

**“EMSHIP”
Erasmus Mundus Master Course
in “Integrated Advanced Ship Design”**

Ref. 159652-1-2009-1-BE-ERA MUNDUS-EMMC

LIST of INTERNSHIPS

3rd Cohort - 2012-2014

INTERNSHIPS – July 2013- Dec 2013

3rd cohort students- 2012-2014 – Internships (on Nov 2013)

	Family name	First name	Place of Internship	Internships
1	Adelere	Oluwafemi Ayuba	Marin Tenik A/s Poland MT (Szczecin, Poland)	Structural Design of multi-role offshore support vessel. Approximately 100m long.
2	Baert	Benjamin	GeoSea nv (Rostock, Germany)	Analysis of the Installation of a Series of Piles for Offshore Wind Turbine Foundations
3	Bailardi	Giovanni	Università degli Studi di Genova (La Spezia, Italia)	Seakeeping analysis of sailing yacht hulls and centerboard effect: comparison between potential method (Hydrostar) and CFD RANS (Star CCM+).
4	Bailly Guimaraes	Helio	Friendship Systems (Postdam, Germany)	Robust Design Optimization for Operational Profiles
5	Barrera Arenas	Andres	STX France Solutions (ICAM, Nantes, France)	Ship Collisions with Offshore Wind Turbine Jackets.
6	Bastide	Guillaume	Intermarine (La Spezia, Italia)	Evaluation of the hull resistance of fast motorboats by CFD software
7	Chahbi	Mohammed Ramzi	SDG Ship Design Group (Galati, Romania)	Hydrodynamics Forces and Moments on KVLC2 Hull, with Drift Angle and Rudder Angle Influences
8	Da Silva	Fellipe Verissimo	Benetti Shipyards (Livorno, Italia)	Risk-Based Failure Mode and Effects Analysis (FMEA) for superyacht systems
9	Eltiro	Desalegn Hailemariam	Christ shipyard (Gdynia, Poland)	Structural design and analysis of Platform supply vessel
10	Guemini	Ramzi	Inter Ocean Metal Joint Organization (Szczecin, Poland)	Unsteady flow computations around a vertical riser for deep sea mining application
11	Hisette	Quentin	Hamburgische Schiffbau- Versuchsanstalt (Hamburg, Germany)	Simulation of Ice Management Operations
12	Hsu	Pao-Chi	Lloyd's Register EMEA (Hamburg, Germany)	A life cycle cost analysis of using alternative technologies on short sea shipping vessels in ECAs
13	Kavas	Süleyman	Blohm Voss Shipyard (Kiel, Germany)	Development of measurement methods concerning dynamic shaft bearing loads resulting from lateral & axial vibrations in propulsion shaft systems of a Megayacht.
14	Kitching	Nicholas Samuel	Azimut Shipyards (Viareggio, Italia)	"Analysis of the design and construction methodologies for carbon composite motor yachts superstructures"
15	Koffi	Danoh	ICE ICEPRONAV SA (Galati, Romania)	Turbulent Flow Separation Around a ROV Body
16	Kumar	Vivek	Baglietto Shipyards (La Spezia, Italia)	Solutions and analysis of the problem of structural deformations in a motor yacht hull plating due to solar radiation, by parametric and finite element modelling.
17	Maliakel	Jose Babu	ICAM (Nantes, France)	Collision damage analysis of ship-offshore jacket collisions using non-linear fem analysis
18	Manaure Trujillo	Ibrahim	ICE ICEPRONAV SA (Galati, Romania)	The Design of a Bulk Carrier Propulsion System
19	Miskovic	Igor	Benetti Shipyards (Livorno, Italia)	<u>PRODUCTION ANALYSIS AND DESIGN OF A SUPERYACHT</u> - Analysis of a semi-custom fiberglass range of Benetti Yachts, from 93' to 140' ; Benchmark based Re-Design of a 121' Yacht.
20	Moraitis	Georgios	Germanischer Lloyd (Hamburg, Germany)	Fatigue & fracture assessment of butt welds.
21	O'Connor	Michael	ICAM (Nantes, France)	Aerogoules project : Vertical Axis Wind Turbine
22	Orona Cobos	Daniel Javier	SDG Ship Design Group (Galati, Romania)	Hydrodynamic Performances Analysis and Design of a Containership Propeller
23	Saâd	Bilel	Hoppe Marine (Hamburg, Germany)	Development of a practical tool to determine the hull damping of modern ship hull forms

24	Singh	Niraj Kumar	Det Norske Veritas (DNV - Gdynia, Poland)	Comparative Strength Analysis Study of Mobile Offshore Unit's considering criteria/results according different applicable Offshore Codes/Standards.
25	Tran	Viet Hai	Hochtief Solutions AG (Hamburg, Germany)	Global response analysis of the jack-up platform Odin
26	Vignal	Héloïse	Abeking & Rasmussen (Bremen, Germany)	Comparison of motion sickness incidence of three crew transfer vessel (CTV) with different hull forms



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: ADELERE OLUWAFEMI AYUBA

Subject/title of your internship: STRUCTURAL DESIGN OF MUTI-ROLE OFFSHORE VESSELS APPROXIMATELY 100M

Name of the company: MARIN TENIK A/S POLAND

Name of the contact person in the company: MR MARCIN

Period of internship : Start date : 22 july
End Date : October 31

Date : 05/10/2013

Signature:

A handwritten signature in blue ink, consisting of a series of loops and lines that form a stylized representation of the student's name.

Report in Internship (1 page):

- a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

I went through design phase of marine offshore projects, from basic design, through class package to workshop drawings in structural discipline. And also simplified direct calculation of simple structure based on Rules provided by classification societies. I also attended seminars organised by the company.

- b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The organization is basically a design office setting with about ten staffs, and i report every completed task to my supervisor at the end of every week and my interactions with the staffs has been great, cordial and helpful because they are often kind enough to give explanations to some my question. The supervising was nice since i have to report and hand over some of the assigned task.

- c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

The concept of the internship is really great, although short, it give a practical understanding of the things learned in the classroom and boost confident.

The internship was great but the title/topic was not decided even after two month on working in the company.

It really a time worth it, but very short

I recommend longer period for the internship



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Benjamin Baert

Subject/title of your internship: Analysis of the installation of a series of wind turbine foundations

Name of the company: GeoSea

Name of the contact person in the company: Stefaan Van Velthoven

Period of internship: Start date: 8th July, 2013
End Date: 14th November, 2013

Date: 5th October, 2013

Signature:

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The internship started with offshore safety training. Afterwards I was sent to the offshore wind farm Baltic 2 project in Rostock. There I am a member of the installation team. My main task is to follow up the installation of the jacket piles from the production point of view. This includes supporting of the daily reports which is filled out by each vessel, analysis of the data, assessment of the cycle time and short term planning, and investigation of possible improvements. Besides these main tasks, I also help with reviewing of method statements, processing of vessel certificates and witnessing of load outs of the jacket piles from the quay to the platform supply vessel (PSV). The latter allows me to gain practical experience. Moreover, I was also one week on board of the jack-up platform.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

As a trainee I was counted as a full member of the installation team, which made the internship a very valuable practical experience. My supervisor, Stefaan Van Velthoven, leads the installation team, and took care of me by answering all my questions, appointing people to help me, or by guiding me through all matter, with which starters have most difficulties. The deputy project manager, Geert Linthout, helped me also when needed.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Although the exposure to the “real life” of offshore works was completely in line with my expectations and wish, I was surprised about the flexibility and the amount of administration (on the project). Flexibility reflected in two ways. Firstly, due to the fact that the offshore works are 24/7, flexibility is required from the personnel, resulting sometimes in high workloads. Secondly, adaptation and customising of equipment are very common, even the jack-up platform was modified for this project. This flexibility in modifying equipment makes the job interesting and challenging.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Bailardi Giovanni

Subject/title of your internship: Seakeeping analysis of sailing yacht hulls and centerboard effect: comparison between potential method (Hydrostar) and CFD RANS (Star CCM+).

Name of the company. University of La Spezia (+ Vismara marine)

Name of the contact person in the company: Boote Dario

Period of internship : Start date : 22/07/2013
End Date : 20/01/2014

Date : 26/10/2013

Signature: Giovanni Bailardi

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The main idea was to develop a study of the seakeeping performance of a sailing yacht regarding the influence of transom shape and lifting the center-board. In order to understand the general differences and evaluate them, two different sea-keeping computational methods have been considered:

- Potential method: Hydrostar v7.03
- RANS: Star CCM+ v8.04

Whereas the potential methods results faster and easy, the computations could be limited to the not calculation of the viscous damping, the lifting effect and the over waterline hull volume. For sailing yachts the aforementioned characteristics could be important and haven't been estimated yet.

The software comparison was then first performed for one hull lately designed by Vismara Srl, focusing on Heave, Pitch and Roll RAO estimation; then an older hull is taken in exam.

Particular attention is given to the Roll Damping behaviour of the yacht varying the heading of the waves and the centreboard draft.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

I started the internship in the CFD Numerical Simulation Laboratory of University of La Spezia and also partially using a DLTM cluster unit. Up to now the internship has been fully organized by me with the constant update of results to professors of La Spezia University. A formal presentation has been sent lately to Vismara shipyards and will be discussed, along with the start a stage, on Monday 28/10 afternoon.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

As in my case I was absolutely motivated to do an internship and a thesis which completely interests me, the plan was to contact a sailing yacht shipyards and start an internship there. The available shipyard advised to start the internship in October (after the Cannes, Monaco and Genova fairs). Hence, in the very next days I will see if it was worthy or not.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Hélio Bailly Guimarães


Subject/title of your internship: Ship Design Optimization/ “Robust Design Optimization for Operational Profiles”

Name of the company: FRIENDSHIP-SYSTEMS GmbH

Name of the contact person in the company: Dr.-Ing. Stefan Harries

Period of internship : Start date : July 1st, 2013
End Date : November 15th, 2013

Date : 09 October 2013

Signature: A handwritten signature in blue ink, appearing to read "Hélio Bailly Guimarães", written in a cursive style.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Andres BARRERA

Subject/title of your internship: CHARGEOL Project for the foundations of renewable marine energy. ICAM is required to develop a simplified calculation tool to rapidly assess collision worthiness of wind turbine jacket structures during the design stage. Concretely, my tasks include performing collision simulations using the nonlinear FEM software LS DYNA and aiding in the development of the simplified calculation tool.

Name of the company: ICAM

Name of the contact person in the company:

Hervé LE SOURNE

Department of Energy, Materials and Mechanics

ICAM Nantes

Carquefou, France

Herve.lesourne@icam.fr

Period of internship : Start date : July 1, 2013

End Date : January 31, 2014

Date : October 1, 2013

Signature:

A handwritten signature in blue ink that reads "Andrés Barrera Arenosa".

Report in Internship:

a) Description of the Internship – explain what you did during your internship

My tasks at ICAM included carrying out a literature review on collision risk analysis between ships and offshore wind turbine structures for STX France Solutions and BUREAU VERITAS, performing several collision simulations between a rigid ship model and a wind turbine jacket model provided by STX France Solutions. The objective of these simulations was to provide results for the development of the super elements to be used in the simplified collision software.

Moreover, I was given the task of aiding in the development of the simplified collision software, adapting the existing upper bound theorem collision software developed for ship to ship impacts to the case of a ship colliding with a wind turbine.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company.

The internship was divided into three phases. The initial phase consisted in the literature review of the collision risk analysis methods available, the second phase involved the simulation of different collision scenarios between ships and wind turbine jackets and the third phase was based in the development of the simplified collision calculation software.

With respect to the organization and supervision, professor LE SOURNE was always concerned with the quality of the interns' work, continuously organizing meetings to clarify doubts and present further required work that had to be completed. Also, when required he was always available to solve all my doubts either regarding the simulations and the LS DYNA project, the programming concerns in C++ and the super element method.

The staff at the university included other students performing internships and additional professors. The internship provided the students the opportunity to also work with STX France Solutions and BUREAU VERITAS, companies that were always willing to provide any additional resources for the success of the project.

c) Personal assessment and recommendations

I think that overall the internship experience exceeded my expectations, as not only it was focused on a project in the field of marine/offshore engineering but granted me a unique opportunity to work with world renowned companies in the sector, providing me with the necessary initial experience to develop my career in the offshore/marine sector. I also received training by professor LE SOURNE in collision analysis, the use of the LS DYNA FEM software and on the usage and theory behind the SHARP program for ship to ship collisions, to be able to modify it accordingly to the CHARGEOL project.

Throughout the internship we had several meetings with the partners of the project and had the opportunity to interact with the companies, get feedback on the work that we developed and participate in the decision making process. We also visited the STX shipyard and saw the manufacturing process of the wind turbine jackets to get a better understanding of our involvement in the project and reflect on the importance of our contribution to guarantee the safety and correct operation of a wind farm.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Guillaume Bastide

Subject/title of your internship:

Resistance study of a planing hull with flaps by CFD analysis

Name of the company: Intermarine SPA

Name of the contact person in the company:

Massimo Mariotti

Period of internship : Start date : 01/07/2013

End Date : 17/12/2013

Date : 21/10/2013

Signature:

Guillaume Bastide

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

For this internship, I am creating CFD models on STAR CCM+ and CFX.

I used first of all Star CCM+, creating a simple model without neither spray rails nor flaps. Then I compared results with the Towing tank test and sea trials of the ship. The second step is to create a parametric CFD model of the ship with overset mesh. Last step is to incorporate the spray rails and flaps with parameters to optimise their position and size.

Finally, I will do something similar with CFX-Workbench from ANSYS and compare the 2 software. Intermarine will use those studies to select one of the 2 CFD software.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The organization is tripartite: it is a contract made with the Cluster DLTM for the licenses and powerful computer, Intermarine which is the client and the university I am depending on.

During the summer, the shipyard was closed so I worked alone. Only a meeting with Dr Massimo Mariotti and Andrea Tonelli (my 2 supervisors in Intermarine) has been done to set the objectives and organization of the internship. Then a second meeting with DLTM to have explanations on how the cluster works.

Since the shipyard is open, I go 3 times a week in the shipyards in Sarzana to work on CFX where I can find some support on CFX. I Work on Star ccm+ at the university.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

The master thesis is absolutely free. I can plan my own strategy and organization. To be independent on work is a good point to me even if there are some drawbacks. Really few support is given by university, DLTM cluster or Intermarine. Even if things get better from Intermarine, the support from the cluster is worse and worse. I have the feeling that nobody at the university, in Intermarine or even in the cluster, is really competent in CFD. So it would be impossible to do a decent work without the powerful help of CD-Adapco in this time laps.

The logistic is... complicated generally speaking, and slow me down a lot in my work.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Mohammed Ramzi CHAHBI

Subject/title of your internship:

Design propulsion system

Name of the company: SHIP DESIGN GROUP (SDG) Romania

Name of the contact person in the company:

- Mr. Ovidiu IONAS

Period of internship : Start date : 08/07/2013

End Date : 03/09/2013

Date : 04/10/2013

Signature:

A handwritten signature in blue ink, consisting of a series of loops and strokes, positioned to the right of the "Signature:" label.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Predict Resistance using different regression methods (Holtrop, Harvald,...) and I developed program with FORTRAN for four methods to compute resistance for any data of ship.

Design Propeller theoretically (Wageningen) and reach to select Engine, Gearbox.

Design Rudder.

And I get some knowledge about stability according rules (IMO, MARPOL).

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

In the company, my local supervisor Mr.IONAS gives me to work for their ships (projects) to predict resistance with different method by checking limitation and design propulsion system.

But in parallel I worked (did the same) for my ship (thesis). And with my supervisor, it was very good I learnt from him too much with his experiences (teaching in university and in company) and the same thing with the other engineers (they are very nice).

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

In the company they provide me support specially a book where the supervisor (Mr. IONAS) is the writer

And inside they have everything (resistance, propeller, rudder,...) but in Rumanian language.

The internship was good with access to internet (wifi).

For next cohort they should choose the thesis related with internship.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name:

Fellipe Verissimo da Silva

Subject/title of your internship:

*Life Cost-Based Failure Mode and Effects Analyses (FMEA) for superyacht systems.**

Short description:

The MSc. thesis proposes a systematic use of empirical data for applying a cost-based FMEA on mechanical/electrical main systems of large commercial yachts in order to enhance reliability, serviceability and predict warranty performance due to an increased awareness of warranty costs associated with failure events. The investigation focuses on the improved version of traditional FMEA by using cost as severity measurement scheme and incorporating sensitivity analysis (Monte Carlo Simulation) to account for the uncertainties in occurrence, downtime and model complex scenarios. Finally, cost-based FMEA is useful for comparing design alternatives that can reduce the overall life cycle cost, planning preventive maintenance and ultimately improving up-time.

*Title is subject to change.

Name of the company:

Benetti Yachts. Livorno, Italy

Name of the contact person in the company:

Emanuelle Camporese

Period of internship : Start date : 05/08/2013

End Date : N/A

Date :

06/10/2014

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

A significant amount of time was spent being acquainted with different sectors of the shipyard. In the meantime, my initial concept idea/project performed in France (Initiation to Research - IR) for the internship has been not completely accepted due to the lack of documentation of Benetti's all-electric driven propulsion superyachts. However, the main tool proposed for reliability assessment (FMEA) remained in. At the moment, I am still gathering enough information to perform a quantitative/qualitative life cycle cost analysis to enhance reliability of systems (not completely defined yet) and, therefore, warranty performance. (It involves several depts. inside of shipyard – warranty, quality, repair and technical depts.)

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

Relation/interaction with the staff is quite good. I am satisfied with it. Internship was not so well organised in terms of credentials to access the shipyard, but I could face it without major problems.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Internship does not fully correspond to the initial plan proposed in Nantes, however, the staff is friendly and welcomed me well. The technical information workflow and feedback are slow.

I am free to propose and research subjects that I am interested most, which I consider it as an advantage.

My advice for next "Italy" fellows is: you should have several different themes for the thesis in mind, just in case. Otherwise, you might spend significant time searching a replace theme if something goes wrong, and probably does. Be in mind that you will not be remunerated in your internship and you will need to pay the transportation costs that are significantly high, in case you live in another city. In my case, living in La Spezia and attending the internship in Livorno – 92km far away.

Despite of,all, has being a very nice opportunity to live here and be part of the fascinating world of luxury superyachts.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Desalegn Eltiro

Subject/title of your internship: Structural Design of Platform Supply Vessel

Name of the company: Crist Shipyard, Gdynia, Poland

Name of the contact person in the company: Jakub Wielgosz

Email: jakub.wielgosz@cris.com.pl

Telephone: +48 668444783

Period of internship: Start date: 24/07/2013

End Date: 27/09/2013

Date : 03/10/2013

Signature:

A handwritten signature in blue ink, appearing to be "D+1", is written over a light blue rectangular background.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The internship project “VIDAR” is a self-elevating wind turbine installation unit and was already on installation and I worked on:

Production Plan of cofferdam piping

Production plan of total bulkhead penetrations

Jack house internal and external pipes requirement

Production and testing of pipes using hydrostatic pressure plan and progress check up

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

I worked in a day to day basis with a supervisor and I had to submit a report daily. One challenge worth mentioning is that, I had to also work on other tasks besides the one assigned by my supervisor as all are rushing to finish the project “VIDAR”.

This created an opportunity to get to know the workers around me and made me to develop good relation. Generally, I could say it was good.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

My personal view is that, I think the internship need should come from the company’s itself so that they mobilize all the necessary resources for the successful completion of the internship. Otherwise they assign the internee wherever a spot is available regardless of the initial plan. My internship title includes structural design but I was assigned to totally on production, such cases do not happen if the need comes from the company.

Moreover, if the Emship program facilitates availability of academic version software to students, I think it would facilitate the internship activity.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Guemini ramzi

Subject/title of your internship:

Unsteady flow computations around a vertical riser for deep sea mining application

Name of the company: Inter Ocean Metal (IOM) .Szczecin.Poland

Name of the contact person in the company: Dr: Tomasz Abramowski

Period of internship : Start date : 25.07.2013

End Date : 05.11.2013

Date : 04.10.2013

Signature:

A handwritten signature in blue ink, appearing to be "Guemini Ramzi", written in a cursive style.

Report in Internship:

a) Description of the Internship

To compute the forces acting on the vertical inclined riser of the mining ship and to deduce on the required power to lift the riser according to different velocities, I have performed a simulation of the 3D flow over a cylinder inclined vertically using Fluent ansys software.

The second task of the internship was to study the self-unloading system in bulk cargo ship, using AutoCAD software; we did some design considerations of mining ship to present the impact on the structure and subdivision.

b) Organisation of the internship

For my internship, I had a clear work plan, because my supervisor in the university is the director of the company at the same time, I have an office in the university to work and we fixe some meetings in the company for the consultation and to discuss the results, He was helpful by giving interesting devices and useful documents but for the local staff of the company I didn't meet them, Also I had the opportunity to attend some international conference in Mining applications, Offshore and Polar Engineers (ISOPE OMS 2013).

The second supervisor was Dr. Zbigniew Sekulski, ZUT, he has a lot of skills and I learnt a lot from him, especially in the design part and organization of the thesis.

c) Personal assessment and recommendations

I spend all the time in my office in the university, looking for solutions linked to the thesis in books or websites, but it could be better if I did the internship in the company to work and to have some experience.

From my point of view, it's interesting when the company gives tasks which correspond to the subjects of the master thesis and each student has to choose and work on one of them in a period of four months at least. Finally, Emship programme is well organised by the coordinators, it's getting famous when contacting more international companies which gives the possibility to the students to get a job after graduation.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Quentin HISETTE

Subject/title of your internship: Ice model testing

Name of the company : The Hamburg Ship Model Basin (HSVA)

Name of the contact person in the company: Nils REIMER

Period of internship : Start date : July 8, 2013
End date : November 15, 2013

Date : September 30, 2013

Signature:

A handwritten signature in blue ink, appearing to read "Hissette", with a long horizontal stroke underneath.

Report in Internship :

a) Description of the Internship

My internship at The Hamburg Ship Model Basin was mainly performed in the large ice basin of the Arctic Technology department. My work consisted in helping the staff during the different ice preparation phases as well as during the testing executions.

More practically, I had the opportunity to help the project teams to prepare several kinds of ice features (managed ice floes, ice ridges, ...) by chopping, cutting and/or moving predefined sections of a level ice sheet. The operations were then followed by measuring properties and/or parameters of the built features. I have also helped the staff during the ice model tests, for example by taking one of the video records of the moving model from a constant perspective.

Beside all these ice test operations, I had also the opportunity to help for a few tasks in the open-water towing tank for a series of Zig-zag tests.

b) Organisation of the internship

During the first days, I have been given several documents to read, about the general ice preparation, ice model testing and results analysis procedures for the tests conducted in the large ice basin. After this, my internship work was purely practical, as the theoretical part of my stay in the company was dedicated to the Master's thesis.

As successive projects took place during my stay at HSVA, I have been supervised by several people, most of the time the project engineer of the corresponding project. Each week I was receiving a draft of the working plan and, according to my availability, I was assigned to one or several tasks, which were placed in changing shifts.

c) Personal assessment and recommendations

My internship at The Hamburg Ship Model Basin is definitely to be recommended to any future student of the EMSHIP programme. It was especially very interesting to learn the specific methods used to efficiently and accurately model the different ice features that can be observed in nature. Additionally, I was allowed to attend all the ice tests and therefore got the opportunity to learn about the behaviour of icebreaking ships and Arctic offshore vessels/structures.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name:

Pao-Chi Hsu

Subject/title of your internship:

A life cycle cost analysis of using alternative technologies on short sea shipping vessels in ECAs

Name of the company:

Lloyd’s Register EMEA Hamburg office

Name of the contact person in the company:

Thorsten Gockes

T +49 (0)40328107414

Period of internship : Start date : Jul. 04, 2013

End Date : Oct. 31, 2013

Date :

Oct. 01, 2013

Signature:

A handwritten signature in black ink, appearing to read "P. C. Hsu", with a horizontal line underneath the letters.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Develop a method to compare the economic performance for future marine alternative fuels, assess the safety and environment impact of each alternative, and deal with the upcoming statutory regulations. Searching up to date international conventions and upcoming regulation to figure out the potential of development of future marine fuels. Read reports from research organizations and equipment manufacturers to assess the cost of different technologies. Review drawing in drawing approval department and learn how the company organized to progress the drawing approve.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

My supervisor prepared a very nice space for me to work everyday and provide me all tools I need during my internship. HR department help me a lot to apply VISA and new bank account, everything here is well organized. Every two weeks my supervisor discuss with me about the project, if he cannot give me suggestion, he can find someone in head office or other branch office to help me. Other staffs in Hamburg office are very friendly and nice, they also provide a lot information about my topic, life in Hamburg and travel etc. It's really a nice chance and experience to work here with those people.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Lloyd's is a historied company, they have powerful database, for internship students who need data and document for their master thesis it is the best place.

Many experts and specialists in different office that we can easily contact them by internal e-mail, and they are willing to help and give their opinion.

The internship starts in summer, but many staffs have their vacation in July and August, the student may ask some online training (in LR internal web system) during the beginning of internship. That helps student understand more about classification society.

If there is some chance that LR allow student to attend some inspection, it will be nice, but because it's dangerous, I don't think LR want to take this risk.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Süleyman Kavas

Subject/title of your internship: DEVELOPMENT OF MEASUREMENT METHODS CONCERNING DYNAMIC SHAFT BEARING LOADS RESULTING FROM LATERAL AND AXIAL VIBRATIONS IN A PROPULSION SHAFT SYSTEM OF A MEGAYACHT

Name of the company : Blohm+Voss Shipyard

Name of the contact person in the company: Michael Scheufele

Period of internship : Start date : 15/07/2013
End Date : 15/11/2013

Date : 07/10/2013

Signature:

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

I usually focus on my master thesis. At the beginning, I learned more about engine room especially shaft and propeller orientation and engine room alignment. Then I searched about axial vibration of the shaft; reasons, minimize shaft axial vibrations etc. I visited one megayacht under construction in companies shipyard in order to see the engine room where is planning to perform the experiment. I had chance to see the vibration calculation, the engine room alignment and material selection of many different yachts.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

They gave me a personal computer which has limited access to the company network. But whenever I need any necessary document, it is provided without any hesitation. Usually I work alone. If I need help, I can ask either my supervisor or engineers in my department. Especially general supervision about daily life is quite well. However the technical supervision is not good as daily one.

Meanwhile we have meetings to evaluate the master thesis and work done so far almost every two weeks with my supervisor, the responsible of the thesis in the company and one engineer from engine room design department. Therefore I have quite well planned internship.

Almost everybody in the company is friendly and helpful. Even if the language is a big problem, they usually invite me in their meetings and activities.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

In my internship almost everything is good. The biggest problem for me is sitting in front of the computer during whole day. It is very theoretical. At the beginning, I expected to do more practical things such as doing experiment ongoing ship or visiting shipyard and workshop more often. We are still planning to do experiment ongoing ship to see whether our measurement procedure which we developed is true or not but I am not sure that we have chance to perform it in the remaining part of my internship.

Even if the subject is megayacht shaft vibration measurement, I have done more about mechanical engineering than naval architecture. I expected more about ships.

Any student who wants to do his internship and master thesis in theoretical area in a calm and friendly environment it is one of the best places.

Another point about here is: accommodation. Kiel is a small city and finding available room is a big issue. Student dormitory of local university did not accept me as a student so I could not find a room during my whole internship.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name:

Nick Kitching

Subject/title of your internship:

Design and Construction methods for Motor Yacht Carbon Composite superstructures.

Name of the company

Name of the contact person in the company:

Azimut Yachts

Giovanni Bizzarri – Technical Department Lead

Lorenzo Della Tommasina – Structural Department

Period of internship :

Start date : 11th July 2013

End Date : 31st January 2014 (Part Time)

Date :

Signature:

Report on Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

During my internship I worked on the structural design of a 40m three deck motor yacht superstructure. The objectives of the design meant that carbon fibre was to be used to make the boat as light as possible for higher cruising speeds.

The design work was conducted as both FEA work completed in cooperation with the university and discussions with both Azimut composite suppliers and shipyard workers. As my thesis topic is investigating the use of carbon fibre in general, the superstructure was used as a case study to investigate the complete process from design through to final production.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company (5 to 10 lines)

The internship was supervised well by both the university and the company, with both providing any resources they had available to help my investigation. The staff at Azimut were very helpful and suggested avenues of further work which were based upon their previous practices at the yard, something which was very relevant to my thesis and the evolution of carbon fibres use in motor yachts.

Although Azimut and the University provided much information, my thesis required a broader overview of the use of carbon fibre in motor yacht construction, and I did encounter difficulty related to inquiries I made directly with various companies. Although interested in helping much of their data is protected by patent law and trade secrets, which I somewhat expected based on my research report for ECN.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

My thesis was mainly research and so it proved a little difficult to create comparisons that were exact in nature. Although supported by the University and Azimut if possible it would be more useful if more companies would be more open with their information. (I am not sure how you can do this actually!)

Also – If possible ensure that a company can provide a desktop computer at their office from which to work on, as most of us in Italy are taking our own laptops.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: KOFFI Danoh Kouassi Ange Gatien

Subject/title of your internship: Computational Fluid Dynamics (C.F.D.)

Name of the company: ICEPRONAV

Name of the contact person in the company: Mr Ion Mustata

Period of internship : Start date : 10 July 2013
End Date : 27 September 2013

Date : 04/10/2013

Signature:

A handwritten signature in purple ink, appearing to be "Danoh", is written on a light yellow rectangular background.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

During my internship I worked on certain aspects of my thesis. There are:

- Investigation of Classification Societies Rules regarding ROV(s) for offshore industry;
- Research on existing ROV(s) on internet, scientific literature;
- Design of 3D geometry for flow modelling purposes with CAD software Rhinoceros.
- Grid generation with ANSYS meshing tools.

These tasks have been done in order to simulate flow around a Remotely Operated Vehicle with ellipsoidal body.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines).

The internship has been done in the company and was organized and assisted by two supervisors (one from the company and another coming from the university). The scope of work was defined by the supervisor from the university and the evolution of tasks was followed by the other one.

Icepronav is a ship design company with no expertise in ROV, because of that, there was no feedback on my work from the company, CFD calculations were also left behind by the company's new management. But they were very open to help me even if they couldn't. Questions regarding my work were reported to the supervisor from the university.

Work was developed according to my rhythm, with an irregular verification of obtained results by my university supervisor.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Internships must be required by the companies and suitable to activities they perform.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Vivek Kumar

Subject/title of your internship: Thermal stress analysis with mitigating solutions to overcome the problem of deformations over a motor yacht hull plating, due to thermal loads set up by solar radiation.

Name of the company Baglietto

Name of the contact person in the company: Mr. Guido Penco (Technical Director)

Period of internship : Start date : 04 July 2013
 End Date : 31 Jan 2014

Date : 06 Oct 2013

Signature: Vivek Kumar

Report in Internship (1 page): This internship is on-going.

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Broadly, Baglietto Shipyards are having a problem with maintaining a fair aesthetic hull as their ships start to age, after a few years. This has been determined due to thermal loads set up by solar heating over the hull plating.

To note is that this problem is less severe with lighter paint colours like White but with clients requesting darker colours like Black, this temperature gradient is quite extreme. Also, HVAC energy needs significantly go up and this needs to be balanced by additional cooling equipment or thicker insulation leading to heavier ships which in turn leads to more efficiency losses. Thus an aesthetic need is causing a significant engineering problem – i.e. the deformation on the hull surface and increased energy needs in the ship.

I planned my project in three stages – observation and initial data collection, analysis, proposition of solutions. In the first stage I carried out thermal imaging on my target ship and analysed the data. Solar radiation heats different parts of the hull differently – the bulwark is the hottest while the waterline is the coolest. The surface in-between these regions are subjected to thermal stresses which cause uneven expansion of the hull plating and results in unaesthetic deformations. At the moment, thicker epoxy filler over the metal hull and closer transversal frame spacing are being used to combat this problem. Both contribute to additional material costs and a heavier ship.

Next, I conducted a lot of research from papers and books pertaining to thermal engineering, solar engineering, materials and mechanics of structures to name a few. Based on this I have built a parametric analytical model which at the moment is realistically predicting the temperatures and stresses on the hull surface. I will also use Finite Element Analysis to compare these results with. If time permits, I plan to also carry out small model tests.

Lastly, based on my parametric analysis, I will try to devise engineering solutions to reduce this problem keeping cost, practicality and time of implementation in mind. These might include more advanced insulation methods, changing the surface finish of the paint while retaining whatever colour is desired, to more advanced paints with built in thermal insulating properties etc.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The internship was organized between the University of Genoa and Baglietto Shipyards. It was scheduled for Mondays, Wednesdays and Fridays while we had classes on Tuesdays and Thursdays.

My Supervision was by both Mr. Guido Penco and Mr. Franco Bruno who is part of the Technical Office.

My relationship with the local staff has been very cordial. They have helped me with whatever information I have requested, I have learnt a lot from them and enjoy their company.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

I received my internship subject as a single line subject in the end of June but I was able to meet Baglietto as soon as I arrived in Italy and that helped me to begin my research as soon as possible. It was however a different problem to what I had assumed from the brief email I had received but I have enjoyed working on the new challenge too.

The thesis subject deals with a challenging problem – there are hardly any recent research papers on the subject, especially applied to motor yachts which have complicated surfaces. I have spent a lot of time teaching myself about thermal engineering, solar engineering, material thermal behaviour and mathematical analysis methods as this skill was not available in the shipyard. However, while this took more time than if I had been able to seek an expert, my knowledge about these subjects in relation to the shipping industry has increased manifold which is a positive.

As a proposal of improvement, I would suggest that as soon as the internship subject is known, the contact details of the supervisor should be made known to the student so that he can (and he should) get in touch in advance and prepare himself with the sources of information he needs – papers and contacts of experts. Also, the internship subject should be communicated at least a month or two in advance of arriving.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: JOSE BABU MALIAKEL

Subject/title of your internship: COLLISION DAMAGE ANALYSIS OF SHIP-OFFSHORE JACKET COLLISIONS

Name of the company : ICAM

Name of the contact person in the company: PROF.HERVE LESOURNE

Period of internship : Start date : 01/07/2013

End Date : 04/02/2014

Date : 15-10-2013

Signature:

A handwritten signature in blue ink, appearing to read "Jose Babu Maliakel", is written over a set of horizontal lines. The signature is stylized and somewhat cursive.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The student will be working on the CHARGEOL PROJECT: The research project "CHARGEOL" was initiated as an important technological building block to better understand the mechanical stresses that exist in complex marine environment and reduce the risk of design. Specifically, CHARGEOL project deals with the development of calculation tools with the objective to study the behavior of an offshore wind turbine supporting structure when it is submitted to accidental loads: seism, ship collisions, strong wave impacts, etc. This research was approved by EMC2 in December 2012. The project leader is STX. Region Pays de la Loire is providing assistance to seven project partners.

The partners of this project are:

- **Hydrocean** for waves impact analyses
- **GEM Laboratory (ECN)** for the seismic numerical studies
- **IFFSTAR Laboratory** for the seismic tests
- **BUREAU VERITAS** for validation of developed tools.
- **STX FRANCE**, leader of the project, builder of the jackets and future user of the developed tools
- **ICAM** for collision numerical studies and for the development of a simplified tool which will help to dimension the jacket submitted to a ship collision.
- **INNOSEA**

As a part of the mechanical engineering department of ICAM, **the author will be involved in the development of a ship collision analysis tool which will be used by STX Solution and BUREAU VERITAS at the pre-design stage of a jacket.** This tool is based on the super-element method which has been developed by ICAM in collaboration with University of Liege (ANAST laboratory).

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The student works at ICAM and represents the university at the monthly review meetings. The task for each partner [ICAM, BV, STX etc] is clearly cut out and each partner presents the results at hand at every meeting. Plans are made for the next month. An FTP server has been set up to share the data among the partners.

The facilities and the support provided by the organization-ICAM is commendable and the colleagues are very friendly.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Overall, it has been a satisfactory experience so far. It corresponds to the initial plans. The student has made some additional proposals to widen the work scope of the internship part of which has been accepted by the Organization-ICAM.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Ibrahim Manaure Trujillo

Subject/title of your internship: Design of a bulk carrier propulsion system

Name of the company Icepronav Engineering SRL

Name of the contact person in the company: Ion Mustata (ion.mustata@icepronav.ro)

Period of internship : Start date : 10/07/2013

End Date : 27/09/2013

Date : 06/10/2013

Signature: Ibrahim Manaure Trujillo

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

First two weeks of the internship were used for gathering main information about the ship, body lines plan, deadweight, draft, hydrostatics tables, all this information was provided by Icepronav. Main activities of the internship were: Ship resistance calculations using Holtrop & Mennen method, shaft line computations according to GL rules, selection of engine, computation of propeller open water performances using Wageningnen B-series. Finally, ship speed was recomputed using the engine brake power to verify if desired speed is achieved or not.

I developed a Matlab application to calculate automatically ship resistance, also an application to generate Wageningeng B series curves for any number of blades and expanded area ratio.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

Internship was developed from Monday to Friday from 9:00 am to 4:00 pm. Supervision by the company tutor was made daily. Any information needed regarding ship particulars was handled to me as soon as possible. Questions and doubts regarding my work were also quickly answered.

Interaction with the local staff was low, because the calculation I was performing was not of their interest, but still they were trying their best to make me feel comfortable during my stay.

Organization of the internship was excellent; all matters were undertaken according to plan (arrival to the company, signing contract, etc). Ugal staff did a great job finding and organizing my internship.

All the work was carried out by myself in my laptop.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Most important thing is that the internship, when possible, should be required by the company.

Feedback and learning the student gets is much greater when work performed is directed and/or meaningful to the company.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: IGOR MISKOVIC

Subject/title of your internship: BENCHMARKING ANALYSIS ON A SUPERYACHTS

Name of the company BENETTI YACHTS

Name of the contact person in the company: Nicola Nicolai, Alessandro Galifuoco

Period of internship: Start date : 15.7.2013

End Date : 1.2.2014

Date : 30.9.2013

Signature:

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Internship is organised in 2 Benetti shipyards. First 3 months are done in Viareggio shipyard (Composite Yachts) and second 3 months will be done in Livorno shipyard (Steel and Aluminium Yachts). Work is still in progress. At the beginning, during the summer, the job was to compare all the models from the Benetti semi custom range. Comparison is done by comparing the technical specifications of each model, and all the items in the yacht (500 items). The goal was to observe the standard by which boats were built, and to identify the possible discrepancies. Comparison also included a full analysis of one of the main competitors on the market.

In the process of standardization of Super yachts, standards are established one by one during the time.

At this moment, I am working on the standardization of the tanks top connections. I am working in AutoCAD and Micro station software. Identifying the best standard among produced vessels and technologies applied, which will be possible to implement in all the models in the Benetti range, is very complex job which started 2 years ago. And is still going on. Internship scheme also included visits to prestigious Boat shows, one in Cannes and other in Monaco. During those visits, the aim was to understand the market, competitors, trends, and the position of the Benetti among them. Also collecting of the information was crucial. This work resulted with Market Intelligence Report, which is done by Product Specialists with my help.

The next 3 months I will be in Livorno where I will deal with steel and aluminium fully custom yachts.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

Internship is mainly done in Project Management department and occasionally in Technical department. My supervisor is head of PM department and I am working with other technical staff, depending on the type of the work. Job is done mainly in the office, but also I have been on board of yachts in production. Typically I am working 5 days a week, almost full time, but since classes are starting, I will limit the time spent in Benetti in according to University obligations.

I am having excellent relation with other Project managers, my supervisor and other staff, which is resulting in a big amount of data accomplished in this time.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

Only thing I would like to mention, is that it is not always well organised in terms of respect of my time and obligations. What I want to say it is that sometimes I am unnecessary waiting for data from the company, even if I am sitting at the desk in the office. I understand they are busy department but it is not acceptable.

Also I was hopping I will work more in Project Management domain and with Project Managers directly. To be precise, I need more practical training in real time than just doing the data entry. I was speaking with my supervisor but somehow it's easily forgotten.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Georgios Moraitis

Subject/title of your internship: Fatigue and Fracture Assessment of Butt Welds

Name of the company: Germanischer Lloyd (GL)

Name of the contact person in the company: dr. Hubertus von Selle

Period of internship: Start date: 15/07/2013

End date: 15/10/2013

Date : 02/10/2013

Signature: Georgios Moraitis

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Finally, the internship consisted of three parts, all relative to butt welds:

1) Evaluation of results from fatigue tests of butt welds (Joined Development Programme between GL and partners: other classification societies and Korean shipyards): Design of S-N curves, investigation of plate thickness effect, material influence, misalignments etc.

2) Fracture assessment of butt welds: Investigation of parameters C & m of Paris crack growth equation, using already existing results of fatigue tests of butt welds made of high tensile YP40 Steel. The software used was VERB (Failure Assessment Software) and the purpose was to calculate the parameters C & m that best fit the results and compare them to the proposed values from literature (IIW).

3) Investigation of thickness effect of butt welds by Notch stress approach and fracture assessment: Model specimens of various thicknesses from part1 and calculate the notch stress distributions using ANSYS (workbench – classic). Perform crack propagation calculations in similar models using FRANC2D (A 2dimensional Crack Propagation Simulator) by initiating cracks of various lengths to the weld toe, redo calculations using VERB with the notch stress profile obtained by ANSYS and using values for the Paris equation parameters from IIW and the ones obtained from part2. Compare results. Investigate thickness effect in total life time predicted by notch stress approach and crack propagation phase by fracture mechanics. Link it to the experimental results of part1.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

Unfortunately, the internship was not organised that well. Only the 1st part was clearly set from the beginning, and that is because the results were urgent to be presented in a meeting. The supervisor was lot of time absent (5 weeks out of 3 months for vacations and business trips) and the final topic of my thesis was given to me literally one month before the end, which of course was really stressful. I completely understand the fact that working in a private company means that sometimes tasks irrelevant to the thesis have to be done, but I would at least appreciate if the topic was clear from the beginning. Perhaps it would be better if the internship was independent of the thesis, though there is the time limitation.

Apart from that, everything else was great. The supervisor was very friendly and helpful and all the colleagues were supportive and helpful as well.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

As mentioned before, the only problem was the lack of organisation regarding the topic of the thesis, which can be expected up to a specific point. Apart from that, the internship in GL was an interesting and valuable experience (though quite sort – only three months). Working conditions are very good, supervisor and all colleagues are friendly, supportive and very skilled engineers and generally I could totally recommend it. I gained valuable knowledge regarding fatigue, fracture mechanics, FEM analysis and became familiar with useful software (ANSYS, FRANC2D, VERB).

My suggestion to the next cohort would be the students to fully define their topic and put pressure on that to their supervisors before starting the internship; otherwise valuable time might be lost.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Michael O’Connor

Subject/title of your internship:

‘Aerojoules project’ : Vertical Axis Wind Turbine

Name of the company : ICAM

Name of the contact person in the company: Jean-Francois Largeau

Period of internship : Start date : 01/07/2013

End Date : 04/02/2014

Date : 15/10/2013

Signature: *Michael O'Connor*

Report in Internship (1 page):

- a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The aim of the 'Aerojoules' project is to optimise the design of a darius type Vertical Axis Wind Turbine (VAWT). This included:

- The study of 3 dimensional Computational Fluid Dynamic (CFD) calculations using StarCCM+ to determine an accurate numerical solution to a complex fluid flow such as the VAWT.
- Comparison of CFD flow simulations with experimental results in a wind tunnel and numerous articles.
- Optimising the design for use in the marine industry for small scale electrical power generation. This included comparison with an alternative design that focussed on changing the blade pitch angle.

- b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The entire internship was spent at ICAM under the supervision of Mr Jean-Francois Largeau. Weekly meetings were organised between Jean-francois and myself to discuss my progress.

- c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

ICAM was a very professional and friendly environment.

There does seem to be a small disconnect between ICAM and the EMSHIP program for the moment. As ICAM has no ship design expertise, so any movement for relevance between my master thesis and ship design or the marine industry in general was often discouraged. For a Naval Architect this is obviously disappointing.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Daniel Javier ORONA COBOS.

Subject/title of your internship: Ship Propulsion.

Name of the company: SDG, “Ship Design Group”

51 Dogariei Street, 800225, Galati, ROMANIA.

Phone: (+40) 236 476 672.

Fax : (+40) 236 460 336.

E-mail: sdg@shipdesigngroup.eu

Website : www.shipdesigngroup.eu

Name of the contact person in the company:

Mr. Ionas OVIDIU.

51 Dogariei Street, 800225, Galati, ROMANIA.

Phone: (+40) 236 476 672.

Fax : (+40) 236 460 336.

E-mail: sdg@shipdesigngroup.eu


Website : www.shipdesigngroup.eu

Period of internship : Start date : July 8th, 2013.

End Date : September 29th, 2013.

Date : October 12nd, 2013.

Signature:


DANIEL JAVIER ORONA COBOS
12/10/2013

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

In collaboration with another EMship student, we had two main tasks: the first one was to estimate the ship resistance for a survey vessel; then, to predict the power estimation as well as, the propulsion system and finally, the design of the propeller.

The second task was divided into two parts, for the first part, a ship resistance prediction was done with several methods. Later on, a comparison between our results and results gotten from an external company was done. After this, we proceed to continue to do the second part of this project, which was the power prediction, as well as the propulsion system design.

On the other hand, an early stage of the rudder design was done for previous project.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The internship was not organised in terms of University-Company, what I did, with the help of their employees, the tasks which were required by the boss of the department. I would like to say with previous comment that I am not disappointed with that, on contrary, I am thankful with this due to the company gave me the opportunity to deal with real work, real tasks. That is why I enjoyed during the internship.

The supervision was generally speaking good and constant, from all of the employees which were related to the tasks given to me/us.

The relation/interaction with local staff was good in all terms. They helped to me with everything what I needed.

c) Personal assessment and recommendations

There was a connection between my Master's Thesis and the internships due to, although I did not start with my thesis at the company, all the tasks helped to me in order to start with my thesis.

All the questions I asked, they were answered with a full explanation (depending on the availability of my advisors).

Personally speaking, I am thankful for the opportunity given by Ship Design Group to me. If I have to say a comment or a proposal, it would be:

- *To give us more time for internships.*
- *Try to not organise the internships during vacations from professors/advisors from the University due to, when problems regarding that period (questions about thesis and so on), there is anybody to answer these doubts.*



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Bilel SAAD

Subject/title of your internship:

Development of a practical tool to determine the hull damping of modern ship hull forms.

Name of the company

Name of the contact person in the company:

Hoppe Marine GmbH

Kieler Straße 318

22525 Hamburg

Germany

Tel. +49-40-561949-45

Fax +49-40-561949-99

s.winkler@hoppe-marine.com

www.hoppe-marine.com

Period of internship : Start date : 22/07/2013

End Date : 15/11/2013

Date : 04/10/2013

Signature:

A handwritten signature in blue ink, appearing to read "Bilel SAAD", is written over a light blue grid background.

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The main task of the internship was to use the data base of FLUME Stabilization systems including the seakeeping model tests reports, to validate the results of ship response, mainly Roll RAOs and damping coefficient, obtained using some open source code like PDstrip or Ikeda computer Program. Some other practical tools were also used for this validation, like Flume ship motion program (2DROLL) and the seakeeping software of MARINTEK called ShipX. Once those results are confirmed valid, they can be included in the data base summary graph of FLUME (B44= f(Effective wave slope)) in order to extend its availability to modern ship hulls (Large container ships, Fast ships with chines, skegs, offshore vessels, etc...)

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

First of all, the first contact with the company was efficient, thanks to Professor R. Bronsart. Then i was there on time as discussed earlier with the supervisor from the company. The company is growing fast and they require more and more space. Therefore, since I came it was hard for them to find a desk for me but finally the problem was solved.

People here are friendly, but very busy. In fact, it was sometimes even hard for my supervisor to find some time to discuss some issues related to my work.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

First of all, one of the main disadvantages of my internship is that my subject is very academic and needs a lot of support from professors who are specialist in seakeeping. In fact, even when tried to contact professors from Ecole central for some help, they didn't seem so interested in giving a helping hand it was like i have never been their student before. I had to contact some professors for the technical university of Hamburg(TUHH) that do not even know me, for some issues that my supervisor in the company couldn't help me with.

I would say that the reason is that we are doing a research project that is supposed to be done in a research institution or a university lab while we are in reality doing it with an industrial partner who only cares about how much benefits he could get out of our work not for the academic value of the work.

I would suggest that the student must receive official support from a teacher of the EMSHIP program who is specialized in his subject.

Another main problem I encountered is to find some references and books that are very expensive for a student and that the company is not even motivated to buy.

Finally, those are my suggestions, please don't take them as complaining but as contribution to the improvement of the program.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: NIRAJ KUMAR SINGH

Subject/title of your internship: DESIGN AND STRENGTH ANALYSIS OF MOBILE OFFSHORE UNITS : To Design and Perform Strength Analysis on Semisubmersible for Extreme Environmental Loading and Compare the Criteria/Results in accordance to applicable Offshore Standards/Codes

Name of the company DET NORSKE VERITAS POLAND, GDYNIA

Name of the contact person in the company: Tomasz Msciwujewski

Head of Section

Advisory Maritime & Offshore

Tel: +48 58 51 15 140

DNV Poland Sp. z o.o. 81-537 Gdynia

Period of Internship: Start date: 15TH July 2013

End Date: 31st October 2013

Date :5th October 2013

Signature: Niraj Kr. Singh

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

- The objective of the internship project was to design an H3 type Semisub and analyse its strength capacity for extreme environmental loading as per criteria specified in the Offshore Codes
- Based on the drawing specifications provided by DNV, a Finite element Model for the panel, Morison and overall structural elements was to be developed using a FEA package Genie
- The Structural Model for FE analysis was designed based on the recommendations and requirements given in the applicable offshore standards *DNV OS-C101*, *DNV RP-C103*, *ISO 19904-1*, *Norsok003*
- A Global FE model of the semisub designed was to be analysed for extreme hydrodynamic loading with sets of wave direction and a predefined wave spectrum as per the standard DNV RP-c205
- The hydrodynamic response of the structure was analysed using Xtract software tool and the von Mises Stress for the element average was listed.
- Further the detailed structural finite element model was also analysed for the self-weight loading conditions and the overall strength assessment was performed by adding the structural loading in operating condition with the applied hydrodynamic response.
- To examine the overall strength capacity of the structure, the yield utilisation of the elements were studied with two different design approaches namely, LRFD (Load Resistance Factor Design) and WSD (Workable Stress Design) as recommended by the *DNVOS-C101(LRFD)*, *DNVOS-C103(LRFD)*, *DNVOS-01(WSD)*, *ISO19904_1(LRFD &WSD)*, *Norsok_N003(LRFD &WSD)*
- Eventually the results obtained from the two different design approaches were compared and recommendations were concluded for the more practical and conservative design philosophies for the Semisub Structure under considerations with applicable loading environment.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

- The internship was coordinated with the help Professor Maciej Taczala, West Pomeranian University of Technology Szczecin, Poland and Mr. Tomasz Msciwujewski, Head of Section Advisory Maritime & Offshore, DNV Poland
- The supervision from the organization DNV and ZUT Szczecin was well organized and periodic feedback/consultation meetings were conducted to monitor the progress of the work and provide required guidance
- The relation/interaction with the local colleagues at the internship organization was smooth and beneficial as regular guidance to work related and other administrative issues were provided. The opportunity to interact with various colleagues and sharing the knowledge regarding different domains of Maritime & Offshore Industry was indeed a great learning experience.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

- Overall the internship organised was a great learning experience providing exposure to the practical industrial work and working with esteemed pool of engineers at a global organisation like DNV
- The flexibility to extend the internship during the final semester is a welcome opportunity as it allows the students to work more precisely on the master thesis subject and update/modify any further changes in the work that was required and could not be achieved during the limited time of the internship.
- The supervision and support provided during the internship was significant although further improvement in the coordination between the students, the supervisor for the master thesis and the internship organisation would be more beneficial to the work. An idea in that regard could be to formulate a formal bi-weekly update meeting.
- An internship/master thesis proposal pre-coordinated with the internship organisation on some current live projects from the industry could be an idea to involve the students of the next cohort in direct working environment in the industry.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name: Tran Viet Hai

Subject/title of your internship: Global response analysis of the jack-up platform Odin

Name of the company: HOCHTIEF Solutions AG

Name of the contact person in the company: Dr. Florian Stempinski

Period of internship : Start date : 8th July 2013
End Date : 15th November 2013

Date : 4th October 2013

Signature: *tran h*

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

The scope of the thesis:

- The Global Response of ODIN in elevated mode, which consists of the operational and survival modes.

Objective of the thesis:

- The envelopes of working condition depending on water depth, leg penetration and deck load components
- Structural improvements to extend the operational limitations and quantify the improvement on the bases of additional operational days (optional)

Detail tasks:

- Model jack-up ODIN in ANSYS for Non-Linear Analysis
- Conduct Finite Element Analysis to find Envelopes of working condition

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

The internship has been organized in a good way. I work as a full time employee. I am able to find help from my supervisor as well as many other local staffs. The internship includes also a technical visit which is a trip to the port of Bremerhaven.

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

For students in the next cohort who want to take internship in Germany, it is necessary to study German. It is very important here.



INTERNSHIP REPORT

“EMSHIP (3rd cohort 2012-2014)”

Erasmus Mundus Master Course in “Integrated Advanced Ship Design”

Student’s name:

VIGNAL Héloïse

Subject/title of your internship:

Comparison of motion sickness incidence of three crew transfer vessel (CTV) with different hull forms

Name of the company Abeking & Rasmusse,

Name of the contact person in the company:

Karsten Fach – kfach@abeking.com

Michael Luedher – mluedher@abeking.com

Period of internship : Start date : 10 July 2013
End Date : 30 September 2013

Date : 4th October 2013

Signature:

Report in Internship (1 page):

a) Description of the Internship – explain what you did during your internship (5 to 10 lines)

Analysis of the previous experiment of the SWATH-Duhnen. Calculation of the Motion Sickness Incidence (MSI) curves for the Duhnen. Preliminary design of two ships to compare the seakeeping behaviour with the SWATH; a monohull and a catamaran. Numerical analysis with the software *seakeeper* to get the vertical accelerations and frequencies necessary to estimate the MSI.

Global comparison between the three ships.

b) Organisation of the internship – explain how the internship was organised, how was the supervision, your relation/interaction with the local staff of the company, (5 to 10 lines)

I worked all the time on my master thesis. My supervisor Mr Luedher was the only one to know which had already worked on the seakeeping behaviour of the SWATH.

I asked for help concerning CAD softwares... The main discussions were in German, 80% of the report and all the softwares also. I improve my German language.

When I have had questions concerning my thesis, I asked my supervisor or other colleagues in function of my interrogations.

2,5 months were too short but I have had some problems with the Szczecin's University which send me a paper telling us that the internship will finish at the end of September. My company changed the final date and after that it wasn't possible to extend it until the date which was expected at the beginning (8th November).

c) Personal assessment and recommendations

Please add your comments about the support (or not) that you received; if the internship corresponded to the initial plan and your expectations.

Please add all positive comments and proposal of improvements that can be useful for the next cohort of students.

When I arrived the first day, my supervisor didn't know what the main goal of my internship was because in Germany the students don't work on their master thesis during the internship period but after that. He asked me for a detailed program or tasks that I had to accomplish. The documents on the EMship website are just examples and not the instructions.