

# How I Became a Marine Engineer

Date Published : 17 July 2010

**Author: Cheng Huang Leng**

## **Through the University – considered the quickest and least painful**

Though I graduated with a degree in Marine Engineering in 1970, I honestly could not call myself a marine engineer till about six years later. For as one of my English classmate criticized me one day (when I asked what to him was a stupid question), “What do you know about engineering?” I could only answer, “Nothing, that’s why I am here!” I hope my students whom I taught at the Singapore Polytechnic during 1971 to 1975 did not feel short changed!

Indeed, how could I call myself a marine engineer when out my three years at the University of Newcastle-upon-Tyne, the whole Marine Engineering curriculum contained only ONE subject, “Marine Engineering” which was taught to us and only during the final year of the course? That subject was delivered in about 30 one-hour lectures plus another 30 hours of coursework on marine engineering topics! Naval Architecture was the only other marine related subject. The rest of the course was what mechanical engineering students undergo and it would be more accurate to describe my course as “Mechanical Engineering with Marine Option”.

During the course, my only other exposure to marine was 6 weeks of industrial attachment at Harland & Wolff Shipyard in Belfast in Northern Ireland in 1968. The training was boring doing workshop practice. I still do not know why I needed to file a round bar into a square bar when lathes and milling machines were already invented AND found in most ships! However, I left with fond memories of Ireland and the Irish and still could not understand the “Troubles” between the Catholics and Protestants.

By the way, the Marine Engineering Department then comprised just three persons: one professor (Professor Chambers), one lecturer (a Mr. Jones) and one secretary (a Mrs Dicks)! It was reputed to be “one of the best in the World”. I cannot confirm that but it was certainly one of the smallest! Our class was 13 strong: 3 Singaporeans (David Chen, Tay Kiong Pang and I), 1 Israeli, 3 Englishmen, 1 Scott, 1 Irish, 1 Greek and 3 Norwegians.

During the 30 lectures, the focus of the Professor and Lecturer was on what topics we should know about rather than what the topic is. Thus the lecture on marine engines told us that we should know about high-, medium- and low speed marine engines. And what are those items? As students, it was our job to find the answers! And when I asked, "What must we know in each topic to prepare for the examination?" the answer was, "Everything!" It was quite clear that we will not be spoon-fed and I learned to educate myself.

Most of my 3rd year was spent in the library, reading the transactions and journals of the Institute of Marine Engineers, the North East Coast Institution of Engineers & Shipbuilders (NECIES), the Royal Institute of Naval Architects and the Society of Marine Engineers and Naval Architects. To make sure that I did not miss anything important, I also read a lot of articles published in marine magazines e.g. The Motor Ship. Thus, when one asks, "What did you read at the university?" instead of "study", he is correct, for that's what we do!

Through reading, I came to know about engines, boilers, auxiliaries, generators, ships, propellers and shafting, marine fuels and marine problems e.g. shaft vibration, corrosion and machinery failures. And through attending technical talks organized by the NECIES and listening to the answers to the questions raised by the audience, I began to understand in some depth what I read.

### **Through my Teachers in Industry – who are ever ready to teach willing learners**

When I understood what marine engineers at sea were required to do to keep the ship going, I could not help feeling that I was half trained. I knew the theory but not the practice. I decided to get the practical experience I needed by undergoing some of the practical classes with my students and through practitioners in industry.

### **Basic Fire Fighting Course at PSA**

Fortunately, my boss (Mr. M.K. Das Gupta) at the Singapore Polytechnic was very supportive of my need for practical training. Shortly after I joined the Poly in 1971, he put me on the basic fire fighting course at PSA with the returning engineer cadets. (A few of them thought I was a new student and fortunately for them, they did not try to rag me!)

I still remember the funny feeling when I jumped from the top of a cherry picker into nothing! The friction break harness was the only device that broke my fall. I did not know that it was a form of bungee jumping till this sport became popular in 1979, a good eight years later. The smoke house experience taught me that one has a very slim chance of surviving a fire at sea unless one knows ALL the escape routes from one's engine room. And I was glad to be put to the test by my Chief Engineer (a Mr. McDonnell) on the Cardigan Bay (more details later).

..... To be Continued .....