

The First Announcement
CFD WORKSHOP TOKYO 2005
(CFDWS2005)

March 9(Wed) - 11(Fri), 2005

National Maritime Research Institute

Mitaka, TOKYO, JAPAN

Purpose

The purpose of the Workshop is to assess the state of the art in computations of viscous flows around a ship hull and to accelerate research and development of numerical ship hydrodynamics. This purpose is inherited from the preceding Workshops in 1980, 1990, 1994 and 2000.

Recommendations of the previous Workshop, Gothenburg 2000, are summarized as follows:

- Similar workshops should be conducted about every five years.
- Modern ship hull forms should be used as test cases.
- Surface streamlines and pressure distributions together with turbulence quantities should be analyzed in detail.
- Propeller-hull interaction, effect of drift angle and the forward speed diffraction problem should be considered for additional cases.
- Standard methodology for verification and validation for CFD methods and their solutions should be used.

The present Workshop aims at providing the marine CFD community with an opportunity to assess some of the above issues. The ship hull forms are the same as the ones used in Gothenburg 2000, but, reflecting the expanding need for CFD, in addition to the conventional subjects of resistance and self-propulsion, maneuvering (oblique motion) and sea-keeping (diffraction) simulations are considered as the new test cases. Resistance estimation with trim and sinkage free condition is also added. New experiments are planned to obtain additional data and towing-tank research community is invited to contribute to EFD validation database, including rigorous uncertainty analysis (contact the organizers for detail). Toward the establishment of verification and validation procedure, a grid dependence test using the common grids with different grid densities is also planned, which will enable the direct comparison of the characteristics of the different methods. Further, using statistical analysis of the collected data, we will discuss issues of code certification.

Date and Venue

The Workshop will be held on March 9(Wed)-11(Fri), 2005 at National Maritime Research Institute, Mitaka, Tokyo, JAPAN.

Test Case Candidates

The following items are candidates for the test cases of the Workshop. Possible participants of the Workshop are requested to show which items they intend to send data for and also to inform any requirements for the common grids in the grid dependence case, if any, through the WEB site shown below. The test cases of the Workshop will be selected based on the number of expected participants and some cases may be cancelled due to insufficient number of expected participants. The final test cases adopted will be presented in the second announcement. The current candidates are as follows, (visit the WEB site for detailed information of each test case candidate):

(1) Towing condition in still water

KRISO Container Ship (KCS), DTMB Model 5415(5415) and KRISO VLCC2 (KVLCC2)

- (2)Self propelled condition in still water
KCS, 5415 and KVLCC2
- (3)Oblique motion in still water
KVLCC2
- (4)Towing condition in incident waves (diffraction problem)
5415
- (5)Common grids provided
KVLCC2 for towing condition in still water

Schedule

March 17, 2003	First announcement and opening of the WEB site
October 1, 2003	Deadline for preliminary registration and return of the inquiry through the WEB site
November 1, 2003	Second announcement and data package available on the WEB
November 1, 2004	Deadline for data and paper submission
January 1, 2005	Third (final) announcement
March 9-11, 2005	Workshop

Fee

To be determined.

Organizers

Executive Committee

Dr. T. Hino (chairman)	National Maritime Research Institute, Japan
Dr. M. Hinatsu	National Maritime Research Institute, Japan
Dr. N. Hirata	National Maritime Research Institute, Japan
Dr. Y. Kodama	National Maritime Research Institute, Japan
Prof. F. Stern	Iowa Institute of Hydraulic Research, University of Iowa, USA
Dr. Y. Ukon	National Maritime Research Institute, Japan

Advisory Group

Dr. Y. Kodama	National Maritime Research Institute, Japan
Prof. L.Larsson	Chalmers University of Technology, Sweden
Prof. F.Stern	Iowa Institute of Hydraulic Research, University of Iowa, USA
Dr. M. Visonneau	Ecole Centrale de Nantes, France

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(Preliminary registration can be made at the above URL.)