

How I Became a Marine Engineer (Part 8 - Final)

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Secondment to Neptune Orient Lines (... continued from Part 7)

I discovered how the Japanese could build ships faster and cheaper than Singapore with workers who were paid at least 3 times more than our yard workers. The short answer is that the Japanese (those at IHI Kure Yard) practised what the Americans and British preached (in our text books and their technical papers). The long answer is, the Japanese:

- Institutionalised TQM (Total Quality Management) with the CEO taking the lead. He personally inspected all sections weekly to verify improvements made (or claimed) by his people. They did strive for 3Z (zero accident, zero defect and zero loss) while others dismissed as “impossible”.
- All employees (organised into squads) were empowered to make improvements and devote an hour (Tuesdays from 1 to 2 pm) to work on a common theme like “is there a better way to improve their own area of work?” For those keen on the details, do read, “Kaizen” by M.Imai.
- Employee education level was high and the workers I interacted with could read the drawings issued to them. They were very productive individually e.g. a welder could simultaneously handle 9 gravity welding sets while our best welder at JSL could handle only 4.
- All levels of management did their PDCA (Plan – Do – Check – Action) thoroughly without taking short cuts. And their plans were communicated to all persons affected.
- Built the largest block that their crane could lift and completed more than 50% of outfitting work, safely on the ground and before the block assembly stage.
- Demonstrated again and again how to get a job done “right first time”. Coordination among trades must have been excellent for rework caused by one trade on another was an exception rather than the rule. For example, after a block is painted with the final coat, there was no burn marks on the outer shell because brackets and anchor points for pipes and cable trays were already installed before the final coat of paint was applied. And the final coat covered to all areas except for about 300mm from the edge where a butt joint to another block would be made.

Till today in 2010, I have yet to know of any shipyard in the World that could match what the Japanese did in the 1970s!

I still hold these fond memories:

1. When the Yard QC told me that a job was ready for inspection, it was ready.
2. I had a hard time finding a defect when it was my turn to do an inspection. Defects if any were already corrected by the worker, his supervisor and the Yard QC. In other words, they have all done their own inspections before us.
3. Any dispute about a defect was resolved objectively by consulting the yard's documented workmanship standard.
4. The 36 hour sea trial for Neptune Pearl was conducted without a hitch.

Regrettably, NONE of the above was achieved at the Jurong Shipyard (also managed by IHI) where I was assigned to for the rest of my secondment to NOL to look after the construction of Neptune Tourmaline and Orchid Palmstar.

I must also say that the Japanese were not perfect and this was revealed through my interviews with the workers and my observations. Their seniority system did stifle the young and bright. Their life long employment policy meant having to support a lot of dead wood.

High pay did not mean a high standard of living when the cost of living in Japan was high. To give you an indication, in 1976, it was 1Yen to 1 Cent. My overseas allowance including rent was \$4,000 per month i.e. 3 times my salary! Mr. Harada, the QA Engineer assigned to our ships one day told me that he just paid up his 6 million yen housing loan. When I congratulated him, he clarified that the loan was for the land only. He had to ask for a 2nd multi million yen loan to pay for the construction of his house! As he was already in his late 40s, I asked how he would service the loan. He replied, "My son"!

The house when completed would be smaller than 60 square metres - about the size of a 3-room HDB flat. (The cost of housing in Singapore has risen to a ridiculous high. Already, it will take a lifetime of salaried work to pay for your housing loan. I do hope that you would never "progress" to having to need two lifetimes of work to pay for the roof over your head!)

Neptune Pearl was christened by our MD's wife, Mrs Goh Chok Tong. Coincidentally, "Kure" in Japanese is "Goh" in Chinese. At the end of my four months in Japan, my wife and I took a short holiday in Nara, Kyoto, Mount Aso and Tokyo. There was a road side sale of crockery in Kyoto when we were there and I lugged away at least 30 kg of Japanese crockery to furnish my new home in Ghim Moh. I had no problem with excess baggage for I was coming home by ship. We embarked on Neptune Pearl in Tokyo for our trip home calling at Hong Kong and Kaohsiung along the way. Being a first timer to Hong Kong, I did the must try thing – eat dim sum. We found a restaurant near the port, the dim sum was so-so and the service of so-bad! In Kaoshiung (also for the first time), I did the must do thing in Taiwan i.e. buy pirated books. I left with 4kg of engineering handbooks. The journey home was smooth and I did not miss the chance to learn from Chia Che Kiang and see for myself the condition of the tank tops. I can confirm that Chia Che Kiang's engine room is the 5S (housekeeping) benchmark for engine rooms. Han (forgot his full name) was our cook and I would recommend his creations to anyone who missed Singapore food.

Conclusions

The route I took i.e. via the university to become a marine engineer was the easiest when compared to the apprenticeship and polytechnic routes. Like most Singaporeans in the 1960s, I was too poor to afford a university education. I was indeed lucky to be supported by a scholarship. To me the greatest benefit of my education abroad was learning to be independent, to survive on little and to rely on myself due to the absence of spoon-feeding by my teachers. I acquired much knowledge through reading, research, observation and practice. However, the conversion of knowledge into understanding was mostly derived through the people I met. I am indebted to all of them for their generosity and patience in answering my questions and putting up with me!

I do wish that all mariners are as lucky as I have been in my becoming a marine engineer!
