

# BOEING MARINE SYSTEMS

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This is a multi-part series of experiences, observations and comments of my 25 years with BMS as a test engineer and manager from 1962-1987. All personal comments are my own and do not reflect the opinions of other employees or the Boeing Co.

## PART 5

### JETFOIL- THE UGLY

In 1982 over half the Jetfoil services had shut down. The survivors were Hong Kong, Japan, Belgium and the Canary Islands. Our Alaska State Ferry demonstration with the Aries was designed to expose Jetfoil to Southeast Alaska. This would be BMS last major attempt to sell more Jetfoils since the number of customers was dropping faster than we were adding new ones. In other words, things were getting ugly at BMS.

After a month of preparations it was finally time for the Aries (017) to embark on her four week Southeast Alaska summer demonstration. It took us three days to get to Ketchikan with overnight stops and refueling at Port Hardy and Prince Rupert, Canada. The demonstration officially started in Ketchikan Alaska with a visit to Metlakatla and various other trips to bays, sounds and glaciers. We spent three days in the Ketchikan area before preceding North through the Wrangell Narrows to Petersburg. The next day we visited Wrangell where we gave all the city officials a ride. On the way North to Juneau we stopped at Kate and did the same routine. The next couple of weeks we ran scheduled passenger service out of Juneau, the Capital of Alaska. The westward routes included stops at Hoonah, Angoon, Tenakee Springs and Sitka. The northward stops were at Haines and Skagway on the Lynn Channel. The Aries returned to Seattle after the summer demonstration, then returned again in January 1983 for a three week winter evaluation. The mission was to access the harsh winter weather and rough water conditions around the Juneau area. Unfortunately the winter of 1983 in Southeast Alaska wasn't all that severe but we did experience some high winds, sea state 4, and lots of icing from spray. We went as far West as we could, up Icy Strait, past Glacier Bay, into Cross Sound to the Pacific Ocean and North up the Lynn Canal. The Aries again returned to Seattle completing two successful demonstrations in Southeast Alaska. It seemed at the outset that Alaska State Ferries System wanted a high speed ferry that would carry passengers and cars. This was another misunderstanding between the BMS Sales department and the customer.

Another Jetfoil worthy of mention was a special rendition built for Saudi Arabia. This was boat 023 the "Aziz II" that was jazzed up with gold fixtures and elevator to the upper deck. Boeing built the bare boat and Lockheed did the opulent outfitting. The Aziz II was delivered to Saudi Arabia in 1984 to support the royal yacht Prince Abdul Aziz.

There was a break in Jetfoil production between 1981 and 1984 due to a lack of new orders and a saturated used boat market in Asia. The next two Indonesian boats were 929-119-024 and 025 which were special military versions a lot like Speedy with a single deck. These boats were launched in 1984 and delivered to the Indonesian Navy in 1985.

The last Canadian demonstration was for Island Jetfoil from April through September 1985. The leased boat was the Aries and was renamed the "Spirit of Friendship" and as many times before

ran out of Seattle with Boeing crews. The morning run was a round trip to Victoria and a afternoon round trip to Vancouver with a stop in Victoria. Again this was a very successful and popular demonstration with only a few schedule delays. We all enjoyed these times because we knew it was our last. Boeing sold boat 017 to Tokai Kisen in Japan. The last boat Boeing built was a 929-117-026 launched and delivered in 1985 for Kyushu Yusen in Japan. There were two partially constructed Jetfoils on the production line at Renton and I think they were the last incompleated boats for Indonesia (929-120-27&28) but I am not sure.

Boeing stopped production of Jetfoils in 1986 and the patents, naming rights and over a million dollars in materials were sold to Japan's Kawasaki Heavy Industries in 1987. Boeing also sold the remaining 350,000 out of the one million gallons of fuel it had bought and stored at the pier 91 fuel farm in 1973.

In 1987 the BMS SST (Ship System Test) group was disbanded since there was no more testing or demonstrations. Product Support took over what was left of BMS supplying field expertise and updateding manuals to existing customers. After shoveling paper work for about six months I was asked to find another job or be laid off.. In retrospect the Jetfoil program did result in a legacy in that most of all the boats Boeing built are still running with a predicted service life of 25 years. Most of the boats ended up in Hong Kong, Japan, South Korea and Indonesia. Added to the Boeing fleet of Jetfoils there were 15 Kawasaki and a couple of PS-30 boats built in China from 1989-1994. It's ironic that all the military hydrofoils except for a couple museum pieces that Boeing built or supported are just piles of scrap and that was their legacy. The fact is that submerged hydrofoils was a technology looking for a mission and there was no defined military mission. The commercial submerged hydrofoil was rated superior in comfort and rough water capabilities which seemed at the time to be fundamental characteristics for any high speed passenger carrying boat. The question is, how much are customers willing to pay for characteristics that are not really necessary?. In Asia where all the Jetfoil are, they are competing with Flying Cats, Foil Cats and Tri Cats which are cheaper to build and cost less to operate and maintain and offer the same type service. The reason there so many Jetfoils still operating in Asia is because they failed to operate in other parts of the world due to nasty weather and heavy seas. Besides most are used boats bought for a substantial discount from Boeing customers that went out of business. The real winner here is FEH (TUBROJET) who picked up 14 used Jetfoils in the 70's & 80's with some sold to South Korea for a profit. The 15 Kawasaki 929-117 boats built from 1989-93 were all sold to Japan. The two PS-30's that were built in China in 1994 went to FEH and later one was sold to South Korea.

Of the 30 years I spent at Boeing the first 10 years (1962-72) were the most rewarding with all the hydrofoil related R & D projects. The next 15 years were very stressful with lots of travel to customer locations running charters, training crews, launching and testing new boats and of course the countless demonstrations. The last 5 years were spent on meaningless jobs with Boeing Aerospace Division until I retired in 1992.

As I look back at my 25 years at BMS I was proud of our accomplishments and to be part of a technology that only Boeing could have achieved. Yes, there were mistakes, misunderstandings and personality problems but the Boeing Marine Systems Division reflected Boeing's diverse aerospace expertise that could be applied anywhere at anytime even though it cost them millions of dollars.

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