



Woodrow “Woody” Saft
Former Superintendent of Ordnance

INTRO MUSIC

Introduction: Welcome to the Dahlgren Centennial Celebration - A Century of Innovation. We hope that this and our many other products, events and offerings will showcase what Dahlgren has accomplished during its last 100 years.

Throughout our history, we’ve interviewed some of the most prominent minds, leaders and innovator that have been here, and we’re opening up the vault to share them with you this year.

Today we are honored to listen to Woodrow Saft, the former Superintendent of Ordnance at Dahlgren. Mr. Saft worked at Dahlgren for nearly forty years, starting in 1943, and was considered an expert in naval guns. He was especially involved in testing the 16-inch guns at Dahlgren.

Woodrow Saft:

My name is Woodrow W. Saft. I’m a former Superintendent of Ordnance working here at Dahlgren for 38 years. One of the primary weapons that we tested during that period of time was the 16”. The 16” fired a projectile, which is similar to what I’m standing by here, to weigh about 2,700 pounds. To propel this projectile required 600 pounds of smokeless propellant, and it would be fired in a 16” gun. We fired every gun used by the United States Navy, not only during the war but pre-World War II and on through the Korean and Vietnam situations. This gun weighs about a hundred tons, and the gun itself, excluding the slide and the girder mechanism. It was designed to be used on the battleships. The modern battleships of the United States Navy used this gun. And as ships were being recommissioned, they were equipped for heavy weapons of this type. Then the new battleships, as they were built, were all built using this gun, it being a metallurgic technique that they developed, these guns were radio-expanded. Thereby they reduced the amount of weight after they were mounted aboard ships. But they were very effective from World War II, Vietnam, and also in the Korean engagement.

Then beyond that, we used to test every caliber gun used by the United States Navy from the 20 millimeter, the 1.1, the 40 millimeter. And the 40 millimeter replaced the 1.1 automatic gun, which we had a form of it adopted from the British Navy until we could build a replacement for it, which was the 1.1, and it later was replaced by the 40 millimeter. The 40 millimeter mount came in the singles, a double, and a quad.

Then following that we developed the 5” gun, 5”/38, which became the workhorse of World War II because it replaced the old 5”/25. And





it had a higher rate of fire and an increased range. And it became the workhorse of the United States Navy for surface warfare.

Following that we developed the 6"/47, which is a primary armament, to go onboard the light cruisers of the United States Navy. And they were sacrificing armor protection in order to accommodate the increased speed of the ship that was developed during the war.

Then following the 6"/47 we developed other guns. First was the 8"/55, and the original was on the Wichita class, which was a buildup gun, quite heavy, and used bag ammunition as well as the later 8" until we developed the automatic. We developed the 8"/55 caliber automatic on the late model, heavy cruisers of the United States Navy. That meant that the cartridge of the propellant was contained within the cartridge, and the cartridge and projectile were loaded into a tray and fired and loaded into the gun as a single operation. Following that we had a variety of research weapons, but we led up to the development of the 16" gun.

But I started out as a gunners mate on the battleship [USS] *Pennsylvania*, and after five years, I accepted my discharge and came to work at Dahlgren as a civilian. In 1943, I felt my responsibility to go back in the Navy, for which I had been trained, and in so doing, I reported back to the Navy in 1943. Then, the first thing they did was send me to the Gun Factory, which I attended a training course on every hydraulic hard drive of every conventional weapon in the United States Navy. From there, I went aboard the light cruiser [USS *Portsmouth*] CL-102,—commissioning her at Newport News. Following the commissioning of her and shakedown crew, I came back to Philadelphia. While I was at Philadelphia, the war ended, and there I'd been highest on the list for people with the rating for discharge. I accepted discharge rather than continuing in the Navy and came back to Dahlgren. And through substantial advancements, from leading man, quartermen, chief quartermen, foreman, and later Superintendent of Ordnance, I worked at the Main Range from 1941, with two years back in the Navy, back in '45, through December of 1974, in which I retired. But the last five years of that time frame, I was assigned to Head of Department of Weapons Specialist and traveled worldwide troubleshooting problems in conventional weapons of the United States Navy. This involved my travel to the Philippines, to Vietnam, to the Mediterranean, to France, to Cuba, and things of that nature.

One of the things I remember vividly is my trip to Cuba. It was a ship that had double-loaded 5" gun, and it was pointing overland to Cuba, and they asked me to go down and assist in unloading that gun. Well, it was a double load and the interlock system—wouldn't operate because the cartridge case sheared off, so I had to experience that in our experimental work at Dahlgren, therefore I had a special tool made where I could pass through the chamber of the gun. It was spring loaded so it expanded in front of the cartridge case and had a screw and nut arrangement fastened to the housing of the gun. And after arriving at seven o'clock in the evening by way of a Lear-jet, I was able to clear that gun by eleven o'clock at night and relieved an international situation that they were very much concerned about.

Then I had a problem with the 16" gun here at Likely, where she had been mothballed at the Navy Yard in Philadelphia, and they were trying to—getting ready to recommission her, and they discovered what they thought was a damaged roller pass because the atmosphere in the turret was negative, and what it did was it was drawing air through the water shield of the turret. And that air contained moisture, being down on the waterfront in the Philadelphia Navy Shipyard. They called me up and asked me to inspect it. Well I had them train off center and degrease the roller path, and I found that the roller





path was not damaged. It was just discolored. Consequently, they were able to put the ship back on schedule and save fourteen months delay and recommissioning her to go to Vietnam.

But while I was there, I happened to be informed that there was a problem on turret 2 so I went and looked, and two of the cap square bolts had popped off, and we checked the records and we found that prior to going to mothball, turret 1 had been elevated while turret 2 was depressed, and they trained into each other and cracked that trunnion bearing. Well, I had just previously been visiting on the USS *North Carolina*, which is a monumental piece in Wilmington, North Carolina. And on there, I learned that the spare parts were still on the ship. So when I was contacted by the lieutenant who was the fitting out officer of the ordnance on that ship, asked about it, and I said, "Well, if you will arrange it with the caretaker on the battleship *North Carolina* in Wilmington, you can get a spare part, a spare trunnion bearing, It will fit. And the Navy says they won't fit, but I know they're interchangeable because I've done many of them here at Dahlgren, which is part of my routine assignment." So he got that and put it back into the USS *New Jersey*, and she then ventured on to Vietnam. Well, I toured Vietnam shortly after that on a troubleshooting mission of the USS *Boston*, who had an explosion on that ship. But the *New Jersey*, when I visited the artillery command centers, every one of them requested fire support of the *New Jersey* while she was out there, and when I went aboard her in Long Beach Naval Shipyard after she came back from Vietnam, she was literally worn out. The guns were just smooth. All the rifling was gone. So they had extended its service that was unbelievable to the people of the armed forces stationed in Vietnam.

While I worked at the Main Range from 1943 to my transfer to head of the department in 1968 to travel worldwide in troubleshooting conventional weapons of the United States Navy, I was in charge of a workforce of approximately 250 people, and we had about ten different gun crew assignments. It was not uncommon when I was working there that I personally fired approximately 100 rounds a day of weapons similar to the 16" and including the 16" while I was here. And I worked primarily in firing major caliber weapons for several months.

But each of the rounds of the 16" were equivalent of firing the price of a Volkswagen down the river. And they had a workforce including about twenty recorders that had to record all the data of every round fired at the battery. Those rounds included another workforce, which is one of my crews that I was in charge of doing the propellant section, and they had to prepare the charges. For instance, on the 16", they had to bag this ammunition in silk bags and take six bags, at about 100 pounds each bag, for each round fired. Then while that was going on, the crew in addition were taking care of a 5" automatic, a 3", or an 8" bag gun, which they had to load those, and things of this nature. So, the workforce I had was variable. Then in addition we had a battery to test nothing but fuses, at the AA Fuse Battery, and there we'd test every production fuse of the 5" guns at that battery.

Then in addition to that we had a force which was allied to my group testing the armament that was used on battleships to protect us against the torpedoes. And that was the armament around the waterline of the battleships. And then in addition to that, they had an armor plate across the main deck to protect against the aerial bombs dropped from aircraft. The only accessible point that they had on a battleship then of that type was down through the smokestack, and we did, I think, lose one ship by a bomb that went down through the smokestack. And of course it had a delayed action fuse on those types of bombs, and also a delayed action fuse that they tested for penetration of armor so that the armor projectile would pierce the armor would pierce the armor and then explode inside and cause more damage to our enemy ships. So we had a very large variety of people working on all types of





weapons, from 20 millimeter, to 40 millimeter, to 5", 6", 8", and 16" at this range.

Then in addition to that, after the war, we recovered an 18" gun from the Japanese, which I understand they're one of the super battleships and were armed with an 18" gun. Well, we had to test it, of course, so we were able to mount it in one emplacement we had that would give us a maximum of 5 degrees elevation, but it was so large and so heavy and the advantage of that over the 16" was not appreciable, so therefore they stuck with our 16" similar to the one you see in this photograph, which I am standing by at this time.

Conclusion: Thank you for listening to this week's Dahlgren Centennial Podcast, and hopefully you have learned another interesting aspect of what our people accomplish for the Navy and our nation.

We will continue sharing how Dahlgren is a one-of-a-kind location where innovation is heralded as the hallmark of each individual.

Tune in next week to hear from Ed Jones, who lived on base from 1948 to 1966.

Thank you for celebrating this century of innovation with us at Dahlgren.

CLOSING MUSIC



