

## PE LICENSURE INTRODUCTION

In October of 1992, the U.S. Coast Guard issued its Navigation and Inspection Circular, NVIC 10-92, in which it published its policy concerning the approval of vessel plans and design calculations which bear a professional engineer's (PE) certification of compliance with Coast Guard requirements. The leadership of The Society of Naval Architects and Marine Engineers (SNAME) recognized the importance of this policy to its membership and the U.S. maritime community. It was clear that a professional engineer license in naval architecture and marine engineering would provide an important qualification for those in the marine industry. The SNAME leadership contacted The National Council of Examiners for Engineering and Surveying (NCEES) for assistance in the development and offering of a national licensing opportunity in this discipline. In 1995, NCEES approved the offering of a national examination for professional licensure of naval architects and marine engineers (NAME) with SNAME as the sponsoring organization. A survey of the SNAME membership was conducted to determine the range of subject matter of importance to practice in this discipline and an examination specification was developed and published. In the October 1998 and April 1999 issues of Marine Technology and SNAME NEWS, articles were presented by the then President of SNAME, Jose Femenia, discussing various aspects of the examination for Professional Engineer Licensure in Ship Design Engineering (SDE). The first Principles and Practices Examination was given on October 29, 1999. In 2001 the name was changed and thenceforth has been identified as Naval Architecture-Marine Engineering (NAME). In an effort to assist the SNAME membership in their exam preparation, some study materials were developed and presented on the SNAME web site that were concerned with some subject areas of the examination specification (the examination specification was published in the Marine Technology issue Volume 35, Number 4 of October, 1998).

Since 2001, annual examination has been administered in April of each year by the various licensing jurisdictions authorized to offer a Principles and Practices Examination in this discipline of licensure. During 2005, a second survey of the naval architecture and marine engineering field was conducted to assess needed changes in requirements for Practices, Abilities and Knowledges (PAK). Based upon this survey, a revised examination specification was developed and implemented in April of 2008. This revised specification is available for review in the following materials as well as on the SNAME web site and the NCEES web site.

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Obtaining a Professional Engineer license in Naval Architecture/Marine Engineering is one of the biggest steps to be taken in establishing your position in the discipline. SNAME, in cooperation with NCEES is pleased to be of help as you prepare yourself for the examination. The Study Guide will provide you with important information on what, how and when to do it and who to contact for additional information.

SNAME encourages its non-licensed membership to consider sitting for the PE exam in Naval Architecture and Marine Engineering next April. Application deadlines vary by jurisdiction and in some jurisdictions are as much as six months prior to the exam date. Members must contact their licensing boards to determine whether or not their jurisdiction will be offering the exam, and for the examinee qualifications, application deadlines and fees. Contact information for the licensing boards as well as other information pertaining to professional licensure can be found on the NCEES web site ([http://www.ncees.org/Licensing\\_boards.php](http://www.ncees.org/Licensing_boards.php)). It is understood that at least 42 of the 55 licensing jurisdictions offer the NAME examination for licensure in their jurisdiction. In the event your jurisdiction does not offer this examination, since the examination is national in scope, the state may offer registration by comity if the examinee passes the examination administered by another jurisdiction. This information should be available from your local licensing board.

After the first two examinations were administered, it was determined that additional assistance in examination preparation was needed. In 2002, the subject matter of the specification was grouped into subsets that could be organized into presentations by capable instructors. A group of such professionals were selected and an internet online available course was presented as a Professional Engineer Review Course (PERC). This course is now given each year, starting in early January and ending a couple of weeks before the examination date. Those interested in registering for PERC should go to <http://www.SNAMELearning.org> where online registration may be initiated.

The PERC Units typically cover more than one subject area at a time; some presentations are of a more general nature while problems concerned with a specific subject area will also be included from time to time. Problem solutions and reference suggestions are also given, but not necessarily with the initial presentation of subject area materials. The PERC ends with a set of sample problems and solutions in the format of the NAME exam. Marine Electrical engineers should note that the NAME exam has only about a 5% focus on electrical equipment, load

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analysis, distribution, energy conversion and emergency systems. Therefore, marine electrical engineers might find licensure in electrical engineering more appropriate for their needs. They should refer to the NCEES web site (<http://www.ncees.org>) for further guidance. NAME examination items have been authored by a wide variety of the Society's currently licensed and widely scattered membership, so it may not be possible to respond rapidly or to all questions. Submitted questions and responses will be added to study materials when they become available, but without attribution.

It is important to note that examination preparation is an ongoing activity and will continue to be so. PE members are requested to submit to SNAME Headquarters their latest ideas and suggestions regarding subject matter and specific items that may be suitable for use in future examinations. Any such efforts will be greatly appreciated.

To start with examination preparation, the prospective examinee should collect an appropriate selection of professional references such as those summarized below:

- Introduction to Naval Architecture, E. Tupper, 1996, INA/SNAME
- Applied Naval Architecture, R. Zubaly, 1996, Cornell Maritime Press
- Principles of Naval Architecture, E.V. Lewis, 1988, SNAME
- Ship Design and Construction, Edited by Thomas Lamb, 2003, SNAME
- Ship Design and Construction, R. Taggart, 1980, SNAME
- Ship Production, R.L. Storch, C.P. Hammond, H.M. Bunch, R.C. Moore, 1995, SNAME
- Principles of Naval Architecture Series: Strength of Ships and Ocean Structures, A. Mansour and D. Liu, Edited by J.R. Paulling, 2008, SNAME
- Principles of Naval Architecture Series: Geometry of Ships, J. Letcher, Edited by J.R. Paulling, 2009, SNAME
- Principles of Naval Architecture Series: Intact Stability, C.S. Moore, Edited by J.R. Paulling, 2010, SNAME
- Principles of Naval Architecture Series: Ship Resistance and Flow, L. Larson, H.C. Raven, 2010. SNAME
- Ship Structural Analysis and Design, O. Hughes, J.K. Paik, 2010, SNAME
- Principles of Naval Architecture Series: Vibration, W.S. Vorus, Edited by J.R. Paulling, 2010, SNAME
- Elements of Ocean Engineering, R.E. Randall, 2010, SNAME
- Principles of Naval Architecture Series: Propulsion, J.E. Kerwin, J.B. Hadler, 2010, SNAME

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- Marine Engineering, R.L. Harrington, 1992, SNAME
- Fiberglass Boat Design and Construction, R.J. Scott, 1996, SNAME
- Rules for Building and Classing Steel Vessels, American Bureau of Shipping (ABS)
- Rules for Building and Classing Plastic Vessels, 1978, ABS
- Rules for Building and Classing High Speed Planning Craft, 1997, ABS
- U.S. Code of Federal Regulations, Titles 33 and 46 (CFR 33 and CFR 46)

Additional reference recommendations are provided in the PERC Units and new or updated texts are in development by SNAME. Information concerning the availability of these materials may be obtained by contacting SNAME Headquarters at (201) 499-5056.

For those wishing to have specific questions answered concerning the examination subject areas and study materials, an e-mail to [btrentham@sname.org](mailto:btrentham@sname.org) or a FAX message to (201) 798-4975 at SNAME Headquarters will be responded to as soon as and to the extent possible. It should be noted that NAME examinations are owned and copywrited by NCEES. They have not been released to the public and are therefore not available for review or discussion.

### Eligibility

The primary purpose of licensure is to protect the public health, safety and welfare. There are 55 United States licensing jurisdictions for the practice on engineering (all 50 states as well as The District of Columbia, Puerto Rico, The U.S. Virgin Islands, Guam and the Northern Mariana Islands). Each jurisdiction has enacted professional engineer licensing statutes that are administered by appointed boards. The passing of license examinations provides one means of measuring the professional competence. Some jurisdictions require a minimum of 12 years of experience in order to become qualified to take the license examination. Eight (8) years of experience is generally credited for an applicant who has graduated from an ABET (Accreditation Board for Engineering and Technology) accredited engineering program. Additional experience is credited for advanced study at an accredited institution. Some states now require graduation from an accredited engineering program.

For engineers who were educated or who practice in other countries and are seeking licensure in the United States, please refer to the NCEES website for further information ([http://www.ncees.org/Audience\\_Landing\\_Pages/International.php](http://www.ncees.org/Audience_Landing_Pages/International.php)).