

AEMTC 's new venture in Advanced Instrumentation and Process Control System Training

AEMTC has ventured to make this unique acquisition of in-house developed training rig for imparting training to marine Engineers in the field of automation and control system. This "ADVANCED PROCESS INSTRUMENTATION TRAINER", was built and designed using in-house resources and exclusively through interaction of the faculty of Anglo Eastern Maritime Training Centre and feedback from Anglo Eastern Technical department.

Ships of modern era are not any simpler in designing and operating with high quality automation and process control system. Anglo Eastern has always identified the need of such requirement of training its crew and educating their personnel in the latest technology in the past and the tradition continues. Now they have custom built the process trainer with a vision to impart more confidence to the sailing engineers in the field of automation, control system and various onboard processes.

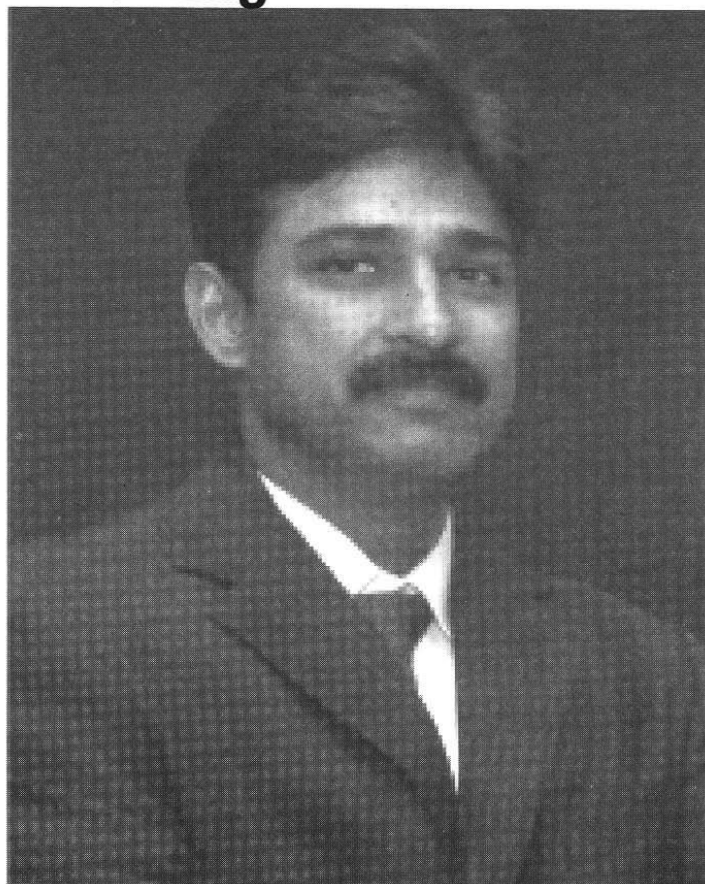
The two day's course is designed for Chief Engineers, second Engineers and senior Electrical Officers covering theoretical and practical aspects of various control systems, including Proportional, Integral and Derivatives. This system has been designed to train our engineers & electro technical to train them from the very basics of instrumentation to advanced levels in control systems & automation.

The participants are taught to build the circuits or the control loop themselves by using these patch

cords and learned what element to calibrate, how to do it & what the problems can be thus educating them about the consequences of on unstable system.

After the course, the candidates learned how to calibrate the valves, E/P converters, adjust the PID controllers or even about supervision through Human Machine Interfaces, a newer prospect on board that could be a challenge to troubleshoot. We have even provisioned for a 'Programmable Logic Controller' thus making this trainer a complete hands on training concept for Marine Engineers.

Earlier Mr. Francis Akkara, the head of engineering studies of Anglo Eastern Group inaugurated the course and congratulated the very first batch of 6 hand picked engineers from a large pool of Anglo Eastern's crew resources. He also proudly announced the methodology used in developing the advanced trainer with the facility to train all kind of shipboard applications and processes. The input from the technical department and faculty of AEMTC have been very encouraging to design and build this training rig to simulate the actual shipboard processes and induce



faults in it.

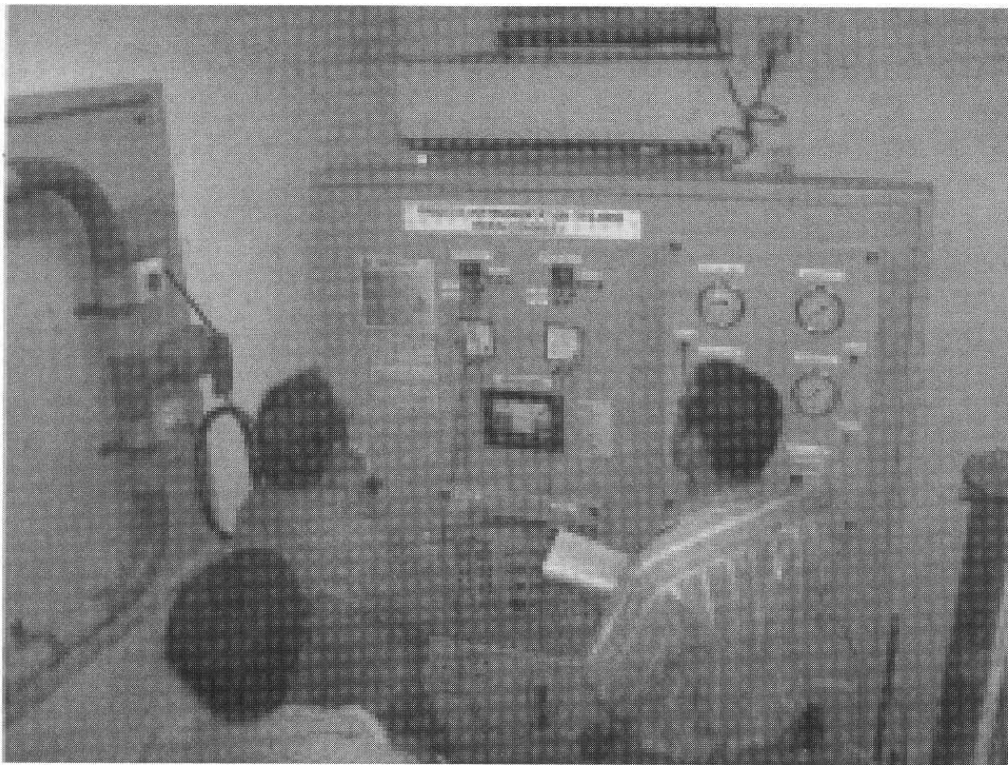
Interview

Q . Can you please tell me about the reason for starting this course?

One of the weak areas of expertise among engineers is control engineering. Ships of highly automated in the engine room and cargo monitoring and operation system are to be taken care very well to maintain the system. Unless one has the theoretical knowledge he / she can't use his analytical knowledge and skill to fix the problems. This course will help the marine Engineers to gain theoretical knowledge and confidence in dealing with such automated equipments.

Q: What is the need for a course of this type?

Our ships should run with better



available in the market suitable for such high value training capable of imparting effective training. This equipment was developed on need base and taking inputs from various experience faculty in the field of Anglo Eastern Maritime Academy. It is important to make equipment which has got controlling equipment of marine type.

Q: What is special about this advanced Instrumentation trainer?

This trainer has got controlling equipments which are the exact make that are used extensively onboard. Here in AEMTC, the equipments used are of latest type

efficiency and all processes must be in good operating range suggested by the makers. So, it is important to monitor these parameters and operate the system in an optimum manner.

As an example, a process like jacket cooling water system, boiler system and so on can be optimized, only if we operate them well with in the allowable limit. This way we will protect the owner's interest and save our planet by minimizing the wastage of energy. Secondly, a plant being operated too far from the set point can give progressive failure which includes a cylinder liner crack, boiler damage etc..which are expensive mistakes. In order to operate such automated system efficiently, it is imperative to acquire good theoretical and practical knowledge

Q: Which way his course will help to ensure the participants onboard?

One of the shortcomings noticed among marine engineers is the lack of confidence in handling any abnormal situations onboard, especially when it is associated with



control systems. The training that we are imparting is a combination of theoretical knowledge coupled with practical training. We can also induce problems and faults in the trainer equipment so that the candidates are trained in achieving better ability to trouble shooting and fault finding.

Q: why did not AEMTC buy this stat- of the art training equipment from the market?

There is no such equipment

and being used presently onboard. This way the Engineers will have better orientation when they go onboard with what they have learned. We also introduce faults which are of similar kind that would pop up onboard during the operation. This way the engineers are better trained and well prepared to operate the equipments correctly and to deal with the situations in a more organised manner.