cruisers, destroyers, auxiliary cruisers, and raiders. Finally, Williamson wraps up his examination of the Kriegsmarine, with torpedo boats, coastal security vessels, minesweepers, and auxiliary ships. Williamson concludes his work with a brief examination of training, and service in the Kriegsmarine, taking time to examine lesser known branches and organizations like coastal artillery.

Hitler's Navy. The Kriegsmarine in World War II provides a solid and comprehensive overview of both the activities and ships of the German navy without delving into detail about specific ships or events. While this provides little new information for those already familiar with the material, it remains a useful reference while serving as gateway for new readers. The technical details and illustrations allow for a quick examination of the ships discussed in a compact and easily accessible volume. There is also a comprehensive bibliography providing individual works for each type of ship discussed, as well as books that explore tactics and events in greater depth. If there is a deficiency in the bibliography, it may be due to the fact that the large number of sources are provided by a comparatively limited number of authors. While not a failure of the work, it does limit the diversity of opinion and perspective.

In conclusion, *Hitler's Navy* is a useful resource for information regarding the full spectrum of ships and personnel attached to the Kriegsmarine, including types of ships and units not often discussed in depth. The bibliography is especially valuable for readers interested in the German navy and the history of the Second World War at sea

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Marc Wortman. *Admiral Hyman Rickover: Engineer of Power*. New Haven, CT: Yale University Press, <a href="www.yalebooks.press.edu">www.yalebooks.press.edu</a>, 2022. 328 pp., illustrations, notes, index. US \$26.00, cloth; ISBN 978-0300-24310.

Admiral Hyman George Rickover, the father of America's Nuclear Navy, had a remarkable engineering career. His personality was famously confrontational, but he was instrumental in keeping world peace from the first use of nuclear weapons that ended the Second World War, to the present. An atypical naval academy graduate hero (for some, a rogue), he performed active duty for 63 years, the longest-serving naval officer in U.S. history, focusing on rigorous reactor safety and searching for insightful innovations among his staff.

Born in the tiny Polish shtetl of Maków-Mazowiecki, the bright non-athletic five-foot-eight Jew was born Chaim Godalia Rykower, anglicized to Hyman George Rickover. His father was a tailor who immigrated with his family to America for its promise of opportunity. Assimilating into his new country, the young Hyman passed the admissions examinations and earned an

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appointment at the United States Naval Academy. Although a perfectionist, he was far from a military martinet. Antisemitism was common in the United States, and especially within the august naval officer ranks. Rickover tolerated abuse, particularly during his years as a midshipman. One of 17 Jewish classmates (2%), only Rickover and six other classmates would survive: he graduated a respectable 107th in the 540 members of the class of 1922. Like most newly commissioned ensigns, he aspired to a line officer's post, one that would advance a career. He soon was assigned to the submarine service and displayed talent as an engineering officer. He later became the skipper of the USS *Finch*, an antiquated mine sweeper at the beginning of the Second World War, but this did not work out well. His arrogant ways and antisocial nature alienated many, which did not help foster his career as a line officer. Rickover finally opted to become an Engineering Duty Only (EDO) officer which, at the time, was a difficult route to high naval command.

After the dropping of the atomic device that helped end the war, the pentagon thought that a slow response navy might be relatively ineffective and perhaps superfluous. A strong air force would be the chief national protection pillar. Rickover, however, saw this devastating weapon as an energy source, if properly harnessed. Building on the scientific breakthroughs of the atomic bomb project, he created the nuclear navy almost overnight. While nearly everyone considered this a fantasy, he built the world's first commercial atomic power station at Oak Ridge, Tennessee, astonishingly within a single decade. He was instrumental in the buildup of the U.S. nuclear submarine and surface fleet plus the civilian nuclear power industry. Uncharacteristically for a naval academy graduate, Rickover disparaged regulations, the chain of command, rank, wearing a uniform, and frequently used insulting language to senior and junior officers. Rickover challenged established authority with a ferocious will and combative disposition but encouraged innovative engineering and unmatched accomplishments of management and organization while simultaneously focusing on rigorous reactor safety and developing innovations among his staff.

Rickover's exceptional ability to accomplish formidable objectives won his Nuclear Reactor Program (NR) wide public acclaim and personal honours for himself. These included presidential citations, honorary doctoral degrees, and congressional gold medals. Despite all this acclaim, Rickover was constantly the subject of bitter controversy and twice passed over for promotions. In 1953, he was saved from involuntary retirement only by way of congressional intervention. Nearly 40 years later, when he finally was forced to step down as a four-star admiral, all three living American presidents attended his retirement party.

Admiral Rickover had a well-deserved reputation for doing whatever was

necessary to see his projects to completion, ignoring traditional naval customs and bypassing organizational hierarchies. He created his own independent power structure with the help of sympathetic members of Congress and members of the media. He demanded the highest standards, pushing defense contractors and his staff (as well as himself) to the limit. At the same time, he clashed with the establishment—many Secretaries of Defense, Secretaries of the Navy, and Chiefs of Naval Operations. A master at intimidation, the admiral would exhibit fury with anyone whom he felt was indolent or incompetent. His interviews with young officers, applying to be accepted in his program were renowned. Wanting to make sure they could adapt to whatever situation they found themselves in, he typically had them sit in a chair whose front legs had been shortened so that they had to struggle to remain seated. If they gave unacceptable answers to intimidating questions, they were summarily dismissed or sent to sit in a broom closet for long periods of time to rethink their answers. Others were assigned curious or extremely challenging tasks to test their ingenuity.

Rickover perceived his greatest failure as the loss of the nuclear-powered submarine *Thresher* that disappeared while conducting deep-sea tests. He had been on the sub during its initial sea trials two years earlier. Rickover felt that it was only fair to share the risk inherent in the first voyage of any submarine for which he was responsible. He agonized over this loss for many years, long after it was found that its loss was likely due to faulty welding during Navy shipyard repairs, and not due to his engineering design.

Wortman's book largely avoids the technical details of Rickover's work but focuses on the admiral's fight to build and extend the nuclear fleet and the often-difficult relationships in the pursuit of that goal. He documents Rickover's efforts that had far-reaching effects on the post-war world. The excellent standards he demanded were qualities that had influence well beyond the Navy. The admiral cared deeply about the United States and threats to its security, especially during the Cold War. These concerns likely made him such a taskmaster. Yet he was a man who held the strong religious values of his family of Jewish and Christian faiths, and for charity and justice. His influence continues to be felt today.

This is a very well written, thought-provoking, inspiring, and moving biography about an important figure in naval and American history. I highly recommend *Admiral Hyman Rickover: Engineer of Power* to maritime historians and lay readers alike.

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Matthew Wright. The Battlecruiser New Zealand. A Gift to Empire.