Proceedings of the 24th ITTC - Volume I

The Executive Committee

Report to the 24th ITTC

1. INTRODUCTION

The 24th ITTC Executive Committee has acted according to the Rules of the Organisation as defined and published in the Proceedings of the 23rd ITTC. The Executive Committee has mostly approved and implemented those policies recommended by the Advisory Council and also implemented the decisions of the Full Conference of the 23rd ITTC.

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In all cases the meetings of the Executive Committee have been arranged to coincide at the same venue as the meetings of the Advisory Council.

The Executive Committee consists of seven full-voting members, six of which are the Representatives of the six Geographical Areas, together with the Chairman of the Executive Committee, who is selected by the previous Full Conference of the ITTC.

The following are non-voting ex-officio Members of the Executive Committee, the Past Chairman of the Executive Committee, and the Chairman and Secretary of the Advisory Council.

The Secretary of the Executive Committee, who is elected by the Executive Committee, is also an ex-officio non-voting Member of the Executive Committee.

2. OBITUARIES

Harrison Lackenby

Dr. Harrison Lackenby passed away on 8th February 2002 after a short illness. He was very well known to a whole generation of ITTC Members and Delegates. He served on the Presentation Committee for a total of twenty one years. From 1957 to 1966, he served as its Secretary, then as its Chairman from 1966 to 1975. He then served a further term as a Member from 1975 to 1978. During this lengthy period he was closely concerned with the production of the first ITTC Symbols and Terminology List initially published in 1976 as BSRA TM 500. He was also instrumental in the publication of the first ITTC Dictionary of Hydrodynamics in 1978, as RINA Maritime Technology Monograph No 6.

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He was born on 31st August 1911 in Newcastle upon Tyne. He studied Naval Architecture at Armstrong College of Durham University, graduating with First Class Honours in 1935. He then gained a Master of Science degree in 1937, for a thesis entitled, "The Surface Friction of Planes Moving through Water".

During World War II he served in the Royal Corps of Naval Constructors on work concerned with aircraft carriers. At the end of the war, he then joined the new British Ship



Research Association BSRA in London. However in 1965, BSRA relocated to Wallsend, near Newcastle, where he remained until his retirement in 1976. He rose to become the Chief Naval Architect of BSRA and was responsible for many of their most important hydrodynamic projects. In his retirement he devoted much time playing bridge and to the affairs of the Royal Institution of Naval Architects, of which was a Vice-President.

Many of his published papers concerned with these BSRA projects have become internationally recognised. In 1951, the Lucy Ashton project entailed taking a Clyde paddle steamer and removing the engine and paddles. Four Rolls Royce Derwent V jet engines were then fitted on outriggers from the deck as a means of propulsion. These four engines developed enough thrust to propel the Lucy Ashton at 15 knots. The purpose of this bizarre arrangement was to measure the full-scale skin friction, free from any influence of the propeller, or in this case the paddles. However, the local population around the Gare Loch in Scotland had seen nothing like this before and had many other far fetched and outrageous explanations for its existence.

Dr. Lackenby was also instrumental in creating the hull forms in the BSRA Methodical Series and ensuring that the resistance properties of all the wide range of hull forms in the family were properly measured in a model tank. His method of adjusting the sectional area curve is taught to naval architecture students.

He instigated a programme of ship-model correlation where newly built ships were tested on a measured mile course and then subsequently models of those ships tested in a tank in the actual trial condition. He was responsible for the BSRA Code of Practice for Measured Mile Analysis and the BSRA Roughness Gauge to measure hull surface roughness down to the micron level. This led to voyage analysis where the worsening hull condition could be quantified in terms of speed loss or power increase and decisions about the best time to dry-dock could be made. His shallow water correction for speed trials was legendary and saved the reputation of many model test facilities and company naval architects worldwide, one of whom once referred to him as St. Lackenby for that reason.

He also published work on ship structures, hull vibration, the acceleration of ships and the measurement of the bollard pull of tugs.

In 1962 he was invited by the Institute of Mechanical Engineers to give the prestigious 34th Annual Thomas Lowe Gray Lecture. Of course his chosen subject was, "The Resistance of Ships with Special Reference to Skin Friction and Hull Surface Condition".

Dr. Lackenby also served as an external examiner to several Universities and in particular to the Department of Naval Architecture at the University of Newcastle. In 1974, by presenting all his published work to the University of Newcastle, he was awarded the highest academic degree, Doctor of Science, DSc. This was fitting reward for a very distinguished career.

Harrison Lackenby was well known in many countries and many a young BSRA naval architect when nervously travelling abroad on business to other research institutes, only had to mention the fact that he worked for Dr. Lackenby, for him to be welcomed with open arms.

He was always very calm, patient and extremely courteous to his staff. On the other hand he was always insistent on correct English in the reports that his staff produced, such was the high standard he required. Many young naval architects thought their draught reports had been marked by their school teacher. Nevertheless, they soon realised the crucial importance of clear succinct and correct grammar to convey the important key facts to readers of their reports and later in their careers they became eternally grateful to him. There are many people throughout ITTC and elsewhere, who will have fond memories of Harrison Lackenby, for his friendship, his leadership and the enduring legacy of his published work. He is survived by his wife Elizabeth.

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Brian Bowden

Brian Bowden passed away on 16th June 2004. Well-known to many Members and Delegates of the ITTC, Brian was a tireless worker for the organisation and a powerful presence at the many Conferences and Committee Meetings he attended.

Having trained as a "dockyard apprentice" at Devonport Dockyard, he gained a degree in naval architecture at Newcastle University in 1959. He subsequently left the university to take up a job with the British Ship Research Association (BSRA) in London and when, in 1965, BSRA moved from London to Wallsend, Brian stayed in the south of England and joined the Ship Division of the National Physical Laboratory (NPL). He was here for nearly twenty years during which time he rose to senior management levels within the organisation and made his name in his chosen field of ship powering performance prediction.

A pleasant and friendly colleague, Brian was a meticulous and tireless worker. These traits were put to good use in the Herculean task of analysing vast quantities of ship trial and model test data to determine correlation allowances for a more accurate prediction of powering performance. The Dawson-Bowden formulae, and the correlation factors which resulted from this work, became the foundation of the NPL model-ship prediction method, used for many years at NPL and its successors, NMI and BMT.

His expertise in the field of model ship correlation, and ship model testing in general, led to a demand for his services on both the British Towing Tank Panel (BTTP) and the ITTC. So began his long association with the ITTC, the international organisation at the heart of experimental and, latterly, computational, hydrodynamics of ships and other floating bodies. A member of several ITTC Committees (generally as secretary), Brian was one of the most devoted servants of the organisation, becoming ultimately Secretary of the Advisory Council and an ex-officio Member of the Executive Committee.

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In his latter years he was also an enthusiastic advocate of a permanent Secretariat for the ITTC, a dream he was to see fulfilled. Many were the Conferences stimulated by Brian's participation, his characteristic Devonian accent and his distinctive sense of humour enlivening many a debate.

In 1984 Brian left the successor to NPL Ship Division – NMI Ltd – and moved to the famous hydrodynamic facilities at Haslar to take up the role of Chief Scientist. There he remained until his retirement, one of the fruits of his endeavours being an innovative autonomous underwater vehicle, the SRM, which could be reconfigured, as required, for new submarine designs.

Characteristically, Brian's retirement was full of activity. A keen bridge player, his scrupulous fairness and attention to detail was soon in demand to adjudicate in the more complex and difficult disputes which occasionally arose in the more intense games. Not confining himself to indoor pursuits, his retirement allowed him to pursue, with vigour, his love of walking and rambling in the countryside near his home. This activity had been one of Brian's loves from his days at NPL when he and a number of colleagues would gather each year for a holiday "walking" some part of the UK countryside. Typically, he documented each of his walks meticulously for the benefit of others, and these documents remain a fitting memorial and tribute to a kindly, dedicated, man who did much for the practical science of ship model testing and correlation. He is survived by his wife and two daughters.



Maurizio Landrini

Dr. Maurizio Landrini died unexpectedly in a motorcycle accident, on 26th June 2003 at the age of 40. He was amongst the most widely recognized of Italian researchers in Marine Hydrodynamics in the world.

Dr. Landrini completed his Master's Degree in Mechanical Engineering with full marks at the University of Rome "La Sapienza" in 1990 and received his PhD. degree at the same University in 1994 working on the thesis "Nonlinear phenomena in the propagation of free-surface waves". Soon afterwards he became a permanent researcher at INSEAN, the Italian Ship Model Basin.

With his talent and great comprehension of physical problems, he was able to study many research fields, in particular nonlinear waterwave dynamics and free-surface effects, vorticity-free surface interactions, water-body interactions, and multi-phase flows. He developed and used several numerical solvers, based either on inviscid or viscid fluid assumptions, such as Boundary Element Methods, Viscous Vortex Method, Smoothed Particle Hydrody-Navier-Stokes namics. solvers. zonal approaches. He worked also on experimental techniques, in particular he implemented the transient test technique for seakeeping tests adopted at INSEAN. His active research brought him wide and deep expertise in Seakeeping and Manoeuvring areas and resulted in a continuous production of highlevel publications, mostly on numerical simulations of unsteady ship flows.

In the spirit of knowledge exchange and training, Dr. Landrini cooperated with many leading researchers and professors around the World (Europe, Japan, USA) and contributed greatly to boost INSEAN reputation worldwide. Among the others, he visited many times the Ocean Engineering Laboratory, UCSB, USA, where he worked with Professor M. Tulin on breaking waves and bubbly flows, and the Dept. of Marine Hydrodynamics, NTNU, Norway, where he co-operated with Professor O. M. Faltinsen on sloshing flows. He supervised several Master students and co-advised on many Ph.D. theses, he lectured on Manoeuvring, Seakeeping and Computational Fluid Dynamic topics in Italy and abroad.

His achievements brought him promotion to Head of the INSEAN Seakeeping and Manoeuvring Group in 1997 and to Director of the Towing Tank Facilities in 2002. Dr. Landrini cooperated with the ISSC in 2001 within the Committee on Loads and was appointed in 2002 as a Member of the ITTC Manoeuvrability Committee, giving his personal contribution to the technical discussions. In 2003 he was chosen as Lecturer for the prestigious Weinblum Lecture, and until now he is the only Italian researcher to receive such honour.

Dr. Landrini was a hard worker and enjoyed his research activity, dedicating most of his free time to it. His brilliant, though short, professional life represents a relevant contribution to the Research Community.

Kazuo Hirata

Kazuo Hirata passed away on 23rd November 2002. He was born in São Paulo, Brazil, on 10th October 1951, and was a graduate of Escola Politecnica of São Paulo University, Brazil, in Naval Architecture and Marine Engineering in 1975.

He joined the Institute for Technological Research IPT in 1976. He received his MSc. in Naval Engineering in 1984. Since 1989, he has been the Head of the IPT Hydrodynamics Group and always active in developing the IPT test facility. He taught hydrodynamics at the FATEC Brazilian Faculty for Inland Construction and Navigation.

Kazuo Hirata was the IPT representative at ITTC, being a Member of the Deep Water Mooring Committee from 1996 to 1999, the



Stationary Floating Systems Committee from 1999 to 2002 and the Assessment of Ocean Environmental Issues Committee in 2002.

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He was Vice-President of the Brazilian Society of Marine Engineering (SOBENA) from 1996 to 2001 and was a Member of SNAME.

Kazuo Hirata was an active researcher and his contribution to Naval Architecture and Ocean Engineering in Brazil is enormous, with important developments related to experimental seakeeping and manoeuvring studies.

3. COMMITTEE MEMBERSHIP

The Membership of the Executive Committee was formalised at the 23^{rd} ITTC Conference in Venice.

Chairman: Professor Atilla Incecik (UK)

Area Representatives:

Dr. Ulderico Bulgarelli (Southern Europe) Prof. Roger H. Compton (Americas) (until July 2004) Prof. Takeshi Kinoshita (Pacific Islands) Dr. In-Young Koh, (Americas) (from July 2004) Ir. George F. M. Remery, (Central Europe) Dr. Harri Soininen (Northern Europe)

Prof. You-Sheng Wu (East Asia)

Secretary: Dr. David Clarke (UK)

In addition there were the following exofficio members:

Admiral Ulderico Grazioli (Past Chairman of Executive Committee)

Mr. David Murdey (Advisory Council Chairman)

Mr. Willem van Berlekom (Advisory Council Secretary)

4. COMMITTEE MEETINGS

The 24th ITTC Executive Committee held four meetings between September 2002 and April 2005. Further meetings will take place during the next full Conference in Edinburgh, Scotland in September 2005.

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A preliminary meeting was held in Venice on 14th September 2002, on the last day of the 23rd ITTC Conference. New Members of the Executive Committee were introduced to each other by the new Executive Committee Chairman. He then proposed Dr. David Clarke to be the new Secretary of the Executive Committee, who was accepted by the Committee. It was agreed that the first task of the Secretary would be to contact the new Chairmen various of the Technical Committees, to ensure that they understood their duties and that they would follow the Recommendations of the Conference.

The first full meeting took place in Busan, Korea, on 25th September 2003. The Executive Committee agreed upon the Membership of the Brazilian Ocean Technology Laboratory and the Membership of the Advisory Council of Seoul National University. It was decided to continue the review of Advisory Council Membership and circulate those Members who were not contacted during the previous ITTC period. A number of changes to some Technical Committees were approved by the Executive Committee. In a matter arising from the Advisory Council Meeting, the subject of ITTC Membership fees was discussed. It was decided to form a small working group, consisting of the Executive Committee Secretary, with the Vice-Chairman and Secretary of the Advisory Council. Their task was to produce a proposal document for discussion at the next Executive Committee Meeting. The Executive Committee Chairman reported that favourable contact had been made with officials of the International Maritime Organisation IMO. The Executive Committee decided that the Chairman should proceed with the lengthy process of making a formal



application for ITTC to be granted Consultative Status as a Non-Governmental Organisation.

The second meeting took place in St. John's, Newfoundland, Canada, on 10th August 2004. A number of changes to some Technical Committees were approved by the Executive Committee. The discussion papers concerning the proposed ITTC Membership fees were presented. After discussion it was agreed that a proposal would be further considered at the next meeting of the Advisory Council, that the fees should provisionally set at \$600.00 per Member Organisation per ITTC three year period. The Executive Committee decided that there would be four Group Discussions during the 24th ITTC Conference in Edinburgh. The subjects areas would be:-

- Experience using the Guidelines.
- Full-scale sea trials.
- New experimental facilities.
- Vortex induced vibration.

The Executive Committee Chairman reported that receipt of the formal application for Consultative Status at IMO had been acknowledged by the IMO Secretariat.

The third meeting took place in Newcastle upon Tyne, England, on 6th April 2005. Some changes to the Technical Committees were approved by the Executive Committee. Having agreed to the proposed figure of \$600.00, the subject of Membership Fees had been referred back to the Executive Committee by Advisory Council. Discussion took place and it was decided to put the proposal before the 24th ITTC Conference in Edinburgh, for their The timetable for formal approval. the Edinburgh Conference, giving both the Technical Sessions and the Social Programme, was presented by the Executive Committee Chairman. After discussion the names of Session Chairmen for the Conference were also agreed upon. The Executive Committee Chairman reported the IMO Secretariat had raised several queries concerning points about ITTC, for which they required further

explanation and clarification. These enquiries had been satisfactorily answered by the Secretary of the Executive Committee. Professor Kinoshita kept the Executive Committee informed by giving further details regarding the planning for the 25th ITTC Conference in Fukuoka, Japan, in 2008.

5. COMMITTEE DECISIONS

5.1 Rules of the Organisation

The rules of the Organisation are reproduced in Appendix 5 of the present Proceedings.

5.2 New Committee Structure

A new Committee Structure, created by the Advisory Council, was agreed and endorsed by the Executive Committee. It will be effective for the 25th ITTC Technical Committees and Groups, following the final decision and agreement of the full ITTC Conference in September 2005.

5.3 New ITTC Member Organisations

During the three years of the 24th ITTC there was only one new Organisation accepted for Membership within the ITTC:

 Brazil Ocean Technology Laboratory, Federal University of Rio de Janeiro, Brazil.

5.4 Changes in Executive and Technical Committee Membership

The following changes in Membership of the Executive and Technical Committees were approved by the Executive Committee.





Executive Committee.

• Dr. In-Young Koh, Americas, replaced Prof. Roger H. Compton, Americas.

Propulsion Committee.

• Dr. Y. Ukon of NMRI, Japan replaced Dr. T. Kudo of NMRI, Japan.

• Mr. E. Jacquin of BEC, France replaced Mr. L. Descotte of BEC, France.

Manoeuvring Committee.

• Dr. R. Broglia of INSEAN, Italy replaced Dr. M. Landrini of INSEAN, Italy.

Ocean Engineering.

• Mr. F. Winsor of IMD-NRC, Canada replaced Dr. B. Colbourne of IMD-NRC, Canada.

• Dr. N. Fonseca of IST Lisbon, Portugal replaced Dr.C. Lugni of INSEAN, Italy.

• Dr. C. T. Stansberg of MARINTEK, Norway took over the Chairmanship from Dr. B. Colbourne IMD-NRC, Canada.

Stability in Waves.

• Prof. J. Matusiak of Helsinki University of Technology, Finland was elected by the Executive Committee.

<u>Assessment of Ocean Environmental Issues</u>
Prof. K. Nishimoto of Univ. of Sao Paulo replaced Dr. K. Hirata of IPT, Brazil.

5.5 Review of Advisory Council Membership

According to the Rules of the Organisation half of the Member Organisations were chosen during the 23rd ITTC, for review and reconfirmation of their membership of the ITTC Advisory Council. During this 24th ITTC, the remaining seventeen Members have been circulated with the standard questionnaire and it is expected that all will be confirmed by the Executive Committee in September 2005.

During the 24th ITTC an application from Seoul National University of Korea for Membership of the Advisory Council was considered and accepted by the Executive Committee.

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5.6 ITTC Website

The Executive Committee decided to continue two websites as in the 23^{rd} ITTC.

One permanent website will provide all the general information on the ITTC, the rules, and a list of the Member Organisations. It will also contain a list of the ITTC Technical Committees, their Members and the tasks they have been allotted by the Full Conference. It will also be possible to down load most ITTC documents, such as the Symbols and Recommended Terminology List. the Procedures and past Conference Proceedings. This website is controlled by the Advisory Council Secretary and is hosted by SNAME as the main archive of the ITTC, at the following address, http://ittc.sname.org

The other website will be concerned with the 24th ITTC and will be controlled by the Executive Committee Chairman and Secretary, as the organisers of the next Conference. It will contain information on the Conference, such registration and hotel information, the Conference timetable and social programme. Also included will be helpful details regarding the Conference venue and travel details. Finally, the Conference Proceedings will be made available to Members on this website, in advance of the forthcoming Conference. This website address is http://www.ittc.ncl.ac.uk

5.7 Consultative Status at IMO

The Executive Committee decided to apply to IMO, to be granted Consultative Status as a Non-Governmental Organisation. The due process is quite lengthy and all the necessary application papers were submitted in July 2004. Then at the 94th Session of the IMO Council in June 2005, "the Council decided



that consultative status be granted to the International Towing Tank Conference (ITTC)". However, this decision must be ratified by the next General Assembly in November 2005, before the Consultative Status is actually formally confirmed.

5.8 Organisation of 24th ITTC

The 24th ITTC will be held in Edinburgh and organised by the School of Marine Science and Technology of the University of Newcastle upon Tyne, UK. The Conference venue will be the Roxburghe Hotel, which is situated conveniently in the centre of Edinburgh, Scotland.

5.9 Organisation of 25th ITTC

A proposal was received for hosting the 25th ITTC from the Pacific Islands Area, which was presented by the Pacific Islands Representative Professor Kinoshita, to hold the 25th ITTC at Kyushu University, Fukuoka, Japan in 2008. The proposal was fully discussed by the Executive Committee at the third meeting of the Executive Committee in St. John's, Newfoundland, Canada in August 2004.

The decision of the Executive Committee was to accept the proposal to hold the 25th ITTC in Fukuoka, Japan in 2008.