

## MY 4 YEARS AS AN APPRENTICE ENGINEER (PART 1)

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23<sup>rd</sup> of January 1958 was the beginning of my 54-year career in the Maritime Industry. That was the day when I reported to the Office of Singapore Harbour Board Dockyard Department at Keppel Harbour along with 20 other 17-year old boys, to start a marine engineering apprenticeship. It turned out that we were the 2<sup>nd</sup> batch of apprentice engineers, who would from 1959 take day-release courses in mechanical engineering at the Singapore Polytechnic; to complement our hands-on training in the dockyard. We were informed that during the 1<sup>st</sup> year we would do bench fitting and the overhaul of machinery components from the ships under repair in the machine shop, followed by 2 years in outside fitting onboard the ships under repair; with the 4<sup>th</sup> year back in the machine shop working on the lathe machines and other planning, slotting and drilling machines. If we were lucky, we could serve the 5<sup>th</sup> year in the drawing office, which had limited places for apprentice engineers.

### The 1<sup>st</sup> year in the Machine Shop doing engine fitting work

We soon found that there was no structured training. We were just assigned to work with the engine fitters in the machine shop, to learn as much as we could from them. I was fortunate in that I was paired with Michael Lim, to work under one of the best engine fitters in the machine shop, Lim Jit Mui. Jit Mui was kind and he showed us how to go about the business. Firstly, we had to acquire a locker for our belongings. The 1<sup>st</sup> batch of apprentice engineers who had just been transferred to the outside fitters department had left their wooden box lockers behind in the machine shop locker room and it became a free-for-all to take possession of a locker, which were of various sizes and forms. We were not supplied with any overalls, so most of us just wore old clothes, which we changed into before we started work. I was an exception, because my father, who was a marine engineer, insisted that I wore proper overalls. I was ragged about this by my fellow-apprentices and the machine shop personnel for being different; but they soon got used to seeing me in my white overalls. However, I was easily identified by the British workshop foreman and thus had to be seen working diligently whenever he was around.

As 1<sup>st</sup> year apprentices, we were paid \$14.96 for a 44-hour week; working between 7:30 AM and 4:30 PM on weekdays and 7:30 AM and 11:30 AM on Saturdays. Payday was on Friday evening and most of us had to be subsidised by our parents from Monday onwards, in order to get to work and keep ourselves suitably nourished. My food and transport expenses per working day was about \$2.00 and that left me with very little to spend for recreation during the weekends. Fortunately for me, my parents knowing my ambition to be a sea-going engineer provided me with an additional allowance to make ends meet. I was even able to continue playing hockey for Singapore Recreation Club and took up boxing at the Singapore Harbour Board Sports Club; through the encouragement of a fellow-apprentice, Willie Tan who was the Singapore amateur flyweight champion in Boxing at that time.

The 1<sup>st</sup> year went by very quickly and was well spent working with the master engine fitter, Jit Mui. He was an excellent teacher and allowed Michael and me to do most of the work under his supervision. Being one of the leading engine fitters in the machine shop, he was given all the interesting and complicated engine overhauls and fitting assignments and we benefited thereby. However, being confined to a particular working location in the machine shop, we had to work hard during that 1<sup>st</sup> year of apprenticeship and could not engage in the extra-curricular activities that the senior apprentices were involved in during working hours. However, there were some slack periods in the machine shop, when Jit Mui allowed both Michael and I to engage in the traditional activity of apprentices; making rings and belt buckles out of scrap stainless steel, we could scrounge. The machine shop charge-hand allowed us to do our thing, as long as we were not seen doing so by the British workshop foreman.

### **The 2<sup>nd</sup> & 3<sup>rd</sup> years in the Outside Fitters Department**

In January 1959, we were all transferred to the outside fitters department. We were singly assigned to engine fitters and I ended up with an in engine fitter called Ah Hong. Ah Hong was a serious man with very little to say; but he worked under a charge-hand who had been given the job of completely overhauling the machinery of a Gold Dredger, which was being re-activated for a gold mining project in West Africa. This dredger had 2 diesel engines which drove electrical generators for powering the dredging and propulsion machinery and we were in the team which had to carry out the complete overhaul of both diesel engines. This job took about 4 months and we had to endure 3 months of chatter from the rivet guns, as numerous bottom hull and side hull plates had to be renewed on the vessel. The rivet stoves also made it quite uncomfortable, as they emitted substantial heat within the poorly ventilated engine room and we had to work for long periods under rather hot and noisy conditions. However, I stuck to it as I was acquiring a lot of experience in the overhaul of diesel engines.

After about 6 months of hard work, I decided that I needed a change and to enjoy the other aspects of an apprentice's life. I elected to work with a younger engine fitter, Joe Chang who had previously worked as an engine fitter on-board a Blue Funnel Line ship trading between Singapore and Perth, Australia. Joe Chang could speak pretty good English and taught several apprentices in his team as much as he knew. He also allowed us to do most of the work allocated to him; which was what we wanted. Unlike my first 6 months in the outside fitters department, I began to enjoy some slack periods, when there was no work to do and our team was put on standby. We also had lots of short duration assignments which were interesting and less demanding; which gave me the opportunity to do some fishing from the ships lying alongside the Chermin wharf or Oil wharf, which were located at the extreme ends of the dockyard and well away from the eyes of the British foremen, who tended to visit the ships lying in drydock or alongside the main repair wharves. Anyway, we always had lookouts who warned us as soon as any white-suited British foreman approached the ship we were on. We then disappeared from sight or walked off the ship.

There was no system in place to ensure that the apprentices did their work; we were left to our own devices and to learn whatever we could. Therefore, during the 3<sup>rd</sup> year of my apprenticeship, I led a team of 2<sup>nd</sup> year apprentices and we would spend entire mornings before lunchtime inspecting the engine rooms of the ships under repair and finding out about the machinery systems on-board. We befriended the engineers we met in the ship engine rooms and asked questions about the machinery and anything we did not understand. In January 1960, my brother Gerard joined the Singapore Harbour Board Dockyard Department in Tanjong Pagar

as an apprentice engineer and my father decided to buy us a 5 year-old 'Ford' car to enable us to go to work easily. The car was purchased at a princely sum of \$900 from a family friend and it took me some 3 months to get my driving licence. Thereafter, I used the car to transport Gerard and Michael to work and back home. It did not reduce of our transport costs, but it meant that we could get up a little later every morning in order to get to work by 7:30 AM. During this 3<sup>rd</sup> year of apprenticeship, 2 Singaporean Chinese charge-hands in the outside fitters department were promoted to foreman. As I had worked under charge-hand, Leong Kai Pong during the latter part of my 2<sup>nd</sup> year, when he was promoted to foreman, he allowed me to lead a small group of apprentices to work on our own assignments on the ships under his charge. This boosted our confidence, as we then reported directly to the charge-hand, who inspected our work upon completion and gave his direct approval. During this 3<sup>rd</sup> year, I also got involved in doing work outside the dockyard; on-board ships lying alongside the SHB cargo wharves or lying at anchor in the eastern or western anchorages. These work assignments appealed to me, as they gave me a day or two away from the dockyard, enjoying the sea breeze and freedom away from the control of the British foremen. During slack periods, especially when the Chermin wharf did not have a ship lying alongside, we would spend the afternoons lazing around the Chermin wharf ship restrooms, which had been cleaned in readiness for the next ship to berth there. We would set up a lookout to warn us if any British foremen came within sight. However, 6 of us did get caught one day by 2 British foremen, who were probably told what we were up to and set a trap. We were let down by the apprentice on lookout duty, who upon being suddenly confronted by the British foremen ran away and left us stranded. The British foremen then had their fun by making all

6 of us polish the propeller of a large ship lying in Queens Dock. All of us dreaded doing this type of work, as it was dirty and extremely uncomfortable; mainly because the combination of bronze dust, calcium dust and marine growth coming off the rotating disc of the grinding machine got into every crevice of the person doing the grinding work, even though goggles and caps were used. We were made to work continuously, as the British foremen stationed themselves on the dock gate walkway, directly above where we were working. However, they were decent enough not to report us to the Apprentice Supervisor, who would have suspended us for the misdemeanour and recorded a black mark against all our names.

From time to time, we also 'flew' from work, in order to watch a movie downtown. This would normally happen after the lunch break; the 'flyers' punching in their time-cards, placing them in the rack and then walking out, when the timekeepers on duty were not looking. Sometimes, the 'flyers' walked out through the main vehicle gate, as the Singapore Harbour Board policemen were quite friendly and did not interfere with the apprentice activities. Another way was by going out in cars or on the lorries going out of the yard through the main vehicle gate. The 'flyers' had to arrange with their fellow-apprentices to punch out their timecards at 4.30 PM. This arrangement sometimes went awry and the 'flyers' would receive a suspension and black mark for their misdemeanour, upon being caught. I personally felt that 'flying' was rather risky and only did so on about 3 occasions during my 3<sup>rd</sup> year, without getting caught. However, 'flying' was regarded by all the apprentices as being something that every apprentice should do at least once during their apprenticeship; to show their mettle and that there was apprentices' blood running through his veins. As we were young and foolhardy, most of us somehow got involved in 'flying at least once during our apprenticeship.

Early during the 3<sup>rd</sup> year of my apprenticeship (1960), a group of apprentices who used to regularly work overtime in the evenings, to supplement their meagre salaries, started to build a

platform under the main wharf. During the late evening, they would transfer staging planks which they had collected during the day, through the electrical power manhole opening in the wharf deck; securing the planks with wire to form a 2-plank walkway, to reach a large platform beneath the wharf about 30 metres from the manhole opening. The platform was about 3 square metres, made up of multiple staging planks secured by wire to the platform supports and was lit by a multi-bulb lighting system, which got its power supply from the electric power supply outlets located at the manhole opening in the wharf deck. The under-wharf platform became the venue for chess and draughts games and the resting place for weary apprentices, who needed to catch up with their sleep. It could be used as long as a ship was lying alongside the wharf and the seaward side of the platform was covered. Entry was by way of the manhole opening and those entering or exiting had to be careful that they were not seen by the British foremen. The same group of apprentices who built the platform and walkway, also made a crude shotgun, by machining a small-bore steel pipe to house a shot gun cartridge and the screw on cap with central hole drilled into the dome; for the firing pin to be inserted and hammered by a 1-pound hammer. 2 apprentices were required to fire this crude shot-gun; one holding the single barrel and the other firing the shot by hammering the firing pin. I was told that the cartridges had been obtained from hunters, who were then shooting flying foxes at the nearby Mount Faber and these had been smuggled into the dockyard. The apprentices used their crude shot gun to shoot stray cats and even went so far as to shoot up the chief foreman's office glass window; following which their risky activities had to be stopped, as the British chief foreman mounted a search for the culprits. As all these activities took place during the evening overtime hours and as I did not work overtime, I was able to stand clear and not be implicated. However, the code of silence among the apprentices stood firm and the culprits were not caught.

### **The 4<sup>th</sup> year in the machine shop doing machining work**

In January 1961, all the 4<sup>th</sup> year apprentice engineers were transferred back to the machine shop to do machining work. We were assigned to the lathe machines, drilling machines, boring machines, slotting machines and slide cutting machines; in order to gain all round experience with setting up, centring and securing the components or materials to be worked upon and machining them down to the required dimensions. Here again, it all depended on our interest levels, as we were left to our own devices. There was no one around to ensure that one learnt the skills or to just laze around marking time. I endeavoured to learn as much as I could in machining work, but bearing in mind that the Part A exams for the MOT 2<sup>nd</sup> Class Certificate of Competency would be coming up in February 1962, several of us spent time during some days studying or discussing the subjects in preparation for the forthcoming examination. We would find a secluded corner in the machine shop, where we could work away under the protection of the other workshop personnel, who would warn us to disperse if any of the charge-hands were around.

The 4<sup>th</sup> year went by rather swiftly and we all balanced our time between work and study. Towards the end of 1961, those who were taking the Part A examination intensified our study periods. We got no assistance from the SHB Dockyard, as we were all supposed to be taking the day-release mechanical engineering courses at the Singapore Polytechnic as part of the apprentice engineers program and the Part A examination was not part of the program.

## Preparing for Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency examination

From the beginning of our apprenticeship in 1958, we soon got to know the senior apprentice engineers and from them found out how we could work towards qualifying for a seagoing career. Several of us who were interested in a seagoing career made enquiries and found out that after 4 years as an apprentice engineer, one could sit for the Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency examination, which would qualify us to join a ship immediately. I then decided that I would work hard towards obtaining the Part A, as soon as I completed 4 years of apprenticeship. The syllabus for the Part A examination was obtained and the interested apprentice engineers went down to Motion & Smith in Battery Road, to obtain the necessary textbooks for the 4 subjects; engineering drawing, applied heat, applied mechanics and mathematics. In December 1958, the Singapore branch of The Institute of Marine Engineers was formed. The apprentice engineers were invited to join as probationer students and several of us joined immediately. This opened the way to obtaining the Institute publications, which would assist us in our studies.

In early 1959, Singapore Polytechnic started the day-release courses. I was able to enrol for the Part 1 of the Council of Engineering Institution (UK) course which would last 3 years. However, after the first year, this course was discontinued and I was transferred to the course for the diploma in mechanical engineering. After 6 months in this course, I realised that I was not achieving very much to prepare for the Part A examination; as the syllabus deferred significantly. As I then had only about 18 months left before I sat for Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency, I then decided to leave the Singapore Polytechnic day-release course in order to study on my own at home during the weekday evenings after work. This meant that I had to revert to the 44-hour working week and had to spend at least 3 hours on at least 3 days every week working at home in the evenings; in order to cover the syllabus of the Part A examination. This study was supplemented during the 4<sup>th</sup> year by studying during the day in the machine shop, together with the other apprentice engineers who were taking the Part A examination. In late January 1962, I received a letter from the apprentice supervisor, which verified that I had served 4 years as an apprentice engineer. Together with the other apprentices who wished to take the Part A examination, I went to the Marine Department, which was then, located in the Post Office Building in Collyer Quay and put in my application for the examination, which was scheduled for end-February 1962. In mid-March 1962, I obtained Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency and immediately applied to Straits Steamship for a 3<sup>rd</sup> engineer's position on-board their Home Trade cargo ships; although this meant that I would have to put in 27 months sea-time, as opposed to 18 months sea-time on Foreign-going ships, before I could take Part B of the MOT 2<sup>nd</sup> Class Certificate of Competency. My first choice was based on the fact that I would be senior engineer on-board the ship and this would give me more responsibilities and experience at a very early stage of my seagoing career. On the foreign- going ships, I would be a junior engineer working under the supervision of the senior engineer; but foreign-going ships would pay about twice of what I would be getting as 3<sup>rd</sup> engineer on-board a home trade ship. However, I rated the experience factor higher than the earnings factor and therefore accepted the offer from Straits Steamship, when it came at the end of March 1962, I was therefore the first apprentice from the 1958 batch to leave after a 4-year apprenticeship with the Singapore Harbour Board Dockyard Department.

## My Reflections

I must say that I enjoyed the 4 years as an apprentice engineer in Keppel Harbour dockyard; although the meagre wages made it rather difficult to make ends meet and I had to rely on my parents for weekly supplement during the 4 years I was there. Although it was called an apprentice engineer program, there was no structured training program besides sending us for day-release courses at the Singapore Polytechnic, from January 1959 onwards. Our Apprentice Supervisor, who was not technically-trained, only dealt with our work attendance and disciplinary issues, but was not involved in our technical development. As such, I had to learn as much as I could from the engine fitters that I was assigned to or chose to work with; in order to develop my own program of gaining marine engineering knowledge in the machine shop and on-board the ships under repair.

As I wanted to obtain the Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency, upon completing 4 years of apprenticeship, I was compelled to withdraw from the mechanical engineering diploma course at the Singapore Polytechnic in mid-1960; in order to prepare for the Part A examination in early-1962. Perhaps, I was 2 years too early, because in 1960, Singapore Polytechnic started a full-time marine engineering course to prepare the students for Part A of the MOT 2<sup>nd</sup> Class Certificate of Competency. The first batch for this course were so well prepared for their seagoing career that most of the graduates went on to obtain the MOT 1<sup>st</sup> Class Certificate of Competency, before they came ashore to participate in the growth of the Singapore Marine Industry during the early-1970's. However, during the 4 years of my apprenticeship, I did learn how to share and co-operate, with the fellow-apprentices, in order to survive in the dockyard environment. I also learnt how to be street-smart; which is something that perhaps the Singapore Polytechnic graduates missed out on. The friendships and camaraderie which were formed with fellow-apprentices during that period still prevails; although more than 50 years have passed by since we first met as 17 year-old boys on 23<sup>rd</sup> January 1958.

**Recorded for posterity by Ron Pereira in June 2012**