

Interning at the Marine Safety Center (Continued)

Once at MSC, we got our Coast Guard HQ ID badges and computer accounts. Then we met with the commanding officer and his deputy. They were impressed by how much we already knew about the Coast Guard's marine safety mission, thanks to our instructors at the Academy. As we ran around the office, all the MSC personnel were introducing themselves and trying to get to know us. We were pretty popular. In the afternoon, we did some basic work with General Hydrostatics, or GHS, the computer software we use to build and analyze ships. Then we launched into helping one of our sponsors with an investigation he was conducting using some GHS. Then, Admiral Lee, a rear admiral who is second in command to the vice admiral in charge of Coast Guard operations, visited the MSC for a briefing. Captain Nadeau, the MSC commanding officer, had us sit in as props. At the conclusion of the briefing, Admiral Lee asked Max and I a bunch of questions about why we were interning at MSC, and then told Captain Nadeau to set up an appointment for us to stop by his office and have a lengthier conversation. In between all of this, we found out our internship projects would involve the application of the pontoon simplified stability test (PSST) to tri-toons and wall-sided catamarans.

For the next few days, we worked diligently on our projects. Max was working on the applicability of the PSST to wall-sided catamarans, and making sure the results from that test align with the SST for catamarans. I was working on the applicability of the PSST to tri-toon vessels. After a couple days of being overwhelmed by the sheer difficulty of the assignments, both of us were able to make significant progress and our level of knowledge expanded vastly. The capabilities of GHS are amazing.

One day, we traveled to Baltimore with SERT to observe the lifting of a sunken McAllister tug. Despite not being able to see the lift, we learned a lot about the salvage process while watching the divers work on sealing the tug. They planned on re-establishing buoyancy as much as possible while using a crane to maintain control of the tug while it was being lifted. We had some good conversations with the qualified SERT members about interfacing with industry. They talked about how there are many different priorities from the various parties involved in a salvage operation. We also talked to a USNA 2010 grad who left her Navy career to work for Titan Salvage. She was the on-scene engineer for Titan. Her perspective was also quite interesting, as she had majored in Naval Architecture and Marine Engineering just like us. We went on the sister-tug to the one that sank and were able to speak with the Captain of that vessel while NTSB and Coast Guard investigators were conducting their investigation. Seeing the interaction with the tug captain and the investigators, again, goes to show the importance of being able to effectively communicate with industry and other government organizations. The captain then took us around the tug, showing us the interior spaces that we had been modeling in GHS. Seeing the vessel after having only seen models made the salvage plan make more sense. Still, it's an

amazing feat; entire "compartments," which I should really call rooms, because the tug was not really compartmentalized, had to be sealed and then filled with air to regain buoyancy, all while 30 feet under murky, cold water.

After returning to D.C., we visited with Admiral Servidio, Mr. Lantz, Captain Thomas, Captain McAvoy, and Captain Mauger at Coast Guard Headquarters, who asked us a lot of questions and allowed us to ask them questions in return. It was a unique opportunity to sit down with the top people in the prevention field.

Next, we traveled with our sponsor to Mobile, Alabama. We went straight to Sector Mobile and met up with Mr. Vince Gamma, a retired Coast Guard turned civilian inspector, and Ensign Kathryn Cappetta, a 2012 CGA Mechanical Engineering grad who had gone directly to Sector Mobile as her first assignment. They took us out to VT Halter Marine's Pascagoula shipyard, where we saw a large roll-on/roll-off vessel under construction and met with some of their quality control inspectors. After that, we found ourselves at VT Halter's Moss Point yard where we saw several Hornbeck offshore supply vessels under construction. We drove around the shipyard and looked at the wide range of completion statuses, with one being in the water and another that was just a few modules. Then we grabbed some Alabama home-cooking for lunch.

Next, we headed over to Gulfport to visit Gulf Ship. We went aboard a Chouest offshore supply vessel (OSV) that was in the water. We walked through the nearly finished interior, looking at the extensive automation of the bridge and the vast size of the tank farm. We even got to witness a test of all the fire hoses onboard. Still in Gulfport, we went to Trinity Yachts/Offshore, where we saw some beautiful mega-yachts in the water. The main projects were some tank barges and a skeleton of an OSV.

The next day, we headed out with Mr. Ron Reeves, another former Coastie, to a mobile offshore drilling unit, the Q4000. The Chief Mate took us on a tour of the rig. We saw nearly everything: the bridge, the drilling deck, backup dynamic positioning, the engine rooms, some pump rooms, the accommodations, and the electronic driving range hidden in one of the columns. We also got to eat in the mess onboard, so we had some tasty food. After that, we visited C&G Boatworks, a small company that specializes in aluminum construction. We met a project engineer and he explained to us what he did on a day-to-day basis. Then we went into an offshore supply vessel that was under construction. It didn't have any decking yet, so we were walking on boards balanced on frames. Mr. Reeves explained to us how he conducted his inspections on each module as it was completed. We also went onboard a Dauphin Island Ferry that was dry docked to replace a shaft. Then we drove past the Austal Shipyard, where we got a good look at the two Navy littoral combat ships and two joint high-speed vessels under construction, and onto the BAE Shipyard. At BAE we saw them constructing some barges that open in the middle to dump spoils. We also saw

an integrated tug and barge undergoing repairs. Finally, we saw the ruins of the pier that had been destroyed by the runaway Carnival Triumph cruise ship and the Army Corps of Engineers dredge it had been blown into. Finally, we visited a welding school and saw how they train welders and test them to ensure their welds meet the standards for shipbuilding.

Lieutenant Commander Venturella, the Chief of Inspections at Sector Mobile, invited us to dinner and regaled us with tales of his days at the Marine Safety Center and stories from his current tour at Sector Mobile.

Our last day in Mobile, we visited with folks from Port State, Facilities, and Investigations, which are all part of Sector Prevention. They all explained to us what exactly their jobs were and provided us with examples of some of their projects.

Once we returned from Mobile, we had a few more days to finish our research, finalize our data, and develop a presentation. After lots of practice with our presentations and lots of editing, we presented our final reports to the highest echelons of Coast Guard Marine Safety. Based on their feedback, our presentations were well received and quite interesting. We had to field difficult questions from individuals much smarter and more experienced than ourselves and did so without making fools of ourselves.

After a celebratory lunch, Max and I, along with Captain Nadeau, made the journey to Admiral Lee's office for the meeting he had requested back on our first day. As we were waiting in the foyer of his officer, he walked in with Admiral Neffinger, the highest-ranking operational officer in the Coast Guard. Admiral Lee introduced us to Admiral Neffinger, who asked us about our projects and was quite interested when we told him our results. Then we went into Admiral Lee's office and he allowed us to ask him any questions we felt like. Next, he decided to take us on a tour of the second deck of CGHQ, where all the magic happens. He pointed out the Commandant's office, and told us to look at where we would be sitting in thirty years. Then he arranged for us to have a tour of the National Command Center. It was a great fringe benefit from our internship.

Max and I really enjoyed our time at the Marine Safety Center. It was a challenging assignment, but a very rewarding one. Next, I am headed back to Mobile for my phase two assignment, the CGC Barbara Mabrity. You will hear all about that at some point in the future.

If you have any questions, please feel free to email me at:
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