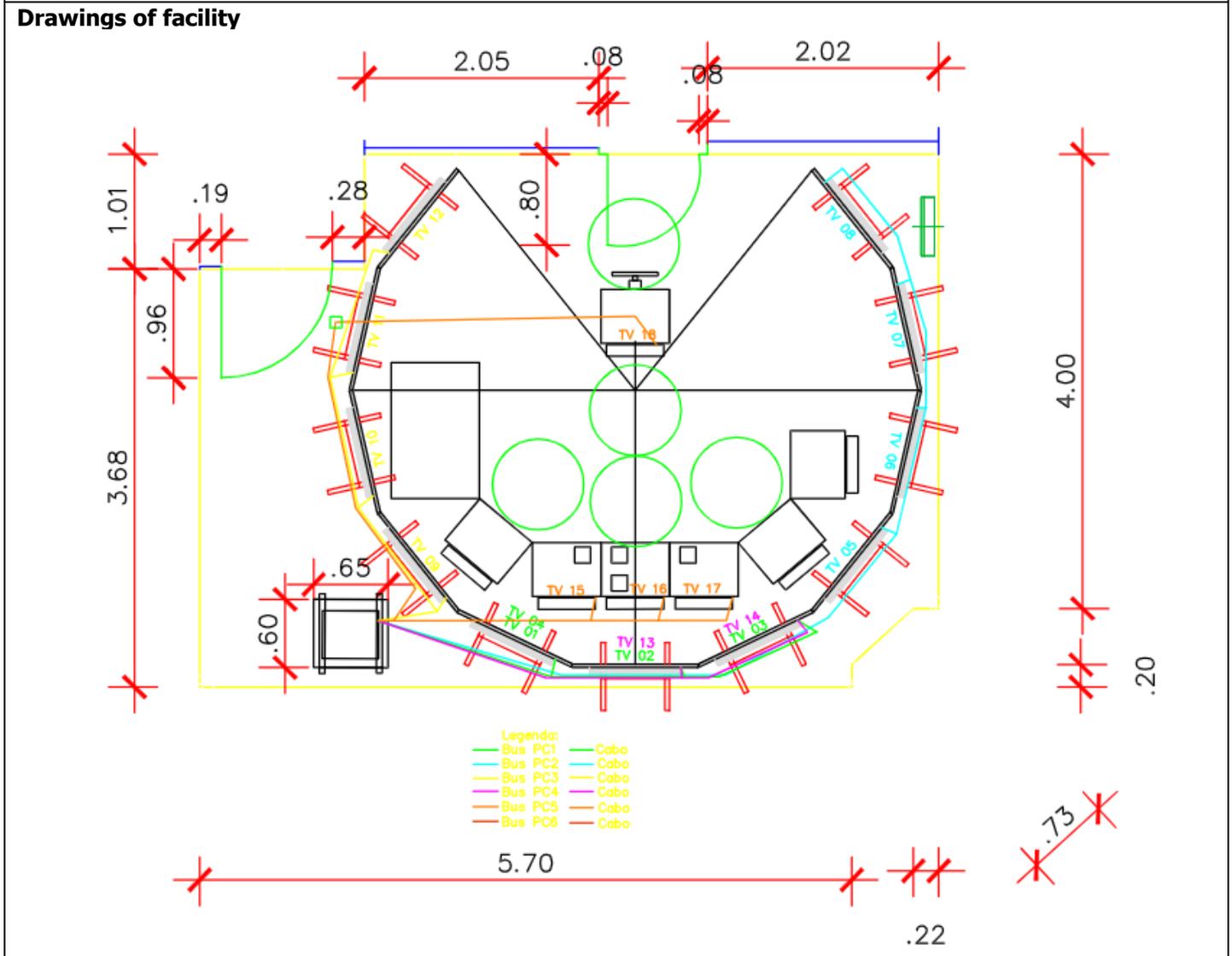


Name of organization Technomar Engenharia LTDA	Year of information updating 2022
Year established 2002	Year of joining the ITTC
Address Avenida Pedroso de Morais,631 CJ 112 – São Paulo-SP-Brazil	Status in the ITTC
Contact details (phone, fax, e-mail) Vinicius Vaguetti da Costa +55 11 953963533 vvaguetti@technomar.com.br	Website www.technomar.com.br

Type of facility Full Mission Simulator and Part Task simulator	Year constructed/upgraded 2015/2020
Name of facility Technomar Training Center	Location (if different from the above address)

Main characteristics (dimensions of tank/basin/test section; for simulators: full mission, part task or desk top)
1 Full Mission DNV class A certificated and a Part task class B DNV certified.



Detailed characteristics (carriages, wave/current/wind generators, instrumentations, etc.)

The software is provided with a time domain 6 degrees of freedom model merging the dynamics effects and forces acting on vessel hull, the models applied were developed for displacement vessels and those effects are currently employed:

- Inertial forces
- Potential damping
- Squat
- Wind
- Current
- Tide
- Hydrostatic restoring
- Propulsion
- Rudder
- Wave 1st order
- Wave mean drift
- Wave slow drift
- Wave drift damping
- Lines
- Tugs
- Fenders
- Ship to ship interaction

The environmental conditions may be presented by maps varying in time and space.

Applications (Tests performed)

The simulator has been used supporting projects for new facilities including entire harbors, new berth on existing areas, maneuver capability for increasing the ship size on existing ports, resources evaluation on ship maneuvers. The studies are being used by contractors for Brazilian navy approval on the respective projects. Some recent projects are listed, the software was used on 99 studies since 2016.

- CP Maranhão – Ponta da Madeira VALE tug capability evaluation (2022)
- Delegacia CP Itajaí – Transportation of floating barge from the shipyard (2022)
- CFAOC (Manaus) – New pier construction on Chibatão port(2022)
- CF Santarém – Super conveyor navigation on inland Waters, Hidrovias do Brasil (2022)
- Delegacia CP Itajaí – New turn basin and maneuver resources for increasing allowed container ship size, Barra do Rio (2021)
- CP Rio Grande do Sul + DPC – Evaluation of channel for increased ship dimensions in Porto de Rio Grande (2021)
- CP Bahia + DPC – Navigation and ship to ship operation, TUP Enseada (2021)

Published description (Publications on this facility)

[Validation of a Modular Mathematical Model for Low-Speed Maneuvering using Small Scale Tests with an Oceanographic Research Vessel](#)

FR Masetti, EA Tannuri, PC de Mello - OMAE2015-42225, St. John's, Newfoundland, 2015

[Deep and Shallow Water Low-Speed Maneuvering Tests: Comparison Between Experimental and Simulation Results](#)

F Ribolla Masetti, PC de Mello, GF Rosetti, EA Tannuri - International Conference on Offshore Mechanics and ..., 2016

Characterization of vessel maneuverability in restricted areas, low speed and transitional operation, Felipe Ribolla Masetti, Escola Politécnica, Universidade de São Paulo, 2018/7/27

Fucatu CH. Desenvolvimento de um simulador dinâmico para análise de navios amarrados. 1998

THE EFFECTS OF MOORING LINE DAMPING AND WAVE DRIFT DAMPING ON MOORED TANKER DYNAMICS, Hernani L. Brinati, Kazuo Nishimoto, Carlos Hakio Fucatu, Isaias Q. Masetti & Martin Fuljahn, 1997

Modular Mathematical Model for a Low-Speed Maneuvering Simulator, Eduardo A. Tannuri, Felipe Rateiro, Carlos Hakio Fucatu, Marcos Donato Ferreira, Isaias Q. Masetti, Kazuo Nishimoto, OMAE2014-24414, 2014