

OPENING ADDRESS

by

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Mr. Chairman and Delegates:

Although there is some doubt about the origin of the towing tank, I think it is generally acknowledged that the one constructed for William Froude in Britain in 1872 was the tank where the foundations of your branch of science were laid. It is therefore with special pleasure that I welcome you to the country of William Froude.

I understand that the first conference of this kind was held in Holland in 1933 in order "to give tank officials an opportunity of conferring in an open and confidential manner on their own methods and also on the manner of the publication of the results". At that conference, there were 23 delegates from 9 countries including the superintendents of 10 European tanks. At today's conference the corresponding figures are (I believe) about 100 delegates from 26 countries including the superintendents of 35 tanks. These figures imply a growth of 300-400 per cent in a period of 30 years. This is not an excessive growth rate, indeed it appears to be considerably less than that found in most other branches of applied science. However, the real growth of your subject is, I am sure, not fully reflected in these figures since I understand that the Standing Committee have taken great care to limit this conference to a manageable size. If I may say so, I think you have been very wise. There is a growing tendency these days to organise huge conferences covering every possible aspect of the subject, with parallel sessions in buildings which may be miles apart and an attendance of several thousand delegates, many of whom spend an appreciable part of their time trying to find one another. Of course your conferences will continue to increase in size but your growth rate is decreasing. In the past nine years the number of delegates has only risen from 77 to 100. If you can hold the line near the 100 mark you will be very fortunate, because in my opinion this is close to the ideal number. I think I have attended about 100 conferences in the past 30 years. I have no hesitation in saying that the Gordon Conferences organised each year in the United States have been the most pleasant and the most productive. The numbers at these conferences are limited to 100-120.

I have always been a little puzzled by the title of your conference - The International Towing Tank Conference. Grammarians would object that Tanks cannot confer with one another, and I am told that in 1954 you gave careful consideration to altering this title to the "International Conference on Ship Hydrodynamics". Although this would have been preferable on grammatical grounds, I understand you rejected it firmly because it would not have been a truly representative title. Your difficulty is that there is no one word which represents your wide interests and responsibilities. When this conference was held at the National Physical Laboratory in 1948, my predecessor, the late Sir Charles Darwin, is said to have proposed the word "Tankery". I can understand why you rejected it. Indeed the phrase Towing Tank is getting a bit out of date. Your establishments would be more properly described as ship model laboratories. Well, I regret that I have no solution to suggest to you for this problem - frivolous or serious. (Latin is no help here but you might consult a Greek scholar).

What is important is that your unnameable science (I cannot call it unmentionable) should develop as vigorously as possible and be of maximum benefit to the shipbuilder and shipowner. At present you have committees on Resistance, Propulsion, Cavitation, Seakeeping, Manoeuvrability and Presentation. I was going to suggest that you might have a committee on Novel Designs but I realise that this does not make sense because any novel design will encounter the problems covered by your existing committees.

Instead let me explain what I had in mind. During the seven years that I have been Director of this Laboratory, three unconventional designs have been studied by Ship Division, (1) the flexible barge, (2) the hover - or cushion - craft, and (3) the hydrofoil ship. In the case of the first two, the idea came from amateurs outside your profession. You may say, quite rightly, that flexible barges and hovercraft will never amount to very much in the shipbuilding industry, but they are going to have a place in it and the same is true of hydrofoil craft. You are of course quite right in devoting the major part of your effort to improving the conventional type of ship, but I would point out that what attracts the bright young man is novelty and experimenting with new ideas. On your ability to attract the bright young men will depend the future of the industry you serve. You are in competition with aircraft as a means of transportation of people but increasingly so as a means of transporting a limited amount of very profitable cargo. Now the aircraft industry and aircraft research establishments attract a very large number of the ablest of our university graduates. It would be very beneficial if a few of these could become attracted to your problems. We have recently made a start in this direction by transferring one or two of the staff of our Aerodynamics Division to Ship Division. This has been a very successful experiment and we expect to extend it in the future.

I seem to be trying to give you advice. This would be presumptuous. One of the penalties of inviting an amateur to open your conference is that you have to listen to his foolish suggestions. What I have been trying to do (and this is all that someone on the fringe can do) is to give you some impression of your "image", on the scientific world. This is something you cannot afford to neglect, however wrong it may be. I realise far more than the average scientist how difficult your problems are and what great strides have been made along the conventional lines. The problems there (and the rewards) are just as exciting as those in the unconventional lines but because they do not get the publicity the young never hear of them. I am only suggesting that you might consider giving unconventionality some official recognition.

You are all well aware that even a small conference of this kind can only be successful if a great deal of unseen work is done by devoted organisers. Your own Standing Committee with Mr. Silverleaf as Chairman has of course the responsibility for the scientific programme, but the British Towing Tank Panel and our Ship Division have had the task of implementing their general decisions. However we all know that much of the value of any conference comes from the informal contacts and discussions which take place during the social side of the Conference. Here we are particularly indebted to Sir Victor Shephard as Chairman of the Organising Committee and to the Shipbuilding Conference, the Admiralty, Lloyd's Register and many firms and technical institutions for their generous contributions. We hope you and your ladies will enjoy the various functions which have been arranged. Lady Sutherland and I hope that one of the few sunny days will be next Saturday when we hope to meet you in the gardens of Bushy House.

I appreciate very much the privilege of opening this very important conference and I trust you will find it enjoyable and profitable.