Curriculum Vitae

Personal Data

First Name: **Abdulkhaled** Surname**: Zareei**
Date of Birth: **21 Sep. 1986** Place of Birth: **Iran- Port of Bushehr**
Nationality: **Iranian** Marital status: **Married**
Mailing Address: **(Home-Iran), Bushehr, Persian Gulf University**
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Education

A.

Graduate Institution, City, State: **Sharif University of Technology (2010-2012), Tehran, Tehran**

Degree, Major: **M.Sc., Marine Engineering (Hull structure)**

Date of Graduation: **Jun., 2012**

Thesis Title: **Mutual Effects between Earth's Magnetic Field and Marine Vehicles and their Modeling & Demagnetization**

Superviser: Dr. Hassan Sayaaddi, Dr. Hamid Mehdigholi

Abstract:
The objective of this theoretical work was to derive solutions to static ferromagnetic problems that include current-carrying coils, uniform inducing fields, and linear and homogeneous ferromagnetic bodies. The solutions obtained with the open source FEMM 4.2, is validated by theoretical formulae. In the construction of naval vessels, stealth is an important design feature. With recent advances in electromagnetic sensor technology the war time threat to shipping posed by electromagnetically triggered mines is becoming more significant and consequently the need to understand, predict and reduce the electromagnetic signature of ships is growing. The work presented in this study is concerned with the magnetic signature resulting from the magnetization of the ferromagnetic material of a marine vehicle. The detection threat arising from this induced magnetic signature has been known for many years, and consequently, ships are generally fitted with degaussing coils. Within this work, the computational models are used to identify the magnetic components and the influence of coils. The first model considered, is a spherical object with defined magnetic permeability. For this model, mathematical relations have been derived and used in preliminary design studies. The second is a prolate spheroidal object which is much more suitable to resemble a real ship. Like the latter, Maxwell's equations are extracted. For clarifying the subject, the equations governing on electromagnetism, earth's magnetic field, and different types of demagnetization are stated.
Key words: Marine vehicles, earth's magnetic field, FEA, FEMM 4.2 software

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B.

Undergraduate Institution, City, State: **Persian Gulf University (2006-2010), Bushehr, Bushehr**

Degree, Major: **B.Sc., Marine Engineering (Naval architecture)**

Date of Graduation: **Sep, 2010**

Dissertation Title: **New Approaches of Ship Design by giving emphasis to Linear Programming**

Superviser: Dr. Ahmad Mobasher Amini

Abstract:
The overall steps of designing a ship are as follow:
- Step design
- Forces acted on ship
- Structural design of ship
- Limited analysis

In the preliminary steps of designing a ship, a lot of parameters considered as a variable. Using above methods are time consuming. So, linear programming is introduced as an analytical method for solving the final equations.

Teaching Experience (at Persian Gulf University and other universities)

* Faculty member of Persian Gulf University, Marine engineering group

1. Mechanical and welding workshop
2. Mechanical behavior of material properties
3. Physical behavior of materials
4. Metallurgy (mechanics of fracture)
5. Welding of steels and cast irons
6. Technical language for welding technology and marine students
7. Laboratory of mechanical behavior of material properties
8. Machine design
9. Marine control Engineering
10. Ship corrosion

Internship Experience

Ports and Maritime Organization, Ship's inspection, Bushehr, 2009-2010

Employment and collaboration History

LIAN RAG Co. (www.Rag.ir) as a scientific consultant and researcher (Since 2010)

Licenses/Certification

1. International NDT certificate (ASNT Level I& II/UT), Sharif University of Technology, 2011
2. Professional ANSYS certificate, Sharif University of Technology, 2010

Books/Publications

1. Abdulkhaled Zareei, Hossein Eskanderi, "An introduction to welding in shipbuilding industry", Published by Persian Gulf University (Book), ISBN: 978-600-90138-7-6

2. Edward. L. Wolf, "Nanophysics and Nanotechnology", Translated by Abdulkhaled Zareei (To Persian), ISBN: 978-600-92490-2-2

3. Abdulkhaled Zareei, "Technical English for students of welding technology", ISBN: 978-600-92490-5-3

4. Zareei, Abdulkhaled, Hassan Sayyaddi, Hamid Mehdigholi, Farhad Abbasnejad, Mutual Effects between Earth's Magnetic Field and Marine Vehicles and their environment with an introduction to modeling with magnetic circuits and microwave radiator, 4th offshore industries conference, 2011. (This article selected and presented in Poster) (Persian)

5. Abdulkhaled Zareei, "Invesigating method of marine vehicle's magnetic signature", Technical marine magazine Behengam, Year 5th, in Persian, **www.magiran.com/view.asp?Type=pdf&ID=1036539&l=fa**

6. An introduction to "Nanophysics and Nanotechnology", **http://ismj.bpums.ac.ir/browse.php?a_code=A-10-3-296&slc_lang=fa&sid=1**

7. Heydarian, Alireza, Abdulkhaled Zareei, "An investigation on new methods of fouling systems in marine industry", **OIC2013**, Sharif University of technology, in Persian

8. "Modeling and Simulating a Surface Marine Vehicle in an External Uniform Earth's Magnetic Field Using of FEM Software", Abdulkhaled Zareei, Hassan Sayyaadi, Hamid Mehdigholi, the 14th marine industries conference, Tehran, December 2012

9. Zohdi, Elahe, Abdulkhaled Zareei, "An investigation on ship fatigue", ISME publication, Gilan university, in Persian

10. Abdulkhaled Zareei, "Shipbuilding Technical Dictionary", Published by Persian Gulf University (Book), ISBN: 978-600-92456-8-0

Skills
Software and programming: MATLAB, Microsoft Office, FEMM 4.2, ANSYS, Photoshop, C++, SAP, MAESTRO, AutoCAD, EES

Language
Persian (Native), English (Excellent in general and scientific)

Hobby
Studying and writing, Swimming, Fishing

Research Interests
1. Ship structure
2. Welding
3. Marine vehicles
4. Mechanics of fracture
5. Ocean wave

Honors
- Selected as a top student (got a first place) in Persian Gulf University and credited (2010)
- Financial support of “Nanophysics and Nanotechnology” by Iranian Nano Technology Initiative Council.
- Selected as the best book entitled as "Nanophysics and nanotechnology" in 19th ceremony of iranian student book agency of Islamic Republic of Iran in engineering section.

References
1. Hassan Sayaaddi
Associate professor of Sharif University of Technology
Phone: +98 21-66165682 | Fax: +98 21-66000021 | E-Mail: sayyaadi@sharif.edu | Home Page: sharif.ir/~sayyaadi/

2. Hamid Mehidigholi
Professor of Sharif University of Technology
E-Mail: mehdi@sharif.edu; http://sina.sharif.ir/~mehdi/

3. Hossein Eskanderi
Assistant professor of Persian Gulf university (Field: Metallurgy)
E-mail: heskandari@pgu.ac.ir

4. Ahmad Mobasher amini
Assistant professor of Persian Gulf University (Marine Engineering)
E-mail: ahmad.mobasher-amini@ec-nantes.fr

Memberships
1. ISME: Iranian Society of Mechanical Engineers (since 2011)
2. INS: Iranian Nano Society Technology (since 2011)
3. IRANAME: Iranian Association of Naval Architecture & Marine Engineering (Since 2010)