

Specialist high-tech tanker training academy opened

Capt Pradeep Chawla – director quality assurance and training, Anglo-Eastern group (AE) - explained the rationale behind AE's new training school and outlined some of the courses and facilities available to cadets.

The academy, rebuilt from a former school on a 53-acre site, was formerly opened on 16th March. It is located just outside Mumbai and includes accommodation on site for 240 students.

AE currently has 550 cadets on its books, but Capt Chawla warned that in the tanker sector, demand still outstripped supply. "There is a great need for more highly qualified and trained tanker officers", he said.

"As the oil and gas industry develops offshore and onshore, more and more youngsters are opting out from sailing to take up shore based positions. Hence there is a need to recruit more cadets and owners should take a long term view by providing more trainee berths on board their ships", he stressed.

He explained that AE's post-sea training dealing with specialised courses is open to all seafarers, third party inclusive. However, the new cadet academy will initially start with Anglo-Eastern cadets, but will be expanded to cater for other interests as well.



AE's training academy was rebuilt from a former school.

He also said that this academy formed part of AE's major expansion plan, which could eventually see the shipmanagement concern diversify towards offshore oil and gas training, in addition to commercial vessel training.

As for the courses on offer, these include management level specialisation courses and

operational level tanker courses.

All the courses are certified by DNV under 3.201 Standards of Training, while all except g, h, and i listed in the box are also certified by the Indian Administration.

The simulators are of the full mission, multi-dimensional types developed by AE with simulator manufacturer ARI based in New Delhi. The simulator is certified as 'A' Grade by DNV.

Four typical AE ship models were chosen on which the simulators were designed. These were a 105,000 dwt Aframax product tanker (LR2), a 15,000 dwt 20 tank chemical parcel tanker, a 78,000 cu m refrigerated very large LPG carrier and a 144,000 cu m LNG carrier with a Moss Rosenberg design containment system.

Typically the cargo operations on these four diverse vessel types would involve:-

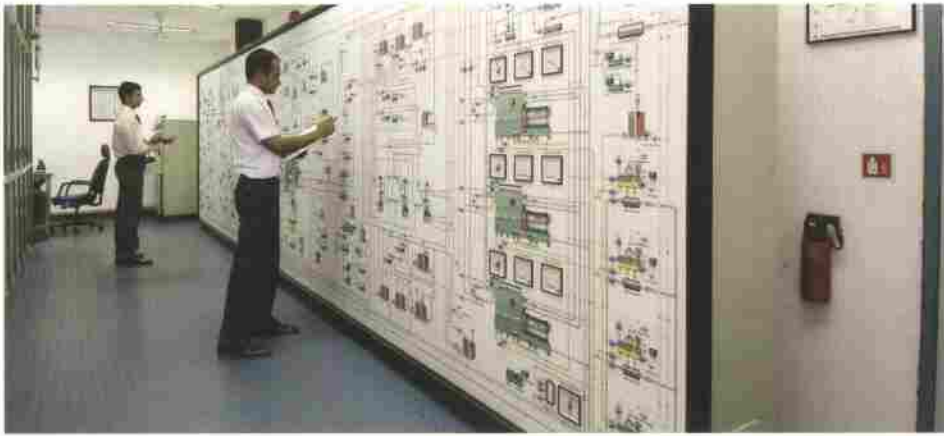
- A cargo control room.
- Deck pipelines and valves.
- Loading computer for calculations.
- Pump room/compressor room.
- Reliquefaction plant.
- Inert Gas system.
- Temperature, pressure, level gauging system.

The management level specialisation courses include:

- a. Specialised training on LNG carrier operations - 10 days, max 20 persons.
- b. Specialised training on LPG carrier operations - 10 days, max 20 persons.
- c. LNG cargo and ballast water handling simulator - five days, max eight persons.
- d. LPG cargo and ballast water handling simulator - five days, max eight persons.
- e. Chemical cargo and ballast water handling simulator - five days, max eight persons.
- f. Oil cargo and ballast water handling simulator - five days, max eight persons.
- g. Tanker vetting inspection courses - three days, max 20 persons.
- h. Tanker instrumentation course - two days, max 20 persons.
- i. MARPOL implementation course - three days, max 20 persons.

The operational level tanker courses include:

- a. Familiarisation training on LNG tanker operations - five days, max 20 persons.
- b. Familiarisation training on LPG tanker operations - five days, max 20 persons.
- b. Familiarisation training on chemical tanker operations - five days, max 20 persons.
- c. LNG cargo and ballast water handling simulator - three days, max eight persons.
- d. LPG cargo and ballast water handling simulator - three days, max eight persons.
- e. Chemical cargo and ballast water handling simulator - three days, max eight persons.
- f. Oil cargo and ballast water handling simulator - three days, max eight persons.



Engine control panel simulator.

■ Tank cleaning guns.
■ Oil control and discharge monitoring unit.
Capt Chawla said that the challenge was to incorporate four different ships into one simulator, in effect to have a four in one simulator. To solve the problem, Anglo-Eastern Maritime Training Centre (AEMTC) came up with an innovative design:-

1. Individual deck panels – oil, chemical, LPG, LNG – 3.5 m long and 2.3 m high. These would be a carbon copy of the actual pipelines, valves, pumps, compressors, gauges etc that are to be found on the deck of the tanker - an exact replication.

2. Each component of the deck panel would be interfaced to the computer software program, so that foreground would be hardware as operated by the student, in reality also on a ship with the software program running in the background.

3. The software is integrated to the cargo control room, which depicts a console from where the operator can remotely control and monitor all operations running on deck. It depicts a 2.5 m long horizontal mimic cargo pipeline system with controllable valves and pump start/stop controls. It also has a vertical console of numerous panels for monitoring pressure, temperatures, tank gauges etc.

To make the control room multi-functional, 40 inch LCD panels with touch screens have been used – enabling the trainers to change over from oil tanker to chemical to LPG or LNG as required for the course.

4. Eight student workstations with monitors were included. These work stations are also connected to the software integrated system and the various operations can also be learnt from here. These stations are used for part-task familiarisation and for pre-loading/discharging cargo and stability calculations.

5. Instructor Console. From the instructor console, the instructor can run exercises, monitor trainees actions and even simulate restrictions and failures of the cargo system.

The instructor console keeps record of each and even function, button, switch operated by the trainee. This will help later in the debriefing of the exercise.

6. Debriefing table and projector. A feed from the instructor station is taken to the LCD projector. The exercise can be replayed in real time or faster at 5x, 10x, or 25x and also the analysis of the event – by – event record maintained by the software. The debriefing helps to iron out wrong concepts and also is an excellent tool to view managerial failures, human interactions, mis-communications, etc. The simulator can increase a trainees understanding and assimilation of the cargo handling procedures 10 times faster than a conventional chalk and talk classroom lecture.

As for the trainers, Capt Chawla explained that the tanker training specialist has oil, chemical, gas and LNG sailing experience and has over 15 years of teaching specialised oil, chemical and gas courses.

He has also been the chief co-ordinator for writing the chemical, LPG, LNG IMO model courses written on behalf of the Indian Administration and has been on the board of



Engine control room simulator.

external examiners for masters and mates certificate of competency examinations for the last 15 years.

Cadet intake

The Mumbai Anglo-Eastern Maritime Academy is expected to welcome the first intake of cadets, straight out of High School, in August, 2009.

“A long-time dream come true” said ceo, Peter Cremers.

Capt Chawla said; “It has been a long-wait to realise this strategic goal of being able to fully control the quality of teaching of our young recruits, right from the start. We aim to build on our existing reputation as a leader in the field of maritime training to become one of the top maritime colleges in the world. Together with our present training centre, situated in Mumbai City, we will have the largest and most well-equipped training establishment in India.”

AE has full technical management of close to 300 ships of all types and sizes, plus a further 70 for which it supplies crews only. The company employs nearly 11,000 seafarers of various nationalities and runs a 17,000 sq ft training centre equipped with LNG, LPG, chemical and oil simulators, shiphandling simulators, engine simulator and a complete engine room workshop.

Cremers explained: ““For us this is an investment that has been fully funded by Anglo-Eastern alone. We consider it to be critical to our business. It is a long term insurance for the growth of the company. We will now be able to add mandatory STCW training to our normal post-mandatory curriculum have our Anglo-Eastern safety culture embedded into our crews, right from day one.”