

S A F E D O R



## SAFEDOR

design, operation and regulation  
for safety

Integrated Project 516278  
in the sixth framework programme of the European Commission

<http://www.safedor.org>

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### Contents Issue No. 4

Editorial.....	1
The importance of SAFEDOR training .....	1
The SAFEDOR Summer 08	
Training Course .....	2
Closure .....	3

### *Editorial*

The SAFEDOR Consortium is pleased to welcoming you as a reader of the 4<sup>th</sup> SAFEDOR Newsletter, which appears bi-annually and informs about research activities and progress of the SAFEDOR Project. More detailed public domain information about the SAFEDOR project is provided in the Annual Public Reports, available on-line (<http://www.safedor.org>).

The SAFEDOR newsletters address readers from organisations from the whole spectrum of the maritime industry: flag state and government administrations, classification societies, designers, operators, researchers, educators, and practitioners of risk-based design. The present forth issue of the SAFEDOR newsletters aims to inform you about

SAFEDOR training activities, their importance and practical implementation in the project.

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### *The importance of SAFEDOR training*

The principal aim of SAFEDOR is to enhance risk-based design, operation and approval, while at the same time developing innovative ship design methods and tools. To enable this, a proper 'risk-based culture' needs to be created and cultivated; an important vehicle to this is professional training.

Training young engineers as well as experienced professionals in applying processes and techniques of risk-based design, approval and operation appears imperative for the successful implementation of SAFEDOR ideas in practice and for improving current maritime education in general.

Trainees should benefit from better understanding of the generated new knowledge and be encouraged to take a more active role in using risk-based concepts.



Following up this, a significant effort in SAFEDOR is focusing on the development and delivery of pertinent training courses and of other dissemination activities.

A first SAFEDOR training course on the Approval of Risk-Based Ship Design took place in Munich, on 30th March 2007. The particular course was offered as a response to the emerging need for a timely introduction of the SAFEDOR concept to flag administrations and class regulators. The course was organised/implemented as event by the National Technical University of Athens, responsible for training and dissemination in SAFEDOR.

This one-day course was introduced by an outline of a high-level risk-based approval process of innovative ship designs. It continued with a description of high-level risk acceptance criteria for the ship, which was further detailed at ship function level by a lecture on acceptance criteria for main ship functions. The second session was focused on detailing of the approval of risk-based system and was followed by the presentation of a Formal Safety Assessment study on containerships. The vital bond between risk-based design and approval was presented in the final lecture, concentrating on how risk-based design and approval work together. The course ended with a presentation of an innovative risk-based tanker ship design project.

The 1st SAFEDOR training course attracted a critical audience from regulatory authorities, flag state/governmental administrations and classification societies. Representatives from many countries around Europe and even from overseas, namely from Cyprus, Denmark, Estonia, France, Germany, Greece, Italy, Japan,

Norway, Slovenia, Sweden, The Netherlands, United Kingdom and USA, participated, and judging by the delegates' responses, the level of their satisfaction with the material presented was very good. Further details about this course may be found in the Year 3 SAFEDOR public report (to be published on the project's web site in April 2008).

### *The SAFEDOR Summer 08 Training Course*

The second training course on Risk-based design, operation and regulation, announced herewith, will be held in August 25-27, 2008 in Lyngby-Copenhagen for an extended number of prospective participants from a wider spectrum of the maritime industry.

The topic of risk-based design, operation and regulation is almost absent from today's European universities' curricula. Therefore, the aim of this course is to provide the participants with an understanding of the fundamentals and integration of risk-based design, operation and regulation. The course facilitates the transfer of knowledge from the research conducted within the SAFEDOR project to a wider community and nurture inculcation into scientific approaches of dealing with ship safety.

The course syllabus includes both elements of risk-based design, operation and regulation such as formal safety assessment, acceptance criteria, risk analysis, equivalent design and approaches as well as their integration within the process of ship design and operation. Several case studies will be presented.

The course will be held on August 25-27, 2008, at the Technical University of Denmark (DTU), Department of Mechanical Engineering, Lyngby, Denmark. The course is being jointly organized by the SAFEDOR consortium and implemented as event by Professor Apostolos Papanikolaou, National Technical University of Athens (NTUA) and Professor Jørgen Juncher Jensen, Technical University of Denmark (DTU).

The course is intended for academic personnel, class society personnel and regulatory administrators, as well as other professionals related to naval architecture. The working load is approximately 40 hours in total (2.5 ECTS points), including some home work during the August 25-27, 2008 course period at Technical University of Denmark (lectures, discussions), as well as preparatory reading required before course start.

Papers and lecture notes covering the course will be distributed in both printed and in electronic form prior to the course to all registered participants. All lectures will be given in English. A certificate of attendance will be issued to all participants by the organiser. The program outline is presented below.

Additional information may be found through the SAFEDOR website (<http://www.safedor.org>), as well as the local organiser's homepage at <http://www.dcam.dk>.

#### **Monday, August 25, 2008: Risk-based Design**

08.00-08.45	Delegate Registration
08.45-09:00	Welcome and Introduction Prof. A. Papanikolaou, NTUA
09.00-10.30	Risk-based Design Overview Prof. D. Vassalos, SSRC
10:30-11:00	Break
11:00-12:30	Case story: Large passenger vessel
12:30-14:00	Lunch
14:00-15:30	Risk-based Regulation Overview (1) Dr. R. Skjong, DNV
15:30-16:00	Break
16:00-17:00	Risk-based Regulation Overview (2) Dr. R. Skjong, DNV

#### **Tuesday, August 26, 2008: Tools and Technologies**

09.00-10.30	Intact stability Prof. Jørgen Juncher Jensen, DTU
10:30-11:00	Break
11:00-12:30	Collision and Grounding Dr. E. Ravn, DTU
12:30-14:00	Lunch
14:00-15:30	Flooding Dr. A. Jasionowski, SSRC
15:30-16:00	Break
16:00-17:00	Hull Girder Strength Prof. C. Guedes Soares, IST
19:00-	Training Course Dinner

#### **Wednesday, August 27, 2008: Case stories**

09.00-10.30	Risk-based Approval Mr. J. Juhl, DMA
10:30-11:00	Break
11:00-12:30	Case story: FSA Container Vessels Dr. P. Sames, GL
12:30-14:00	Lunch
14:00-15:30	Case story: Tanker Prof. A. Papanikolaou, NTUA
15:30-16:00	Break
16:00-17:00	Closing discussions

### ***Closure***

The SAFEDOR consortium strongly recommends to all interested parties of the SAFEDOR concept to take notice of the present announcement of the SAFEDOR Summer 2008 Training Course and to encourage representatives of their organisation to attend.

So far organized workshops, conferences, seminars and training courses within SAFEDOR proved very rewarding; the presently announced course is considered as one of the most important SAFEDOR dissemination events, as the SAFEDOR project is now reaching to its closure in January 2009 and training course participants will have the chance to be informed about the most recent SAFEDOR research developments in a very

efficient way. Last but not least, the local organiser of the present training course, namely DCAMM of the Technical University of Denmark, has a long standing experience in the successful organisation of summer school training, all ensuring that the presently announced training course will be rewarding in all respects.

### **Editor of SAFEDOR Newsletters**

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