

Visit aboard S/S Markland March 1941

She is armed with a 4.7 inch gun aft, with a pedestal nearby for an anti-aircraft gun when it comes. Gun is manned by a crew of naval ratings, who have fairly frequent firing practice and are good. Alarm bells ring throughout ship when the "Action Stations" switch is closed on the bridge. Ship retains its peace-time paint, black and buff. All portholes have been heavily painted over, and all doors leading out-board are fitted with a cut-out which automatically switches off lights within the cabin. Bridge windows on port and starboard sides are covered with a heavy quilt of canvas filled with sand and stitched horizontally about 8 inches apart. Other sand-quilts have been made ready to hang over the forward windows in case of machine-gunning by aircraft. The anti-magnetic-mine device is a girdle of the "de-Gaussing" type, consisting of 24 electric wires arranged in several separate circuits or coils, and charged by means of the ship's dynamo. To get the necessary power for it, unnecessary light were disconnected throughout the ship, and all electric appliances in cabins forbidden. (Otherwise ship would have had to instal larger dynamo.) Theory of the device is to off-set the natural magnetism of the ship's hull, which it receives from the earth. Some coils can be switched off in the neighbourhood of the equator, where earth magnetism is minimum; but as the ship goes towards the poles, more coils are required. When going from the northern to the southern hemisphere the direction of the current in the de-Gaussing cable must be reversed, to correspond with the change in direction of the earth's magnetism. Each girdle has to be "made to measure", as no two ships have the same amount of magnetism; this has to be calculated by experts; the girdle may contain few or many wires according to the amount of ship's magnetism. Early practice was to fasten the girdle around the ship's plating up near the bulwark. This proved impractical, as the chafing of the ship against wharves etc, damaged the cables. Capt. Williams told of a tanker coming into Halifax with her girdle broken in many places, and the wires dangling in bunches down her sides. The Markland's girdle consists of 24 insulated wires, all wrapped in canvas to form a single hawser-like cable, about 6 inches diameter. It is fastened inside the bulwark out of harm's way. When leaving port, the captain switches on the de-Gaussing device at once, and the captain steps out on deck with a small pocket compass to make sure the current is on. When the girdle is properly charged, the "north" (blue) end of the compass needle points straight inboard, no matter on which side of the deck it is held. Incidentally, the de-Gaussing gear affects the ship's compass to some extent, and the variation has to be marked and allowed for; this variation is more when the ship is travelling in an east-west line than when her course is north or south. Markland keeps her de/Gaussing gear going all the time from port to port, even though her run, Nova Scotia -- New York, is considered a safe one. German submarines (and possibly surface craft) will undoubtedly lay mines off this coast soon. Williams checks his ship's compass by taking visual bearings on known points by means of a small brass "bearing-board", held in the hand against the forward window or the bulwark on port or starboard side of the bridge-house (assumed to be true fore-and-aft or thwart-ships); a pointer with a sight at each end is lined up by eye with the shore object and the bearing then read off the calibrated brass top of the board. Pride of the ship are the radio direction-finder, and the echo sounding apparatus, which stand side-by-side at the starboard end of the bridge house. The "Husun" sounding apparatus depends on two magnetic coils fastened to the ship's bottom inside the skin, one each side. These are kept filled with fresh water, and are connected by electric wires to the apparatus on the bridge. When the ship desires a sounding, the Husun apparatus is switched on; one of the coils on the ship's bottom acts as a transmitter, throwing an audible note straight downward through the sea, which strikes the bottom, is reflected, and caught as an echo by the other coil, which acts as a receiver. The time lag is an accurate gauge of depth. This is calculated by an intricate machine on the bridge, where a metal pointer, sweeping in a half circle across a moving sheet of paper, always moist, shows the depth in fathoms with a stain like the faint brush-mark of a purple water-colour. " With these two things", said Williams, standing with an affectionate hand on each, " I can take the ship from Liverpool to New York and back."

Owing to the fact that submarine listening devices can pick up almost any electrical oscillation, the sounding device is only used when absolutely necessary, and then it is done quickly. For the same reason, private radio receivers on board ship are forbidden, as the "carrier wave" or "howl" of the usual heterodyne circuit can be picked up some distance away. For this reason also, radio transmission is forbidden at sea, except in urgent circumstances. All messages are arranged in elaborate codes. On each arrival in New York, the captain and wireless operator must go to the Britishconvoy office there, where they receive instructions. The merchant service codes are changed every three months. The wireless operator has two large code books, each with a sort of "key" code, so that messages are changed from plain language to the "key" code, and then into the real code, and vice versa. Also the captain has a sort of super-code, to which not even the wireless operator has access.

Distress calls, in addition to the regular SOS, which is still used to indicate ordinary distress at sea, are as follows:

- QQQQ ---Attacked by an enemy armed-merchant raider.
- RRRR --- " " " " surface warship
- SSSS --- " " " " submarine
- AAAA --- " " " " aircraft

In the port of New York, inspectors seal the radio transmitter by threading a wire through the "jigger" transformer secondary (thus short-circuiting it) and the two ends of this wire are brought together in a button seal. In Liverpool, the customs officer is supposed to do ~~##~~ seal the apparatus; he does it by removing the two main transmitting tubes and binding them to the grill surrounding the apparatus with a pink ribbon sealed with sealing wax and the customs stamp. They are easily removed without disturbing the seal, as the operator demonstrated for me.

December, 1941

Back from North Atlantic convoys, including a voyage around the north tip of Scotland and down the east coast of England to London. Went over in a convoy from Sydney, N.S. Had no A.A. gun, no defensive equipment other than the 4-inch gun. Our original sand-quilt defense for the bridge however, had been replaced with 5/8" steel plate along the sides and along the floor of the upper bridge; there was a two-foot slit along the whole front for vision, and this protected by a steel visor projecting well out and running the whole length of the bridge. In England much extra defense equipment was installed. For A.A. defense a Bofors gun was installed aft, together with several steel boxes for its ammunition. This was a fine gun. Strangely the crew for it -- three men -- was provided by the army, and we had to carry these three soldiers about with us everywhere. As we already had three naval gunners for the 4-inch, it made quite a cosmopolitan crew of us. My whole crew (including myself) took a machine-gun course in England, and we were fitted with two machine guns in little armoured cups, one at each end of the bridge. We also were fitted with PAC (protection against aircraft) which consisted of two small mortars, one each side of the fiddley, and fired by lanyards running on pulleys to the pilot house. When ^{dived on} approached by hostile aircraft, you jerked your lanyards and the mortars shot a little projectile about a thousand feet into the air. At that height the thing ~~was~~ opened with a bursting charge and gave birth to a parachute, connected with the ship by 1000 feet of piano wire. At the base of the wire was a bomb. If a hostile dive-bomber swooped over the ship he would be entangled in the wire, and the drag on the wire automatically pulls the bomb up to him. It explodes on contact. In addition to this, you had another deterrent to dive-bombers. This was a balloon, which when inflated was about 25 feet long, 17 feet diameter, and shaped like a rather bloated Tuna fish. In convoy about the British Isles you kept this up all day, moored to the ship by piano wire. The wire was coiled on a special drum which fitted on the end of one of the ship's winches. You could let out 4000 feet of this wire very easily. You expected to have trouble with the thing, at first, especially if there was a strong wind at sea level. But usually the thing rode along above the sea level wind, in calm air, and it was queer to see it coming along so serenely high above. The only trouble was to get it down again in a bad wind. You had to wind her down with the winch until you could get hold of the balloon's downhauls. During this winding-down process she would jerk about violently, threatening to snap the wire any second. I lost one in this way. It was in a convoy coming out of the Irish Sea, just about sundown. A terrific squall came from nowhere and away went balloons right and left, a quaint sight. We usually carried a spare, and a number of iron containers of hydrogen gas for inflating them. Three of these cylinders were enough to inflate a balloon. The cylinders were quite long -- twelve feet or so. For bad weather, you had a big bamboo kite, 15 or 20 feet square, which you flew from the same piano wire, instead of the balloon. The Balloons or kites were only used in waters around the British Isles, where the danger from dive-bombers is greatest. You aren't allowed to use your wireless for signalling, unless you're on your own -- and then you'd be a fool to use ~~use~~ it. All signalling is done with flash lamp, semaphore and flags. If case you are torpedoed at night in convoy, you are provided with a kind of bomb-rocket which looks like half a bologna sausage painted with aluminium. Dangerous damn things. You set them off in an ordinary rocket socket set in the bridge rail, though these rockets have no stick. There is a special detonator which you insert in the top of the bomb, and a lanyard which you jerk from a safe distance. A charge explodes and drives the rest of the bomb high into the air. Then the other half explodes and out pours a sort of shower of white stars that give out a brilliant light. Two of these constitute a "torpedoed" signal when in convoy. If you see a ship torpedoed nearby and she fails to get her rockets up, you fire off two for her. Then the commodore of the convoy will order the special "rescue ship" to pick up ~~your~~ men. He may want the whole sea lit up, in case the sub is on the surface, and at a given signal every ship in the convoy will send up rockets of this type. When this happens, the whole area in and about the convoy is lit up like day.

All portholes are painted black, of course, and there are special door-switches which cut out the lightswitn -- these are fitted to any door opening on the deck. For steaming along in column at night there is a small blue stem light. I had a rheostat installed in the lighting circuit which feeds my ship's side-lights and mast-head lights, so that I could switch them on in moments of emergency and at the same time dim them to any degree I thought sufficient.

We now have a special apparatus for correcting the compass deviation caused by the de-Gaussing gear. It is good, but not good enough; the compass is still erratic with the de-Gaussing gear in use, and you have to check up on it constantly. In convoy ports, such as Halifax, all ships have their de-Gaussing gear checked by moving the ship over a special de-Gaussing range. In Hfx this is an area on the east side of Bedford Basin, where electric cables have been laid in a certain pattern on the bottom. You steam over these wires, switch on your de-Gaussing gear, and the instruments ashore at the ends of the electric cables show what degree of accuracy your outfit has.

Our steel protection around the bridge was installed in Hoboken, N.J. After leaving Hoboken I discovered that a neat bit of sabotage had been done. The cable which connects the bridge "action stations" button with the alarm bells throughout the ship had been cut clean through, apparently with a cold chisel.

Before leaving New York for convoy duty I bought a number of small balsa wood rafts, each holding 15 men. In England the admiralty authorities said these weren't enough. So I installed two large rafts aft, cocked at a steep angle with one end over the side, and held by a patent fastening to the mainmast rigging. The shackle can be unhooked in a matter of seconds, and the raft then slides into the sea. Each of these rafts will hold 25 men, and will support more than that. The new life jackets are fine things, a real canvas jacket, impervious to wind even when wet; you inflate them with air. The latest ones have a battery and a small red light, in case you have to jump into the sea at night.

You keep your lifeboats swung out all the time, of course -- and risk losing them when the ship rolls in a heavy sea. The boats are very carefully equipped now. You carry four times as much water as in ordinary times; and instead of the old fashioned sea biscuit, you have chocolate, and small biscuit about 2 inches square, and another kind of biscuit which contains some sort of treated pemmican, full of vitamins and that kind of thing, and supposed to be non-thirst-producing. Also you have rockets, and signalling lamps, and I believe they now require every lifeboat to have a small self-contained radio transmitter.

Going down the war channel off the east coast of England you have to be very careful about noise at night, on account of the German E-boats lurking in the darkness. There must be no slamming of doors, no voices hailing about the deck, nothing. Going along there one night I found a noise that was familiar and ordinarily meant nothing; the bilge pump sucking dry and setting up its peculiar rattle. I yelled down the voice-pipe to the engineroom to shut off the pump, damn quick.

There were 17 wrecks in, or on the flats at the edge of the channel going into Liverpool, England. Quite a business, steering clear of them. No land lights over there, of course.

I went across with a load of wood-pulp from Port Alfred, Quebec, together with some pigs of aluminium. Two or three days out, the aluminium worked loose and began to slam to and fro. I had to leave the convoy and put back to Sydney to re-stow it.

Every convoy sailing begins with a conference ^{aboard} the commodore. He is usually an old dug-out naval officer aboard one of the bigger ships in the convoy. There is also a vice-commodore and a rear-commodore. If anything happens to the commodore, the vice takes over, and then the rear-commodore. I was vice-commodore on one of my trips across. The commodore is boss of the merchant ships in the convoy. The whole show is bossed by the Senior Escort Officer, in one of the accompanying warships. Each skipper is issued with a printed sheet, showing the whole set-up of the convoy, the place of each ship in each column, her signal number, and so on. One ship is always assigned as "rescue ship" to pick up survivors of any ship or ships torpedoed; she is usually a vessel with some passenger accommodation and with a special crew.