



## FAST-TIME SIMULATION PROGRAM FOR SHIP MANEUVERING STUDIES

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### **I am looking to design a new marine facility for ships, barges etc., do I need ship simulation studies?**

Yes, the simulation studies serve two purposes. One it helps you design and configure the most optimum layout for your marine facility and it is an important part in obtaining the statutory clearances as well.



### **Ship Simulation studies are very expensive correct?**

There are two types of ship simulation studies 1) Fast ship simulation studies 2) Real time ship simulation studies. Fast ship simulation studies provided by Indomer are very cost effective.



### **What is the difference between Fast Ship Simulation and Real time ship Simulation?**

At the initial design stage of a marine facility, there will be a lot of permutation

combination for changing the length of breakwaters, deciding on the type of vessels to be catered to, the requirement for tugs etc. These can be taken up using fast ship simulation studies and the most optimum requirements can be zeroed in. Once it is clear that the facilities are planned and finalized then a real time ship simulation for the most important and critical scenarios can be taken up.

### **If we do fast ship simulation with Indomer and later we need real time ship simulation what is the procedure?**

Indomer can assist with fast ship simulation at present. We have also tied up with Marin, Norway who has the capabilities to take up the studies needed for real time ship simulation if needed. Indomer will assist in taking up the studies with them. Indomer also has plans to enter the space of real time ship simulation studies soon and then we will be able to do it in our own facility.





### Why should we opt for a fast ship simulation?

Fast ship simulation relies on the use of an autopilot, which also includes a tug and thruster allocation algorithm. The choice for using an autopilot rather than hands-on steering by a pilot or Master allows the engineer to clearly judge and compare the results of different simulations on technical and physical aspects.

The use of an automatic pilot in desktop simulation assures repeatability and a consistent nautical assessment procedure. The hands-on mode often seen in other models (actively steering the ship over a chart displayed on a screen) would put a civil engineer in a position where he is in fact playing the role of a pilot or Master. Alternatively, one could ask a pilot to do the runs, but the chart display offered to him is rather different from his normal sailing practice. This will jeopardize the result of the maneuvers. Furthermore, runs have to be repeated to guarantee consistency.

### Can standard environmental inputs be used for the fast ship simulation?

Yes, the software has an option of choosing a simple set-up with constant wind, waves or current or to import self-prepared environmental grids.

### Is the software available with Indomer the latest version? How many ready-made ship models are there?

Yes, Indomer has the paid licensed version for the latest software. We also have taken the Annual contract to keep updating to the newer versions when they get released. There are over 100 ready to use ship models for various types of ships like Bulk Carriers, Tankers, LNG Tankers, Containers, Ferry, Etc. We can share the list on request. The design for ships not in the standard library can also be requested from the maker.

### How to know that the computer generated results are reliable?

Indomer will be supplementing the computer model reports with detailed analysis and comments from experienced ship masters who have practical knowledge

of having handled such ships. They will closely interact with the hydrodynamic modeling department of Indomer and will help clear all doubts to the client with regards to the simulation results.

### Is this method of study approved by any nautical agency?

Yes, according to PIANC a first estimate of the required channel width based on their methodology has to be followed by ship maneuvering simulations. These simulations give insight into the inherent possibilities and/or restrictions of vessels, infrastructure and environmental conditions including the effect of additional maneuvering devices like bow and stern thrusters and the role of tugs. Based on the insights gained, mitigations, if needed, of the infrastructure design (channel layout, maneuvering basin and terminal layout) and/or the admittance policy can be proposed. Reference: PIANC-IAPH Working Group II-30, APPROACH CHANNELS; "A Guide for Design".

### Do we have any special offer if we take up the studies with Indomer?

Yes, In order to help the Port and Harbor sector, Indomer will be offering a 50 percent discount on the ship simulation studies order placed with us. Also there will no restriction in the number of layouts that need to be tried out for the first time client with Indomer. If the ship type is readily available with Indomer then there will be no additional charge as well.

### Can we come and witness the study being taken up?

Indomer will be happy to host you and show the ship simulation studies being taken up at our office in Chennai.

FOR FURTHER  
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