Tactical Notes

July/August 2024

So many kits... So little time...

The Bottom of the Battleship New Jersey

To Contact MMCL:

President:
Rich Guetig
Email: wolfandgang@twc.com
Phone: 502-931-0302

Vice President:
Alex Restrepo
Email: alexrest@aol.com

Treasurer:
Bill Wise
Email: williamd.wise@aol.com

Secretary/ Tactical Notes Editor:
Jason Sizemore
Email: sizemj@gmail.com
Phone: 502-377-4330

Show Chairman:
Joe Betz
Email: jbetz2970@gmail.com

Member At Large:
Julia Evelsizer
Email: juliaevelsizer@yahoo.com

Member At Large:
Randy Fuller
Email: srandfuller@gmail.com

Editor's Notes

MMCL Members,

So this is a issue of Tactical Notes for both July and August. I had to combine them due to my family travel, and it also seemed kind of slow around MMCL with a lot of folks gone at the Nationals.

The issue this month has an article by Myles Marcovitch on the Battle Ship New Jersey. Thanks very much Myles on a great article.

Our "Friday Night Fights" and our “Italian Armed Forces” Smackdown is this Friday August 16th. I have built a very small 1/72 IBG M41M Semovente 90/53 Self propelled Gun. I have been doing a lot of traveling so my bench time has not been as much as I would have liked but, I have started on a couple new 1/72 Dragon kits, a Tiger II and a Panther G. I hope you have had more bench time in July than I did. See you Friday.

Take care and happy modeling.
Jason

Cover Image: New Jersey off Oahu in September 1968, prior to departure on her first WESTPAC cruise following recommissioning for service in Vietnam

By Official US Navy Photograph from the U.S. Naval Photographic Center, courtesy of Robert M. Cieri. Text courtesy of U.S. Battleships: An Illustrated Design History by Norman Friedman. - navsource.org, Specifically, Public Domain

Don't Forget to join us on our Saturday Morning Workshops. The Workshop is open most Saturdays from 6 AM to Noon.

President's Page

"So many kits... So little time..."

Hello MMCL Members,

On July 17, 2024, Terry and I, along with Tim Brown started our journey to the 2024 IPMS Nationals in Madison, Wisconsin. Brian, Alex and Dave started theirs about an hour after we did. There is nothing like going to a Nationals! The quality of models were outstanding and to say the least, inspiring. The vendors were phenomenal. Andy's Hobbies, Squadron, Michigan Toy Soldier, Tamiya were among the many vendors present. I spent a ton of money on a bunch of goodies – A new airbrush and some 1/16 figures and an M10 Tank Destroyer to mention a few. With the 2026 Nationals in Fort Wayne, Indiana, I hope several of you can make the trip – A Nationals will blow you away!

I would like to encourage everyone to start going to Invitationals, Regionals, and Nationals. It is not just about finding deals or entering in hopes of winning an award. It is about supporting other clubs. Several members from neighboring clubs attend our show on a regular basis. MMCL members have done a great job in the past supporting other club's shows. Attending a model contest is inspirational and a learning experience. You get to see what other modelers are doing in the hobby. I have talked with master modelers at shows before, and I have to say, most want to share their techniques and what inspires them. So, I hope that several of you start going to shows to experience a great time with individuals that share a common passion.

As always, relieve your stress level and build a model!
Rich

Some of Rich's phots from the Nats in Madison.

The Trip to a Battleship's Bottom

The May 19th Special Tour of the Battleship New Jersey in Dry Dock

By: Myles Marcovitch

BACKGROUND:

As members of the MMCL know, my first model when I was 9 on my birthday in 1954 was Revell's Box Scale Missouri. I was imprinted with that ship for the rest of my life. In 1985 (pre-photo etched) and again in 2012 I built Tamiya's 1:350 Missouri. The second of which won Best Ship in MMCL's 2019 Exposition. If that wasn't enough to get me completely engaged with the Iowa Class ships, I was fortunate (crazy) enough to build two custom models of the Battleship New Jersey: cutaway versions of the entire 16" and 5" gun systems. Both models are on permanent display in the museum ship's Ward Room.

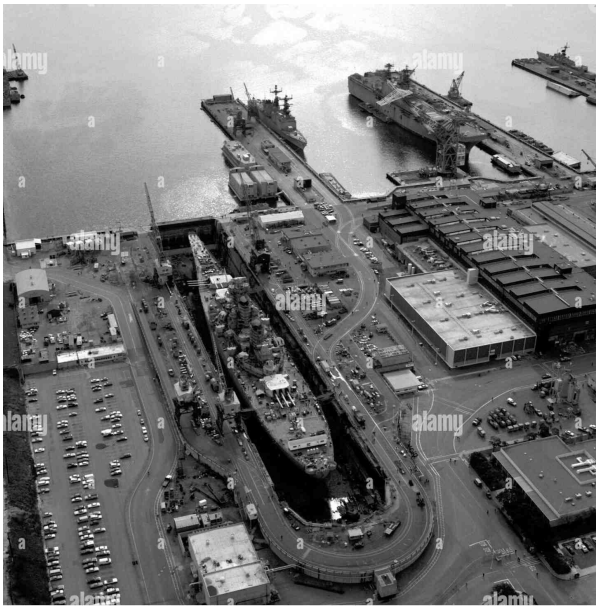
When I first suggested building the 16" turret model to Ryan Syzmanski, the Battleship New Jersey's museum curator, he agreed, but what I was suggesting was a bit over the top and, while he cooperated with my requests, didn't start to really get engaged until the model was progressing where he could tell it was something different. When it was delivered, our relationship moved up a notch.

I then suggested that I would build a similar model of the 5"38 caliber twin gun mount and now he didn't hesitate to offer his assistance. If there was a picture I needed, I'd have it in 24 hours. As a result of this collaboration, Ryan and I developed a nice working relationship.

In March, the New Jersey was moved from its berth in the Delaware River at the Camden, NJ waterfront (across the River from downtown Philadelphia) to the Philadelphia Navy Yard to have a much-needed bottom refurbishment. The ship hadn't been out of the water for 34 years and, and while de-commissioned, was still under some auspices of the US Navy requiring the ship to be maintained in such a way that, if necessary, it could be re-activated. Bottom painting was one of these requirements.

Getting the ship to the dry dock was no easy feat. The ship's operational displacement was 57,000 tons, but without ammunition, fuel, ballast, crew or stores was a svelte 47,000 tons. It was riding so high in the water that it needed 300,000 gallons of water ballast to lower it sufficiently to clear the Walt Whitman Bridge. If it couldn't clear, the radar mast would have to be cut off. The ship was towed to Paulsboro, NJ where the ballast was removed and then pushed into the 100 year-old graving dry dock at the Navy Yard. It was sort of poetic since it was in this dock that the ship was outfitted in 1943. And… after this contract, the dry dock was being de-commissioned, filled and turned into park land.

The cost estimate for the refurbishment was $10mm. The State of New Jersey was contributed $5mm and the rest was to be had by donations. At the time of the move, they had raised $4mm and were still $1mm short. Then someone had the great idea to charge to tour the bottom of the boat during the repairs. This was a once-in-a-lifetime event that attracted immediate attention. As soon as the word went out the tours were fully booked.

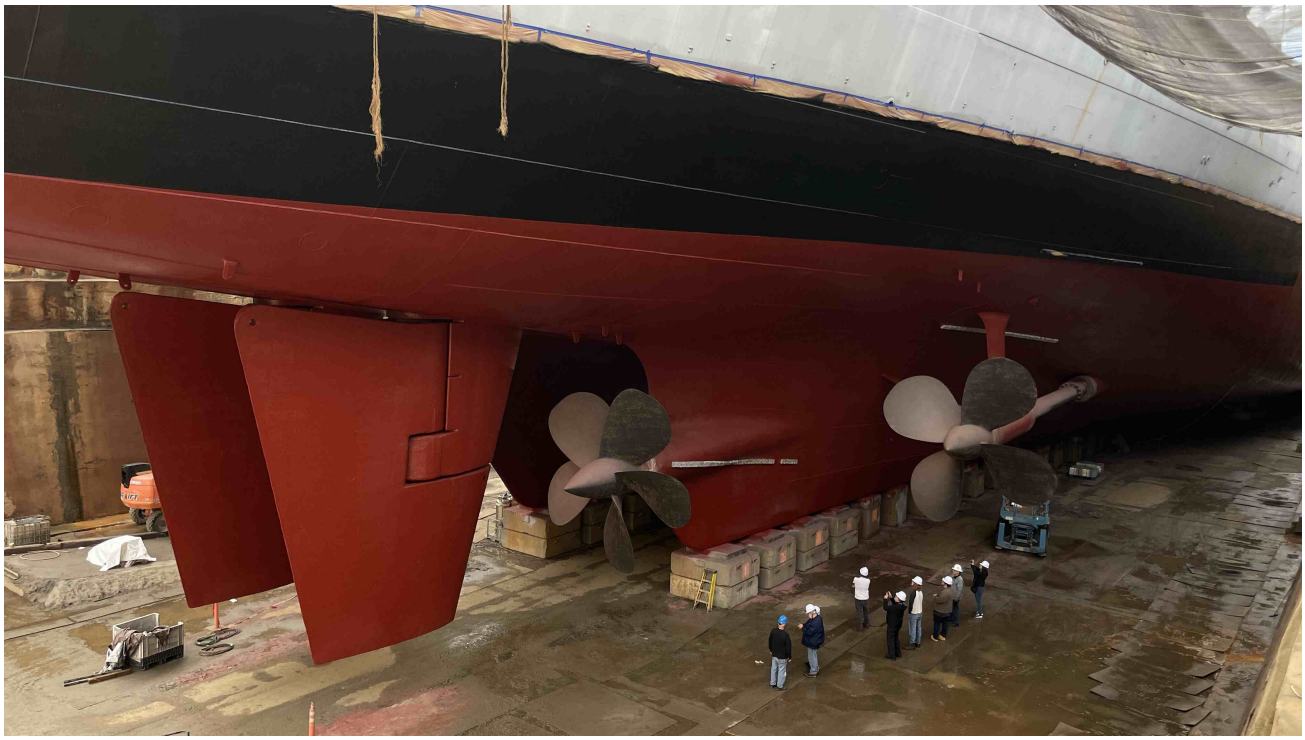


A little back story is called for. During COVID, no one visited the ship. In an effort to keep people's interest, Ryan started making a series of video tours. These YouTube videos took off and became a hit. Ryan produced many, many more and had hundreds of thousands of subscribers. So when the call went out that the bottom tours were going to happen, he had a ready-made global audience. I look at his videos occasionally, but missed the announcement, but I knew that the ship was going into dry dock, so I independently contacted Ryan about visiting the ship in dry dock. He told me about the tours and offered to comp me a tour the next time we were in Philly.
I was hoping to get the 5"38 project complete for delivery and was planning on seeing the ship at that time. We set a date for May 19. The ship was supposed to be done by Memorial Day, so the window was closing. These tours were expensive. If you wanted a tour with Ryan, who BTW was the project manager as well, was $1,000. With Libby his communications director it was $550, and for other docents $225. I was getting a private tour with Ryan for no charge as partial compensation for the models I've been donating. I was a couple of days short of completing the model and that will be delivered on August 1.

The tour's idea was so successful that by the time of our tour, they had already raised an additional $1.5mm. This gave them more money to extend the project until the middle of June and do some more maintenance items that were being sidelined.
I talked my wife into going with me. She, needless to say, is not a big model lover and definitely does not like military-themed ones, but I convinced her that she's never seen something like this. I also invited two close friends from Philly. So it was the four of us and Ryan.

THE SHIP:
Moving a 47,000 ton object to a precise location in a dry dock is daunting. The ship was pushed into the dock stern first and sits on 292, 4’ cubic concrete blocks. The blocks have wheels so they can be positioned by humans. And there are steel shims inserted to compensate for any slight surface irregularities. The ship, therefore, sits 4” above the dock bottom, meaning moving around underneath is both awkward and a bit claustrophobic. It’s also a bit sobering that each block is supporting an average of 320,000 pounds or one healthy-sized diesel locomotive. To correctly position the ship, there are two blocks situated at the extremis of the stern and bow and a simple plumb bob suspended from each end used to guide the ship to the proper position. Simple!
When we arrived, the bottom had been mostly completed and it was really neat to see the true color of “Hull Red”. The paint, all 18,000 gallons of it, is a special Sherwin-Williams anti-fouling marine paint. The bottom of the dry dock sits almost six stories below street level and is reached by one of four concrete stairs each with 75 steps. Getting down was trick. Getting back up was difficult which describes getting up from most things when 79 years-old.
Before the tour you’re given a safety briefing as it is an active work site, where you’re provided with a Battleship New Jersey official hard hat, and strap on steel-tips for your shoes. The bottom of the dock was partially wet due to recent rains and from the normal seepage that occurs.
You entered the dock from the aft starboard end, go around the props and rudder, come up the full-length of the port side and around the bow, and then exit via the fore starboard staircase. We then walked out of the catwalk at the top of the

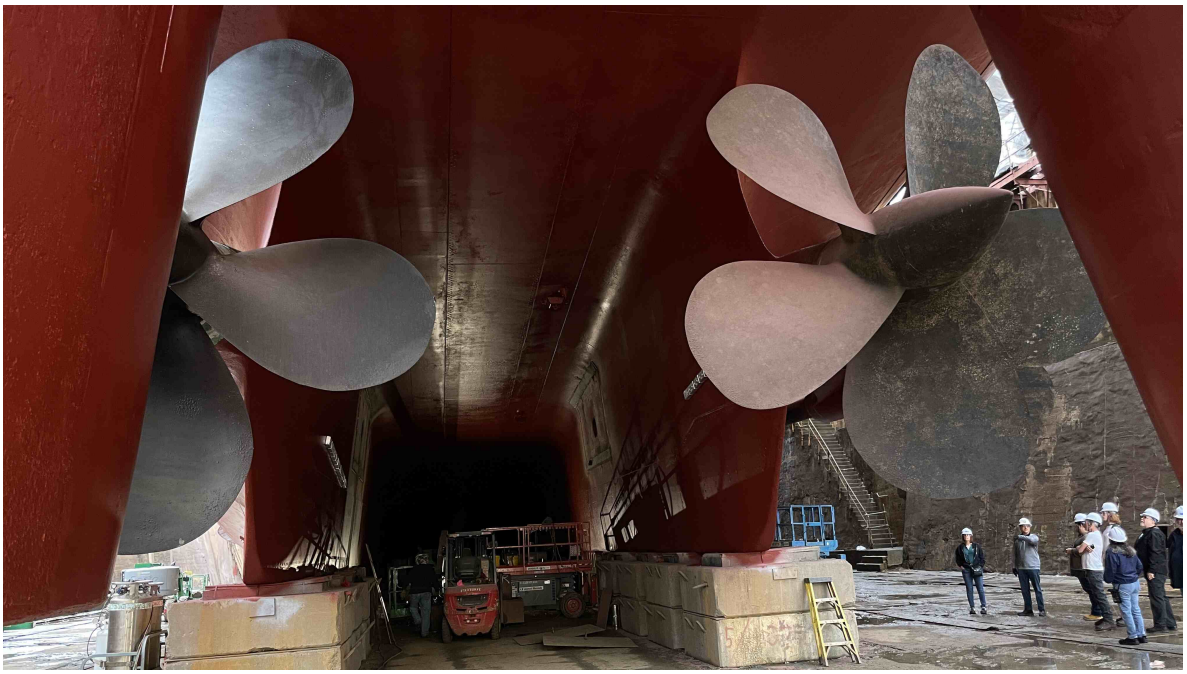
caisson that blocks the Delaware River from entering the dry dock. From that vantage point you a looking head on at the bow. The tour ends at that point.
When you come down the steps this is the view you see.



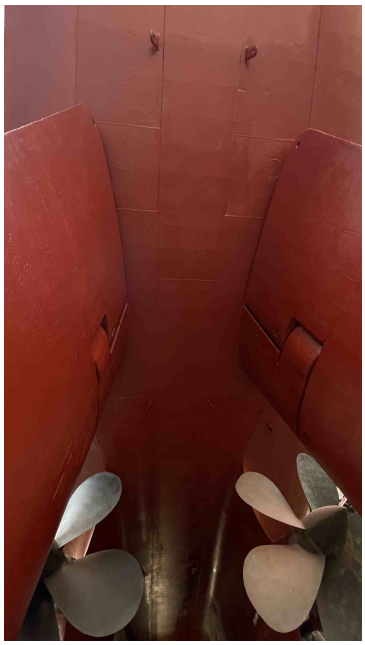
Those little things down along the side are people! The Iowas weren't the biggest ships ever made. They are big, but the new monster cruise liners and super-sized container ships are much bigger. However, I've never been up close and personal to them, whereas I have with the New Jersey and believe me, it's really big.

Lucky we had hard hats on. When my wife passed under one of the two 25 foot tall rudders, she knocked her hat into it. It would have been her head. The rudder wouldn't have moved. It's as single piece hollow casting. They had to drill and use bore scopes to inspect the interior to make sure no corrosion was talking place.

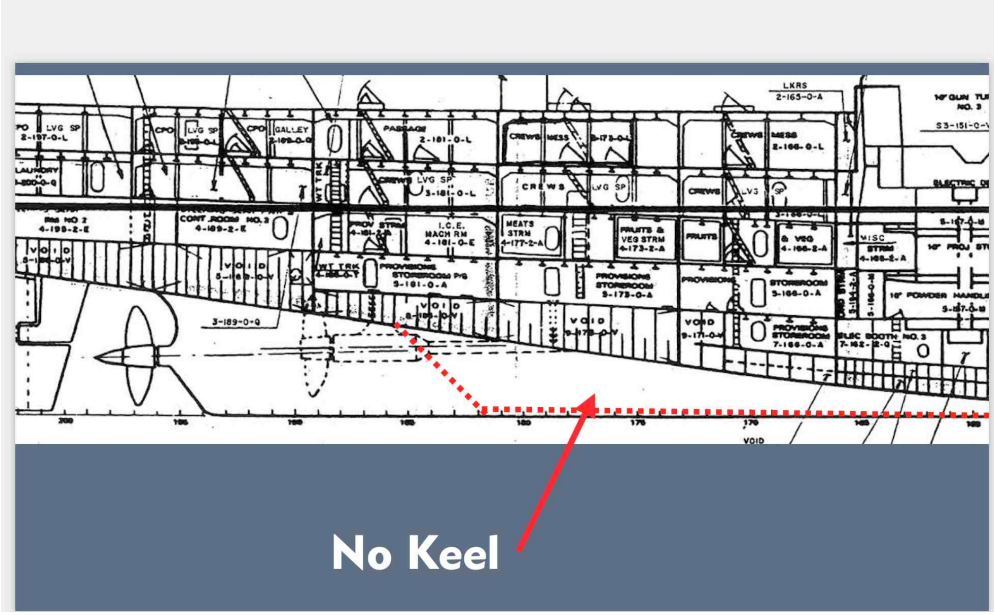
The four props are awe-inspiring. The outboard ones are 18' ft in diameter with four blades, while the inboard props are 17' in diameter and have five blades. The very conspicuous skegs and unique with the battleship class, direct the flow of water to the inner props and rudders for greater response and efficiency.



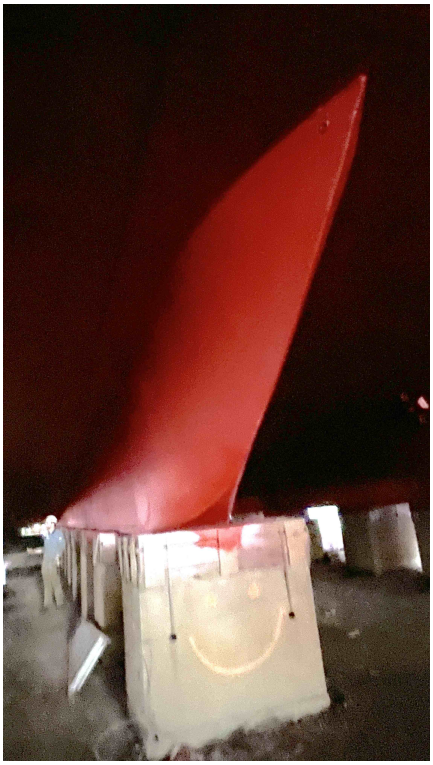
The space between the skegs is affectionately called, "The Holland Tunnel" since two cars could pass side-by-side. Looking straight up at the rudders gives a better impression of their height, although it's hard to gauge. I had to measure them on scaled plans I have.



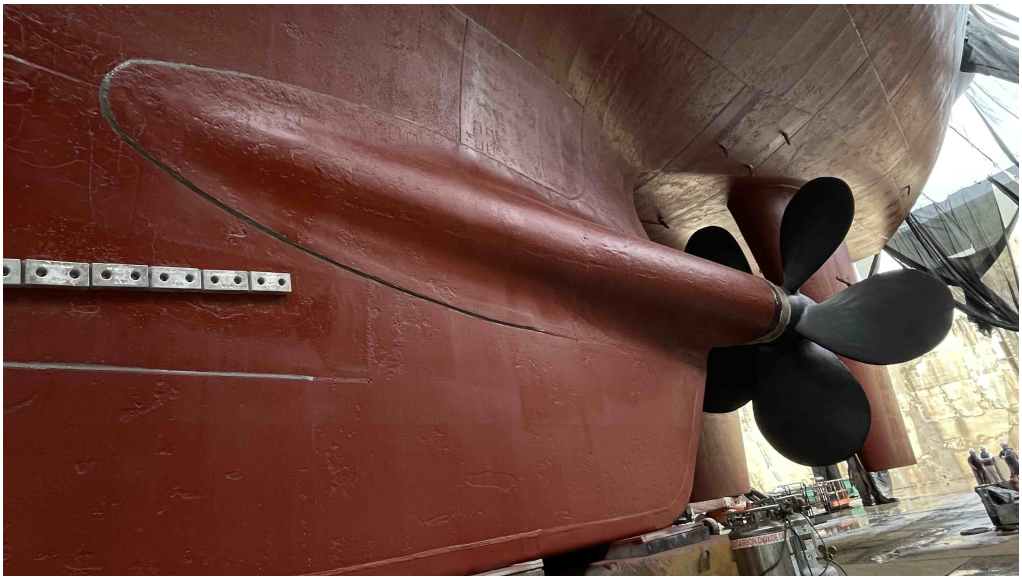
There is a feature that lies in the tunnel that, while prominent, doesn't appear on any plans or model that I've seen. It's the end of the true keel. It's large, and tapers to a knife-edge reminiscent of the cutwater at the bow. It's there to support the vast weight of the #3 turret and barbette, but is missing on all documents. It should be visible on profile drawings done down the centerline as I have drawn here.



For all those rivet counter modelers who want to add a thousand dollars worth of after-market photo-etched parts, maybe they should include this missing, major structural detail. I have the excellent Sumrall book on the Iowa Class Battleships and found one line that describes the "Center Keel" that extends rearwards, so i know that it was an original construction and not an add-on done during a refit.



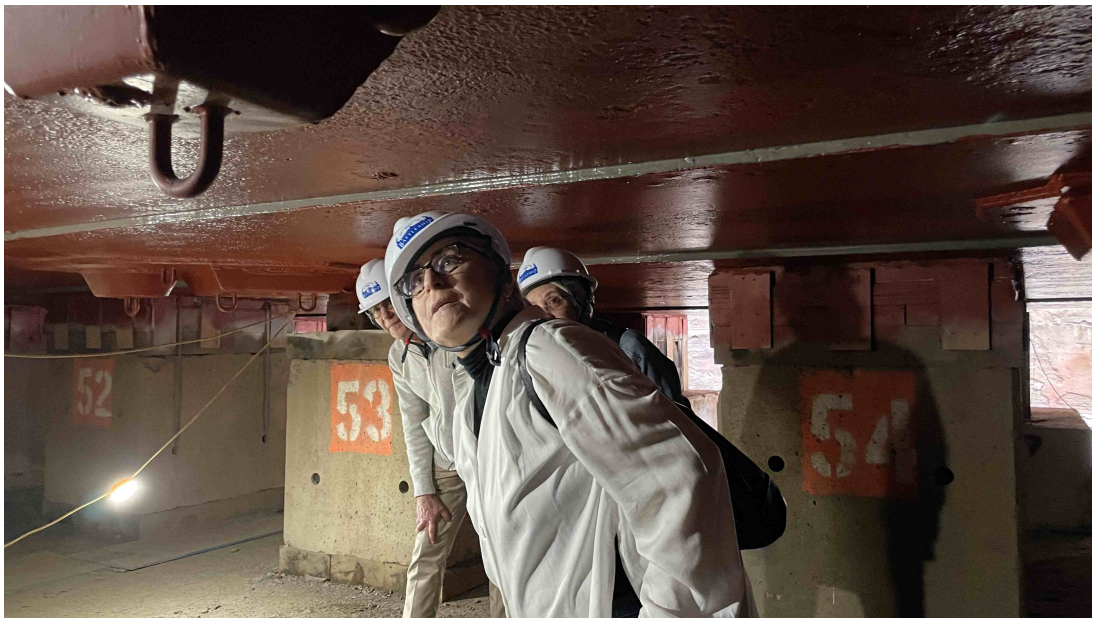
The inboard prop shaft supports are a single, large casting that's welded to the hull. There's a bearing at the end, but that's not the thrust bearing that transfer the 53,000 hp generated by each propulsion plant. That's buried in the ship just on the aft side of the main reduction gears. It's just a final support bearing. During WW2, the Iowa burned out one of these and which was replaced at see in a 10-section floating dry dock.



Located around the hull are these metal blocks. They are the anodes of the galvanic corrosion protection system. All of the electrical systems in the ship are grounded to the hull, making the hull and electrical object. Steel being a noble metal is the negatively-charged pole. The next metal in the charge field is the less noble bronze propeller. Electrons would flow from the hull to the prop and it would send positive ions to the steel, electroplating the bronze from the propeller to the hull and eventually consuming the propellers. To counteract, all ships have some form of system where a less noble metal is sacrificed to save the props.

The Big J originally had 1,204 zinc blocks bolted around the hull. When the ship was pulled from the water, the expectation was that the zinc would be badly corroded, meaning it was doing its job. However, the zinc was in perfect condition. It was offering no protection. Zinc, it turns out, is the correct metal for salt water. The ship in the Delaware River is in brackish water with some salt coming from Delaware Bay and the Atlantic Ocean. The correct metal is aluminum. If it was in pure fresh water, the metal would be lead. 600 aluminum blocks were installed.

We went under the bottom which is vast considering the flat part extends from in front of the #1 turret past #3, which is almost 400 feet. There are many protuberances from the hulls where you can knock your head, but we had hard hats. And it's not good with a bad back. We had those too.

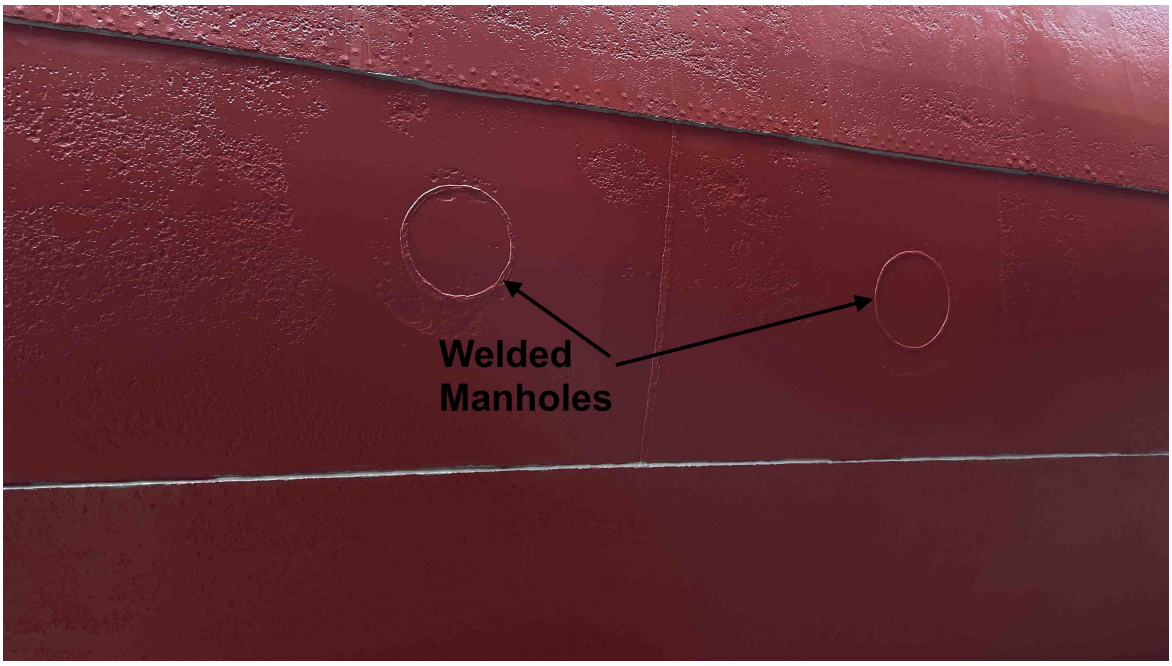


While under the ship Ryan explained what all the welded panels were. The ship has 160 sea chest openings. These are inlets and outlets of sea water that's used throughout the ship for various functions including feedwater for the eight Babcock and Wilcox marine boilers, cooling water for the four main condensers, fire water, water to feed the evaporators that produce potable drinking water, and water for showers and sanitary sewers systems. All had welded covers that needed inspection/repair. This could not be done by divers. The visibility in the Delaware is 15 inches. It had to wait until the ship was out of the water.

I was amazed at the condition in general of the hull. And at the level of craftsmanship exhibited in a ship that was built before computers, modular assembly, etc. It was all old school. The ship's keel was laid in 1941 in a building dock just down river from this dry dock. It was 'Stick built' with individual ribs and panels built in situ. The hull plating is riveted top and bottom and overlaps down from the top. It is welded side to side. You can barely see the rivets. And even the panel lines are very small in comparison to the ship's size. Therefore, modelers working in 1:350 or even 1:192, should forego attempting to do panels. They are going to be way over scale.

“In 81 years you reach, look as good, you will not!”

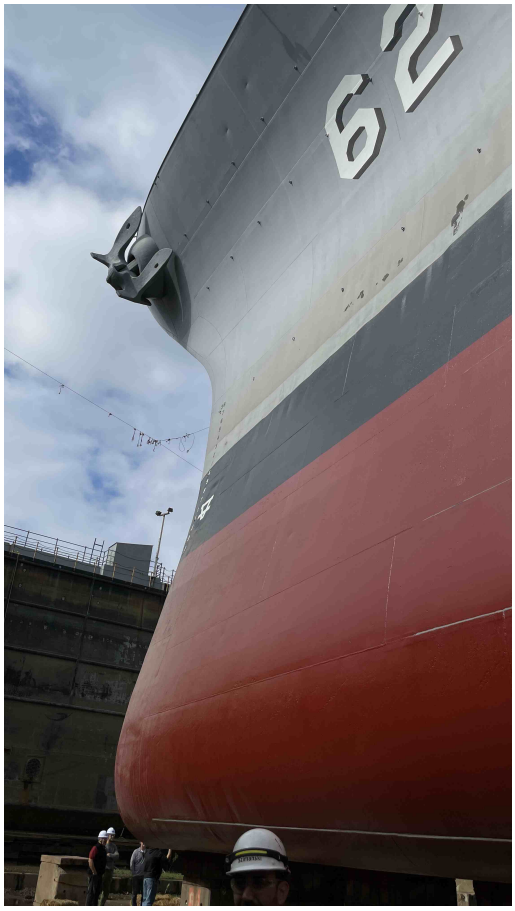
Ryan also explained a slight project wrinkle. Where the ship is resting on the blocks you can’t paint the bottom. This eventuality was considered by the US Navy. During Wartime, the ship was scheduled for a bottom paint every two years. It was to be set over the blocks in three positions. Position 1 puts the ship over the blocks. Two years later in position 2 the ship is moved 2 feet forward of position 1, and then two years after that the ship is moved another two feet exposing all the last bits of the unpainted spaces, and the whole thing starts over again. At least that’s the way it’s supposed to work. The problem was that even though the ship was re-activated five times over its history, it was only activated at one-year increments. And then they forgot the scheme, so each time it was painted it was put in position #1. That meant there were 292, four-foot squares all over the bottom that hadn’t been painted since the 1940s. To solve this problem, the ship had to be re-floated, moved four feet forward and settled back down on the blocks. This small move added another $100k to the project.
As we proceeded down the port side, Ryan pointed out another strange artifact. They found these perfectly circular welded patches. No one knew what they represented. After some research they found the answer.



In the 1980s refit the ship was converted from burning bunker-C fuel to distillate, i.e., fuel oil. It was a good decision since bunker-C is a mess that fouled burners, made a lot of soot, fouled boilers, etc. But there was a catch. Before the conversion could be made, all remnants of the old crud had to be removed. It was a tarry sludge that lined all the fuel tanks. When I say “fuel tanks” I’m referring to large sections of the lower chambers of the triple bottom that lined the armored areas of the ship from turret #1 to #3. Not all the chambers were fuel, but many were. This served two purposes; essential ballast to trim the ship and part of the torpedo protection system. The rest of the tankage was for water ballast. There were no entry points to these lowest tanks. To access, circular holes were cut just large enough to let a not-so-large human to enter, and then, with steam lances, remove the bunker-C crud. It was an awful job! When done, the circles were re-welded to the ship creating the welded circles.

I couldn’t stop taking pictures of the curves and condition of the hull. This ship was built for speed. It certainly was a warship, but it was a 57t beast that could do 35 knots in its sea trials. The Iowas were designed from the onset to match the speed of the fleet carriers, which did 33 knots. Prior to this design, our battleships topped out at 28knots as did our adversary’s. To gain that additional 6 knots, required almost 300 feet of added length and 66,000 more horsepower to 212,000 up from the South Dakota’s class of 146,000. Folks who understand naval architecture know that speed is the result of the ratio of length and width of the hull. Battleships have a special condition. They need a wide, stable platform to support and fire the massive main battery. Iowas had another constraint. They could not exceed a 108 foot beam or they wouldn’t pass through the Panama canal, which (at the time) was 110 feet. Seeing the Iowa’s pass through the canal with a foot clearance on each side is almost humorous if it weren’t so serious. They were built on the East Coast (New Jersey and Wisconsin in Philly and Missouri and Iowa in Brooklyn) and had to get to the Pacific where they served.

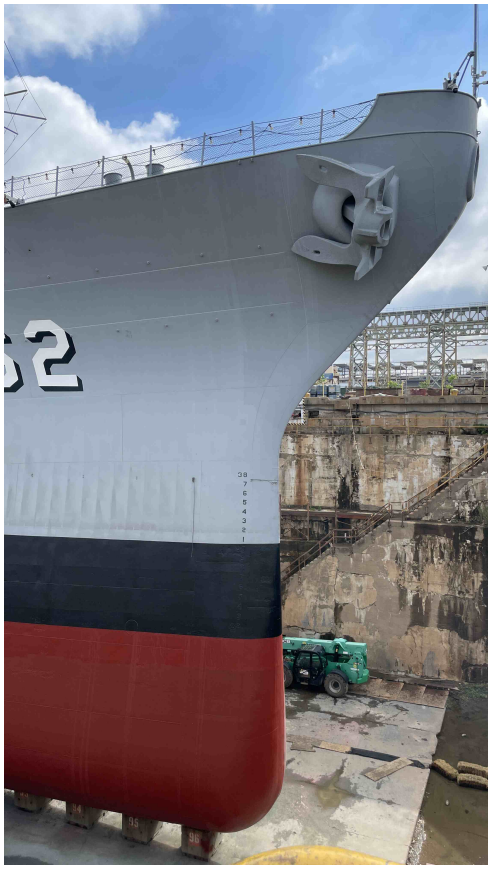
This view of the bow shows the small bow bulge that began to be understood by that time to increase speed and reduce drag. The curves and lines are gorgeous!



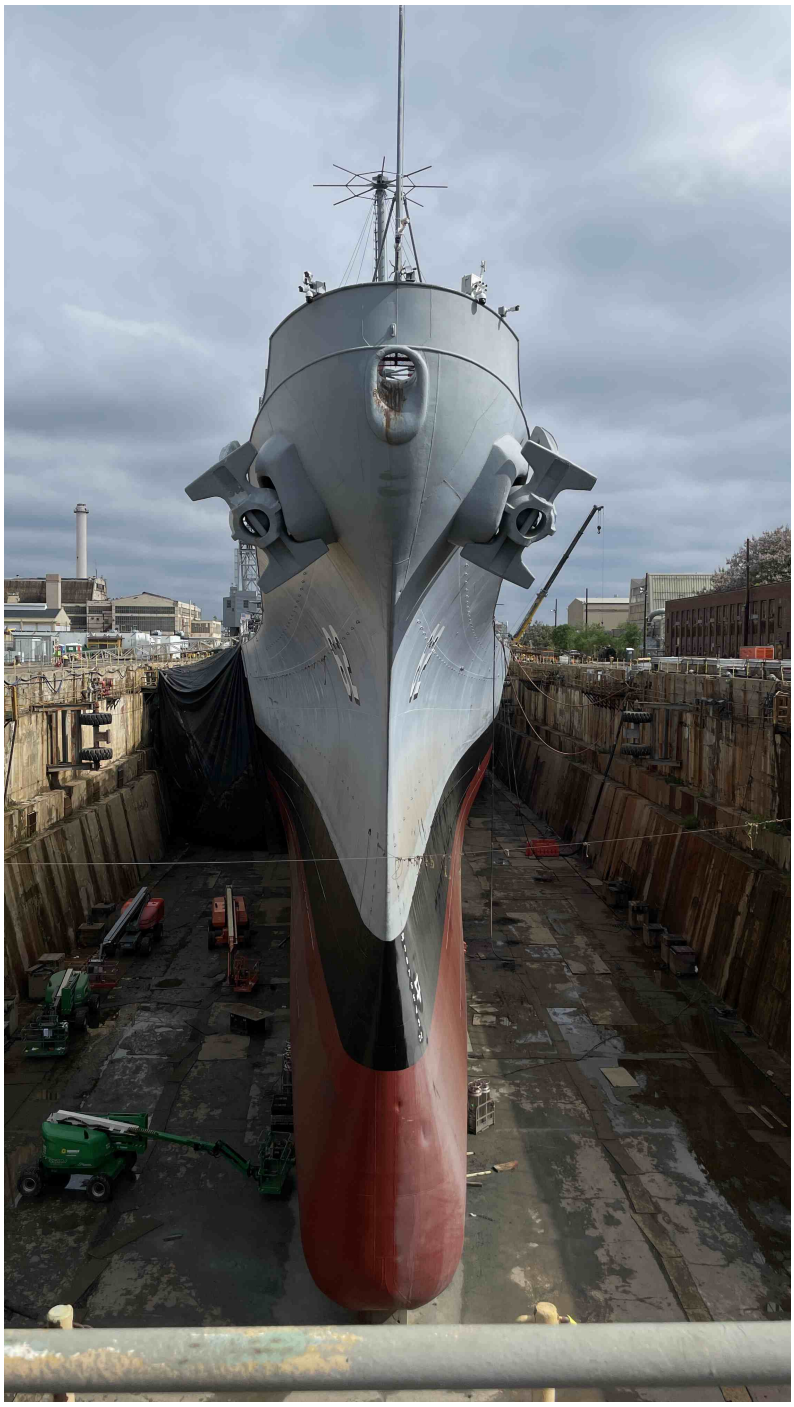
Even more telling about its design are the lines at the bow. The cutwater is almost a razor's edge. The top of the fog'stl is about 72 feet above the keel and just sticks up over the dry
dock's rim.

We came around the starboard side and I took a picture looking down the ship's flank. This was first opportunity to view the mythical "oil canning." Avid modelers with Advanced Modelers Syndrome (AMS) have been known to attempt to carve into the hull, especially in 1:200 models, to create the oil canning effect. They also work hard to show the plating in 1:350 kits. This work is nonsense! You barely see it in 1:1 scale and it's only at the bow and stern having the thinnest plating and in the region of the black boot topping. The effect is caused by sun heating the thin plating in the area of darkest colors. The ship's frames are every 4 feet so the panels can't readily expand longitudinally, so they buckle a little. And it's really just a little. My advice, spend time on details that people can see and that make sense, and not exaggerate effects in the sheet metal.

I took one last shot before climbing all those stairs of the beautiful bow. This ship has one of the most elegant (need I say sexy) bow shapes of any warship of WW2. Again, it exudes speed.



After climbing the steps (and catching my breath), we walked across the caisson door catwalk and got a perfect nose-on view of the bow.
As Ryan pointed out, “Looking at the bow from this angle, all you see is speed. Looking at the stern and the four massive propellers and 212,000hp and all you see is power!” Yup… that sort of sums it up.
A caisson dry dock doesn’t have doors per ce. The end wall is a free-floating object that is filled with water so it sinks down a trapezoidal groove until it seats at the bottom and seals the space. To let the ship out, the caisson’s water is pumped out and the wall re-floats where it’s towed away by a tug and parked elsewhere.
While it was very impressive being there. It wasn’t until I returned home and looked at my wonderful Missouri model that it hit me just how special the trip was. Having read about and built models about these ships, to actually be so close to places that are never seen was almost a religious experience. I said “almost”. It reinforced my belief that Iowas were a special thing that won’t be recreated again. All of the modern warships, like the Arleigh-Burke or Ticonderoga Class destroyers/cruisers, while sharp looking just don’t have the uniqueness as the Iowas did. In fact, the surplus pond at the Philly Navy Yard is full of Ticonderoga Class ships that are now mothballed. I remember flying over the Naval grave yard at Martinez, California in the early 1980s and seeing Iowa Class ships in mothballs. The Wisconsin was at the Philly Navy Yard at that time too.
Many people were very pleased when Reagan re-activated the Iowas and turned them into formidable missile platforms.



Folks to this day would like to see them reactivated once more. But, alas, these ships are 81 years old and show it. Having had the chance to get into spaces that have not been restored, the ship is a mess. I read a white paper on the difficulty of getting the 16” guns into firing capability in the 1980s rebuild. It was touch and go. There were hydraulic systems that were so old that spare parts had to are re-manufactured. The preservative that was used within them hardened and made repair very difficult. In one case, a large hydraulic valve body had to be removed from the turret by cutting a hole in the turret floors, getting it down to the bottom, moved out and then up to “broadway” and taken 400 feet to the aft where another opening was made to extract it from the ship. Forty years have passed since then. It hasn’t improved with age.

I am indebted to Ryan for his gift of the trip when it was completely sold out. I am also happy that my wife saw it. It helped her realize just why I spend so much time in creating the one-off models that I build. I am bringing the finished 5”38 project to the ship on August 1 and spending time in Engine Room #3. I’ve chosen modeling this for the next (and last) major project for the ship. It’s a massive one. Besides taking direct measures and 3D scans in the engine room, through diligent research, I’ve located the original engineering plans for the ship at the National Archives. These plans are not micro-filmed nor digitized and I must view them in person. To do this I had to apply for a researcher’s card and pass an on-line program on handling original archived documents. Its a big deal and the research is going to be as much fun as the design and building. They are housed at the Archives’ massive repository at College Park, MD. My wife and I are planning the trip to DC in October where I will spend the Friday viewing and photographing the pertinent drawings of the engine room and its machinery.

Of course, I will keep our club appraised of my progress.

2024 Military Modelers Club of Louisville

IPMS Invitational Contest

New location

Paroquet Springs Convention Center
395 Paroquet Springs Drive,
Shepherdsville, KY, 40165

Saturday Sept. 28th 9:00 AM - 3:30PM

SHOW THEME:
Models of subjects from the 80's

FOOD CONCESSIONS ON SITE

Show Contact :
Joe Betz
jbetz2970@gmail.com

Vendor Contact:
Dave Crouch
dcrou@bellsouth.net

Website: MMCL.org

Largest Raffle In Region 4

IPMS Guideline:
"In light of the current pandemic situation, please be aware that neither IPMS/USA nor its Chapters (Military Modelers Club Of Louisville) are liable for any potential transmission of illnesses. Those planning to attend events do so at your own risk and should
(A) follow existing safe social distancing and mask use recommendations and
(B) abide by any local or state regulations regarding gatherings."

General Admission: $5.00
Contest Entry Fee: $10 ($8 for IPMS Members)
Includes First two Models, $1 per additional model,
Juniors (Under 18) $5 unlimited entries

See MMCL.org for Contest Entry Forms and Categories