

## REPORT OF EXECUTIVE COMMITTEE

## INTRODUCTION

The International Towing Tank Conference started its activities in 1932 with the intention:

"to give tank officials an opportunity of conferring in an open and confidential manner on their methods and also on the manner of publication of tank results",

as described in the preface of the proceedings of the first Conference in 1933.

The initiative of organizing the first Conference was taken by Prof. L. Troost, the President of the Netherlands Ship Model Basin in Wageningen. At that time this model basin had just been put into operation. By taking this action, Prof. L. Troost was following the suggestion of Dr. Ing. John de Meo, of London, who for a long time had been strongly pleading for international co-operation in the field of ship propulsion.

At the first Conference, 23 delegates were present, representing 10 European model basins in 9 different countries. The number of towing tanks has grown since then and the 15th ITTC will be attended by about 200 delegates, representing 65 model basins in 35 countries all over the world.

The ITTC has become an internationally recognized Conference, which is very fruitful for all the towing tanks involved and strengthens respect for the profession.

One of the recommendations (No. 9) of the Executive Committee of the 14th ITTC was

that: "the new Executive Committee will give specific consideration to the possible future goals, responsibilities, structure and style of operation of the ITTC in view of new activities of towing tanks". In 1978, for the first time since the first meeting in 1933, the Conference will be held in The Hague. It seems appropriate therefore, that on this return to the place of the first meeting, the Conference should review the accomplishments of the past 45 years, and also examine what measures should now be taken to allow the ITTC to meet the future requirements of towing tanks.

In the following the proposed Report of the Executive Committee is given, and it is hoped that its contents will stimulate constructive discussion about the Conference's future tasks and its most efficient organization.

## MEMORIAL

The Executive Committee reports with deep regret the death, on 15 July 1977, of

Admiral R. Brard

Admiral Brard was Chairman of the Resistance Committee and gave outstanding service to the Conference and contributed a great deal to the profession. He will long be remembered not only for his many valuable contributions to ship hydrodynamics, but also for his warm personality and his unique ability to inspire and

encourage others.

Professor E.V. Telfer

The Executive Committee also records with deep regret the death of Professor E.V. Telfer. Prof. Telfer will long be remembered for his very valuable contributions to the work of the ITTC, in connection with the extrapolation of the viscous drag from model to ship, and in particular mention should be made of his 'geosims' approach to this aspect of model research.

#### MEMBERSHIP

The membership of the Executive Committee appointed by the 14th ITTC in Ottawa, Canada, in September 1975 was:

Prof. Dr. J.D. van Manen	- The Netherlands
(Chairman)	
Mr. S.T. Mathews	- Canada
(Vice-Chairman)	
Ing. Gen. A. Castera	- France
Mr. W.A. Crago	- United Kingdom
Dr. H. Edstrand	- Sweden
Col. P.G. Maioli	- Italy
Prof. G.A. Matveyev	- USSR
Prof. Dr. S. Motora	- Japan

The Committee appointed

Dr. M.W.C. Oosterveld and Mr. M.D. Miles as secretaries.

#### MEETINGS

The Executive Committee met in Wageningen in May 1976, and held further meetings in Göteborg in April 1977, Paris in December 1977 and Tokyo in April 1978. The members were responsible for the following areas:

Prof. Dr. J.D. van Manen	- Austria, Germany,
	The Netherlands
Mr. S.T. Mathews	- North and South
	America

Ing. Gen. A. Castera	- Belgium, France,
	Spain
Dr. H. Edstrand	- Scandinavia
Col. P.G. Maioli	- Greece, Israel,
	Italy, Turkey,
	Yugoslavia
Prof. G.A. Matveyev	- Bulgaria, Poland,
	USSR
Mr. W.A. Crago	- Australia, India,
	United Kingdom
Prof. Dr. S. Motora	- China, Japan,
	Korea

The matters considered by the Executive Committee at its meetings are discussed in subsequent sections of this report.

#### MEMBERS OF TECHNICAL COMMITTEES

The Chairmen of the Technical Committees were elected and the Secretaries were appointed by each Technical Committee as follows:

##### Resistance

Ing. Gen. R. Brard	- Chairman
Dr. G. Gadd	- Secretary

##### Performance

Mr. H.B. Lindgren	- Chairman
Mr. J.J. Muntjewerf	- Secretary

##### Seakeeping

Mr. D.C. Murdey	- Chairman
Mr. G. Cox	- Secretary

##### Manoeuvrability

Mr. L. Wagner-Smitt	- Chairman
Mr. D. Clark	- Secretary

##### Propeller

Dr. J.W. English	- Chairman
Dr. W.B. Morgan	- Secretary

##### Cavitation

Prof. Dr. Ing. C. Kruppa	- Chairman
Dr. F.B. Peterson	- Secretary

Presentation and Information

Prof. Dr. L. de Mazarredo - Chairman  
Dr. M.D. Miles - Secretary

Ice Panel

Mr. G. Frankenstein - Chairman

After the death of the Chairman of the Resistance Committee, Admiral Brard, the Executive Committee followed the suggestion of the Resistance Committee and appointed Prof. T.Y. Wu as Acting Chairman of the Committee, for the remainder of the period. A new member was not appointed, because the time available for any such member to make a useful contribution to the Report of the Resistance Committee was too short.

Dr. N.N. Rakhmanin, member of the ITTC Seakeeping Committee, has, owing to a change of professional affiliation, resigned from this Committee. The Executive Committee followed the suggestion of Prof. G.A. Matveyev and appointed Dr. Y.A. Netsvetaev as a member of the Seakeeping Committee.

CONSIDERATIONS FOR THE 15TH ITTC

In arranging the programme for the 15th ITTC, the Committee has made efforts to keep the Conference as short as possible. Accordingly, it was decided that the 15th ITTC would be held from 3 to 10 September 1978 in The Hague, The Netherlands.

The 14th ITTC decided that the general scope of the 15th ITTC would be devoted to the following 5 topics:

- the flow around the hull
- the motions of the hull
- towing tank systems and techniques
- propulsion
- ocean engineering

This pattern may already be a step in the

direction of adapting the ITTC to present-day requirements of marine technology.

As a result of close co-operation between the existing Technical Committees the first four topics will be covered by their Committee Reports.

During the last 10 years most ship model basins have been involved in an increasing amount of work for the Offshore Industry. The question has therefore been put forward as to whether the activities of the ITTC should be extended to include ocean engineering developments, insofar as model testing is concerned. For this reason Topic 5, dealing with a group discussion on 'Aspects of Ocean Engineering which are relevant to the ITTC', has been included in the programme. This group discussion will be supported by the presentation of invited papers, by the following:

Mr. F.N. Biewer - Offshore Technology Corporation, ESCONDIDO, California, U.S.A.

Dr. N. Hogben - National Maritime Institute, FELTHAM, United Kingdom

Dr. G. van Oortmerssen - Netherlands Ship Model Basin, WAGENINGEN, The Netherlands

Mr. A. Tørum - VHL River and Harbour Laboratory, TRONDHEIM, Norway

Dr. Y. Yamanouchi - Mitsui Engineering & Shipbuilding Co. Ltd., TOKYO, Japan

In addition, the various Technical Committees were requested to consider those ocean engineering activities which could be covered by their work.

The group discussion will help the ITTC to decide whether some aspects of Ocean Engineering are sufficiently relevant to the ITTC and, if so, to consider which

steps should be taken to cover the subject adequately.

#### REPORTS OF TECHNICAL COMMITTEES AND DISCUSSIONS

In giving guidance to the Technical Committees for the preparation of their Reports for the 15th ITTC, the Executive Committee has emphasized that:

- the Committee Reports must reflect the thoughts and the opinion of the COMPLETE Committee. The Committee Report should not be a rather loose combination of paragraphs and appendices;
- through close co-operation between the existing Technical Committees, the topics adopted during the 14th ITTC, for the 15th ITTC, should be covered as completely as possible;
- any member of the Conference may submit material of possible value to the Report of a Technical Committee. A Technical Committee may include in its Report such parts of contributions which are considered important. It is not the intention to publish these contributions separately in the proceedings;
- the Committee Reports should be limited in length.

The contributions of any member of the Conference to the Reports of the Technical Committees can be divided into two types:

- contributions which may be of value to the Technical Committees during the preparation of their Reports, as mentioned already;
- contributions which consist mainly of a discussion of the final Report of a Technical Committee. These contributions

must be available at the Conference. Each contributor will have the opportunity of presenting his contribution during one of the Technical Sessions. These contributions will be included in the proceedings, but should be limited in length.

#### OTHER CONSIDERATIONS CONCERNING THE 15TH ITTC

It was decided that the members of the Executive Committee would act as Session Chairmen and Liaison Officers at the different sessions during the Conference.

The following division has been made:

1. Flow around the hull
  - resistance - Prof. G.A. Matveyev
2. Motions of the hull
  - seakeeping - Col. P.G. Maioli
  - manoeuvring/  
shiphandling - Prof. Dr. S. Motora
3. Towing tank systems and techniques
  - testing in ice- Mr. S.T. Mathews
  - presentation and  
information - Mr. W.A. Crago
4. Propulsion
  - propeller/  
cavitation - Ing. Gen. A. Castera
  - performance - Dr. H. Edstrand
5. Aspects of Ocean Engineering which are relevant to the ITTC
  - Prof. Dr. J.D. van Manen

A briefing meeting with the Session Chairmen and the Chairmen of the different committees will take place at the beginning of the Conference, so that the sessions may be run as efficiently as possible.

MEMBER ORGANIZATIONS, DELEGATES AND OBSERVERS

The list of member organizations has been considered in view of new applications for membership. The following organizations were accepted as member organizations of the ITTC:

- Bulgarian Ship Hydrodynamics Centre  
VARNA 9003, Bulgaria
- Indian Institute of Technology  
Department of Naval Architecture  
KHARAGPUR 721302, India
- Hiroshima University  
Faculty of Engineering  
HIROSHIMA, Japan
- Korea Research Institute of Ship  
DAEJEON, Korea
- Pennsylvania State University  
Applied Research Laboratory  
STATE COLLEGE, Pennsylvania 16801, U.S.A.

The list of delegates has been reviewed and revised according to the rules of the ITTC.

For the selection of observers, the following procedure was adopted:

- each member of the Executive Committee has, for the areas which he represents, the freedom to appoint five observers;
- observers from the member organizations of the ITTC are allowed;
- the area representatives of The Netherlands and the USSR are allowed to appoint more observers because the 15th ITTC will be held in The Netherlands and the 16th ITTC in the USSR.

FUTURE TASKS AND THE EFFICIENT ORGANIZATION OF THE ITTC

Thought was given by the members of the Executive Committee to the methods currently used for attaining the goals of the ITTC, and the responsibilities, structure and style of operation of the ITTC in view of new activities. In this respect the following items are considered important:

1. The ITTC must continue to be aware of, and adjust to, those new activities of towing tanks which are relevant to the ITTC. The idea of devoting the Conference to a number of topics, including new activities, should continue, and the Technical Committees and Panels should be associated with these topics.

Possible topics for the 16th ITTC are:

1. Flow around the hull.
2. Motions of the hull:
  - a. seakeeping.
  - b. ship handling.
3. Propulsion:
  - a. propeller/cavitation.
  - b. propeller-hull interaction.
4. Ocean Engineering.
5. Ships in ice-covered waters.
6. High-speed marine vehicles.
7. Information.

2. In the past, the work of the ITTC has been very much restricted to 'tankery'. Theoretical methods are, however, becoming more and more important in ship predictions. All Technical Committees must ensure that their Reports take note of the usefulness of these methods. At the moment, there is a tendency to overestimate the usefulness and accuracy of these methods in certain applications.

3. More attention should be paid to

'shallow water' problems. This work must be included in the various specific topics. The effect of shallow water on resistance, trim, squat, wake flow etc. has to be considered.

4. More attention should be paid to ship behaviour predictions and correlations with full-scale measurements.
5. Continued attention should be paid to the needs of Industry. This can be stimulated by preparing 'readable' proceedings and by making these proceedings more readily available to Industry.
6. The new style in which the Technical Committees have been asked to prepare their Reports should continue. This puts a heavier workload on the members of the Committees and, in particular, on the Chairmen. This factor must be the prime consideration in the selection of future Committees and Chairmen.
7. The idea of making delegate representation more compatible with the size and scope of each establishment should be considered. This may reduce the pressure for seeking membership of Technical Committees.
8. Further extensive exchanges of information on the application of computer programs (software packages) should be stimulated. In future, the experiments carried out by model basins will be used more and more in association with powerful software packages.
9. An improvement of the exchange of information between the member organizations of the ITTC is advisable. This information should include a yearly, or half-yearly, list of those publications from member organizations which have become available in the preceding period; it should be sent to all member organizations. This exchange could be a task for the Presentation and Information Committee.
10. Symposia should be encouraged on topics which are important to the ITTC. Such symposia may stimulate research on particular topics where a better knowledge of ship or ocean engineering hydrodynamics is needed.