

# ittc - news

JUNE 1999

No. 40

## Contents

- Message from the Chairman
- News from the Executive Committee
- News from the Advisory Council
- News from the Technical Committee
- Obituary
- Catalogue of Facilities

## Message from the Chairman

This issue of the ITTC News is the last of the six news letters (No. 35 to No. 40) issued by 22nd ITTC Executive Committee Secretariat. I have enjoyed the opportunity of sending my greetings to you through the ittc-news. By any means, the task starting from gathering the news materials, editing, printing and mailing the ittc-news twice a year could not have been a small chore at all. In addition to many other affairs of the ITTC to be taken care of, Dr. Seung Il Yang, Secretary of EC, has never failed in issuing the ittc-news on schedule. His invaluable services to the ITTC community will be long remembered.

A few respected senior colleagues of ours have passed away during the last three years. With sorrow, I read the two obituaries in this issue again. Their life-long dedication to the profession of naval architecture will be well appreciated by their followers.

Reviewing the reports from the technical committees, I strongly feel that all of the committees have accomplished their assigned tasks extremely well. You will soon have an opportunity to hear their accomplishments at the forthcoming General Meeting of the 22nd ITTC in Seoul and Shanghai in September, or read them from the proceedings to be published soon.

I eagerly look forward to seeing you at the General Meeting in September.

Choung Mook Lee, Chairman  
22nd ITTC Executive Committee

## News from the Executive Committee

The third meeting of the 22nd ITTC Executive Committee was held at MHI Izu-Kogen Club in Izu-Kogen, Japan on March 17, 1999. Mr. Naoji Toki, Mitsubishi Heavy Industries, Ltd., hosted the meeting. Selected items from the extensive agenda are presented below.

### *New ITTC Member Organization*

Applications from the following organizations were presented and approved.

- Offshore Model Basin, USA and
- School of Transportation System Engineering, University of Ulsan, Korea

### *New ITTC Advisory Council Member*

An application from the University of Newcastle was reviewed. Considering the requirements defined in the Rules of the Organization the Committee approved the application for membership on the Advisory Council.

### *Review of Advisory Council Membership*

According to the ITTC Rules of the Organization, sixteen member organizations were chosen and reviewed for reconfirmation

---

#### Newsletter editor:

Dr. Seung-Il Yang  
Korea Research Institute of Ships  
and Ocean Engineering (KRISO)  
Yusong P.O. Box 23  
Taejon, 305-600, KOREA

---

#### Published by:

Executive Committee Secretariat  
22nd International Towing Tank Conference  
Tel : +82 42 868 7240  
Fax: +82 42 868 7274  
Internet: siyang @ mailgw.kimm.re.kr

as member organization of the ITTC Advisory Council.

The Versuchsanstalt fur Wasserbau und Schiffbau, Germany, had resigned from the Advisory Council in July 1998 and the Shipbuilding Research Center of Japan had resigned in January 1999. The other fourteen member organizations' qualifications for remaining as Advisory Council members have been confirmed. Later, VWS stated that it wishes to continue as a member. It was decided that a review questionnaire would be sent again and that reconfirmation of membership would be discussed at the next Executive Committee meeting.

#### *Arrangement for the 22nd ITTC Meeting in 1999*

The arrangement of the 22nd ITTC was decided:

##### **September 5 (Sunday)**

|             |                             |
|-------------|-----------------------------|
| 14:00-16:00 | Advisory Council meeting    |
| 16:00-18:00 | Executive Committee meeting |
| 17:00-20:00 | Registration / Reception    |

##### **September 6 (Monday)**

|             |   |
|-------------|---|
| 08:00-09:00 | Registration  |
| 09:00-09:30 | Opening   |
| 09:30-10:30 | Report of Executive Committee                               |
| 11:00-12:30 | Propulsion Committee  |
| 14:00-15:15 | Committee on Cavitation-Induced Pressure Fluctuations       |
| 15:45-17:00 | Committee on Computational Methods for Propellor Cavitation |

##### **September 7 (Tuesday)**

|             |  |
|-------------|--|
| 09:00-10:15 | Committee on Trials & Monitoring       |
| 10:45-12:15 | Manoeuvring Committee                  |
| 13:45-15:00 | Committee on Waterjets                 |
| 15:30-16:45 | Committee on Unconventional Propulsors |
| 16:45-18:00 | Symbol & Terminology Group             |
| 19:00-      | Banquet                                |

##### **September 8 (Wednesday)**

|             |                                 |
|-------------|---------------------------------|
| 09:20-10:10 | Transfer from Seoul to Shanghai |
| 14:00-17:30 | Conference Tour I               |
| 19:00-20:30 | Reception                       |

##### **September 9 (Thursday)**

|             |                       |
|-------------|-----------------------|
| 09:00-10:15 | Quality Systems Group |
|-------------|-----------------------|

|             |  |
|-------------|--|
| 10:45-12:15 | Resistance Committee                                   |
| 13:45-15:00 | Committee on Safety of High Speed Marine Vehicles      |
| 15:30-16:45 | Committee on Model Tests of High Speed Marine Vehicles |
| 16:45-18:00 | Committee on Ice                                       |

##### **September 10 (Friday)**

|             |                                      |
|-------------|--------------------------------------|
| 09:00-10:15 | Committee on Stability               |
| 10:45-12:15 | Loads & Responses Committee          |
| 13:45-15:00 | Committee on Environmental Modelling |
| 15:30-16:45 | Committee on DeepWater Mooring       |
| 19:00-      | Banquet                              |

##### **September 11 (Saturday)**

|             |                             |
|-------------|-----------------------------|
| 09:00-09:30 | Conference Photo            |
| 09:30-10:30 | Plenary Session and Closing |
| 10:30-11:30 | Meetings of New Committees  |
| 13:00-      | Conference Tour II          |

It was agreed that the technical committees should present their reports limiting discussions to the Recommendations and Conclusion of the technical committee reports, avoiding discussions not relating directly to the statements of the reports.

The presentation of the General Committee Reports should be limited to 45 minutes, leaving 45 minutes of the session for discussions. The presentation of the Specialist Committee and Group Reports should be also limited to 30 minutes, leaving 45 minutes for discussions. Also 3 minutes will be allowed to each written discussion and impromptu discussion.

#### *Homepage on the Internet*

The Secretary presented the progress of the ITTC Homepage. The On-line Paper Repository is newly added. The technical committee reports will be put on the ITTC web site in June 1999. ITTC member organizations and the delegates to the 1999 Conference can download the Proceedings from the ITTC Homepage.

#### *Date for Next Meeting*

The next meeting of the Executive Committee will take place on Sunday, September 5, 1999 in Seoul, Korea.

## News from the Advisory Council

A meeting of the Advisory Council was held at MHI Izu-Kogen Club, Izu-Kogen, Japan, on the 16 and 17 March 1999.

### *New Committee Structure*

After a long and detailed discussion, the Council agreed the work tasks for new committees for the next conference period. It was proposed that there should be four general committees, nine specialist committees, and one group as follows:

#### General Committees

- Resistance
- Propulsion
- Manoeuvring
- Loads and Responses

#### Specialist Committees

- Speed and Powering Trials
- Procedures on Resistance, Propulsion and Propeller Open-Water Tests
- Validation of Waterjet Test Procedures
- Cavitation Induced Pressures
- Water Quality and Cavitation
- Ice
- Waves
- Stationary Floating Systems
- Esso Osaka

#### Quality Systems Group

Emphasis was placed on the development of ITTC Procedures when specifying the work tasks for each of these committees.

### *22nd ITTC Recommendations*

The Council reviewed the draft conclusions, recommended procedures, and recommendations for further work as provided by the technical committees and groups.

When carrying out the review it was decided that Council members should not propose changes because they did not agree with the conclusions or recommendations for scientific or technical reasons (unless they were undisputedly wrong); objections of that kind could be made during the discussion of the committee reports at the Conference.

Most of the changes made to the drafts were necessary because the committees were not always clear as to the differences between conclusions and recommendations. Some changes were also made so that the drafts were more concise and easier to read.

It was agreed that the Secretary would send copies of the drafts as approved by the Council to each of the committee chairs so that the changes could be made to the committee reports before they were published in the Proceedings.

## News from the Technical Committee

### *Propulsion Committee*

The Propulsion Committee mailed the Committee Report describing the assigned tasks and summarizing the accomplishment made by the Committee.

The present propulsion committee was formed by combining the previous propulsor, cavitation, and powering performance committees. Therefore the Committee decided to propose a substantial number of new tasks for the next Propulsion Committee and the propulsion related specialist committees. The substantial number of proposals for new tasks could possibly make it easier for the Advisory Council to set direction to the committee work.

It seems that eight tasks and a page allowance of 50 pages do not allow one committee to review adequately the developments in the areas of propulsor, cavitation, and powering performance in as great detail as previously. Some of the review work needs to be given to the related specialist committees.

### *Manoeuvring Committee*

The Manoeuvring Committee completed its report and delivered a new version of the captive model manoeuvring test procedure to the quality control group. One of the main

conclusions of the work performed stresses the lack of quality benchmark data for manoeuvering forces.

### *Loads and Responses Committee*

The Hyundai Maritime Research Institute in Ulsan, Korea, hosted a meeting of the Loads and Responses Committee in early February 1999. Five of the eight members of the committee attended. During the meeting, the committee reviewed the version of the Loads and Responses Committee report which had been distributed prior to the meeting. The committee also developed General Technical Conclusions and Recommendations to the Conference for Future Work which were forwarded to the Secretary of the Advisory Council for review.

### *Committee on Waterjets*

The Specialist Committee on Waterjets did not meet since the last newsletter. Three formal meetings were held during this second term, with the final committee meeting including a one-day open discussion with representatives of some of the leading waterjet manufacturers. At the first meeting of the Waterjets Committee, it was clear that in order to accomplish the goals of our predecessors, a series of standardization experiments, traditional to the ITTC, were required. Interaction with representatives of several waterjet manufacturers was also essential in order to obtain their valuable insights and contributions to this effort.

The Waterjets Committee decided that the standardization exercise would need to be broader and more comprehensive than what could be obtained through just a towing basin self-propulsion experiment. To assess the validity of the self-propulsion experiment, the performance of the waterjet pump and its interactions with the inlet and associated ducting must also be measured. Two additional experiments, the "waterjet pump", and the "waterjet system" water tunnel tests were proposed in conjunction with the traditional self-propulsion test to do this.

It was also felt that the use of computational fluid dynamics (CFD) to improve the estimation of parameters used in the

performance of the momentum flux method must also be considered. The momentum flux method currently relies upon several fundamental assumptions, such as the estimation of the inlet capture area and the scaling of the boundary layer thickness from model to full-scale.

These waterjet self-propulsion standardization experiments will be detailed in the Committee Report and presented at the Conference.

### *Committee on Stability*

#### **Fifth meeting of the committee**

The fifth meeting of the committee was held in January in Tasmania. This was an editorial meeting with only the chairman and the secretary present. The other members contributed by email during the meeting.

### **Questionnaire**

The replies to the questionnaire from the ITTC member organisations with capabilities in this field, together with a selected number of non-member organisations, have been analysed and are included in the report to the 22nd ITTC.

### **Benchmarking**

The preparation of the details required to enable member organisations to benchmark their capsizing predictions for both the intact and damaged stability cases is now complete. Benchmarking of the results from different member organisations is an essential aspect of ITTC's work and this is becoming very important with regard to dynamic stability predictions. Unless member organisations have some means of benchmarking their predictions, customers will not have the necessary confidence in their work.

With the current developments in dynamic stability this is particularly timely, and it is hoped it will form a major part of the work of the next committee.

### **ITTC Symbols and Terminology**

#### **Appropriate to Ship Stability**

A comprehensive review of the symbols used by the major organisations with interest in ship stability has been conducted. The differences found were too great to make any

conclusions at this stage regarding the appropriate symbols to be adopted by the ITTC. This is an important task and should be continued with a view to finalising it for the 23<sup>rd</sup> ITTC.

**7<sup>th</sup> International Conference on the Stability of Ships and Ocean Vehicles**  
 The above conference will be held in Launceston, Tasmania, Australia, on 7-11 February 2000. Details can be found on the web site at: <http://www.amc.edu.au>.

#### *Committee on Unconventional Propulsors*

The final report has been submitted. The Chair would like to thank all members of the Committee for their hard work which enabled a timely submission of the report.

### **News from the Member Organizations**

#### *Hamburg Ship Model Basin(HSVA)*

##### **International Workshop on Ship Manoeuvrability**

In commemoration of the 25th Anniversary of its Computerized Planar Motion Carriage, HSVA is organizing an International Workshop on Ship Manoeuvrability. Apart from the jubilee, the workshop will be an open forum for a vital exchange of thoughts regarding the latest developments in the various aspects of ship manoeuvrability. The workshop will take place in October, 2000.

##### **Considered Topics:**

Manoeuvring Model Testing

Mathematical Modelling

Aspects of Hull Design

Assessment of Manoeuvring Behaviour

CFD Applications

##### **Deadlines**

Submission of Abstracts November 30, 1999

Notification of acceptance January 15, 2000

Submitting of Paper April 30, 2000

##### **Contact Address**

Dr. Peter Oltmann

Hamburg Ship Model Basin

Bramfelder Str. 164

D-22305 Hamburg  
 Tel : +49 (40)69203-234  
 Fax : +49 (40)69203-345  
 E-mail : oltmann@hsva.de

### **Obituary**

Mr. David Bailey, 70, died on March 6, 1999. David Bailey died peacefully at Weybridge on the 6 March 1999. Mr Bailey was born on the 22 August 1928 in Portsmouth, UK. He was employed for thirty eight years at Teddington and Feltham as an hydrodynamicist, initially with the National Physical Laboratory, then with the National Maritime Institute and, finally, with British Maritime Technology. He specialised in the design of small high-speed ships and, together with John Marwood, he designed the NPL series of semi-displacement vessels. He was a fellow of the Royal Institution of Naval Architects and was awarded the Medal of the Small Craft Group by the Institution. As well as being the author of many technical papers and reports, Mr Bailey also wrote a history of ship model testing at Teddington and Feltham- Ships in the Making.

He was a member of the Powering Performance Committees for the 17th and 18th ITTC.

Mr Bailey is survived by his wife, Audrey, and two daughters, Ruth and Imogen.

**Prof. Zae-Geun Kim, 79, died on April 9, 1999**

Professor Zae-Geun Kim, age 79, the founder of the Naval Architecture field in Korea, President of the Society of Naval Architects of Korea, 1960-1970, and the Vice President of the Korea Academy of Arts and Sciences, 1988-1999, died of a heart ailment on April 9, 1999 at his home in Seoul, Korea.

Professor Kim was born in 1920 in the Pyungbuk Province of northern Korea. He attended the Kyungsung Imperial College (now Seoul National University) in 1938 and received his Bachelor's degree in mechanical engineering in 1943.

After graduation he began work as a

marine engineer at the Chosun Machinery Manufacturing Co. and took part in the design of Japanese submarines until the end of World War II. After Korea's independence he was a faculty member of the Department of Naval Architecture at the Korea Maritime University from 1946 to 1949. He came to Seoul National University in 1949 as the first faculty member of the Department of Naval Architecture. He stayed at the Massachusetts Institute of Technology as a visiting fellow at the Department of Naval Architecture and Marine Engineering for one year beginning in March 1954. He received his Ph.D. from the Seoul National University in 1968 and Professional Degree on Shipbuilding Technology in 1966. After retirement from the University in 1985, he served as a professor emeritus. He wrote textbooks and taught courses on ship design, hydrodynamics, resistance and propulsion. He made significant contributions to papers of journals until the latest date. After his retirement, he made Herculean efforts to investigate ancient Korean ships including the well-known 'Turtle Ship' and published books such as "History of Ships" and "Myth of Turtle Ship".

Professor Kim was a founder of the Society of Naval Architects of Korea and served as a trustee from 1951 to 1960 and as the president from 1960 to 1970. He was elected as a member of the Korea Academy of Arts and Science in 1966 and later served as vice-president from 1988 to 1999. He served as vice president of the Korean Register of Shipping from 1960 to 1965 and as president from 1965 to 1979. He was also vice-president of the Korean Association of Welding Technology from 1965 to 1970. He actively served as vice-chairman of a board of trustees of the Korea Ship Research Institute(now KRISO) from 1976 to 1980. He was vice chairman of the Korean Technical Committee of the American Bureau of Shipping from 1982 to 1999.

Professor Kim had been involved on many advisory committees for the Government such as the Maritime Administration Agency, Ministry of Education, Korean Industrial Bank, Ministry of Construction, Ministry of Health, Ministry of Home Affairs, Ministry of Labor and Korea Science and Engineering Foundation. Especially, he served as a

member of the Excavation and Investigation Committee of Shinan Sea-bed Relics from 1978 to 1984.

Professor Kim received many professional honors such as the Technology Achievement Award from the Samil Cultural Foundation in 1969, the 'Dongbaeg Badge' of National Decoration in 1972 from the Government and the 'Moran Badge' of National Decoration Award in 1985 from the Government. He also won the Publishing Cultural Award from the Korea Publication Association in January 1978 and the Writing Award from the Korea Academy of Arts and Science in September 1978 for writing the book, "Study of Naval Ships in Lee Dynasty".

Since he attended the 2nd World Fishing Boat Conference in Italy in 1959, he had been present at the IMCO(Inter-Government Maritime Consultative Organization) as a Government delegate in 1969. He attended the 17th(1978) and the 22nd(1988) International Congress of Science Union as a delegate of the Korea Academy of Arts and Science. He had attended the 11th(1966), 12th(1969) and 13th(1972) ITTC as the delegate of the Seoul National University.

Professor Kim is survived by two sons; Yoon, engineer and vice president of Yushin Corp. and Yoonsu, medical doctor and professor of Catholic Medical University, and three daughters.

## Catalogue of Facilities

The catalogue of experimental facilities is included in this issue of ittc-news.

Offshore Structure Experimental Basin (1978) and Pulsating Wind Tunnel with Water Tank(1993), Ship Research Institute, Japan

## Deadline of Next Newsletter

The deadline for submitting material to the December 1999 issue(No.41) in 15 November 1999.

# PROGRAM : 22nd ITTC

| SEOUL HOTEL LOTTE |                             |                               | SHANGHAI WORLDFIELD CONVENTION HOTEL |                     |                         |                         |
|-------------------|-----------------------------|-------------------------------|--------------------------------------|---------------------|-------------------------|-------------------------|
| Sept. 5<br>SUN    | Sept. 6<br>MON              | Sept. 7<br>TUE                | Sept. 8<br>WED                       | Sept. 9<br>THU      | Sept. 10<br>FRI         | Sept. 11<br>SAT         |
| SEOUL             | SEOUL                       | SEOUL                         | SEOUL/SHANGHAI                       | SHANGHAI            | SHANGHAI                | SHANGHAI                |
|                   | REGISTRATION                |                               |                                      |                     |                         |                         |
|                   | OPENING                     | TRIALS & MONITORING           |                                      | QUALITY SYSTEMS     | STABILITY               | CONF. PHOTO             |
|                   | EXECUTIVE COMMITTEE         | C.B.                          |                                      | C.B.                | C.B.                    | PLENARY SESSION CLOSING |
|                   | C.B.                        | MANOEUVRING                   |                                      | RESISTANCE          | LOADS AND RESPONSES     | C.B.                    |
|                   | PROPELLION                  | LUNCH                         |                                      | LUNCH               | LUNCH                   | NEW COMM MEET.          |
|                   | LUNCH                       |                               |                                      | LUNCH               | LUNCH                   | LUNCH                   |
|                   |                             | WATERJETS                     |                                      | SAFETY OF HSMV      | ENVIRONMENTAL MODELLING | CONFERENCE TOUR II      |
|                   | ADVISORY COUNCIL MEETING    | CAV.-INDUCED PRESS. FLUCT.    |                                      | C.B.                | C.B.                    |                         |
|                   |                             | C.B.                          |                                      | MODEL TESTS OF HSMV | DEEP WATER MOORING      |                         |
|                   | EXECUTIVE COMMITTEE MEETING | COMP'L METHODS FOR PROP. CAV. |                                      | ICE                 |                         |                         |
|                   | REGISTRATION RECEPTION      |                               | BANQUET                              | RECEPTION           |                         | BANQUET                 |

■ General Comm. : 90 min.

■ Specialist Comm. : 75 min.

■ Coffee Break : 30 min.

■ Lunch : 90 min.