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Engineering for the Officer of the Deck

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A naturalized citizen of the United States, the effects of Dengler's boyhood days in Germany during which his father was killed in action, his home destroyed by bombs, and his family forced to scavenge for food were perhaps instrumental in his living through the ordeal he describes. A U.S. Navy A-1 pilot shot down over Laos in February 1966 and captured a short time afterwards, he survived a torturous forced march to a Laotian prison camp, escaping once for a short period en route. In the camp where he was incarcerated with two Americans and four Asians he was starved, humiliated, forced to live like an animal, and beaten, but never lost his determination to escape. Although some of his actions were admittedly impetuous, he brought all his imagination, instinct, escape and evasion training, and spirit into play in planning and in executing his final escape with the other prisoners.

After several aborted attempts and having been threatened to be killed by the guards (themselves close to starvation during the prolonged dry season), an escape was made. Splitting up, Dengler and an Air Force helicopter pilot struck out on their own hoping to find a river down which they could float to freedom. Leeches, mosquitos, monsoon rains, cold, disease, and hunger all took their toll on the pair. Disoriented by curved ridges and twisting streams, they traveled in giant circles: at one time crossing a ridge to find what was assumed to be a new river, floating around a mountain, then climbing over the mountain, only to come back to their starting point.

After approximately 3 weeks they were discovered by Laotian villagers, one of whom killed Dengler's partner with a machete. Scrambling away with new found energy, Dengler evaded for several more days. Hallucinating, but still determined to find freedom, he was spotted through sheer luck by an Air Force pilot who called in a rescue helicopter.

Dengler had wandered 23 days in midst of the Vietcong and Pathet Lao to be picked up only 5 miles from his detention camp. His photograph on the book jacket, taken shortly after his rescue and hardly recognizable as a human being, perhaps tells more than can words of the trials he endured. Sometimes truth is more exciting than fiction, and this book should be read by all in the business of preparing for combat.

R. CRAYTON

Captain, U.S. Navy

Felger, Daniel G. *Engineering for the Officer of the Deck*. Annapolis: U.S. Naval Institute Press, 1979. 203pp.

Although greater emphasis has been placed on engineering in recent years, it still remains a black art for many naval officers. Complexity, noise and heat have deterred many from gaining a working knowledge of systems whose reliable performance is fundamental to the success of any seagoing vessel. Part of the engineering awareness problem has been a dearth of readable publications that will allow an officer to bootstrap himself to the level of knowledge at which he can competently explore and educate himself on the unique features of his own plant. Commander Felger's book is a comprehensive, yet readable guide to engineering in general and specifically deals with those areas that should be part of a competent deck officer's ready store of information concerning his ship. Drawing on a rich background of operational and administrative engineering experience, Felger skillfully blends technical information with nontechnical explanations and underscores significant points with relevant and all too real sea stories.

Contrary to most engineering texts and course curricula, this book focuses on the 1200 PSIG four boiler plant and digresses to explain the unique features of the FF-1052, FF-1040/FFG-1 classes. This is indeed proper, for the DDG-2/DDG-37/CG16/CG-26 class plants are the most complex systems (not

counting CVs) and provide a sound baseline for discussion. The book does not slight new developments, for there is ample discussion of the DD-963/FFG-7 gas turbine plants and their associated machinery.

In nine chapters Felger establishes the need for an OOD to achieve a basic level of engineering competence; he describes built-in safety features and provides the basic fundamentals of fireroom and engineroom operation. The author then outlines the successful teamwork needed between OOD and EOOW, reviews the fundamentals and hazards associated with auxiliary systems, and provides an introduction to gas turbine ships. The book concludes with a useful chapter on inspections, efficiency and economy, all of which are sensitive areas under today's operational conditions.

The 203-page book is sprinkled with useful schematics and block diagrams and features a detailed index. The use of more photographs such as found on the dust jacket would provide a better bridge between the practical and the theoretical. Also, specific examples of engineering documentation such as MRCs, 3M maintenance schedules, EOSS and EOCC would be a useful addition.

Engineering for the Officer of the Deck will be a welcome edition to wardroom libraries, but its \$16.95 price will, unfortunately, preclude its becoming a mainstay of personal professional libraries. The publisher and author are to be praised for taking a major step in upgrading the professional literature in an important but often slighted area.

P.E. TOBIN
Commander, U.S. Navy

Gamble, John King, Jr., ed. *Law of the Sea: Neglected Issues*. University of Hawaii Law of the Sea Institute, 1979. 545pp.

Neglected Issues is the report of the proceedings of the 12th annual conference of the Law of the Sea Institute of the University of Hawaii, held in The

Hague 23-26 October 1978. The Naval War College was represented by its then Stockton Professor of International Law, Gordon A. Christenson; a former Stockton Professor, Carl Q. Christol, was on one panel, and contributors to this *Review* also served on panels. Other U.S. Navy and Department of Defense representatives also attended.

The conference addressed seven topics: Non-nodule Resources of the Deep Seabed, Air Space and the Law of the Sea, Problems of Polar Regions, the Changing Regime for Shipping, Energy Sources from the Ocean, Military Issues in the Law of the Sea, and Sea-Use Planning in the North Sea. The address of Jens Eversen, Minister for the Law of the Sea from Norway, emphasized what is "[t]o many the main outstanding issue[,] . . . exploitation of the mineral resources of the" deep ocean floor.

Of particular interest to the professional military officer are the Air Space and Military Issues chapters. Christol's essay on "Unilateral Claims for the Use of Ocean Airspace" discusses legal problems of air defense identification zones in the context of the Exclusive Economic Zones under consideration by the LOS conference. Paul Heller's "Air Space Over Extended Jurisdictional Zones" also addresses this problem as well as the effect of the current LOS text on rights of aircraft passage and other issues vital to military interests. The longest chapter in *Neglected Issues* concerns Military Issues in the Law of the Sea. That conference session was chaired by Professor H. Gary Knight of Louisiana State University and considered "Military Implications of the Changing Law of the Sea," by Ken Booth of the University College of Wales and commentaries by Frank L. Fraser, India's chief hydrographer, VADM Shannon D. Kramer, USN (Ret.), and Michael McGwire of Dalhousie University.

For the military professional who is in a hurry, reading these two chapters is