NEWSLETTER

19th International Ship and Offshore Structures Congress

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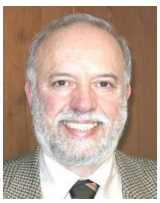
Editorial



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

This is the second issue of the ISSC Newsletter and the first one in 2015. ISSC Newsletters started last year and, as in most of these situations, there is a slow starting process as contributions take time to arrive and readers have to get used to the system.

The objectives of the Newsletter are two-fold, to reach the ISSC members and to provide an update of the activities being conducted in ISSC to other professionals outside ISSC.

ISSC is made up of 8 Technical Committees and 8 Specialist Committees, in a total of about 200 persons. The Committees are hopefully well aware of their activity and plans, but there is no mechanism to keep members informed of the general trends of what is happening in other Committees except for yearly Coordination meetings attended by Committee Chairs. The aim of this Newsletter is to fill that gap and to provide general information about Committee plans and meetings as well as benchmark studies. General knowledge about the location and dates of meetings may facilitate some interaction among committee members, which in many cases is encouraged but has no special support to facilitate it. More important is the early information about benchmark studies, which benefit from a wide participation that is even better if they manage to also involve specialists outside the responsible Committees.

Newsletters become more useful when their readers start taking the initiative by sending information they feel is relevant and timely, so we hope that in the future ISSC Newsletters will appear more often, possibly twice a year.

This matter was discussed at the last meeting of the Standing Committee in the Autumn of 2014 and it was agreed that an Editorial Board of the Newsletter should be created, preferably with representatives of the various committees, so that the flow of information to the Newsletter would be facilitated and would not need to only go through the Committee Chairs as in general they are already very busy with the normal Committee work. So for the ISSC2018 Congress, one of the first tasks of the Committee after the appointments of their Chairs is to nominate the Newsletter Editorial Board member. The Editor–in-Chief of the Newsletter will be a member of the Standing Committee and it was decided that for ISSC2018 I will have that responsibility, hopefully to consolidate the Newsletter and make it ready for others to take over more easily.

Now, it is a busy period for Committees as the first versions of the reports are being finalised and sent to the Liaisons members first to be checked and afterwards to the Official Discussers. At the autumn meeting of the Standing Committee, an overview was made of the progress of reports, and only one or two cases were identified in which there was some pressure to conclude the reports on time, as all others seemed to be progressing well.

This year there is a novelty with the Conference Proceedings, where the published book will include a CD-ROM, in which Committees are able to include appendices in the electronic version, in particular with the results of Benchmark or other studies conducted.

Another important item related with the publication of the work of the Committees is the agreement reached with the Marine Structures Journal to publish review papers from ISSC Committees.

Marine Structures was created in association with ISSC and even today the Journal indicates “Published by Elsevier in association with the International Ship and Offshore Structures Congress”. However, I have noticed that throughout the years the presence ISSC in the Journal is not noticeable, and for the Journal to continue having that statement it is necessary to change the state of affairs. I am happy to announce that we reached an agreement with The Editor of the Journal, Prof Torgeir Moan, to promote the presence of ISSC in the Journal as described in a note in this Newsletter.

Finally, I would like to report on the ongoing cooperation with ITTC. For many years there have been contacts and exchange of information between ISSC and ITTC, mainly at the Committee level, and mainly by Committees I.1 Environment and I.2 Loads, having myself been involved in that when member of both Committees. However, the cooperation moved to a higher level with the organization of a joint Workshop on the occasion of ISSC2012 in Rostock (Warnemünde), and more recently at a second workshop at ITTC2014 in Copenhagen.

Following that workshop and further meetings of the respective bodies of both organizations, it has been decided to move ahead with the creation of a Joint Committee ISSC-ITTC, whose mode of operation will be defined in the near future, as described in another article in this Newsletter.
Finally, as expected, the preparations for ISSC 2018 are well underway and we need to identify potential future members of the Committee so as to prepare the lists of invited observers for ISSC2015 in Cascais, on 6-10 September 2015. I look forward to meet many of you in Cascais.

2nd ITTC-ISSC Joint Workshop

Copenhagen, Denmark, 30th August 2014

The overall aim of the joint ITTC-ISSC workshops is to foster collaboration between the ITTC and ISSC communities on topics of common interest. The 1st joint workshop UMSOS (Uncertainty Modelling for Ships and Offshore Structures) took place in Rostock, Germany, in September 2012, and focused on uncertainty modelling for ships and offshore structures. The focus of this workshop was wave-induced motions and loads on ships and offshore structures.

The workshop was divided into two main sessions. The first comprised presentations by the chairs of ISSC Environment (I.1) and Loads (I.2) and ITTC Seakeeping and Ocean Engineering Committees focusing on the methods and the issues related to environmental conditions for and the evaluation of loads on ships and offshore structures.

The chair of the ISSC Loads (I.2) Committee, Prof. Temarel, gave a presentation entitled "Prediction of wave-induced loads on ships: Progress and challenges". He noted the following:

- investigations on global wave-induced loads is continuing with different levels of nonlinearity – from partly nonlinear to fully nonlinear potential flow methods.;
- coupling between RANS and FE methods is gaining ground;
- impulsive loads, such as slamming and sloshing, are modelled as individual problems and not, by and large, coupled to global analyses and loads.

With reference to uncertainties, he noted that:

- predicted loads were not accompanied by a quantification of uncertainties relating to hull geometry, structural modelling, mass distribution and numerical procedures, noting in particular the difficulties associated with RANS methods in terms of convergence analysis and turbulence modelling;
- experimental measurements required a comprehensive uncertainty analysis, in line with analyses employed in wave resistance tests.

He emphasized the need for:

- comprehensive elastic model tests to provide validation results for prediction methods;
- Full scale measurements to test assumptions in: seaway modelling, numerical methods, discretisation, coupling and range of validity of experimentation.

He concluded by outlining the challenges that are likely to provide the next step-up in fluid structure interaction investigations, namely

- data rich analysis and data sparse analysis;
- systems approach to FSI, e.g. hull + propeller + rudder + machinery +…;
- smart hull concepts, such adaptive/morphing structures and control of flow around the hull, hence, control of wave loading at local and global levels;
- gridless solutions, beyond particle methods.

The chair of the ITTC Seakeeping Committee, Prof. Kim, focused on problems associated with nonlinear seakeeping analysis, hence, wave-induced motions and loads. He gave examples of various methods, comparing predicted motions and loads with experimental measurements.

The chair of the ITTC Ocean Engineering Committee, Prof. Qui, reviewed progress in a range of nonlinear loads on offshore structures, such as slamming, sloshing, wave-run up and vortex-induced vibrations.

The chair of the ISSC Environment (I.1) Committee, Dr. Bitner-Gregersen, gave a presentation on "Sea state conditions for marine structures' analysis and model tests" where she showed an overview of wave data and models used currently for design and operations of ship and offshore structures and pointed out associated uncertainties. She underlined that even though the same basic principles prevail for hydrodynamic loads on ships and offshore structures, actual problems and methods for assessing these loads in the design stage are quite different. Different wave data and models are used currently for defining design and operational conditions for these two types of structures. She noted the following:

- The shipping industry is using visual observations collected from ships in normal services in design and operation process while the offshore industry is applying hindcast and instrumental location specific data (including satellite data) in developing design and operational criteria.
- The linear irregular wave model as well as linear and nonlinear regular waves is commonly used as input to the numerical codes for calculations of ship loads and responses.
- 2nd order waves (irregular) are commonly applied by the offshore industry in calculations loads and responses for offshore structures.

- CFD is becoming increasingly used for calculating loads and responses of marine structures, but computational costs represent a limitation of this tool.
- Empirical formulations of wave spectra are used extensively in offshore engineering such as modified versions of the Pierson-Moskowitz, PM, (1964) spectrum and the JONSWAP spectrum (Hasselman et al., 1973) for unimodal conditions (one wave system), and the Ochi-Hubble (1976) and Torsethaugen (1993, 1996) spectrum for bimodal sea states. The maritime industry has used traditionally the PM spectrum, but recently also the JONSWAP spectrum and a double peak spectrum is applied, particularly for evaluation of ship operational criteria. There is still uncertainty about the form of the decay in the high frequency tail – the (modified) PM and JONSWAP formulae have an f^{-5} tail decay, while the theory and field data show an f^{-4} tail decay.
- Sampling variability (uncertainty due to the limited number of observations) needs to be accounted for when carrying out model tests and numerical simulation. It is recommended that the duration of a wave record is around 3-hours in full scale to decrease the effect of sampling variability.
- Rogue waves and climate change are much in focus at present, but they are still not included in Classification Societies' Rules and Offshore Standards. She showed some results of the EC EXTREME SEAS (Design for Ship Safety in EXTREME SEAS) project coordinated by legacy DNV, Norway, and dedicated to rogue waves. The results demonstrated that accounting of rogue waves will require the use of higher order wave models, the second order wave models cannot capture these abnormal waves. Impact of rogue waves on loads and responses is significant.

Finally, she replied to the questions received from Prof. Kim prior to the ITTC-ISSC Workshop regarding the wave steepness limit for regular wave experiments and proposed by IMO adverse weather conditions to be used in the assessment of ship power which has to be sufficient to maintain the manoeuvrability in these conditions. For the wave steepness limit she referred to the DNV GL RP-C205. Further, she mentioned that the ongoing EC SHOPERA (Energy Efficient Safe SHip OPERAtion) project, coordinated by NTUA, is validating the suggested adverse conditions.

The second session set out the context of the "blind" benchmark study for a real containership for which experimental measurements of wave-induced motions and loads in regular and irregular waves were available. 11 organisations, with 17 prediction codes, took part in this benchmark study, using a range of linear and nonlinear methods. The predicted results were presented and discussed, together with some of the methods used for prediction.

The workshop ended with a panel discussion focussing on the main issues emerging from the two sessions and discussing the way forward for tackling such issues within the framework of collaboration between ISSC and ITTC.

Pandeli Temarel

Elzbieta Bittner Gregersen

Publication of ISSC work in the Journal MARINE STRUCTURES

Marine Structures was created in association with ISSC and even today the Journal indicates "Published by Elsevier in association with the International Ship and Offshore Structures Congress". A journal needs to have a life of its own and to publish high quality papers in order to fulfil its role and to gain a reputation. The Journal has been progressing during the years with the contributions of many ISSC members, although their affiliation with ISSC has not been indicated in the papers and thus it has been unnoticed to the general public.

The Journal is committed to encourage the authors to also show their ISSC affiliation in their papers. Therefore, within the submission procedure the Journal web page will be asking the authors if they are ISSC members and their committee affiliation so that this information can be included as a footnote in the papers, not to distract from the institutional affiliation.

The Journal has also published several articles with results from benchmark studies and those show normally that the work carried out by one ISSC committee. In some cases, special issues have been compiled with the work of one or other committee making the work of ISSC clearly visible, as exemplified by the following special issues:

- Guedes Soares, C. Loads on Marine Structures. Marine Structures, 1999; 12(3):129-130, and
- Guedes Soares, C. Wave-Induced Loads in Marine Structures. Marine Structures, 2003; 16(2):95-184, that were the result of the work done in Committees I.2-Loads in successive mandates.

The possibility of presenting the work of the committees in this way has always been open in the Journal and it is up to ISSC members to take the initiative to present and submit their work.

However, the main activity of ISSC is in reviewing and evaluating the literature produced in their time frame and thus one strong component that should be expected from the committees is in the form of literature reviews, which continue being very important to show the status of a given area and help the newcomers to find the relevant papers in their area of interest. While in the past literature reviews were important in

the absence of widespread access to publications, nowadays, in the era of electronic publishing and web access to publications the need for the reviews continue as there is a need to identify the important references among the vast numbers of papers that are now available in each topic of interest.

So review papers are one type of contribution that ISSC has not been providing to Marine Structures, and which we would like to recommend as a desired change.

The review papers to be submitted to the Journal by ISSC members should have a different character than the ISSC reports. Due to the large number of references and the necessarily limited space, the ISSC reports normally limit themselves to brief references to various papers. However, the Journal papers, however, should concentrate on more focused topics and discuss them in more depth. They could also be the results of a benchmarking of methods or of marine structures concepts, for example. The originality required for journal papers lies in the synthesis of results. The character of the papers needs to be such that they are chosen as references in future research.

The review papers that are being sought for the Journal would not normally be authored by all committee members, but only by the subset that was more interested and active in the specific topic area. The submitted papers will go through the normal review process of the Journal having to obviously meet the Journal standards for acceptance.

We leave therefore an invitation to the various committees to consider contributing with one review paper to the Journal, right after having terminated their ISSC reports and having thus the material fresh and ready for publication.

If it was possible to have one contribution from each committee this might be collected in two special issues of the Journal, which would certainly become solid references for the future.

We hope that these measures will encourage ISSC members to have a more substantial and visible contribution to the MARINE STRUCTURES journal, raising the profile of ISSC and of the Journal at the same time.

C. Guedes Soares
ISSC Chairman

Torgeir Moan
Editor
MARINE STRUCTURES

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 the 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 the area of 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.

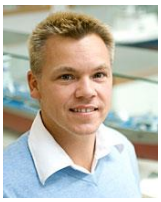
Committee I.2: Loads

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 envi-

ronmental 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

Chair:
Gao Zhen
Norway

Stand. Com. Liaison: Xiaozhi (Christina) Wang

Mandate: Concern for load analysis and structural design of offshore renewable energy devices. Atten-

tion 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

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Chair:
Robert Dow
UK

Stand. Com. Liaison: Merv 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.

Committees' Activities

Standing Committee

The last Standing Committee meeting took place at the IST campus in the centre of Lisbon, on 20th and 21st October 2014 and hosted by IST. 15 members of this committee attended this meeting to discuss the ongoing work.

In addition to dealing with the normal operational aspects of ISSC, the Standing Committee decided:

- To further support the publication of the ISSC Newsletter mobilising in the future more contributions.
- To promote an increased rate of publication of ISSC related matters on the MARINE STRUCTURES Journal, which is being "published by Elsevier in association with the International Ship and Offshore Structures Congress", since its creation.
- To support the creation of the Joint Committee ISSC-ITTC.

Committee I.2: Loads

The Committee I.2 on Loads held its 3rd (and last) committee meeting at the IDA Conference Centre in Copenhagen, Denmark on 29 August 2014. 10 members of this committee attended this meeting to discuss the committee's draft report.

Members of ISSC I.2 at the
ITTC-ISSC workshop buffet

All present committee members also attended the 2nd ITTC-ISCC joint workshop on 30 August 2014, at the IDA Conference Centre in Copenhagen, Denmark.

Committee II.1: Quasi-Static Response

During recent years, much attention has been directed towards the structural integrity of free fall lifeboats and the difficulty of using appropriate design loads for safe and reliable structural design. The committee has been working with a benchmark study on quasi-static assessment of response to slamming impact using a free fall lifeboat for case study. The design against impact loads (slamming) is challenging and time consuming and can involve complex calculations. Application of simplified, quasi-static calculation approaches will significantly simplify the calculations. The committee's objective with the study is to evaluate the accuracy of simplified approaches in quasi-static analysis of impact loads and compare the results with fully dynamic analysis. The assessment is based on structural drawings and data from drop tests (trajectory information, measured pressures, etc.). The response is calculated based on basic mechanics and experimental results for composite panels. Both quasi-static and dynamic finite element analyses are performed. As an example of a result, it is found that results from the simple beam theory combined with basic formulas for dynamic response assessment is in good agreement with experimental results for composite panels as long as the hydrodynamic added mass is included. An abstract to a conference paper has been submitted to the international conference OMAE2015 in St John's, Canada, in May 31 – June 5, 2015.

Committee II.2: Dynamic Response

The Committee II.2 on Dynamic Response held its 2nd committee meeting at the Istanbul Technical University, Turkey on 5-6 June, 2014 and kindly hosted by Prof. Ahmet Ergin. The meeting was attended by 10 out of the 18 members. The topics discussed were:

- Discussion of the progress of draft to prepare the committee report
- Discussion on the benchmark study (Unfortunately, I consider the benchmark study will not be done due to the copyright issue of raw materials required for the study).

Committee III.1: Ultimate Strength

The Committee III.1 on Ultimate Strength held its 4th committee meeting at the Chalmers' Johanneberg Campus in Göteborg, Sweden, on 11-12 September, 2014. 7 persons attended the meeting and the topics discussed were:

- Discussion of the draft of the committee report
- Discussion of the results of Benchmark calculations of (ultimate strength of box girder model and 3-hold model of bulk carrier)

Committee III.2: Fatigue and Fracture

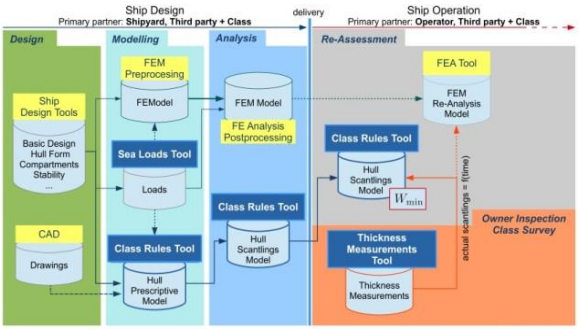
Increasing needs to have higher payload-to-structural weight ratio have increased the need to study lightweight structural solutions in ships. This is especially important in ships where structural weight is significant part of the displacement, e.g. passenger ships. The previous committee carried out a benchmark investigation on the bulkhead structures of passenger ships and focused on the fatigue damage assessment under multi-axial stresses. Another way to reduce weight and vertical centre of gravity is to decrease plate thickness of the passenger decks within the superstructure. However, this requires design around te minimum plate thickness requirement of 5mm set typically by the classification societies. Thus, the starting point of the benchmark is the discussion of the previous committee work on the plate thickness effect and especially the influence of initial shape to fatigue effective structural and notch stresses. Based on the information from scientific literature the committee decided to carry out a benchmark on this topic. A simple, curved, dog-bone specimen used typically in the development of welding processes in industry

was selected as a case study. The analyses were carried out using analytical and numerical methods from various sources including classification society rules.
The benchmark shows that the assumptions made in modelling can cause relatively moderate changes on the observed response (stress state) in the specimen and therefore also in the estimated fatigue strength based on existing design curves. It was found out that the design rules used should be updated to follow more closely the recent recommendations given by the International Institute of Welding. It was also discussed that in real structures the problem becomes even more difficult as the curvature occurs not in one, but two directions. This means that the stresses are being redistributed within the panels. Furthermore, when the consideration is extended to passenger ship hull girder response, the effects realized by the benchmark become even more complex as the stresses are being redistributed also between different decks. Considering these facts, one committee recommendation is that large-scale tests would be carried out to account the stress redistribution, the initial imperfections and residual stresses properly. Another recommendation is that the next committee should perhaps review the works done in past by committee III.1 on large-deflection plate theory and its' applications to ultimate strength; instead of considering the load-end-shortening behaviour the fatigue committee should focus on the estimation of local, fatigue effective stresses.

Committee IV.2: Design Methods

Classification Society Software Review

In 2000, the Technical Committee IV.2 – Design Methods of the ISSC2000, presented an interesting evaluation of the tools developed and provided by the main Classification Societies for the scantling and assessment of ship structures. After fifteen years, the Members of the ISSC 2015 IV.2 – Design Methods Committee have decided to carry out a new analysis of the software packages provided by the Classification Societies. Since the committee members come from different countries around the world, we decided to take into account a large number of Classification Societies which provide software packages. The Classification Societies that have been taken into account are the following: American Bureau of Shipping, Bureau Veritas, Croatian Register of Shipping, Det Norske Veritas – Germanischer Lloyd, Korean Register of Shipping, Lloyd's Register, Polish Register of Shipping, Registro Navale Italiano. At the beginning of the work, the evaluation criteria for carrying out the software review have been defined. These criteria have been developed considering, as basis, the evaluation criteria that were defined in the benchmark study of the Design Methods of ISSC2000, and introducing new criteria that take into account the development of the design methods and of the software packages into last years. The analysis has been split into two levels. The first level analysis deals with the general philosophy of the software under evaluation and with the identification of its category, PLM tool or software for the structural assessment. Moreover, in this part of the analysis, the design phase, in which the software under investigation is used, has been identified along with the types of ships that can be analyzed by the tool. In the second level of analyses two different sets of criteria have been defined, the first one for analyzing structural tools, the other one for the PLM tool.
The criteria of the second level of analysis aim to understand the capabilities of the software packages, their ability to share information and models with other commercial tools, the types of analysis that they are able to carry out, as for the structural tools, or the information that they are able to take into account and to share among the stakeholders of the ship construction, with regard to the PLM databases. The information on the software under evaluation has been gathered by the committee members who interviewed the experts of the software at the premises of the Classification Society, or who acquired data on the Classification Society web sites. The Figure shows the main phases of ship design and ship operation which are supported by software. For each Classification Society, we have identified the software that has been developed for supporting each design phase. The study that has been undertaken by the committee members gives an overview of the development of the tools provided by the Classification Societies.



Committee V.2: Natural Gas Storage and Transportation

The Committee V.2 on Natural Gas Storage and Transportation held its 4th committee meeting at the Delft University of Technology, Delft Netherlands on 15-16 September 2014. 4 persons attended in the meeting and the topics discussed were:

- Discussion of the progress of draft of the committee report.
- Discussion on process delivery final report

Committee V.4: Offshore Renewable Energy

After discussion, the committee formulated three groups of topics that will be covered in the report.

- Offshore wind turbines:
  Zhen Gao (group leader), Dale Karr, Frank Adam, Annemarie Damen, Debabrata Karmakar, Huilong

Ren, Chae Hwan Rim, Hyun Kyeong Shin, Johan Slaette.

- Wave energy converters:
  Harry Bingham (group leader), Ivan Catipovic, Giuseppina Colicchio, Spyros Mavrakos, Wanan Sheng.
- Marine current turbines:
  Rachel Nicholls-Lee (group leader), Yu-Ti Jhan, Pengfei Liu, Yukichi Takaoka.

Three group tele-meetings have been held as follows. Otherwise, email communications have been used.

- Wind group tele-meeting on July 8th
  Participants: 5 persons
  Duration: 2 hours
  Topics for discussion: contents and structure of the wind chapter in the committee report; assignment of writing for each group member
- Wave group tele-meeting on July 8th
  Participants: 7 persons
  Duration: 2 hours
  Topics for discussion: report structure (wave chapter); distribution of tasks
- Wave group tele-meeting on October 8th
  Participants: 5 persons
  Duration: 1 hour
  Topics for discussion: progress of the draft report; deadline for submission of the contributions from each member

A face-to-face meeting with all committee members has been planned to be on 27th November (8:30-12:30) in Lisbon after the RENEW Conference (24-26 Nov.). The purpose of the meeting is to discuss and comment on the first draft of the committee report and refine the report after the meeting if this is necessary.

The committee might need an extension of the deadline (12th Dec.) for submitting the final report. But, it will be clearer by 27th Nov. whether we really need this. But, do you think how long we can get for extension after Dec. 12th.

Committee V.5: Naval Vessel Design

The committee has now met 5 times: ISSC Rostock 2012; Newcastle University January 2013; Singapore in October 2013 (Following the PRADS Meeting in Korea); DNV Oslo May 2014 and our latest meeting at ABS in Alexandria, Virginia in October.

- The last meeting at the ABS offices in Alexandria, Virginia was attended by 9 people.
- A full draft of the committee report was discussed at this meeting and changes to the draft were agreed, these should be sent to the committee chairman by the end of November 2014 for incorporation in the improved draft committee report, the draft should then be uploaded onto the ISSC web site in December 2014.
- The current draft of the committee report consists of 60 pages spread over 8 chapters forming the main body of the report.
- The chapter covering our benchmark studies on Ship Whipping and Damaged Ultimate Strength will add a further 15 pages to our committee report. All of this is currently available in a single draft document.
- An updated version of the template for the chapters is requested from the standing committee.

It is proposed that we will have one last committee meeting in Newcastle at the end of January 2015 to review our final committee report and benchmark solutions before uploading the final version of the committee report to the ISSC web site in February 2015.

Committee V.7: Structural Longevity

The committee has worked very hard to develop a report architecture in response to the mandate that covers relevant areas within the abilities of the membership. The breadth of the topic touches on all past and present ISSC committees, in addition to touching upon new areas. The key issues focused on by the committee center around the following:

- Why is structural longevity important?
- How is data/information gathered to support structural longevity understanding?
- How is the understanding of structural longevity advanced and what actions are taken with the collected data and information?

The committee has met in person twice: 19-20 March 2014 in Delft, The Netherlands; and 21-23 October in Genoa, Italy. These were well-attended and very active meetings. In addition the committee has held virtual meetings via Skype on 8 occasions. Additional virtual meetings will be held as needed to support finalization of the report and to address comments from the Official Discusser. The committee members have contributed a significant amount of quality material that is still being reduced to meet the 60 page limit before the report is finalized. We look forward to delivering the report and taking part in the ensuing discussion upon publication.

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

Increasing needs to have higher payload-to-structural weight ratio have increased the need to study lightweight structural solutions in ships. This is especially important in ships where structural weight is significant part of the displacement, e.g. passenger ships. The previous committee carried out a benchmark investigation on the bulkhead structures of passenger ships and focused on the fatigue damage assessment under multi-axial stresses. Another way to reduce weight and vertical center of gravity is to decrease plate thickness of the passenger decks within the superstructure. However, this requires design around minimum plate thickness requirement of 5mm set typically by the classification societies. Thus, the starting point of the benchmark is the discussion of the previous committee work on plate thickness effect and especially the influence of initial shape to fatigue effective structural and notch stresses. Based on the information from scientific literature the committee decided to carry out a benchmark on this topic. A simple, curved, dog-bone specimen used typically on the development of welding processes at industry was selected as case study. The analyses where carried out using analytical and numerical methods from various sources including classification society rules.
The benchmark shows that the assumptions made in modeling can cause relatively moderate changes on the observed response (stress state) in the specimen and therefore also in the estimated fatigue strength based on existing design curves. It was found out that the design rules used should be updated to follow more closely the recent recommendations given by the International Institute of Welding. It was also discussed that in real structures the problem becomes even more difficult as the curvature occurs not in one, but two directions. This means that the stresses are being redistributed within the panels. Furthermore, when the consideration is extended to passenger ship hull girder response, the effects realized by the benchmark become even more complex as the stresses are being redistributed also between different decks. Considering these facts, one committee recommendation is that large-scale tests would be carried out to account the stress redistribution, the initial imperfections and residual stresses properly. Another recommendation is that the next committee should perhaps review the works done in past by committee III.1 on large-deflection plate theory and its' applications to ultimate strength; instead of considering the load-end-shortening behavior the fatigue committee should focus on the estimation of local, fatigue effective stresses.

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 classification 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

Whipping Response of ships Comparison of experimental results with theoretical predictions covering:

- Natural frequency response.
- Whipping response of ship subjected to underwater explosion.

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

No study.

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
Tamunoiyala S. Koko, Canada
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

Members: Aleksandr Nilva, Ukraine
Andrea Ungaro, Italy
Andrey Dulnev, Russia
Bart Boon, Netherlands
Gyu Sung Kim, Korea
John Vægter, Denmark
Kristjan Tabri, Estonia
Lars Brubak, Norway
Michael Johnson, UK
Nikolaos Ventikos, Greece
Spiro Pahos, UK
Wenyong Tang, China
Yasuhira Yamada, Japan
Zbigniew Czaban, Canada

- Specialist Committee V.2 on Natural Gas Storage and Transportation

Chairman: Rene Huijsmans
Stand. Com. Liaison: Stefano. Ferraris

Members: Ahmad Zakky, Indonesia
Longbin Tao, UK
Magnus Lindgren, Norway
Makoto Arai, Japan
Marcos Donato Ferreira, Brazil
Mun Keun Ha, Korea
Oscar Valle, Mexico
Pradeep Sensharma, USA
Sebastian Schreier, Germany
Tauhid Rahman, Australia
Zhihu Zhan, China

- Specialist Committee V.3 on Material and Fabrication Technology

Chairman: Jean David Caprace
Stand. Com. Liaison: Weicheng Cui

Members: Brajendra Mishra, USA
Floriano Pires, Brazil
Frank Roland, Germany
H. Kim, Korea
Heikki Remes, Finland
Ingrid Schipperen, Netherlands
Jerolim Andric, Croatia
Liangbi Li, China
Naoki Osawa, Japan
Nisith Mandal, India
Per Lindstrom, Norway
Rafael Doig, Peru
Stephen Boyd, UK
Thierry Millot, France

- Specialist Committee V.4 on Offshore Renewable Energy

Chairman: Gao Zhen
Stand. Com. Liaison: Xiaozhi (Christina) Wang

Members: Annemarie Damen, Netherlands
Chae Hwan Rim, Korea
Dale Karr, USA
Debabrata Karmakar, Portugal
Frank Adam, Germany
Gao Zhen, Norway
Giuseppina Colicchio, Italy
Harry Bingham, Denmark
Huilong Ren, China
Hyun Kyeong Shin, Korea
Ivan Catipovic, Croatia
Johan Slatte, Norway
Pengfei Liu, Canada
Rachel Nicholls-Lee, UK
Wanan Sheng, Ireland
Spyros Mavrakos, Greece

Yu-Ti Jhan, China (Taiwan)
Yukichi Takaoka, Japan

↳ Specialist Committee V.5 on Naval Vessels
Chairman: Robert Dow
Stand. Com. Liaison: Mervy Norwood

Members: Akihiro Yasuda, Japan
Albert Fredksen, Norway
Darren Truelock, USA
Francisco Viejo, Spain
James Underwood, UK
Jang Hyun Lee, Korea
Jianhu Liu, China
Joep Broekhuijsen, Netherlands
Lex Keuning, Netherlands
Luca Dematteі, 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 longe-vity
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.

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 in the format of the commercial software EndNote (http://endnote.com/) by using the ISSC2015 output style. However, you may use EndNote online without having a desktop version of the software.

Schedule for Preparation of ISSC 2015

Pre-Congress

Action	Date
• Secretariat to ask SC and Correspondents for names, CVs of observers of ISSC 2015 Congress	January 2015
• Secretariat to distribute the Committee member evaluation forms to CC	January 2015
• Liaison Comments to comment on report to CC	January 2015
• CC to upload Committee Report after accounting for Liaison comments on ISSC2015 website and to Secretariat	February 2015
• CC to send Committee Report to Official Discusser	February 2015
• SC and Correspondents to propose observers to be invited for the ISSC 2015 Congress to Secretariat	February 2015
• CC to submit Assessment Forms to Secretariat	February 2015
• Secretariat to issue invitations to delegates and observers to attend ISSC 2015 Congress	March 2015
• OD to send comments on the report to Secretariat	April 2015
• CC to upload the final reports to the internal ISSC website and to Secretariat after editing	May 2015
• OD to send the Official Discussers Reports to Secretariat	May 2015
• Secretariat to forward the Official Discussers Reports to CC and concerned SC Liaisons	May 2015
• Secretariat to provide an ISSC Power Point presentation template of ISSC 2015 Congress	June 2015
• SC Liaisons to comment on Official Discussers Reports, if appropriate	July 2015
• CC to submit response to Official Discussers Reports to Secretariat	July 2015
• CC send the committee Power Point presentation to Secretariat and concerned SC Liaisons	July 2015
• Secretariat to compile all committee references in one database	July 2015
• Secretariat to submit manuscript of Vols I and II to Taylor &Francis	July 2015
• Secretariat to upload Congress proceedings on ISSC2015 website and advise members/delegates/observers of this	July 2015
• All Members/Observers to submit registration forms to attend ISSC 2015 Congress	July 2015
• Secretariat to invite discussions on committee reports for presentation at ISSC 2015 Congress	July 2015
• CC to submit Congress Presentations on ISSC2015 website and to Secretariat	July 2015
• Taylor &Francis to deliver Vols 1 and 2 Congress proceedings of ISSC2015 hard copies to Secretariat	August 2015
• All interested Members/Observers to submit discussions to Committee reports	August 2015
• **ISSC 2015 congress in Cascais/Portugal**	7-10 September 2015

Post-Congress

Action	Date
• CC to reply to contributions to Committee reports at Congress to Secretariat	October 2015
• Secretariat to compile all responses, along with Official Discussers Reports, Members/Observers contributions and CCs replies and submit to Taylor &Francis, Vol III, CD	November 2015
• Secretariat to upload all Congress presentation material on ISSC website	November 2015
• Taylor &Francis to deliver Vol III, CD to Secretariat	December 2015
• Secretariat to mail Vol III, CD to all attendees	January 2016

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 investigations 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/.