



# FLYING CODFISH AIRLINES



## *An Uplifting Experience after an Exasperating Experiment*

*by Bill Lee*

In early April of 1975, I experienced an 'uplifting experience' from the flight deck of the USS NIMITZ, courtesy of a Carrier Onboard Delivery (COD) aircraft much like this one.



I could pretend that I was a VIP, but the harsh truth is that after some associates and I had completed an experimental task onboard NIMITZ (CVN-68), the ship's captain wasted no time in figuring how to get rid of us. Here's the rest of that sea story. Like most of my tales, it requires some background to understand why I was flying off an aircraft carrier.

During the sea trials for CVN-68, a curious and vexing problem associated with the ship's machinery had been identified. The problem only manifested itself when the ship's course was radically and suddenly changed, which was a required element of the sea trials. The problem disappeared after the ship resumed a normal course.

The equipment involved was the ship's multi-unit distilling plant. Nick-named 'stills', a unit would infrequently 'salt up' (i.e., not satisfy the maximum allowable salinity criteria for fresh water) when the ship heeled over. When that happened, automated controls would shut down the unit. Turning to port did not affect certain units, and turning to starboard did not affect others. We ran out of time, during the trials, before we could fully understand and possibly correct the curious set of circumstances described above.

When the equipment was manually reset, the units functioned normally and produced more fresh water than their rated capacity. So, technically, even with such spurious interruptions, the equipment passed a specified 24-hour capacity test by a wide margin.

Based on those test results, the vendor recommended 'accept as is', and also noted that aircraft carriers only made radical turns during sea trials and in extreme battle conditions. In addition, the vendor's Chief Engineer pointed out, correctly, that the NIMITZ was 'light' during her trials, as seen here during one such maneuver.



He predicted the problem would disappear once aircraft fuel, the ship's airplanes and associated personnel and equipment were placed onboard and the vessel sat several feet deeper in the water. I thought he was right, and since the equipment was not considered to be 'vital' by the Navy, I endorsed his recommendation. I admit, my position was based, in part, of being tired, after two sea trials, of dealing with the mystery.

The ship's captain was incredulous that we had dared suggest such a thing. I didn't think much of his protests, for he had been a pain for months. However, engineers in Admiral Rickover's group agreed with him. They ignored our 'sea-lawyering' rationalizations about meeting capacity. Don Kane, my boss and Chief Engineer of the NIMITZ Propulsion Plant design group also felt we should find and fix the problem.

Faced with the threat of loss of future business, the vendor withdrew his recommendation. Thus humbled, the vendor's staff and mine started developing ideas to determine the source of the problem and eliminate it, once and for all. Not an easy task...

Our only 'test bed' was NIMITZ. But she had been delivered to the Navy and was preparing to go to sea to 'qualify the flight deck' (a procedure required whenever a new class of aircraft carriers is first introduced in the fleet). A composite NNS/vendor team of six led by me boarded CVN-68 just before she went out to satisfy that requirement.

Once at sea, complications arose. The Navy had several heavily instrumented test aircraft onboard for qualifying the flight deck. That mission required the carrier to steam steadily into the wind and took precedent over ours. The only time the captain would allow hard turns was before daybreak. But the ship had a deeper draft than during her trials and hard turns did cause the ship to heel very much. Consequently, the distilling units, located well below the waterline in the ship's machinery spaces, performed almost perfectly.

Providing us better test conditions entailed making hard turns and using the direction of the ocean's waves to accentuate the effect. This was exasperating, because sometimes the effect we were seeking just did not happen. After a series of such attempts, which took several days, we isolated the cause and started to work on a solution. The vendor's Chief Engineer came up with a remarkably simple and practical fix that looked promising.

But in order to demonstrate that his proposed fix would work, we needed permission to physically modify a unit for experimentation purposes. We promised that the simple change we wanted to make would not harm the unit. If the idea didn't work, we could put things back in their original configuration. To us, all that was obvious.

Although the ship's captain wanted us to fix the problem, he didn't want us to change anything. He was an aviator and didn't trust engineers. Trying to talk sense to him did no good, even when the ship's Chief Engineer supported our suggestion. His mind was made up and he thought he was the absolute authority. He was wrong. Ultimately, Admiral Rickover's group had the ultimate authority.

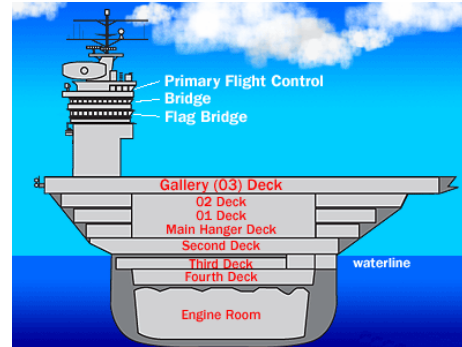
After multiple radio transmissions, we got the desired go-ahead. We opened up one unit, took out an internal part and utilized the ship's machine shop to make some minor alterations. Once back together, the unit performed perfectly under all adverse conditions.

We were delighted. Plus, I was a bit relieved. Each time the ship heeled to one side or the other, novice sailors would be caught by surprise. On one occasion, I was moving from one part of the ship to another by walking through the mess deck area. As the ship suddenly lurched, dozens of loaded breakfast trays slid off metal tables and crashed to the deck. One disgruntled sailor muttered: "I sure would like to get my hands on the idiot responsible for this mess!" He had no idea I was the idiot he sought.

With our mission accomplished, we settled back to enjoy the rest of our cruise and watch aircraft operations from the vantage point of the then-unoccupied Flag Bridge. About a day later, after a morning of observing test pilots taking off and landing in a variety of warplanes, an aircraft with the words CODFISH AIRLINES painted on its nose landed to deliver mail or perhaps some needed supplies.



Suddenly, the ship's public announcement system blared out: "Mr. Lee to the bridge!" Surprised, I went up one level to the bridge where the captain informed me that he had arranged for us fly back to Norfolk on the COD aircraft. It was obvious we had no choice in the matter. But that was OK; the allure of flying off an aircraft carrier appealed to me. I envisioned being catapulted into the sky after giving a cool thumbs-up to the deck crew, as I had seen the test pilots doing that morning.



We were given less than an hour to get ready. I dropped back down a level by happily sliding on the handrails and informed the others. In short order, we gathered up our gear, which, in addition to personal effects, included a lot of test gear and hand tools. We then reported to a squadron ready room. We were given a briefing about all the things that could go wrong, which was accompanied by a gruesome film of carrier accidents. Then we were required to sign a release!

Next, we were fitted with inflatable life vests and skull protective gear, and led up to the flight deck by a very young Airedale who continued giving us instructions, non-stop. By that time, I began to think staying on the ship until it docked might have been a better choice. We awkwardly climbed into the aircraft, which was positioned at the aft end of the angled flight deck, engines idling, and discovered that we would be sitting in un-cushioned bucket seats and facing to the rear. That position might help us survive, if we crashed, we were told matter-of-factly.

We were individually assisted in fastening elaborate body restraints. We were told we would be on our own to get unrestrained, if we went into the drink....and if we survived that! We were also handed well-worn protective gear for our eyes and ears to wear when takeoff was 'attempted'. It was obvious that the aircraft crew and plane handlers on the deck were enjoying our discomfort. I assume the ship's captain, looking down from the bridge and knowing what we were experiencing for the first time, probably had a little smile on his face, as well.

Then, the plane's twin engines revved up, and we took off, utilizing the canted flight deck instead of a catapult. I was disappointed. COD aircraft, with a carrier steaming into the wind; can literally jump into the air, much like a short take-off commercial aircraft, only much quicker. I had a momentary glimpse of the carrier 'falling away' beneath us.



The brief flight to the Norfolk Naval Air Station probably only lasted a half hour. There was no in-flight service and the cabin décor was military drab. Our visibility was restricted by our aft-facing positions and the plane's few small windows. All we could see, most of the time, was water. But then, that's all there was to see, until we crossed the airfield perimeter on final approach.

When we landed, we were each given one of these little cards.



My naval aviation career was over.