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The 196-foot menhaden steamer Rappahannock leaves the Omega Shipyard and heads for Virginia with matching pursers mounted on her stern.

OMEGA SHIPYARD

Delivering twins

Mississippi boatyard converts southern oil supply boats for Mid-Atlantic menhaden fishery

By Larry Chowning

Omega Shipyard at Moss Point, Miss., recently delivered two menhaden steamers to the Omega Protein plant in Reedville, Va. They will be fishing in Chesapeake Bay and off the Virginia coast.

Both steamers are converted offshore oil supply boats that operated in the Gulf of Mexico, carrying equipment and personnel to and from oil platforms.

The 196' x 40' Rappahannock was built in 1982, making it the largest boat operated by Omega Protein. The 184' x 38' Fleeton was built in 1976. The addition of the two boats gives Omega's Reedville menhaden fleet a total of seven steamers.

These are not "steamers" in the sense of being powered by coal-fired steam engines, as menhaden boats once were — starting in the 1870s when steam replaced the sail power of schooners, sloops and pungies. Today the boats are diesel powered, but around Chesapeake Bay they are still referred to as steamers.

"The offshore supply boats make good fish boats," says Omega Protein's general manager, Monty Deihl. "The boats are wide and long, stable and low-sided. We have to be able to work from the deck, so we must have a relatively low-sided vessel." He adds that converting a supply boat as opposed to building a new steamer is "a very cost-effective option."

Of course, taking boats designed for work not at all related to commercial fishing and giving them the capability to catch menhaden requires some alterations. In an 18-month project, the Omega yard rebuilt about 40 percent of each steamer. Most of the work took place in the stern and the midship section.

"We gutted out the whole boat," says O.W. Brown, the shipyard's general manager. Below deck, a supply boat has a centerline corridor that goes between tanks for fuel, seawater and mud. They removed the corridor and all the tanks. Beyond that, Brown says, "We used framing that was there, and tossed out what was bad and replaced it."

In the now empty space, they built four insulated fish holds. "The fish holds are slightly larger than on our standard boats. We also doubled the tonnage of the refrigeration system to improve the quality of our product when it gets to our processing plants," says Brown.

The "gutting out" process included getting rid of the machinery, like the main engines and even the potable water system. "It was a brand new machinery package for the whole boat," Brown

says. Both the Rappahannock and the Fleeton now have a pair of new 1,500-hp Caterpillar 3512C diesels that work through Twin Disc MGX-5600 marine gears with 6.04:1 ratios that turn 84" x 69" four-bladed props.

Each has five 231-hp John Deere 6068 engines. Two of them power compressors for the refrigeration; a third one is hooked up to the fish pump; and two more are part of Marathon Marine 150-kW generators for ship's power.

The Omega yard crew replaced some of the main-deck plating and completely rebuilt the wheelhouse with new electronics. All of the winches were renewed, including the anchor winch.

When a steamer heads out to the grounds in search of schools of menhaden, it carries a pair of purse-seine boats, almost always in davits on the side of the steamer. But the Rappahannock and Fleeton are borrowing a method of transporting the purse boats that's been used for about 10 years on menhaden boats in the Gulf of Mexico.

"We have always used World War II vessels that are not wide enough for a stern ramp," Deihl says. "We brought one up from the gulf that has a stern ramp, but these are the first two vessels specifically built with the ramp for Chesapeake Bay. They are the wave of the future in this business because they work great."

Since the offshore supply boats didn't come with stern ramps, the Omega yard had to build them. Part of the process involved changing the hulls from a square-stern shape to a fantail design to support, launch and retrieve the pair of 40' x 11' purse boats. Building the ramps added about 12 feet to the length of the steamers.

The top deck of the stern ramp is half-inch steel with two 18- to 20-inch-wide slots — referred to as "slides" — built into the ramp that then fan out as they approach the water. The keel of each boat sets in one of the slides, which helps keep the boat level and stationary. The slides have a "heavy plastic-type nylon," adds Brown, "so the keels don't skin up the steel" when the boats are launched and hauled back.

A cleat is welded into the deck between the slides for towing when the boats are in the water and not chasing fish.

A pair of 25-foot catwalks with railings extends out to the purse boats when they are on the ramp. These provide a means for the boats' crews to easily enter and leave the boats. Large pads on the heavy pipe uprights that support the catwalks keep the boats level and stationary. On the Rappahannock, the skipper and 10 others go across the catwalks and into the two purse boats. That leaves two engineers, a cook and the first mate to run the steamer.

The purse boats are ready to be launched. The chain holding them together keeps the boats stable until they are in the water.

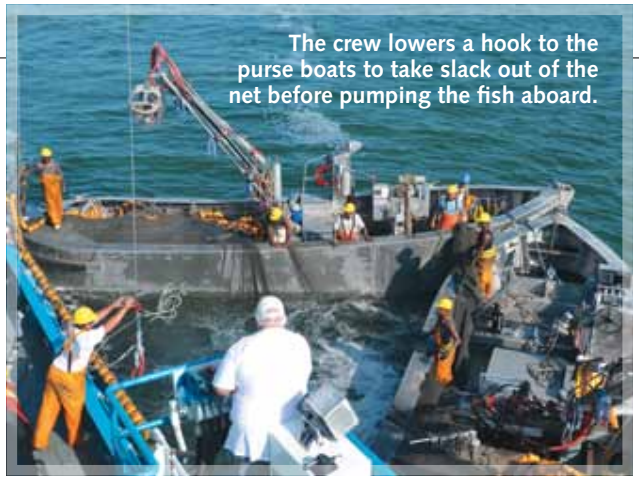
LARRY CHOWNING

Building the stern ramp increased each steamer's length by 12 feet.

OMEGA SHIPYARD

Having encircled a school of menhaden, the purse boats retrieve the wings of the seine.

LARRY CHOWNING


The crew lowers a hook to the purse boats to take slack out of the net before pumping the fish aboard.

LARRY CHOWNING

When it's time to go fishing, the crews drop into the purse boats, and an engineer on the second deck releases the cables on Pullmaster winches that are hooked to a U-shaped bolt at the stem of each boat.

The boats launch simultaneously down the ramp. All the while they are lashed together at about amidships with a heavy chain for stability. Boats that haven't been chained together have turned over. The process is reversed when the purse boats come back aboard.

Once in the water, the purse boats, with each carrying half the seine, go side by side after a school of fish and then split apart as they approach the school and start to encircle it, releasing their nets as they go.

After they complete the circle and link up again, they send over a 2,000-pound lead "tom" to anchor the end of the purse line and hold the net on the bottom. The tom also closes the net, preventing encircled menhaden from escaping. With the net closed, the crews hauls up the tom and use power blocks on both purse boats to haul the nets and fish toward the surface.

When the steamer comes up, the purse boats form a V-shape against the steamer with their sterns to the side of the larger boat and their bows touching. One part of the net is lashed to the steamer's rail. The rest of the net is up against the purse boats, creating a pocket for the fish to be closely contained.

Next a cable attached to the steamer's mast drops down to the purse boats and is attached to the net. The excess net is pulled upward, which tightens the purse pocket and bunches up the fish even tighter. When it's as high as it will go on the mast, another cable drops down to remove additional slack.

The crew lowers a 12-inch hose into the pocket of fish to pump menhaden and warm seawater up to the dewatering screen that runs across the steamer's deck. The seawater goes overboard, and the fish are directed to cooled fish holds.

All the while, the first mate is at an outside helm station with an excellent view of the offloading fish. He has hydraulic controls that operate the winches on the mast and the fish pump. The steamer is operated with Twin Disc throttles, Simrad rudder-angle indicators and joystick steering.

The refrigeration process uses 1,000 to 2,000 gallons of chilled seawater. Ammonia condensers installed on the deck just aft of the fish holds chill the refrigerated seawater to 32 to 36 degrees, which is sprayed over the menhaden as they go from the dewatering screen to the holds. Each steamer packs 2 million fish. (The menhaden fishery keeps track of its catch not by pounds caught but by individual fish, which average just over half a pound each.)

At the end of the day, the crew can retreat to a rebuilt galley with new appliances and crew quarters that the shipyard's carpenters completely refinished. Compared to other menhaden boats "these are really nice," says Brown. Each stateroom sleeps four in two sets of bunk beds and there are two wardrobes for the storage of clothes and personnel items.

Of the two steamers, the Rappahannock is the easiest to spot at night. She's the only one of Omega's seven steamers that uses blue lights, as opposed to white, over her work decks. The Rappahannock's captain, Lee Robbins, requested the blue lights because he felt it would set the boat apart from the rest of the fleet.

According to Deihl, the Rappahannock and the Fleeton are fishing Chesapeake Bay and "efficiently" doing the job of catching fish and getting them to the plant. On June 24th, the Rappahannock landed 1.2 million fish, off Cape Charles, Va., in Chesapeake Bay. It was the largest one-day catch of the season so far. NF

Larry Chowning is a reporter for the Southside Sentinel in Urbanna, Va.

For information on companies mentioned in this article, see page 49.