

---

## PREFACE

On behalf of MARINTEK and The Norwegian University of Science and Technology I take great pleasure in welcoming the 21st ITTC to Bergen and Trondheim. The Technical Committees and the organisers have already spent considerable effort in preparing the Proceedings and the Conference. It is now up to all of us to make it a fruitful arrangement, socially as well as professionally.

Over the past few decades we have witnessed a general technological development that seems to be ever-accelerating. The three years that have passed since the 20th ITTC have been no exception in this respect. Looking more specifically at the area of interest to the ITTC community we have for instance a development within information technology that changes our lives and activities significantly. Awareness of the necessity to protect the environment has an impact on ship design. Interest in high speed ships is no longer limited to naval applications. They have become an important commercial market for the shipping and shipbuilding industry, and thus also more important for the ITTC member organisations. In the offshore industry the development of oil fields in very deep waters poses new challenges to us regarding numerical hydrodynamics as well as model testing techniques.

Business-wise the rapid changes may represent ups and downs in the market that can be hard to predict. An overall conclusion is that in order to survive our member organisations must be flexible and capable of quick response to changes in the industry. In this situation it is important that the ITTC be an efficient tool for the member organisations, and not an obstacle to rapid technological changes. Considering the present interest in ITTC shown by the member organisations it is my sincere belief that we shall manage to maintain and augment the role of ITTC as the efficient tool we want it to be.

The 21st ITTC is deviating somewhat from traditional arrangements in the sense that it takes place partly on board a ship. We hope that you will find this arrangement, together with the technical and social programs interesting, and that your visit to Norway will be a rewarding and memorable one.

A handwritten signature in black ink, appearing to read "Arnold Hansen".

Arnold Hansen  
Managing Director, MARINTEK  
Chair, Executive Committee, 21st ITTC

## PREFACE

With the publication of Volume II of the Proceedings the work of the 21st ITTC Secretariat has come to an end. On this occasion the Organizing Committee would like to thank the delegates to the Conference and their accompanying persons for their enthusiastic participation in the technical sessions and the social program.

The 21st ITTC deviated somewhat from previous Conferences in the sense that it took place at three different locations, in Bergen, on board the Coastal Express, and in Trondheim. When planning the arrangements we felt a little bit uneasy that checking in and out of two different hotels and the ship, all during one week, might end up as a stressing experience to the participants. We appreciate very much the patience shown by everybody in this respect. On the other hand we take pride in having been able to show you the west coast of Norway in this manner (and weather !), and hope that everyone enjoyed it.

On this occasion we also extend our sincere thanks to the sponsors. They are listed on the title page of this volume. Last, but not least, we would like to express our appreciation to Ms. Inger Gudmundsen of MARINTEK for her excellent assistance in preparing the Technical Program and the two volumes of the Proceedings, and to Ms. Astrid Bye and Ms. Mari Sæterbakk of SEVU for their very professional work in managing the Social Program and general secretariat functions prior to, and during the Conference.

At MARINTEK and NTNU we look forward to continued association with, and activities for the ITTC in future years.

  
Arnold Hansen  
Chairman

  
Erling Huse  
Secretary