

**2) S.S. Solen (Shell Tankers 42162 Tons 22000 SHP callsign GHPG
2nd R/O - London 1/1/68 - 4/5/68 Stavanger.**



I joined at Shellhaven on the river Thames, not all that far from home, and thus easily found. A friend of my mothers drove me there, which made things a lot easier. This was a really beautiful ship, with fine lines and relatively new. She had split accommodation, with cabins amidships and aft. There was a very impressive double curved staircase in the amidships accommodation from the main entrance hall up to the captains and owners suits on the second and third decks. The bridge and radio room (and the senior radio officers cabin) were up a further flight of stairs. Engineers and crew were aft, deck officers amidships. The bar and saloon were also aft, which caused some problems in heavy weather particularly after a few beers. We never lost anyone though, but people occasionally got very wet when a wave ran up on deck and sprayed the raised catwalk.

The chief R/Os cabin was just abaft the bridge. It was roomy and close to the radio room. My cabin (as still a junior R/O) was two decks down, just across from the officers laundry! The mid-ships accommodation was beautifully quiet, and when the ship was rolling, I could quite often hear the oil in the cargo tanks a few feet below my cabin gurgling or sloshing around. My chief was a Mr A. J. Pennington (Anthony James hyphen Pennington as he used to call himself, but was quite happy being called Tony). He was young but experienced and had recently taken the advanced Marine Electronics course, probably one of the first to do so.

We were powered by a steam turbine which gave a very quiet vibration-free ride, especially amidships where I was. There were two tall funnels aft, where the engine room was situated, the large swimming pool being sited between them. Each of the bright red painted funnels had a huge floodlit yellow shell emblem painted on the side, the trade mark of the company. They could be seen for miles. That and the twin aft funnels made the ships very distinctive and easily recognised.

The radio equipment was also better than the old Benhope, especially the transmitter, which was a Globespan with over a Kilowatt output using AM and CW modes from a final stage comprising 3 x 4-400a valves in parallel, modulated by 2 x 4-400's in push-pull). the usual Atalanta receiver and accessories rack with the Salvor emergency transmitter, Alert receiver, autokey automatic keyer and Seaguard auto-alarm was fitted. The radars were interswitched

Argus-Hermes, my first experience of interswitched radars. It enabled any radar transceiver, display or scanner to be used by any other component, by use of a very flexible cross switching system. The radio antenna was also large and high, stretching almost the full length of the ship. It was a really super high T type, between the Foremast and After mast. We could work stations on 500 KHz and 2 MHz R/T which other ships could hardly even hear.

I even managed to work back to Humber Radio (GKZ) on 2 MHz R/T from the Persian Gulf, but signals were not good enough for a telephone call. I got told off by him actually for trying. He said I should use Portishead (the British long range HF station, which would have been much more expensive!) For my trial, the power reduction on 2 MHz was turned off, and I was running the full kilowatt output of anode and screen modulated AM (around 4Kw PEP output on 2 MHz!) I doubt I have ever had more power at my disposal at any time since. I can remember that the modulation transformer used to talk back to me quietly on full power, and on 500Khz I could occasionally hear the modulation tone from a slight brush discharge due to the very high voltages around the antenna connection.

The large antenna could also however be a disadvantage when static electricity built up. One evening, I heard an intermittent loud crack when talking to my chief outside my cabin. Curious, we followed the sound upstairs, and into the radio room. There we were led to the aerial switch box by the bright blue flashes and almost ear-splitting bangs emanating from it. The antenna was being charged up by static laden dust, and arced across to earth when the voltage was high enough to jump the gap inside the antenna switch box. Carefully making sure whatever we touched was earthed, we turned the earthing switch. As the contact got closer to the antenna, the intermittent bangs changed to a deep loud angry buzz, then higher into a whine, finally ending in silence when the antenna was properly earthed. The initial gap which arced across must have been fully three inches, so it proved the antenna insulation was good!

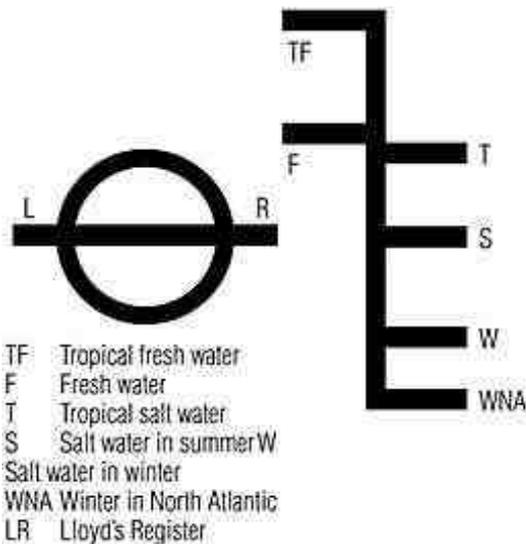
The build-up of static charge on antennas is a re-occurring theme on all ships, especially off the West African coast, where a dust laden wind (The Harmatan) can carry Sahara dust hundreds (or even thousands) of miles out to sea, giving every ship it passes over a thick red coating, and a charge of several hundred Kilovolts!. This effect was be experienced a number of times throughout my seagoing career, but it never ceased to be somewhat disconcerting.

When viewed through the skylights from above, the ship had a huge, seemingly almost empty engine room. Looking down, the apparently small, white mound of the turbines could be seen far below, with their associated high pressure pipe work, all very well insulated and painted white too. There were two massive boilers at the foreword end of the engine room, completely filling it. These provided the steam at around 800 degrees for the turbines. Despite this, it was possible to stand right next to the turbine casing and high pressure steam pipes without feeling any undue heat, due to the very thick insulation around them. The boiler uptakes, steam safety valves and soot blowers took up most of the room above the boilers and on into the funnel itself. There was also an economiser – a sort of hot water boiler using the exhaust gases for pre-heating the boiler water before it is injected into the boiler.

The turbines were connected to the propeller shaft by a huge gearbox which reduced the 15000 or so RPM of the turbines to the 120 RPM required by the single huge propeller. This, and the air blowers for ventilation and supplying air to the burners for the boiler gave the most noise in the engine room. Under the turbines, were the huge condensers, for recycling the steam. They could maintain around 30 inches of vacuum to improve the efficiency of the

turbines, and get the last kilowatt of power from the steam. The size and power of engine room machinery started to fascinate me, and I used to spend quite some time down there talking to the watch officers and looking around.

One should maybe mention here something taken for granted by seamen. Its called the Plimsoll line. This is a marking on the ships side showing the maximum depth to which the ship can be laden for various parts of the world. It prevents unscrupulous owners loading ships down until they are virtually underwater in an effort to get as much cargo in them as possible. This of course is dangerous to the ship and crew, particularly in stormy waters. In the “good old days of sail” many a ship was lost due to being overloaded by owners out for as much profit as could be had. These days it is more uncommon, but by no means unheard of.



The markings of the Plimsoll line take account of the weather conditions and densities of the various oceans. Also the type of cargo a ship carries and the ships construction play a part in where the markings are placed. For example a ship cannot be loaded so heavily for “Winter North Atlantic” waters as she could for tropical waters, as it would be dangerous to do so.. It is not only the bad weather, but also the cold waters of the North Atlantic are denser, and make the ship float higher. The ship would then be overloaded, and float too deep when sailing in tropical waters On its passage through the oceans, a ship actually floats higher and lower due to the density changes caused by variation of water temperature and salinity. This can make several feet difference and is thus of great importance if you are in a heavy storm!

These markings are periodically reviewed, and certain classes of ships suddenly are able to carry more (or less) cargo than before. The Solen for example was initially certified to carry 67000 tons of cargo. Later this was revised in the light of heavy waterproof deck fittings, and all main deck doors being water tight and other changed regulations, together with the trading pattern of the ship. She was able to load deeper, hence the uprated carrying capacity of 72000 tons. The markings are inspected and renewed each drydock and surveyors check the ships draught rigorously against what is allowed at almost every port. An overloaded ship can be heavily fined and refused clearance to sail. It is something not taken lightly.

Chinese New Year

The crew of the Solen were Hong Kong Chinese, who lived aft, underneath the engineers accommodation. At Chinese New Year, which was their biggest celebration, we were invited aft to their party. Mountains of delicious food, and booze that flowed like a river. One beer in the glass, one beer can open ready and one cold beer can "on standby" next to it. After a while, when the party started to get louder, I was introduced to the dreaded "Yam Sing" with a glass of whisky. Drink it in one gulp, and the empty glass must be placed upside down on your head. Not to do so was to "lose face" with the crew, so not something to be thought of. I didn't like whisky, and never usually drank spirits, but it seemed here it was compulsory!

I don't remember much after a while, but I apparently took myself off. It seems that God looks after children and straying seamen. In any event, I made it to my cabin without getting my feet wet. The Chief Officer (obviously an experienced drinker!) became a little worried, wondering where I had got to, and went amidships to see. He found me lying on the floor beside my bunk - asleep. He tried to wake me up to get me to get into bed. I reportedly got half way up, then said "I'm quite comfortable here really" and flopped back down. He then apparently picked me up and plonked me on the bunk, where I woke up next morning, not remembering anything of it.

Our route was Europe - Curacao / Maracaibo – Europe with one trip out to the Persian Gulf. These ensured quite long periods at sea. We thus devised various ways to prevent boredom, and keep ourselves entertained. We had a spare cabin next to the Officers bar. This was turned into a Scalectrix model racing car track, complete with paper mache mountains and tunnels built on a huge sheet of plywood. Each officer had his own car, and we could race I think three at a time around the track. Each car was "customised" to make it faster or more manoeuvrable. Some had miniature lights fitted as well, so we could turn off the cabin lighting and still follow the race. This looked really rather spectacular, but was often the time when an anonymous strategically placed beer can would sabotage a run, and sometimes cause absolute mayhem on the track or in a tunnel!

As radio officers, we were the all important repair men when a car started smoking, or its lights failed. The radio room carried a varied supply of fine motor winding wire, miniature light bulbs, motor brushes and small screws for quick repairs. The middle of the South Atlantic is not an easy place to get your model car repaired, and the call out charge is horrendous! The engineers never really trusted themselves to do their own repairs. A heavy shifting spanner (their tool of choice) was not the best one for this job!, so someone with a somewhat lighter touch was preferred.

As these car races could become quite ferocious, the loser having to buy the next round of drinks, all tricks were resorted to. These including beer cans in the tunnels, a stealthy finger on the track, or the surreptitious short circuit. When a round of beers is at stake, all sense of fair play vanishes!

At Mina Al Ahmadi, we were moored to a very long oil jetty, with virtually nothing ashore except tank farms and pumping houses. The hospitals in almost all the Arabian countries, have a hard time getting blood for their hospital operations, the Muslim religion often forbidding the giving of blood. Foreign merchant ships are therefore an important source of blood donors for them, and frequently, a blood donor service is set up at the end of the jetty. At that time, the donor got 5 Dinars (about 2 Pounds Sterling at the exchange rate then valid) for his pint of blood. I had just started to collect foreign bank notes, and as I did not have any

from Kuwait, I got a walk, a free blood test and a nice new 5 Dinar note for my trouble. Not a bad deal!.

The ship's Gyro compass was a somewhat large, older model Sperry. It was housed in its own room together with a rotary transformer and control electronics, located aft of the bridge, and next to the Radio Room. One day, there were shouts of dismay from the bridge as the ship started to turn in circles. There was also a horrible howling noise coming from the gyro room. The bridge quickly switched off the auto pilot, and called a sailor to steer by hand using the magnetic compass. I and my chief dashed into the gyro room to see what was happening to the gyro.

We were confronted by this delicate piece of apparatus virtually standing on its head inside the cage, screaming loudly in distress as it was brutally pushed around by a faulty servo system. A bright flickering blue glow was coming from the control electronics rack. It must be remembered that these older gyros contained a heavy 20 or 30 pound (10 - 15 Kilos) wheel, revolving at 5 to 10 thousand RPM. The whole thing suspended by thin piano wire on gimbals to lessen frictional losses and ensure freedom of movement.

The forces acting on those thin pieces of wire when the system was driven around by its servo must have been tremendous. There were stories of faults which caused the heavy gyro wheel to actually break loose and wreak havoc inside the gyro room until its energy was expended. We quickly switched off the system, and waited outside until the wailing had died down before venturing inside again to take stock.

The servo was driven by a balanced valve thyatron system. One of the thyatrons had suddenly gone short circuit, causing the balanced system to become totally unbalanced and giving full drive to the servo motor. A new valve, some quick adjustments, and all was right with the world again. A sigh of relief from all concerned. There was no damage, and after letting it run up to speed and stabilising, the ship could be put back on auto pilot.

At the time, this ship was classed as a very large crude carrier (VLCC), and only a very few tankers were larger. These days of course, it would be looked at as being comparatively small, as there are many much larger ships. The process of docking such large ships however was, and still is, a problem. The pilot must be expert in judging very slow movements, as bringing a loaded tanker alongside just a bit too fast could well result in a concertina shaped pier and pipelines, not to mention a bent boat!

The inertia of well over 50,000 tons of ship (or these days possibly a lot more), plus cargo and fuel is immense. A fully loaded modern supertanker, sometimes carrying a cargo weighing over half a million tons takes a lot of stopping, even when moving very slowly. Modern technology includes Doppler speed measurement systems and automated side thrusters on the ships to help, but even so, accidents can - and unfortunately do - still happen. These modern monsters can reach well over 600,000 tons displacement. You can imagine what could happen if they "nudged" a pier just a bit too hard.

The net result was that berthing was, and still is, a very slow process for these huge ships, often requiring long hours standing in the cold and rain on the bow and stern of the ship waiting to get it tied up. Patience is hard to keep after a long tiring voyage. It was especially hard for jolly Jack waiting to spend his hard earned cash on a run ashore. Even when the ship is alongside, all ropes and fenders have to be checked and secure before "finished with engines" is rung by the captain, and everyone can stand down. The gangway must be lowered, gantries rigged, and the huge cargo hoses connected as quickly as possible so that the precious oil could be pumped out. Port health must clear the ship, then Customs and

immigration officials must visit, and see that we have no unwanted persons on board, and that no one is smuggling illegal or undisclosed goods. This can sometimes take quite a while if rummage squads tour the ship looking into likely hiding places. It is only when all formalities are finished, and the ship and everyone on it are cleared, that the waiting crew can go ashore. It can sometimes be a long and frustrating wait.

Steam turbine ships of this size required immense amounts of fuel. It is the main reason they have virtually died out today. The Solen burned around 120 tons of heavy fuel oil a day at normal cruising speed, and carried enough for several months between fuel stops. Heavy oil is one of the cheapest of fuels, being almost like tar, and has to be heated to around 100 degrees Centigrade before it can be pumped into the burners. Bunkering 10,000 tons of the stuff however, is still expensive in anyone's language. It also took quite a while to load, and bunkering alone could take a whole day. It is strange to think that we carried as much oil in our fuel tanks, just for our own use, as would have been contained in a fully loaded oil tanker as cargo only a few years previously. Such is the speed of progress!

Even though my Grandfather used to work as an engineer for the British airline BEA, I had never flown before, or even been near an aircraft up until then. Thus, my first time ever in an aircraft was the flight home from Stavanger to London. I was a little bit nervous – but also quite excited at the prospect. All relief's had previously been in the UK and so the ships had been reached by train or taxi. It was a new experience and was to be the first of many, sometimes much longer, international flights to and from ships all over the world. It was a good flight, but I was not so impressed by the raw fish (apparently a delicacy) which we were served on the plane as a meal.

I was never one for fish (unless deep fried together with chips and peas!)

Our Sister ship Serenia

