NEWSLETTER

19th International Ship and Offshore Structures Congress

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Editorial

Carlos Guedes Soares
ISSC 2015 Chairman
Instituto Superior Técnico
Lisbon, Portugal

The International Ship and Offshore Structures Congress (ISSC) is a well-established organization that brings together many specialists, all over the world, since its inception in 1961 in Glasgow.

ISSC is presently made up of 8 Technical Committees (I to IV) with 12 to 18 members each and 8 Specialist Committees (V.1to V.8) with about 12 members each. Each committee has a specific mandate that guides them in the preparation of the state of the art report to be presented and discussed at the next Congress, which now will be in 2015.

Therefore, ISSC members are now about 213 spread in different committees.

The management is ensured by the Standing Committee and by the Committee Chairs, and while in theory all relevant information reaches all committee members and also all Standing Committee members, the fact is that in such a large organization, it is sometimes difficult to have all relevant information available in due time.

Therefore, it was thought that it might be useful to have a Newsletter as a mean of spreading useful information to all members.

In a first issue, the objective was mainly to bring the updates approved at the Standing Committee meeting of the winter of 2013 about membership and the description of the mandates of the Committees, some of which have been slightly adjusted.

Although it seemed a simple task to collect information and photos from all Committees, it took much longer than anticipated and delayed the issuing of this Newsletter several months. Some information was very easy to obtain, but at the end, we had to settle to publish this Newsletter even without the photos of all Committee Chairs.

In addition to the mandates, you will find also information about dates and locations of the meetings held and planned for the Committees, which may be useful to promote interactions amongst committees.

In addition, information about planned benchmark studies is included in the Newsletter.

The Newsletter is aimed at being a living way of communication among ISSC members and as such, it is open to contributions, and indeed, we invite contributions from members.

The contributions can be on short features articles on matters that appear to have high timeliness or that bring information about very recent topics, which may be of interest to members.

We can also include a Calendar of Conferences and workshops, which can be relevant for committees to attend a plan a committee meeting.

Information and calls for contributions to Benchmark studies or other types of collective studies is also welcome.

The periodicity of the Newsletter will depend on the amount of information received from the ISSC members. With enough material it will be published at six-month intervals, but the periodicity will be adjusted to the volume of incoming articles and contributions

Past ISSC Congresses

ISSC is a forum for the exchange of information by experts undertaking and applying research, design, building and classification of marine structures. The aim of ISSC is to further the understanding in the various disciplines underpinning marine structural design, production and operation through internationally collaborative endeavours.

Specific objectives are:

- To review research in progress and to facilitate the evaluation;
- To disseminate results from recent and current investigation;
- To identify areas requiring future research, and
- To suggest improvements in design, production and operations procedures.

Structures of interest to ISSC include ships, offshore structures and other marine structures used for transportation, exploration and exploitation of resources in and under the oceans.

The ISSC Congress is held every 3-years and the next event will take place in Lisbon, Portugal in September 2015.

1st	ISSC 1961	Glasgow	United Kingdom
2nd	ISSC 1964	Delft	The Netherlands
3rd	ISSC 1967	Oslo	Norway
4th	ISSC 1970	Tokyo	Japan
5th	ISSC 1973	Hamburg	Germany
6th	ISSC 1976	Boston	USA
7th	ISSC 1979	Paris	France
8th	ISSC 1982	Gdansk/Paris	Poland/France
9th	ISSC 1985	Genova	Italy
10th	ISSC 1988	Lyngby	Denmark
11th	ISSC 1991	Wuxi	China
12th	ISSC 1994	St. Jones	Canada
13th	ISSC 1997	Trondheim	Norway
14th	ISSC 2000	Nagasaki	Japan
15th	ISSC 2003	San Diego	USA
16th	ISSC 2006	Southampton	United Kingdom
17th	ISSC 2009	Seoul	Korea
18th	ISSC 2012	Rostock	Germany
19th	ISSC 2015	Lisbon	Portugal

Committee Mandates

Committee I.1: Environment

Chair:

Elzbieta Bitner-Gregersen
Norway

Stand. Com. Liaison: Carlos Guedes Soares

Mandate: Concern for descriptions of the ocean environment, especially with respect to wave, current and wind, in deep and shallow waters, and ice, as a basis for the determination of environmental loads for structural design. Attention shall be given to statistical description of these and other related phenomena relevant to the safe design and operation of ships and offshore structures. The committee is encouraged to cooperate with the corresponding ITTC committee.

Committee I.2: Loads

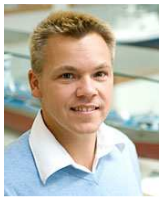
Chair:

Pandeli Temarel
UK

Stand. Com. Liaison: Carlos Guedes Soares

Mandate: Concern for environmental and operational loads from waves, wind, current, ice, slamming, sloshing, weight distribution and operational factors. Consideration shall be given to deterministic and statistical load predictions based on model experiments, full-scale measurements and theoretical methods. Uncertainties in load estimations shall be highlighted. The committee is encouraged to cooperate with the corresponding ITTC committee.

Committee II.1: Quasi-Static Response



Chair:

Jonas Ringsberg
Sweden

Stand. Com. Liaison: Yoo Sang Choo

Mandate: Concern for the quasi-static response of ship and offshore structures, as required for safety and serviceability assessments. Attention shall be given to uncertainty of calculation models for use in reliability methods, and to consider both exact and approximate methods for the determination of stresses appropriate for different acceptance criteria.

Committee II.2: Dynamic Response

Chair:

Dae-Seung Cho
Korea

Stand. Com. Liaison: Mirek Kaminski

Mandate: Concern for the dynamic structural response of ship and floating offshore structures as required for safety and serviceability assessments, including habitability. This should include steady state, transient and random responses. Attention shall be given to dynamic responses resulting from environmental, machinery and propeller excitation. Uncertainties associated with modelling should be highlighted.

Committee III.1: Ultimate Strength

Chair:

Takao Yoshikawa
Japan

Stand. Com. Liaison: Masahiko Fujikubo

Mandate: Concern for the ductile behaviour of ships and offshore structures and their structural components under ultimate conditions. Attention shall be given to the influence of fabrication imperfections and in-service damage and degradation on reserve strength. Uncertainties in strength models for design shall be highlighted. Consideration shall be given to the practical application of methods.

Committee III.2: Fatigue and Fracture

Chair:

Feargal Brennan
UK

Stand. Com. Liaison: Wolfgang Fricke

Mandate: Concern for crack initiation and growth under cyclic loading as well as unstable crack propagation and tearing in ship and offshore structures. Due attention shall be paid to practical application and statistical description of fracture control methods in design, fabrication and service. Consideration is to be given to the suitability and uncertainty of physical models.

Committee IV.1: Design Principles and Criteria

Chair:

Enrico Rizzuto
Italy

Stand. Com. Liaison: Manolis Samuelides

Mandate: Concern for the general concept of goal orientated design, for the quantification of general sustainability aspects in economic, human and environmental terms and for the development of appropriate procedures for rational life-cycle design of marine structures. Special attention shall be given to the issue of Goal-Based Standards as presently proposed by IMO in respect of their objectives and requirements and plans for implementation, and to their potential for success in achieving their aims. Possible differences between the current regulatory framework for ship structures and the design requirements developed for offshore and other marine industries shall be considered.

Committee IV.2: Design Methods

Chair:

Matthew Collette
USA

Stand. Com. Liaison: Jean-Yves Pradillon

Mandate: Concern for the synthesis of the overall design process for marine structures, and its integration with production, maintenance and repair. Particular attention shall be given to the roles and requirements of computer-based design and production, and to the utilization of information technology.

Committee V.1: Accidental limit states

Chair:

Jurek Czjuko
Norway

Stand. Com. Liaison: Jeom P. Paik

Mandate: Concern for accidental limit states (ALS) of ships and offshore structures and their structural components during design. Types of accidents considered shall include fire, explosion, dropped objects, collision and grounding. Attention shall be given to hazard identification and related risks, assessment of accidental loads and nonlinear structural consequences including residual strength. Uncertainties of ALS models for the use in design shall be highlighted. Consideration shall be given to the practical application of methods and to the development of ISSC guidance for implementation of ALS principles in engineering

Committee V.2: Natural Gas Storage and Transportation

Chair:

Rene Huijsmans
The Netherlands

Stand. Com. Liaison: Stefano Ferraris

Mandate: Concern for the safety and design of containment systems for the storage and transportation of natural gas in connection with floating platforms and terminals, and on board ships. This is to include assessing the performance of various containment systems for gas under compression (CNG), liquefaction under cooling (LNG), and combinations of the two methods. Particular attention shall be given to the integrity and safety aspects of containment systems under pressure and thermal loads, and the interaction between fluid and structure under static and dynamic conditions. Needs for revision of current codes and regulations shall be addressed.

Committee V.3: Material and Fabrication Technology

Chair:

Jean David Caprace
Belgium

Stand. Com. Liaison: Weicheng Cui

Mandate: The committee shall give an overview about new developments in the field of ship and offshore materials and fabrication techniques with a focus on trends, which are highly relevant for practical applications in the industry in the recent and coming years. Particular emphasis shall be given to the impact of welding and corrosion protection techniques for structural performance, on the development of lighter structures and on computer and IT technologies and tools, which are meant to link design and production tools and to support efficient production.

Committee V.4: Offshore Renewable Energy

Photograph unavailable

Chair:

Kimon Argyriadis
Germany

Stand. Com. Liaison: Xiaozhi (Christina) Wang

Mandate: Concern for load analysis and structural design of offshore renewable energy devices. Attention shall be given to the interaction between the load and structural response of fixed and floating installations taking due consideration of the stochastic nature of the ocean environment. Aspects related to prototype testing and certification shall be considered.

Committee V.5: Naval Vessels

Photograph unavailable

Chair:

Robert Dow
UK

Stand. Com. Liaison: Mervy Norwood

Mandate: Concern for structural design methods for naval ships, including uncertainties in modelling techniques. Particular attention shall be given to those aspects that characterize naval ship and submarine design such as blast loading, vulnerability analysis, and others as appropriate.

Committee V.6: Arctic Technology

Chair:

Soren Ehlers
Norway

Stand. Com. Liaison: Jørgen Amdahl

Mandate: Concern for development of technology of particular relevance for the safety of ships and offshore structures in Arctic regions and ice-infested waters. This includes the assessment of methods for calculating loads from sea ice and icebergs, and mitigation of their effects. On this basis, principles and methods for the safety design of ships and fixed and floating structures shall be considered. Recommendations shall also be made regarding priorities for research programmes and efficient implementation of new knowledge and tools.

Committee V.7: Structural longevity

Chair:

Paul Hess
USA

Stand. Com. Liaison: Ajit Shenoi

Mandate: Concern for the structural longevity of ship, offshore and other marine structures. This shall include diagnosis and prognosis of structural health, prevention of structural failures such as corrosion and fatigue, and structural rehabilitation. Attention should be given to the on-going lifetime extension of existing structures. The focus shall be on methodologies translating monitoring data into operational advice and life-cycle management. The research and development in passive, latent and active systems, including their sensors and actuators should be addressed. Further self-healing and smart materials should be addressed.

Committee V.8: Risers and pipelines

Chair:

Hideyuki Suzuki
Japan

Stand. Com. Liaison: Segen Estefen

Mandate: Concern for the structural failure modes of risers and pipelines. Consideration shall be given to dynamic response of risers under environmental conditions as well as pipe-soil interaction. Aspects related to the installation methods shall be considered. Attention is recommended for aspects related to maintenance, inspection and repair, especially in deep-water conditions.

Calendar of Committee Meetings

Listed below are the meetings, which have taken place, and the meetings, which are planned in each Committee.

I.1: Environment

Meeting 1: February 18-19, 2013, at IST, Lisbon, Portugal

Meeting 2, November 29-30, 2013, Shanghai, China

I.2: Loads

Meeting 1: July 1-2, 2013, Southampton, UK.

Meeting 2: To be arranged in 2014.

II.1: Quasi-Static Response

Meeting 1: December 10-11, 2012, at CUT, Gothenburg, Sweden

Meeting 2: March 29, 2013, at the MARSTRUCT conference in Helsinki, Finland

Meeting 3: October 21, 2013, at the PRADS conference in Changwon City, Korea

Meeting 4: May 24-25, 2014, in Carderock near Washington DC, USA

Meeting 5: September, 2014, Italy

Meeting 6: (if needed) December, 2014, at CUT, Gothenburg, Sweden

II.2: Dynamic Response

Meeting 1: June 5-7, 2013, Bussan, Korea

Meeting 2: June 5-6, 2014, Istanbul, Turkey

III.1: Ultimate Strength

Meeting 1: January 28, 2013, Fukuoka, Japan

Meeting 2: October 10-11, 2013, Newcastle, UK

Meeting 3: June 2014, at OMAE, San Francisco, USA

III.2: Fatigue and Fracture

Meeting 1: March 29, 2013, Helsinki, Finland

IV.1: Design Principles and Criteria

Meeting 1: April 10-11, 2013, Genoa, Italy

Meeting 2: Oct 20, 2013, Changwon City, Korea

Meeting 3: Tele-conference to be scheduled

IV.2: Design Methods

Not planned yet

V.1: Accidental limit states

Meeting 1: April 12-13, 2013, Shanghai, China

Meeting 2: November 9-12, 2013, Genoa, Italy

Meeting 3: Spring 2014, in preparation

V.2: Natural Gas Storage and Transportation

Meeting 1: March 24, 2013, at MARSTRUCT 2013, Espoo, Finland

Meeting 2: December 2013, at Samsung Bussan, Korea

V.3: Material and Fabrication Technology

Meeting 1a: March 22, 2013, at TNO, Delft, Netherlands

Meeting 1b: May 2-3, at UFRJ, Rio de Janeiro, Brazil

Meeting 2: February 26-28, at Pusan University, Korea

V.4: Offshore Renewable Energy

Meeting 1: June 13, 2013, at OMAE 2013, Nantes, France

V.5: Naval Vessels

Meeting 1: January 16-17, 2013, Newcastle, UK.

Meeting 2: October 28-29, 2013, at PRADS 2013, in Korea.

V.6: Arctic Technology

Meeting 1: January 28-29, 2013, at LR, London, UK

Meeting 2: May 14-15, at Total, Paris, France

Meeting 3: October 28-29, 2013, at MUN, St. John's, Canada

V.7: Structural longevity

Meeting 1: 20-21 March 2014, TNO, Delft, The Netherlands

Meeting 2: Sept-October 2014

Interim Meetings: Virtual Meeting via Skype

V.8: Risers and pipelines

Meeting 1: June 14, 2013, OMAE 2013, Nantes, France

Meeting 2: December 12-13, 2013, Tokyo

Meeting 3: June 8-13, OMAE2014, San Francisco

Meeting 4: October, 2014, Australia, Norway, Brazil or Singapore

2nd ITTC-ISSC Joint Workshop

The first Joint workshop between ISSC and ITTC was organised on the occasion of the ISSC2012 in Rostock. It was an initiative of ISSC Committees I.2 Loads under the Chairmanship of Spiros Hirdaris and Committee I.1 Environment chaired by Elzbieta Bitner-Gregersen and had obviously the cooperation of various ITTC members mainly from the ITTC Committees on Seakeeping and Ocean Engineering.

The workshop was held on 8 September 2012 on Uncertainty Modelling for Ships and Offshore Structures. The presentations of this workshop were by invitation only but the participation on the workshop was open.

This was a successful event as the topic was important and it had important contributions from ISSC and ITC members, contributing thus to a better understanding of the problem and a closer interaction among the committees from the two organisations.

The initiative is now being followed up in the 2nd ITTC-ISSC Joint Workshop, which is aimed to be held one day before the ITTC Conference in Copenhagen, more precisely on August 30, 2014 at the IDA Conference Centre in Copenhagen. This event has started from the initiative of the ITTC Committee on Seakeeping chaired by Prof Yonghwan Kim but it involves also ITTC committee on Ocean Engineering. It concentrates more on the uncertainties in the ship responses, building upon a comparative study on ship motion and structural loads in waves.

Nowadays the nonlinearity of floating-body motion and hydroelasticity in structural responses are of great interests in marine engineering field and thus this workshop will focus on the wave-induced motion and structural loads on ships and offshore structures, including a computational benchmark test for a large modern ship.

It is proposed to compare the predictions of various computational programs for seakeeping performance and hull structural loads in waves. Particularly, a new set of towing tank experiments for a modern containership will be made available for validation by KRISO and DSME and computations are expected to be made without any information about experimental data. By comparing the motion and loads on ships, the uncertainty involved in the current status of computational methods will be assessed.

The considered ship is a 300-m containership, which its segmented model was tested at KRISO, Korea. The scale of experimental model is 1/70, and a steel backbone was installed to measure to motion and sectional loads. The comparison will be made for the RAOs and motion signals of motion and loads. The wave conditions for linear and nonlinear ship motion will be proposed for the comparative study.

The computational results of motion responses and structural loads in specified wave condition will be compared in the workshop. Any researcher or group is welcome to participate to this comparative study.

From the ISSC side the workshop organisation involves the Committees I.2 on Loads and I.1 on Environment. However the involvement in the workshop and in the benchmark study is open to all interested ISSC members.

Benchmark and Comparative Studies

I.1: Environment

Comparative study planned is to compare how the dimensions of a basin impact prediction of extreme waves. Two basins will be used the Shanghai basin and the University of Newcastle basin. The experiment will be carried out in the summer 2014.

I.2: Loads

No study planned.

II.1: Quasi-Static Response

Benchmark study is quasi-static approach to transient dynamic response. As an example, a free-falling lifeboat case is selected.

The goal of the benchmark study is to look at the degree of variation in estimates produced by different methods and organizations.

Determination of slamming loads on a lifeboat during impact is complex and difficult to describe with simple expressions or simulations. In particular, the complexity of the analysis increases significantly when including waves. Therefore, it would be an advantage if we could compare with available measurements, which we have access to.

The most basic scope of work is then:

- Make structural model of lifeboat bottom (2D and 3D model), and benchmark different FE solvers,
- Determine a proper quasi-static pressure distribution (shape and magnitude) based on section shape and impact velocity,
- Determine a proper quasi-static pressure distribution based on provided results for dynamic pressure,
- Calculate the quasi-static response based on the two pressure distributions found above,
- Comparison with results from a full dynamic calculation and with results from the measurements.

II.2: Dynamic Response

Benchmark study is to predict ship hull slamming response and to compare with the measured results on an actual ship for the validation of dynamic response prediction methods against measured response.

The target ship is a general cargo ship and TNO provides the input for benchmark study under the agreement of the ship owner. The requested outputs are wave input time trace and damping ratio as applied, natural frequencies and mode shapes, time trace of the calculated accelerations and strains with a brief description of the applied analysis method.

The analysis results will be compared with the measured results obtained from a measuring campaign done by a JIP in 2002, which are also provided by TNO.

III.1: Ultimate Strength

The ultimate strength calculation of box girder, which is, attached 2 or 3 longitudinal stiffeners at each plate. The calculation results will be compared with the experimental results conducted in IST, Lisbon.

The ultimate strength of hull girder with and without initial imperfection. The candidate of the ship is the Bulk carrier, which is the same to the benchmark model of ISSC 2000 VI.2.2.

III.2: Fatigue and Fracture

Due to energy-efficiency requirements, lightweight structural designs are needed. One way to achieve this is to use thinner plates. Currently, investigations are being carried out on plate thicknesses down to 3mm, which means that the design approaches and rules need to be reconsidered. One concern is the initial deformations induced by welding of thin plates and how do these affect the fatigue assessment. Some investigations have been published on the topic. However, there is a need to study the uncertainty related to the modelling of thin structures.

In stress-based methods the fatigue strength assessment requires peak stress at the weld notch, σ_{notch}. This can be obtained using a notch stress approach where the shape of the specimen and the weld is modelled explicitly. The approach suffers, however from considerable modelling efforts, thus structural stress, σ_{HS}, and nominal stress, σ_{nom}, can also be used as input for the fatigue assessment. In case of structural stress method, the notch stress can be approximated using calculated structural stress, σ_{HS}, and notch factor, K_w.

The aim of the benchmark is to show how these assumptions change the calculated notch stress. In addition, the influence of geometrical non-linearity is taken under investigation**.**

IV.1: Design Principles and Criteria

No study planned.

IV.2: Design Methods

The proposed work is to have a review of each class society's software, focusing on:

- Structural geometry modelling and model creation Capability for
- Automated links to FEM analysis Links to PLM databases - with respect
- To both through-life support (e.g. inspections, updated FEA models) and provisions for sharing data between class, owners, and shipyards/subcontractors
- Impact/incorporation of CSR/GBS rules Discussion of how wider PLM
- Issues and IP are handled in situations such as a vessel switching class.

It is proposed to cover the following class societies: RINA, LR, DNV/GL, NK, ABS, and BV. We are open to others, and also open to considering offshore platform or offshore renewable software dependent on having committee members with sufficient expertise. The comparison would form as section of our report, and the findings would feed into our discussion of current challenges/future needs. We are planning to finalize the outline of this section at our committee meeting immediately preceding PRADS 2013 in Korea.

Committee IV.2, designers and owners interface these developments via software suites developed by class societies (e.g. ShipRight, Nautilus etc.) is discussing including a section in our report (roughly equal in length to the survey section from 2012) reviewing and comparing the approaches taken and significant capabilities of the different software systems in this field.

V.1: Accidental limit states

Resistance of topside structures subjected to fire.

Comparison of PFP design methods using existing standards and numerical tools.

V.2: Natural Gas Storage and Transportation

No study planned.

V.3: Material and Fabrication Technology

To decrease the number of costly prototypes and to reduce the lead time of the design of complex structures, a large number of Computational Welding Mechanics (CWM) tools to simulate transient welding phenomenon's are becoming available. A better prediction of residual distortion and residual stresses in welds and welded structures is the main selling argument of these new companies.

Assembling a ship or an offshore structure requires sequential continuous welding joints. Therefore, defining the welding sequence is crucial for the correct completion of the welding assembly process. Simulation allows prediction and minimization of distortions which generate an increase of the overall product quality as well as drastic cost saving. Simulating the welding process aims to control the process in a way that minimizes the stress gradient and tensile surface stresses. As a result, the lifetime of a part increases as fewer cracks appear after load cycles. Compressive stresses can also be detected on the surface of the component, therefore improving part quality and avoiding corrosion risks due to tensile stresses.

To what extent these tools provide reliable and accurate results? Is these results are applicable to the shipbuilding and offshore industry? Costs and computation time are they acceptable? To answer these questions the "Material and Fabrication Technology" committee (V.3) of the International Ship and Offshore Structure congress (ISSC) is proposing the benchmark study where simulation results will be compared to experimental results.

V.4: Offshore Renewable Energy

No study planned.

V.5: Naval Vessels

1 Whipping Response of ships Comparison of experimental results with theoretical predictions covering:
- Natural frequency response.
- Whipping response of ship subjected to underwater explosion.

2 Progressive Collapse of Damaged Ships:
- Damage Simulation
- Theoretical prediction of damage and residual strength after damage
- Class society assessment for residual strength
- Effect of surface corrosion on hull girder strength of aging naval ships
- Use of ONR Frigate model as benchmark structure.

V.6: Arctic Technology

Case study applying the presented mission-based design methodology to a ship and an offshore structure.

V.7: Structural longevity

No study planned.

V.8: Risers and pipelines

It was determined that the past comparative studies should be reviewed and a proposal of the benchmark should be included in the committee report of ISSC2015 V.8.

ISSC Committees Membership

ISSC Committees

ISSC comprises of one Standing Committee, and a number of Technical and Specialist Committees on specialised areas of interest. The area of interest for Specialist Committees can be changed and slightly modified in preparation for each Congress.

Standing Committee

- Carlos Guedes Soares (Chairman), Portugal
- Ajit Shenoi, UK
- Jean-Yves Pradillon, France
- Jeom Kee Paik, Korea
- Jørgen Amdahl, Norway
- Manolis S. Samuelides, Greece
- Masahiko Fujikubo, Japan
- Merv Norwood, Canada
- Mirek Kaminski, The Netherlands
- Segen F. Estefen, Brazil
- Stefano Ferraris, Italy
- Weicheng Cui, China
- Wolfgang Fricke, Germany
- Xiaozhi Wang, USA
- Yoo Sang Choo, Singapore
- Yordan Garbatov (Secretary), Portugal

Technical Committees

Tech Committee I.1 on Environment

Chairman: Elzbieta Bitner-Gregersen
Stand. Com. Liaison: Carlos Guedes Soares

Members: Alan J. Murphy, UK
Christophe Maisondieu, France

Geert Kapsenberg, Netherlands
Igor Rychlik, Sweden
Ning Ma, China
Ryuji Miyake, Japan
Sheng Dong, China
Subrata Battacharrya, India
Taek Soo Jang, Korea
Thomas Fu, USA
Zhivelina Cherneva, Portugal

Tech Committee I.2 on Loads

Chairman: Pandeli Temarel
Stand. Com. Liaison: Carlos Guedes Soares

Members: Anna Bruns, Germany
Apostolos Papanikolaou, Greece
Arne Nestegård, Norway
Celso Pesce, Brazil
Daniele Dessi, Italy
Josko Parunov, Croatia
Kang Hyun Song, Korea
Nuno Fonseca, Portugal
Quentin Derbanne, France
Sharad Dhavalikar, India
Suqin Wang, USA
Toichi Fukasawa, Japan
Wei Bai, Singapore
Xuekang Gu, China

Tech Committee II.1 on Quasi-Static Response

Chairman: Jonas Ringsberg
Stand. Com. Liaison: Yoo Sang Choo

Members: Adrian Cosntantinescu, Belgium
Albert Zamarin, Croatia
Bastiaan van der Sluijs, Netherlands
Beom Seon Jang, Korea
Berend Bohlmann, Germany
Ertekin Bayraktarkatal, Turkey
Hui-Lung Chien, China (Taiwan)
Maciej Taczala, Poland
Matteo Sidari, Italy
Ole David Økland, Norway
Paul Lara, USA
Satoshi Miyazaki, Japan
Spyros Hirdaris, UK
Svein Erling Heggelund, Norway
Zhenquan Wan, China

Tech Committee II.2 on Dynamic Response

Chairman: Dae-Seung Cho
Stand. Com. Liaison: Mirek Kaminski

Members: Alexander Düster, Germany
Ahmet Ergin, Turkey
Ionel Chirica, Romania
Michael Holtmann, Germany
Ole Hermundstad, Norway
Michael Holtmann, Germany
Chenfar Hung, China (Taiwan)
Andrea Ivaldi, Italy
Chunyan Ji, China
Won Ho Joo, Korea
Bernt Leira, Norway
Sime Malenica, France
Yoshitaka Ogawa, Japan
Murilo Vaz, Brazil
Alex Vredeveldt, Netherlands
Yeping Xiong, UK
Dexin Zhan, Canada

Tech Committee III.1 on Ultimate Strength

Chairman: Takao Yoshikawa
Stand. Com. Liaison: Masahiko Fujikubo

Members: Abbas Bayatfar, Belgium
Simon Benson, UK
Jihed Boulares, USA
Chung-Ping Chen, China (Taiwan)
Hyung Min Do, Korea
Bong Ju Kim, Korea
José Gordo, Portugal
Pål Jensen, Norway
Xiaoli Jiang, Netherlands
Lennart Josefson, Sweden
Patrick Kaeding, Germany
Roberto Ojeda, Australia
Xudong Qian, Singapore
Malcolm Smith, Canada
Suhas Vhanmane, India
Deyu Wang, China
Shengming Zhang, UK

Tech Committee III.2 on Fatigue & Fracture

Chairman: Feargal Brennan
Stand. Com. Liaison: Wolfgang Fricke

Members: Agnes Marie Horn, Norway
Alexandros Theodoulidis, Greece
Asokendu Samanta, India
Byeong Ki Choi, Korea
Cesare Rizzo, Italy
Erkan Oterkus, UK
Fang Wang, China
George Wang, Singapore
Guy Parmentier, France
Henk den Besten, Netherlands
Ilson Paranhos Pasqualino, Brazil
Jani Romanoff, Finland
Jörg Rörup, Germany
Kim Branner, Denmark
Tetsuya Nakamura, Japan
Wengang Mao, Sweden

Tech Committee IV.1 on Design Principles and Criteria

Chairman: Enrico Rizzuto
Stand. Com. Liaison: Manolis Samuelides

Members: Alan Klanac, Croatia
Anders Rosen, Sweden
Ângelo Teixeira, Portugal
Byeong Seok Kang, Korea
Edzard Brünner, Germany
F. Barranco Cicilia, Brazil
Genadiy Egorov, Ukraine
Hongde Qin, China
Jonathan Downes, UK
Luis Sagrillo, Brazil
Maciej Radon, Germany
Rolf Skjong, Norway
Sean O'Neil, Netherlands
Yasumi Kawamura, Japan

Tech Committee IV.2 on Design Methods

Chairman: Matthew Collette
Stand. Com. Liaison: Jean-Yves Pradillon

Members: Han Koo Jeong, Korea
Igor Ilnytskiy, Ukraine
Iraklis Lazakis, UK
Lorenzo Moro, Italy
Mauro Sicchiero, Italy
Masanobu Toyoda, Japan
Manuel Ventura, Portugal
Petar Georgiev, Bulgaria
Robert Bronsart, Germany
Stein Ove Erikstad, Norway
Vasile Giuglea, Romania
Vedran Zanic, Croatia
Youfang Chen, China
Zbigniew Sekulski, Poland

Specialist Committees

Specialist Committee V.1 on Accidental Limit States

Chairman: Jurek Czujko
Stand. Com. Liaison: Jeom Paik

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Lars Brubak, Norway
Michael Johnson, UK
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Marcos Donato Ferreira, Brazil
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Pradeep Sensharma, USA
Sebastian Schreier, Germany
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Zhihu Zhan, China

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Stand. Com. Liaison: Weicheng Cui

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Floriano Pires, Brazil
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Jerolim Andric, Croatia
Liangbi Li, China
Naoki Osawa, Japan
Nisith Mandal, India
Per Lindstrom, Norway
Rafael Doig, Peru
Stephen Boyd, UK
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Thierry Millot, France

Specialist Committee V.4 on Offshore Renewable Energy

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Chae Hwan Rim, Korea
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Gao Zhen, Norway
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Hyun Kyeong Shin, Korea
Ivan Catipovic, Croatia
Johan Slatte, Norway
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Rachel Nicholls-Lee, UK
Spyros Mavrakos, Greece
Yu-Ti Jhan, China (Taiwan)
Yukichi Takaoka, Japan
Wanan Sheng, Ireland

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James Underwood, UK
Jang Hyun Lee, Korea
Jianhu Liu, China
Joep Broekhuijsen, Netherlands
Lex Keuning, Netherlands
Luca Demattei, Italy
Neil Pegg, Canada
Paulo Martins, Portugal
Stuart Cannon, Australia
Thomas Grafton, Norway

Specialist Committee V.6 on Arctic Technology

Chairman: Soren Ehlers
Stand. Com. Liaison: Jørgen Amdahl

Members: Alexei Bereznitski, Netherlands
Fai Cheng, UK
Ian Jordaan, Canada
Jaideep Sirkar, USA
Janne Valkonen, Norway
Kai Riska, France
Koji Terai, Japan
Pentti Kujala, Finland
Walter Kuehnlein, Germany
Yeong Tae Oh, Korea
Yu Luo, China

Specialist Committee V.7 on Structural longevity

Chairman: Paul Hess
Stand. Com. Liaison: Ajit Shenoi

Members: Alexander Egorov, Ukraine
Arne Fjeldstad, Norway
Dario Boote, Italy
Hideaki Murayama, Japan
J.I.R. Blake, UK
Jae Hong Park, Korea
Mark Tammer, Netherlands
Martijn Hoogeland, Netherlands
Michael Rye Andersen, Denmark
Piero Caridis, Greece
Renjun Yan, China
Seref Aksu, Australia
Valery Shaposhnikov, Russia

Specialist Committee V.8 on Risers and Pipelines

Chairman: Hideyuki Suzuki
Stand. Com. Liaison: Segen Estefen

Members: Celso Morooka, Brazil
Guido Kuiper, Netherlands
Gundula Stadie-Frohboes, Germany
Hugh Howells, UK
Jer-Fang Wu, USA
Jung Kwan Seo, Korea
Liping Sun, China
Min Low, Singapore
Nils Sodahl, Norway
Shuhong Chai, Australia
Svein Saevik, Norway
Yannis Chatzigeorgiou, Greece
Yoshiyasu Watanage, Japan

ISSC 2015 Congress - Working Procedures

Yordan Garbatov
ISSC 2015 Secretary
Instituto Superior Técnico
Lisbon, Portugal

ISSC 2015 website

In order to facilitate collaboration and information exchange, ISSC2015 has set up a website (http://www.issc2015.org/), which is available to all members. The website allows the Committee members to upload background documents, which are the references to be used in the committee reports. The website also allows for working documents to be made available to committee members such as the various drafts of chapters. This will be protected only for Committee members. The guidelines for using the website can be downloaded from http://www.issc2015.org/images/issc2015_online_help.pdf.

Proceedings information

The ISSC 2015 Proceedings will be published by Taylor & Francis. The report manuscripts should be prepared by using MS Word following the instructions of Taylor & Francis for one column (see the file

Taylor & Francis Instruction for autors.pdf uploaded at ISSC2015 webpage in "Standing Committee > General").

The page limit for Technical Committee and Specialist Committee Reports has been set to 80 and 60 pages respectively. An annex can be created for those committees that may want to present their benchmark studies and information additional to the one covered by the formal report. It is intended to make the reports available to the public. The annexes will appear only in the CD format, not in the book that will only contain the text of the reports.

The references are to be organized on the format of the commercial software EndNote (http://endnote.com/) by using the Harvard output style (see the file Harvard.ens uploaded at ISSC2015 webpage in "Standing Committee > General"). However, you may use EndNote online without having a desktop version of the software (see the attached file EndNote online.pdf, uploaded at ISSC2015 webpage in "Standing Committee > General").

Schedule for preparation of ISSC 2015

Data	Actor	Description
April 12 2014	CC	3 candidates proposed for Official Discusser. The OD shall not be a member of any ISSC committee
September 2014	SC	Nominates ODs
December 12, 2014	CC	Upload 1st version of the Report
January 9, 2015	Liaison	Comments on report to CC
February 07, 2015	CC	Upload final version of the Report
March 15, 2015	CC	Member evaluation submitted to the Secretary
April 2015	SC and Correspondents	Propose Observers to be invited for the ISSC 2015 Congress
May 2015	CC	Final Reports uploaded to the internal ISSC website
May 2015	OD	Sends comments on the Report to the Secretary and SC
July 2015	CC	Reply to OD comments to OD and SC
September 2015		ISSC 2015 congress in Lisbon/Portugal

CC - Committee Chairperson
SC - Steering Committee
OD - Official Discusser

The 19th International Ship and Offshore Structures Congress (ISSC 2015) will take place in the Lisbon area, Portugal. The congress is a forum for the exchange of information by experts undertaking and applying marine structural research. The aim of the ISSC is to facilitate the evaluation and dissemination of results from recent investigation to make recommendations for standard design procedures and criteria, to discuss research in progress and planned, to identify areas requiring future research and to encourage international collaboration in furthering these aims. Ships and other marine structures used for transportation, exploration and exploitation of resources in and under the oceans are in the scope of ISSC.
For more information about the 19th edition of ISSC, visit the webpage at http://www.issc2015.org/.