

Broome
Maritime Simulation Centre

Kimberley TAFE's

BROOME MARITIME SIMULATION CENTRE

Kimberley TAFE's **Broome Maritime Simulation Centre** was established in 2004 and has developed into a centre of excellence supporting the maritime industry.

In addition to providing a first class simulation system, we pride ourselves on delivering excellent customer service, as well as competitive rates.

For more information or to arrange a tour of the Broome Maritime Simulation Centre, please contact me directly.

Regards,

Robert Tondut
Manager Instructor
Broome Maritime Simulation Centre
Kimberley TAFE

Phone (08) 9192 9142

Mobile 0427 089 886

Fax (08) 9192 9111

Unique Training
Uniquely Kimberley

**The Broome Maritime Simulation Centre is located at Kimberley TAFE,
68 Cable Beach Road Cable Beach, Broome, Western Australia.**

BROOME MARITIME SIMULATION CENTRE

Capability Statement

The simulation system installed at the Broome campus of Kimberley TAFE is based on a Mistral 4000 system as developed by Faros / Sindel now E.C.A Sindel. The system installed in Broome presently consists of three own ship bridges, which can be operated either separately or interactively.

The main bridge provides five channel vision out to 200 Degree in the horizontal. The projected image is via rear projected data projectors onto a 5 screens total vision 7.5 metres by 1.2 metres. The visual image is pannable and tiltable through 360° and can show centre of bridge or bridge wing views including panning down to show vessel coming alongside at water level. Binocular vision is also available. The main bridge has a full real instrument conning console (Mansim2) with associated display screens. On the main bridge there is also ARPA Radar, ECDIS, GPS and Nav Instruments screens. The displays are mounted in aluminium consoles.

The secondary bridge is the same as the main bridge but is limited to a 40 degree visual horizontal field of view. The image is provided via the main system. The visual is completely pannable and tiltable. This bridge is equipped with a small ship conning console but includes ARPA, ECDIS and Nav Instruments.

The tug bridge is a fully functional Azimuth Stern Drive Tug simulator which can interact with both of the other bridges in the system. The system is illustrated in the separate brochure provided but consists of dual Stork Kwant azimuthing thrusters and winch controls mounted in a stainless steel bracket and tug master chair. Visualization is provided through a Sony VR helmet, which is worn by the tug master with an additional visual monitor. Visual is 40° but completely pannable and tiltable.

Our system allows for the inclusion of buoys markers etc and also reasonable alterations to wharves/jetties ad hoc so that time is not lost if changes are required.

The Broome Maritime Simulation Centre BMSC has been provided with a database management system for the development of new port areas and ship models. Several Australian ports and ships have been modelled so far using the system.

Available Australian ports include

- Fremantle
- Port Hedland
- Koolan Island
- Esperance
- Broome
- Dampier
- Sydney
- Newcastle
- Haypoint (PMI)
- Gladstone (PMI)
- Cairns (PMI)
- Melbourne (PMI)
- Torres Strait (PMI)

Navicom PPU equipment can be interfaced into our simulator so that instrument pilot training / familiarisation can be conducted at the same time.

Simulation projects undertaken so far with Pivot Maritime International using a Mistral 4000 system include:

Dampier Port Authority:

- Escort Tug Simulation 2004.
- Simulation on the use of an escort tug for steering and braking fully laden Cape Class bulk carriers in the Dampier iron ore channels.
- Modelling of new Liquid Bulk Cargo (Ammonia) wharf and pilot training exercises.
- Proposed new Solids berth and new cargo berth.

Port Hedland Port Authority:

- Pilot training using 2 systems for pilots to use interactively for “double Shuffle” manoeuvres
- Modelling new wharves both for Utah Point and FMG.
- General pilot training for new facilities.



Esperance Port Authority:

- Developing data base of Esperance port and surrounds and pilot training

Geraldton Port Authority:

- Development of database for Geraldton including two new berths
- Pilot and tugmaster familiarisation training for use of new berth with integration of ASD tug model

Svitzer Australasia(Adsteam) :

- Development of data base of new iron ore jetty for Mount Gibson Mining Koolan Island including pilot familiarisation training.
- Training of new pilots
- Tug training for new tug masters using the ASD tug simulator.

Mermaid Marine

- Training of new pilots

Broome Port Authority

- Training of new pilots

Private

- Training of both private and company personnel using the ASD tug simulator.

Broome
Maritime Simulation Centre



Unique Training
Uniquely Kimberley

Future Developments

Future projects include:

- Modelling HMAS Stirling and HMAS Coonawarra for the RAN to conduct various types of training using simulation for vessel handling and theory based training.
- New projects for Maunsell Australia including Oakajee ,Impex and Guan Dong Offload facility China.
- New proposed wharf project for Worley Parson /Dampier Port Authority

Offshore Industry Capability:

The BMSC will be able to offer the following capability to the offshore industry:

- Modelling of offshore support vessels with different propulsion and thruster configurations.
- Exercises involving operations around oil platforms or barges such as
- Holding vessel under an oil platform whilst unloading.
- Anchor handling operations (under development) to an oil platform.
- Towing and pushing barges offshore.
- Picking up and running oil hoses or lines.

These exercises can be undertaken under limit wind, current and swell conditions.

Dredgers and pipe laying barges can also be modelled. Accident investigation capability is also available

Customs/ Coastwatch and Coastguard Capability:

The BMSC can model patrol boats and fast rescue craft to specification and provide realistic exercises in ship handling and navigation techniques such as

- Berthing and unberthing,
- Anchoring and mooring,
- Bringing small craft alongside larger vessels in a seaway,
- Radar plotting techniques,
- High speed radar techniques,
- Vessel interception techniques
- Navigation Watchkeeping and collision avoidance,
- Vessel identification from sea and air.

The BMSC can create aircraft models for coastal surveillance exercises and overview flights of database areas.

Broome
Maritime Simulation Centre



Unique Training
Uniquely Kimberley

Training Courses in association with Pivot Maritime International include:

- Pilot Professional Development Courses
- IALA VTS Training Courses and
- STCW ARPA/ ECDIS/Upgrade and Revalidation Courses.

For any further information, please contact:

Robert Tondut
Manager Instructor
Broome Maritime Simulation Centre
Kimberley TAFE
Tel (08) 9192 9100 or 9192 9142
Mob 0427 089 886
Fax (08) 9192 9111

PO Box 1380
Cable Beach Road
Broome WA 6725



Unique Training
Uniquely Kimberley

