been published on Ottoman maritime history, one of the most active fields of research within Ottoman historiography. Among these studies, which generally focus on naval warfare, organisational history, and maritime trade, it is noteworthy that relatively few studies have addressed maritime technology. This new book by İdris Bostan, who has authored numerous studies in the field of maritime history over the past half-century, most notably *XVII. Yüzyılda Tersâne-i Âmire* (*Ottoman Imperial Arsenal in the 17th Century*), is a compilation of his earlier studies on Ottoman maritime technology. The book, titled *Osmanlı Deniz Teknolojisi* (*Ottoman Naval Technology*), includes nine articles previously published in various journals and edited volumes, between 1987 and 2020, and brought together in this volume after revisions and updates. Naval technology, along with naval policies and maritime trade, constitutes one of the three main topics of Ottoman maritime studies, as the author states in the introduction (pp. 7-11).

In the first chapter (pp. 13–50), titled "The Accounts of Galata Shipyard for the Years 933-934 (1527-1528) and Shipbuilding Activities at the Shipyard" (Galata Tersanesi'nin 933-934 (1527-1528) Yılı Muhasebesi ve Tersanede Gemi İnşa Faaliyetleri), the author publishes one of the first available budgets of the Imperial Shipyard. In total, five registers from 1527-1531 are examined in this chapter. The relevant budgets of the Galata Shipyard, which became the central shipyard of the Ottoman Empire from 1515 onwards, are important for documenting the activities of the shipyard immediately before the tenure of Barbaros Hayreddin Pasha. The book gains additional significance as the central state budget for the year 1527-1528 is extant and thus making it possible to compare Galata shipyard's budget of that year with the general budget and estimate the fiscal share of the shipyard. In addition to the accounts of the shipyard's income and expenditure items, the relevant registers also provide important data for economic history, as they contain information about the number of workers employed at the shipyard and their wages. Furthermore, the materials purchased for the shipyard and the ship repair and construction activities at the shipyard are also revealed through these registers. In this way, the working capacity of the Galata Shipyard in these years can be better understood. The author's publication and comparative use of these registers also serve as an example of the method of publishing such registers.

The second chapter (pp. 51-63) is titled "Ship Types and Port Characteristics According to Piri Reis's *Kitâb-ı Bahriye* Manuscripts" (Piri Reis'in Kitâb-ı Bahriye Nüshalarına Göre

Gemi Tipleri ve Liman Özellikleri). When evaluating the *Kitâb-ı Bahriye*, Bostan takes into account the existence of numerous copies of this book completed between the 16th and 18th centuries. The article focuses on ships and ports, which are integral parts of seafaring. It is noteworthy that Piri Reis's aim was not to depict the appearance of ports as they existed at that time in his drawings. The types and locations of ships surrounding the ports in *Kitâb-ı Bahriye* were specifically selected to guide those who would later use the book as a guide, hence information on which ports should be used by ships such as galleys (*kadırga*), barques/carracks (*göke*), galleons (*kalyon*), and galliots (*kalyata*) is at the forefront. As the author notes, the copies of the *Kitâb-ı Bahriye* also reflect the transformation in ship technology over the centuries. Accordingly, barque and carrack were replaced in the 17th century by early versions of galleons and galleys, and in the 18th century by two-decker galleons in particular. The information about ports, however, remained unchanged in the copies.

The third chapter (pp. 65-83) is titled "Cog: The First Ottoman Sailing Ship in the Mediterranean" (Göke: Akdeniz'de İlk Osmanlı Yelkenlisi). This chapter deals with the "cog" (*göke*) type ship, the first example of a large sailing warship in the Ottoman navy. This ship, which was the largest warship in the Ottoman navy for about half a century from the end of the 15th century onwards, was actually equivalent to the barque and carrack ships used by Europeans in the oceans. The author, notes that the Ottomans often used all three names interchangeably, and seeks to clarify the technological differences between these three ships. The author points out that although the cogs had oars at the bottom, these oars were only used when necessary. The Turkish sailors, who had been familiar with Italian barques since the 14th century, began to include these ships in their own fleets from the reign of Bayezid II onwards. These ocean-faring ships, which were only available in large fleets and in limited numbers, began to be acquired by the Ottomans at a time when they had only recently entered the central Mediterranean. Focusing on the use of cogs in the Battle of Bradone against Venice in 1499, the author emphasises the vital importance of these ships in the Ottoman navy's domination of the Mediterranean. The presence of cogs in the Ottoman navy gradually disappeared after Barbaros Hayreddin Pasha, who took office in 1534 and favoured oared ships.

The fourth chapter (pp. 85-119), titled "From Galleys to Galleons: The Transformation of Ottoman Ship Technology in the Second Half of the 17th Century" (Kadırgadan Kalyona: 17. Yüzyılın İkinci Yarısında Osmanlı Gemi Teknolojisinin Değişimi) describes the transition from rowing warships to large sailing warships in the Ottoman navy. The debate over whether the Ottomans were late in transitioning to galleons is clarified by noting that other Mediterranean powers, particularly Venice, adopted a similar stance during the same period. Because of the heavy losses suffered during the Ottoman attempt to transition to galleons in the course of the Cretan War, priority was given to galleys in 1662. Twenty years later, the Ottomans once again and definitively adopted galleons as the main warships of their navy. The author proposes a revised periodization of the galleon era, which constitutes one of the three main technological epochs in the Ottoman navy. In this context, the period from 1650 to 1662 has been proposed as the first galleon era, and the period from 1662 to 1682 as the final galley era. The influence of the Barbary Regencies' *(Garb Ocakları)* fleets on this technological transition is also discussed in the article. Due to the fragmented structure of the Ottoman navy, the central navy began to use galleons mainly from the mid-17th century onwards, while the Barbary Regencies began to use galleon-style sailing ships already in the beginning of the

century, thanks to their contacts with Northern European powers. The author also explains the new regulations introduced by the Ottomans regarding the building and equipment of galleons from the late 17th century onwards.

The fifth chapter (pp. 121-139), titled "Why did the Ottomans Abandon Galleon Building Between 1656 and 1682?" *(Osmanlılar 1656-1682 Arasında Kalyon İnşasından Niçin Vazgeçtiler?)* examines the final period of galley use between 1656 and 1682, which fell between the two periods when the Ottomans decided to switch to galleons. This decision, which was taken by the state's high administrators during the Cretan War, was shaken by a heavy naval defeat in 1656. According to the author, the costs of galleons, which were three to four times higher than those of galleys, the heavy taxes imposed on the public to cover these costs, and the lack of personnel trained to operate these newly built ships brought an end to the first galleon period. The author conveys the criticisms raised against this decision, particularly through the words of Kara Çelebizâde, a historian of the period. In this first study on the naval policies of the period in question, the author highlights that the Ottomans' technological choices were guided not only by victories and defeats but also by the struggles between political parties.

The sixth chapter (pp. 141–175), titled "Modernization Movements in the Ottoman Navy: Construction of the Large Dry Dock in Imperial Shipyard (1794-1800)" *(Osmanlı Bahriyesinde Modernleşme Hareketleri: Tersanede Büyük Havuz İnşası (1794-1800)*), begins by addressing a common assumption. The author notes that French, Swedish, and British architects and engineers played an important role in rebuilding the navy that was destroyed at Çeşme in 1770. However, the Ottoman navy that was rebuilt over the fourteen years following the Çeşme Defeat was not the work of the foreign experts. The employment of the European expert teams at the Imperial Shipyard became widespread only after 1784. In this article, the author examines the construction of the large dry dock (Büyük Havuz) between 1797 and 1800 by a Swedish engineer named Anders Erik Rhode and his team, which was a first in the history of Ottoman naval technology, based on documentary evidence.

The seventh chapter (pp. 177-197), titled "*Osmanlı Bahriyesi'nin Modernleşmesinde Yabancı Uzmanların Rolü (1785-1819)*" (The Role of Foreign Experts in the Modernization of the Ottoman Navy (1785-1819)), focuses on the French and Swedish experts employed by the Imperial Shipyard during the relevant years. In particular, French shipbuilding teams were present between 1784-1788 and 1793-1798. The author reiterates the common assumption that French shipbuilders were employed to rebuild the navy that had been destroyed at Çeşme. The author notes that the contribution of French experts, whose presence at the shipyard was interrupted by wars with Russia and France, was more sophisticated and long-lasting. The presence of the European expert delegation that arrived in 1793 and its impact on the modernization of the Ottoman navy are examined on the basis of archival documents. The activities of Swedish experts, who made a significant technological breakthrough by constructing a dry dock at the Imperial Shipyard, are also examined in this context. The Napoleonic Wars disrupted the Ottomans' use of French experts during this period. However, as the author also notes, with the training of Ottoman ship architects under the supervision of these experts, the Ottomans were able to continue building warships in the European style from the late 18th century onwards.

The eighth chapter (pp. 199-217) is titled "A Fragment from Ottoman Campaign Organisation: Military Bridges Established on the Danube in the 16th and 17th Centuries" *(Osmanlı Sefer Organizasyonundan Bir Kesit: 16. ve 17. Yüzyıllarda Tuna'da Kurulan Askerî Köprüler)*. The author states that the Ottomans began building military bridges for the passage of their armies during the reign of Mehmed II, and shows that they gained expertise in this field over the following three hundred years. This fact demonstrates the Ottoman Empire's logistical sophistication, as evidenced by the construction of numerous bridges over the Danube and its tributaries during campaigns in Europe. However, the author notes that following the 1711 Prut Campaign, the decline in the frequency of campaigns led to the disappearance of this expertise, and that the logistical shortcomings became apparent during the war with Russia that began in 1768.

In the ninth and final chapter (pp. 219–251) titled "The Imperial Cannon Foundry and Casting Activities in the Early 16th Century" *(16. Yüzyıl Başlarında Tophâne-i Âmire ve Top Döküm Faaliyetleri),* Bostan focuses on the casting of cannons, one of the components of the Ottoman navy, in the 16th century. By discussing the earliest date of using cannons by the Ottomans, the author reveals that the Ottomans were able to produce a large number and variety of cannons in the 16th century. In doing so, the author draws on Ottoman archival documents, highlighting the valuable data contained in ledgers regarding the details of Ottoman cannon casting. In his article, he makes extensive use of the Accounting Ledgers of the Cannon Foundry from 1513 -1528.

The book is mainly based on Ottoman archival documents, and numerous examples of these sources are published at the end of the volume. The author recommends the use of archival materials in research in this field due to their high reliability. Although the process of searching through and deciphering Ottoman archival documents is laborious, their examination and use are of great importance in terms of originality and credibility. Some of the articles in the book –such as those dealing with the Cretan War or the activities of European experts– may appear somewhat repetitive because of similarities in content, yet they remain valuable as they are among the rare studies on Ottoman naval technology. In this respect, the work functions as a guide for future research in terms of subject selection, the use of primary sources, and methodology.

On the other hand, Osmanlı Deniz Teknolojisi *(Ottoman Maritime Technology)* secures its place in the literature by focusing on the often-neglected "technological dimension" of Ottoman maritime history. Earlier studies generally concentrated on the Ottoman navy's wars, institutional structure, or commercial activities, while aspects such as shipbuilding, the functioning of shipyards, and technological transformation processes remained in the background. Through its detailed analyses based on Ottoman archival records, İdris Bostan's work fills this gap and stands out as a reference source within the scholarly literature. Moreover, by addressing maritime history not only in a military and political framework but also from the perspectives of technology and economic history, the book positions itself at an important intersection for both historians and interdisciplinary researchers.