Fighting engineers: the U.S. Navy and mechanical engineering, 1840-1905

Foley, Brendan Patrick, 1968-

Alternative title
United States Navy and mechanical engineering, 1840-1905

Other Contributors
Massachusetts Institute of Technology. Program in Science, Technology and Society.

Advisor
David A. Mindell.

Terms of use
M.I.T. theses are protected by copyright. They may be viewed from this source for any purpose, but reproduction or distribution in any format is prohibited without written permission. See provided URL for inquiries about permission. http://dspace.mit.edu/handle/1721.1/7582

Abstract
Fighting Engineers examines social conflict as the cause of the formation of professional mechanical engineering in the nineteenth century U.S. Navy. In the middle of that century, the Navy began to utilize steam engines for motive power. Navy administrators recognized the need for engineering officers to design and operate ships' steam power plants, but the social and political status of staff engineering officers was unclear. Their rank was relative to line officers, the men who navigated the ship and commanded the crew. Engineers possessed no legal command authority. This created problems as engineers' responsibilities increased during the Civil War. In response to shortcomings evident in the training of the engineer corps during the Civil War, the U.S. Naval Academy in the postwar period designed an unprecedented technical curriculum. Through this program, the Navy trained the nation's first group of modern mechanical engineers. As Navy engineers built their profession after the war, they attempted to redefine what it meant to be a naval officer. The officer ideal moved from the aristocratic warrior of the antebellum period to a college educated, scientifically minded professional late in the century. To maximize the political utility of their technical expertise, Navy engineers had to spread their idea of mechanical engineering and engineering education to a broader audience. In the 1880s, they chose to do so in an unprecedented way. They promoted legislation that allowed them to serve as engineering professors at American universities. This foray into academia was a continuation of the long-standing government policy of internal improvements and federal technology sponsorship.

(cont.) The U.S. Navy developed a distinct form of professional mechanical engineering practice in the late nineteenth century. As Navy engineers became professors and industrialists, they transmitted Navy engineering throughout the nation. The human products of that engineering style were a new generation of professional engineers. They were the foundations upon which America erected the modern industrial economy.

Description

"May 2003."

Includes bibliographical references (p. 268-290).

Date issued
2003
Average salaries for US Navy Mechanical Engineer: $74,920. US Navy salary trends based on salaries posted anonymously by US Navy employees. When factoring in bonuses and additional compensation, a Mechanical Engineer at US Navy can expect to make an average total pay of $76,000. See all Mechanical Engineer salaries to learn how this stacks up in the market. Are you paid fairly? Get a free, personalized salary estimate based on today's market.

Alternative Title: United States Navy and mechanical engineering, 1840-1905. Author: Foley, Brendan Patrick, 1968-. Citable URI: http://hdl.handle.net/1721.1/17575. Fighting Engineers examines social conflict as the cause of the formation of professional mechanical engineering in the nineteenth century U.S. Navy. In the middle of that century, the Navy began to utilize steam engines for motive power. Navy administrators recognized the need for engineering officers to design and operate ships’ steam power plants, but the social and political status of staff engineering officers was unclear. Their rank was relative to line officers, the men who navigated the ship and commanded the crew. Engineers possessed no legal command authority.