

PART II OF III

was routine and I spent as much time as possible working on my "SS" qualification work. By this time I was becoming quite confident that I could "qualify" on all the systems and equipment that were considered the hardest to

learn. Of these, two systems required particular attention: One being the sanitary tanks and the process involed when "blowing" them to sea. One had to remember to make sure the vents were closed, they vented inboard, for if they were not closed the tanks' contents would

EARLY MISSILE SUBMARINE ADVENTURES8

Fitted with the new Regulus I missile, the fleet sub TUNNY ventured to the Arctic for cold weather tests.

BY STEPHEN EDDS

TTTY TO Alaska



Standing watch on the sub's bridge during dirty weather. TUNNY's officers and crew learned to cope with the harsh realities of patrolling Arctic waters.

be blown through the vents thusly making a real mess in the compartment. The second system, the ship's underwater garbage disposal, aside from knowing the opening and/or closing sequence of the valves, required a certain amount of patience to operate.

I got the reputation of being able to operate it without getting the system jammed and soon, much to my chagrin, found myself always on duty to operate the system.

Another engineer and myself now teamed up to make sure we covered everything that we were advised to know. We made a good team, as I had not, as yet, spent much time in the Maneuvering Room or he in the Engine Rooms. Teaming up with someone could be very useful as long as that person's interest in getting qualified was serious, and particularly so if both can complement each other's knowledge. I also knew at this point that the Engineering Officer would be the one testing my qualification and that his questioning would be thorough and that I had better know the complete right answer — there would be no "BS," as he knew the boat absolutely "cold."

It was on this trip that I got a little recruiting from the Chief Engineman. He knew I had the mechanical ability and interest and hung around with several electricians and enginemen ashore. He also knew, I didn't, that he was about to lose two or three people to special schools. I finally consented to become an "Engineman Striker."

This change, however, would not take place until we returned to port. After we got back to Port Hueneme, I started standing watches as an "oiler" in the After Engine Room. Fortunately my "boss," an Engineman First Class, was thoroughly qualified as a teacher as well as Engineman. I firmly believe he could overhaul a Fairbanks-Morse nine-cylinderopposed piston diesel blindfolded. Soon I became knowledgeable enough to start the engines, shut them down, start up and secure from snorkeling, operate the fuel system, and understand the various gauges. My last qualification work involved learning how to make fresh water in the Forward Engine Room. (An historical note: Starting with TUNNY [SS-282] all new construction boats had two Kleinschmidt vapor compression stills specified as original equipment. These stills could produce 1,500 gallons of distilled water per day. This water was pure enough to be used in the storage batteries as well as for drinking.) Operating these stills was a hot job, but it had a reward, the operator could make himself enough water to wash up with.



The destroyer YARNALL (DD-541) conducts signal practice with the TUNNY during the long Alaskan twilight. Postwar naval operations in Aleutian waters were no less dangerous than they had been during the war years.

In a relatively short period of time I had learned quite a lot, but I also knew I had a lot more to learn. One thing you learn quickly was that there was no fooling around in the engineering spaces, too much could happen too quickly and one could get into serious trouble fast if you didn't pay strict attention to what ever you were doing. This held particularly true when you were snorkeling.

Of everything I was taught and learned, I never did get used to snorkeling, there were too many opened valves and a lot of sea water could get into the boat quickly if you were not careful and react quickly

and correctly. Perhaps the worst thing, for me at least, was starting to snorkel and the wait for the sufficient amount of engine exhaust back pressure necessary to "blow open" the "A" or Able exhaust valve. Every time we commenced snorkeling it seemed to take an eternity for this valve to open. When on watch in the engine rooms you had to keep your eyes opened and keep listening for the noise that didn't belong in all the racket.

One other consideration concerning snorkeling was that the diesel engines needed to have a continuous supply of air. If the air intake valve on the snorkel mast



was closed, the only other source of air was from the air contained within the boat itself. This could become very annoying if the valve cycled a number of times over a protracted period of time.

This valve would automatically close if seawater contacted the electrodes atop the air intake mast and the suction created when the engines drew air from inside the boat was such that you had to "pop" your ears and some would complain of headaches.

Another interesting evolution occurred when, while snorkeling, the engines were shut down by the electricians in the Maneuvering Room. This usually occurred when we were involved in antisubmarine exercises. You're "minding the store" and all of a sudden the alarms go off, both visual and audible, and the engines start to slow down. You must move quickly to secure the engine and particularly so if you are in an engineroom with two engines. TUNNY's snorkel air intake valve, atop the snorkel air intake mast, was equipped with BLR, an electronic radar detection device. It would give an immediate indication if a radar pulse hit it and the automatic shut down of the engines would begin. This process would allow the submarine to become invisible, to radar at least, as soon as the intake mast disappeared underwater.

The engine exhaust system, on *TUNNY*, was equipped with a series of valves identified as: In the After Engine Room "C," Charlie, in the Forward Engine Room "B," Baker, and the main exhaust valve "A," Able in the Exhaust mast. In addition there was hand-cranked valve on each engine near the point where the exhaust exited the respective engine. The exhaust would go through the piping, up the mast and would be dispersed into the sea as it passed the snorkel exhaust mast's diffuser plate.

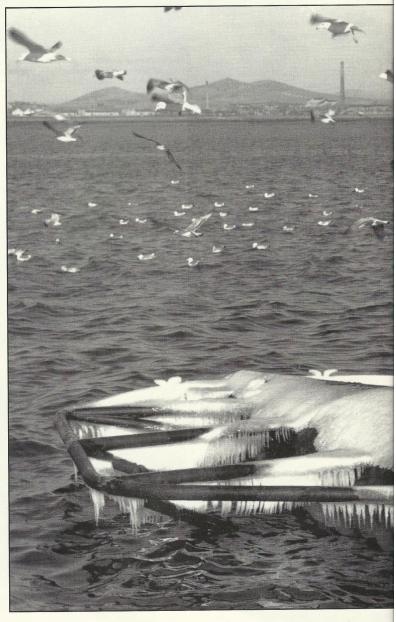
The trip back to Port Hueneme was routine and we passed the time cleaning our respective compartments and attending to any repairs or doing preventive maintenance as necessary. As it was now getting into the latter part of November, those with leave time were contemplating when they could get away. Being one of the newer crewmembers and not as yet qualified, I was surprised when I

was told I could take some "leave" at Christmas if I wanted. I was advised to take the time when it was offered since no one could guarantee when time would again be available. I elected to take ten days that would include Christmas. But first we had a major job to do.

There was one thing about the Navy, at least in submarines; there was always something to do. This time our main project in the After Engine Room became the overhaul of number three main engine. This became very interesting since it was my first experience in taking apart

and putting back together any engine, let alone an engine of this type and size. This turned out to be extremely dirty work, but the educational experience was something I needed and never regretted the opportunity to participate with my shipmates in this work. These diesels seemed to be well designed and considering the work they did, were very easy to work on. With all of the enginemen "turning to," we completed the job within a week.

The worst part of this experience came at the very end when, because



I was a "rookie," I was directed to crawl into the engine's oil sump, it was drained, to look for anything that could that could damage the engine's lubricating oil system. At the time I was about six feet tall and weighed about 180 lbs. and when I saw the size of the sump, particularly the small "ports" within the sump that I would have to crawl through, I couldn't believe it was possible. I threw caution to the wind and with a flashlight crawled to the end of the sump, turned around and came back all the time looking and feeling for anything that could cause



TUNNY's aft engine room, looking forward. TUNNY was a WWII-era diesel-powered fleet boat experimentally converted in 1953 into the Navy's first guided-missile submarine. A Gato-class vessel, her hull could withstand dive pressures up to 400 feet deep.

Gulls gather around *TUNNY's* ice-coated propeller guards.

a problem. I found nothing, but knew at this point that I was evidently not afflicted with claustrophobia as this was as confined a space as one could imagine. Amazing to me was that the Chief, bigger than myself, then proceeded to repeat the inspection to confirm my findings.

Shortly before Christmas, I left Port Hueneme and spent ten days at home in New Jersey, returning to California and TUNNY a day or two before New Year's. It turned out to be fortunate I took this leave when I did as future operations, let alone the travel expense, would have made it almost impossible to get any extended leave.

On one of my first days at home, I took my "dress blues" to the cleaners and really was taken back when the proprietor looked at me and said, "you're on a submarine, right?" "How do you know that," I asked. He replied, "it's the smell, I was in the Navy and I'll never forget the smell of diesel oil. I took this as a lesson to keep everything possible ashore from that point on.

When I returned, I was informed that *TUNNY* would be making a trip to Alaska and into the Bering Sea in February and we had to get to work in preparing the boat for this trip. There was no stated reason



given as to why we were making this journey but scuttlebutt had it that the purpose was to indoctrinate the crew to the weather conditions one could possibly find in the Bering Sea in the winter. We were again advised that where we went and what we did was no one's business but ours, or in other words we were to keep our mouths shut. Every system in the boat was tested and retested and anything that needed repair was immediately attended to. I knew this trip was for real when some cold whether clothing was delivered to the boat.

At the appointed time, along with CUSK and CARBONARO, we departed Port Hueneme and started on our journey. This trip provided those of us who were not qualified a lot of time to work on this project and I, for one, spent as much as possible working on the process. At this point I had been on board almost six months and was beginning to feel acclimated to the life one lived in a submarine. I also was becoming more and more confident of the knowledge I must acquire to be "qualified" and set a goal for myself to be ready to take

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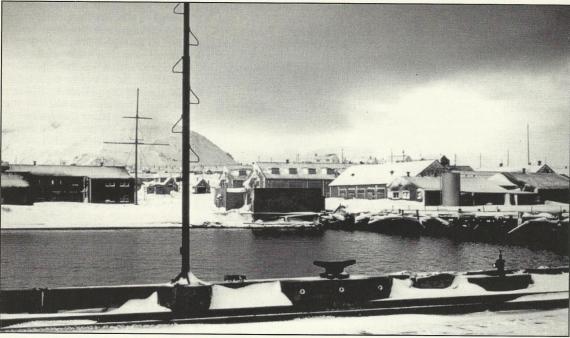
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Seen from TUNNY's deck is the inactive naval base at Dutch Harbor, Alaska. Bombed by the Japanese in WWII, Dutch Harbor was America's largest Arctic naval facility early in the Pacific War.

the qualification exam upon our return to California.

The trip became routine, if there is such a thing, but I was a little surprised at the boat's heading, it was much more westerly than I had envisioned. Having fooled around with small boats before joining the Navy, I could read nautical charts, a compass and use dividers and a parallel ruler. With my own understanding of basic navigation, coupled with the normal amount of scuttlebutt, it became obvious we were on a course that would eventually take us to the western end of the Aleutian Island chain. It did not take a genius to figure out, if we maintained this course, where we could wind up. This trip, to my way of thinking, was now becoming interesting. One thing that I had learned, particularly relative to situations like this, was not to ask any questions, or if there was not a need to know I did not want to know. Eventually we took up a more northerly course, transiting through the Unimak Pass into the Bering Sea.

After a day or two we had closed on the ice pack and one night, shortly after the evening meal, those of us who were interested and not on watch were in the Forward Torpedo Room watching a movie when we felt a change in the boat's forward

motion. We had hit something and then the collision alarm sounded. The watertight door between the Forward Room and Forward Battery was immediately secured and, along with the rest of us, the Captain became "trapped" in the compartment. Within seconds, the officer who had the conn was on phone with the Captain and proceeded to tell the CO that we had struck ice with the periscope. The extent of any damage was, at the moment, unknown, but the fact remained that we had hit the ice. This was hard on the "JG" who had the watch or the cone, as the Captain had warned him about the proximity of the ice pack. At this point the Captain left, going to the Conning Tower, and relieved the JG of his duties

This was another reminder to me that working in a submarine is a serious job, regardless of your duties, and it automatically makes you assume a certain degree of responsibility - like it or not. If for any reason you are unwilling to accept the responsibility you should immediately seek another area in the service. The basic reason behind this is that your life and the lives of your shipmates depend upon everyone working together as a team and doing ones' job to the best of his ability.

After spending a few days in and around the ice pack, along with CUSK and CARBONARO, we turned around and headed toward Adak. The trip was uneventful and we tied up at the naval base dock. At this point, as soon as the gangplank was secured, the JG who had the conn when we hit the ice appeared on deck with a suitcase and quickly departed. I do not know any particulars regarding this episode beyond what I have related, but I felt very sorry for the fellow and for him it had to be a tremendously embarrassing moment.

After two or three weeks at sea it was a good feeling to set my feet on land again. What to do in Adak. Alaska, now became the topic of conversation. This place was as desolate as could be, it was purely a military outpost and aside from an "EM Club," there was no where else, at least known to us, to go. Three or four of us got together and went to this establishment and found it, to our surprise, to be a rather nice place. We found several of our counterparts from the other boats, the CUSK and CARBONARO, and we all got something to eat, had a few beers and swapped sea stories. We all agreed that this was not a duty station we would like to be assigned; it seemed to be more or

less at the end of the world and on top of that there were no members of the opposite sex. After a couple of hours we departed and went back to our respective boats.

On the third day in port, I had the duty and became occupied with a battery charge after the evening meal. More than anything else, charging the batteries was a boring job and you couldn't wait to reach the "finishing rate." As soon as the battery charge was completed, I went forward to the Crews Mess to get something to eat and have a cup of coffee. As a good friend of mine had the "Below Deck Watch," I went into the Control Room to see what was going on and to read the next day's "Work Orders." Nothing was out of the ordinary and I accompanied him on one of his "patrols" through the boat. This, incidentally, was another ingredient I found useful in getting "qualified." Sometime after we had returned, the "Topside Watch" called and told him that an officer was at the gangplank and wanted to immediately speak with the duty officer.

In reply to the question, for whatever reason, the answer came back, "I'm not sure but I think we have a problem, there is a bus up here full of our people." My friend went into the Forward Battery and got the duty officer who immediately went topside. I then went up to the bridge to see what all the commotion was about. The bus evidently contained a mixture of sailors from all three submarines and from what I gathered an altercation had taken place between the submarine sailors and the sailors stationed on the

base. Now the duty officers from CUSK and CARBONARO joined the conversation.

Soon the bus was emptied and each person was sent to his respective boat. I went below and the duty officer, now in the Control Room, told us that he had instructions to tell the Captain that the Base CO wanted all three submarines out of the port the next morning. He also allowed that the Captain wouldn't be very happy hearing what he was about to be told. He departed to speak with the Captain and I went aft to hit the sack as I had a feeling we would all be up early.

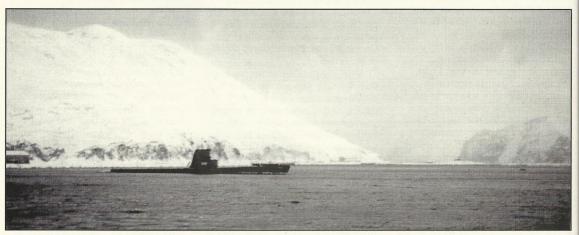
Sure enough we were up early and very soon after chow was over we were called to "quarters" topside. The Captain addressed the crew and stated that nothing like this had ever happened to him before and that he was ashamed to think that his people could be involved in such a mess. To say the CO was mad about the situation would be an understatement and I am thankful that I had the duty when this occurred. Pursuant to instructions, we departed Adak and started on our way to Dutch Harbor.

Dutch Harbor certainly fit the definition of desolate. I was told that at one time, this had been an active military base but had been abandoned prior to the start of WWII and that it had been bombed by the Japanese at one point during the war. As I recall, this attack was allegedly part of the diversionary tactics the Japanese employed at the time they attacked Midway. One thing I'll never forget about this

place was that we took on a load of diesel oil that was the dirtiest any of the engineers had ever seen. Our fuel oil purifiers had to be cleaned almost constantly after we took on this load until it was used up.

After a day or two we departed for the long trip to Kodiak, Alaska. It was on this trip that we encountered a storm that really made a lot of the sailors wish they were someplace else. I didn't normally mind a rough ocean, but I must admit, in this case, I did not really feel that great. One night, after my watch was over, I ventured up to the bridge and the quartermaster, in the Conning Tower, told me that we were taking "green water" over the bridge and that if I went up on the bridge I'd better "duck and cover" as soon as possible. One the count of 3-2-1, I opened the hatch and hastily got to a very small but protected area in the forward part of the bridge. I shot the breeze with the Officer who had the watch for about 15 minutes and then, having had enough of cold and wet, went below.

Úpon arrival in Kodiak, we tied up alongside a dock in the town's small harbor area amongst a number of fishing boats. Everyone was glad that trip was over and many just wanted to stay in their bunks and get some sleep. After getting everything "squared away" and taking a shower, several of us went ashore to look things over and get something to eat. We found a place that served food as well as beer or whatever else you wanted. We ordered hamburgers and beer. The biggest problem we had was



USS CUSK (SS-348) at anchor in the frigid waters of Dutch Harbor. CUSK, TUNNY and CARBONARO acted as a coordinated team in both launching and guiding the Regulus I missile to its target.

that the hamburgers tasted funny; there was no diesel oil flavor. On top of this, it was nice to sit still and not have the food sliding around.

The bartender was a very engaging fellow and he let it be known he was also a guide. He tried to get us interested in going hunting with him. Hanging on the wall. above the bar, was the skin of a Kodiak bear. After seeing this and hearing his physical description of these bears, it was my feeling that we should leave the bears alone. I reverted to my "rule" that the animal was not interfering with my life and therefore why should I interfere in his. Aside from this, these animals appeared to be rather amazing, particularly in size, and it seemed to me that to kill or otherwise harm one of these creatures would prove nothing. We declined his invitation.

After the meal we took a selfguided tour around the town of Kodiak. This place reminded me of something you might read about in a travel brochure; it was clean and quiet and certainly nothing like places I had been in the States like, for example, Brooklyn, New York. After roaming around for a while we returned to the boat. When we got back we found out that someone had delivered a load of "King Crab" to TUNNY. This changed our menu and the cooks really outdid themselves in preparing these for the evening meal. The crew really enjoyed eating these unique crabs and the person who gave them to us had the eternal thanks of everyone on board.

After several days of "R&R" we departed Kodiak and now took up a course for Seattle, Washington, our last stop before returning to Port Hueneme.

The passage from the Pacific Ocean into the Port of Seattle is through the Strait of Juan deFuca and because of the distance involved it required a very long "maneuvering watch." Eventually we reached the pier and got TUNNY secured to it. After getting the boat cleaned up, liberty went down. This was an interesting place to visit, but everyone was now getting anxious to get back to California and therefore happy that this was to be a short visit. Again, after three or four days in port, we finally got underway for Southern California. After for what seemed to be an eternity, we finally

arrived at the little harbor at Port



Crewmembers sun and relax on TUNNY's forward deck while still in balmy Southern California waters.

Hueneme. Before we got the boat secured, word was passed that no one was to leave the boat until we had quarters topside and the Captain had spoken to the crew.

As soon as we were secured to the dock everyone assembled on deck. The Captain then announced that our homeport was being changed to Pearl Harbor and the change would take place as soon as possible. To me this was great news as I really enjoyed seeing places and things I hadn't seen before and might not have the opportunity to see again.

As soon as quarters was over, I told the Engineering Officer I was ready to take the (SS) qualification exam. After chow we met and agreed on a date and time for the exam. At the appointed time we met in Forward Torpedo Room. It turned out that four of us would be examined at the same time. I knew that two of us were very well prepared, both of us were in the Engineering Department and had "hands on" experience with most of the systems and equipment that would constitute a good part of the exam.

We started in the Forward

Torpedo Room and the first question we were asked was, "show me how to fire a torpedo." Fortunately one of the last things I had worked on was this procedure. We spent most of the morning, almost four hours, working our way aft, spending the bulk of the time in Control Room and Conning Tower. In the afternoon we covered the After Battery, the Hanger, both Engine Rooms, the Maneuvering Room and the Stern Room. I thought I knew the boat fairly well, but I missed one piece of equipment, the IFF control box in the Control Room. To this day I swear I never saw it prior to taking the exam and I must have passed it a number of times — it was in the Control Room on the left side of the ladder going up to the Conning Tower. Three of us passed the "exam" and were told that the CO would present our "twin dolphins" insignia to us at quarters the next morning.

One of the happiest moments I had in the service was when the CO presented me with this insignia and after some 40 years, I still have it. SC

(To Be Continued)