

### THE CONFERENCE OPENING CEREMONY

The 16th ITTC Opening Ceremony was held on Tuesday September 1, 1981, at the congress hall "Leningrad" of the "Pri-baltiyskaya" hotel.

The Opening Ceremony was attended by the

representatives of the Leningrad city authorities, Ministry of Shipbuilding Industry of the USSR and scientific public as the guests of honour from the USSR.

The speeches were presented by:

- Prof. Dr. G.A. Matveyev - the President of the 16th ITTC

Ladies and gentlemen, comrades!

On behalf of the Organizing Committee responsible for preparing and conducting the ITTC Full Conference in our country, I have the honour to heartily welcome you, the 16th ITTC guests and participants in Leningrad - the Soviet Union's greatest center of shipbuilding and ship research. Our city is famous for the revolutionary and labour traditions of its citizens, for its numerous world-known art and cultural monuments. We hope that this will make your stay in our city not only useful, but as well enjoyable.

I'd like to stress that the International Towing Tank Conference has already half-century history of its activity. Last year it was 50 years since the first constituent meeting of several West European towing tanks' superintendents. In two years we shall mark the fiftieth anniversary of the

first Conference held in the Hague in 1933. It is nearly 25 years since our country's research organizations have joined the ITTC. It wouldn't be an exaggeration to say that, at least to the opinion of the representatives of our country, the ITTC is an example of a worthy combination of its members' common interests in solving the problems facing the world's shipbuilding, with strengthening and developing scientific potential of every country represented in the ITTC. I think the ITTC activity may also be an example of how in our eventful time the ITTC makes its contribution to erecting that very edifice which is so needed for strengthening cooperation among the scientists of different countries and mutual understanding among the nations

Here, in Leningrad, at the forthcoming technical sessions of the 16th ITTC, we shall do some intensive work in support of

our organization's goals. I'm sure that this work will be done in accordance with the long-established traditions of the ITTC. I'd like to assure my colleagues of every possible assistance from our side. This is warranted by the fact that the activity of our representatives in the ITTC Executive and Technical Committees has always found support and attention of our country's authorities. An evidence to the fact is this very meeting at which among the guests of honour from our country we can see representatives of the City Council of Leningrad, of the Ministry of Shipbuilding Industry, of the scientific world. I'm pleased to introduce to you the guests of the Conference:

- Deputy Chairman of the Leningrad City Council of People's Deputies Mr. A.S.Sokolov,
- Chief of the Foreign Relations Department of the Ministry of Shipbuilding Mr. V.A.Blagov,
- Deputy Chief of the Foreign Relations Office of the USSR State Committee on Science and Technology Mr.V.N.Antonov, as well as the eldest ITTC representatives

- Mr. V.A.BLAGOV - Head of the Foreign Relations Office of the Ministry of Shipbuilding Industry of the USSR

Mr.President, dear ladies and gentlemen, comrades - all the guests and participants of the 16th International Towing Tank Conference!

When speaking to you here, at the Conference Opening Ceremony, I feel deep personal engagement.

As a shipbuilder, I'm impressed to see here, at the Conference, the world's leading specialists in hydromechanics whose names until now I knew from books, text-books, and other scientific publications. Welcoming you here, in Leningrad,

who contributed a lot to working out the organization's principles, to establishing its structure and avenues of research:

- Prof. Aertssen (Belgium),
- Prof. Inui (Japan),
- Dr. Lackenby (United Kingdom),
- Prof. Denis (USA),
- Prof. Couch (USA),
- Prof. Wehausen (USA).

Let me also express gratitude for accepting the invitation to come to our country to the ladies attending, whose very presence I regard as a factor which will stimulate the efforts of the male part of the Conference to accomplish the technical program with success.

And now, let me, on behalf of the Executive Committee, announce that the 16 th ITTC Full Conference is in every respect ready to be started, let me open its sessions in accordance with the program, and wish you thorough discussions, new fruitful ideas which will assist the further advance in shipbuilding research and serve to ensure the prestige of our organization. Let me wish all of you a pleasant stay in the Hero-City Leningrad.

on behalf of the authorities of the Ministry of Shipbuilding Industry of the USSR I can't but say some words about the importance of the problems which face and will face the towing tanks all over the world.

Century after century shipbuilders developed floating vessels mainly for passenger and cargo transportation, for fishing, and for building marine structures. But now the fuel supply of the whole mankind to a great degree depends on the work of shipbuilders. As you know, already more than one fourth of world's gas and oil is coming from the shelf. The time of exploration of

sea-bottom deposits lying at the depth of kilometers is not far away. The use of wave and current energy, as well as of ocean temperature differentials is already among the present-day problems.

The floating constructions required to accomplish these tasks are often very large, extremely expensive, and quite unlike anything we have built before. It is evident that predicting behaviour of such structures in the ocean becomes a problem of great difficulty and significance.

At a new level we see nowadays the problem of minimizing water resistance and increasing propulsor efficiency. The so-called energy crisis and also the fact that the usual sources of fuel are finite, force us to take a fresh look at the traditional towing tank task - investigation of the ways to reduce energy consumption necessary for ship's propulsion. Today, development of any method to achieve energy economy, even a slight one, is highly desirable.

And thirdly. During the last two decades some non-displacing ships like hydrofoil, air cushion vehicles, and similar vessels have been rapidly developed. The combination of hydro- and aerodynamic problems and difficulty in mathematically describing the behaviour of such craft in the waves

- Prof. Dr. J. D. van MANEN - Vice President of the 16th ITTC.

Mr President, ladies and gentlemen,  
my dear friends,

It is my pleasure to say a few words on behalf of the guests from abroad.

After 48 years of existence of the ITTC it is for the first time that the

make the research in this sphere very complicated, but at the same time very interesting.

In short, the problems facing now the towing tanks are to a great extent new, not in the least simple, and very important.

As to solving these problems, it can be said that we are much better equipped for the task than ever before. I mean the unique test facilities, modern instrumentation, computers, etc. Still there are problems for the solution of which it is necessary to combine the efforts of scientists from different countries.

I think this is the principal goal of your international organization whose activities we have always supported and are going to support in future.

And in conclusion, let me wish everybody fruitful work and also, pleasant impressions from the visit to this country - for the foreign guests and participants of the Conference.

We hope this Conference will give a good start to the second fifty years period of international cooperation among the towing tanks' superintendents initiated back in 1950.

I wish you every success in our important, necessary activity!

Conference is organized in the USSR. And as you could see last night at the reception our Conference is still alive and as usual for the ITTC many ladies have joined us again and that is very promising for the right atmosphere.

We are happy that the Conference is

organized here in Leningrad, a town with a rich cultural and scientific history, among others the Krylov Institute.

For our hosts it may be good to tell something about the history of our ITTC.

In 1933 the first ITTC was held in The Hague, attended by about 17 managing directors. Their goal was to come to a mutual agreement about the interpretation and extrapolation of the results of their model tests.

How such mutual agreements were developed was clearly shown after the war by the Resistance Committee. Starting from Froude and the Schoenherr-line they discussed for nine years and finally produced the ship form frictional drag curve for engineering purposes only.

Also the results of 4 ft models were included in the discussions and the effect of sand roughness, trip wires, studs and struts.

The Cavitation Committee also has shown the relativity of our scientific attempts.

An ambitious program of comparative tests kept many model basins busy. And even we had a great belief in the improved Van Slijke method to measure the total air content and its relation to cavitation inception.

The Propeller Committee started its life by measuring unsteady propeller forces mostly by inadequate measuring devices.

The Seakeeping Committee was struggling with the selection of the most representative wave spectrum.

The Performance Committee was in the first instance equipped with wise senior scientists who started to do nothing to the performance problem.

The new Panel on High Speed Marine Vehicles had a strong start and produced a report too thick to be included in the Proceedings.

Finally the Information Committee invented after a very long period what was their real task.

The Executive Committee in the sixties solved the intriguing problem of the rights and duties of the universities at the ITTC.

So, my dear President, you see what honourable company you have in house. But they are all here, even many old timers like Prof. Aertsen, Prof. Couch, Wehausen, St. Denis, Jourdain and Lackenby.

We appreciated very much receiving the Proceedings well in advance of the Conference. An excellent job of all Technical Committees and our hosts.

Finally we look forward with great expectations to your well prepared social program. We wish you all the success for the 16th ITTC.