



WENONA

Originally launched 1899

THE ELECTRIC LAUNCH AND NAVIGATION COMPANY, LATER TO be known as The Electric Launch Company, or ELCO, was established way back in the late 1800s to introduce the first electric 'engine' to boating.

The company built a fleet of 55 electric launches that were used to ferry visitors around the World's Columbian Exposition in Chicago in 1893, and in 1899 it delivered *Wenona*, a 32-foot electric launch, to the F R Smith boatyard

on Lake George, about midway between Boston and Lake Ontario in New York State. The yard used her to demonstrate the qualities of electric launches to clients.

In 1903 the boat was bought by Bishop Stires, who owned a house on the lake and used her for cruising. She was passed on to his son and then grandson, Ernie Stires, both of whom also cruised her on the lake and elsewhere, and was finally sold out of the family, after more than 100 years of ownership, in 2006.

Beautifully restored Wenona is probably the only electric boat of her era still running on the original motor

With her electric power, *Wenona* could cruise the 68-mile length of the lake on one charge, running at an economical speed of six knots. Her efficient hull shape allowed a top speed of 12 knots from the 3hp electric motor running at 80 volts DC and powered by a bank of 44 Edison single cell batteries.

The Stires family kept the batteries topped up from a single- cylinder generator that also provided the power supply for the family's summer home on the lake. In the winter the batteries would be removed from the boat, the acid decanted into glass jars and the lead plates from the batteries stored in the lake! Come spring, the batteries would be reassembled, and it was reported that there was just enough charge left to make the trip from the storage boathouse to the dock for connection to the generator.

When the boat was sold in 2006 the new owner decided to take her back to Lake George, and eventually she went to Halls Boat Corporation to be fully restored. She was showing her age with a significant amount of hogging of the hull, so that her original graceful, sweeping sheer line had actually been reversed. The cross-sectional shape of the hull was also far from its original outline. At some point in the boat's long history the transom had been replaced and was shaped very differently from the one shown in historical pictures.

So the first step in the restoration process was taking *Wenona* back to her former lines. Luckily, the Stires family had loved the boat so much that they had kept extensive documentation in the form of photos and written exchanges. There was even a short book of family stories, written as though they were told by *Wenona* to the other boats while

in winter storage. Using these resources, it was possible to determine the original shape and then begin to restore it. This was achieved by removing some of the planks and ribs and using braces and straps to push and pull the hull back into a fair form. After the correct shape was achieved in one section, new oak frames were steam-bent and fastened into place. Once the hull shape was restored, some of the cedar planks were replaced. Most of the original planking was in surprisingly good condition after 100 years.

Now that *Wenona* had her shape back, the rest of the boat could come together. A sub-deck was built along the keel to support the large battery bank required to power the electric motor, and the original cockpit sole was replicated in one-inch thick yellow pine, which makes for a sturdy walking surface. The sheerstrakes were particularly challenging, as they have a reverse-teardrop contour that changes as it runs the length of the boat, a shape that could only be cut and shaped by hand. The covering boards, decks and coaming were all replaced. Tongue-and-groove mahogany staving was installed on the interior and the forward bulkhead, and a new transom was fitted, showing off *Wenona*'s newly restored contours.

The ELCO propulsion system that was shipped with the boat in 1899 represented the latest electrical technology

THESE PAGES: ONE OF THE RENOVATORS' BIGGEST TASKS WAS TO CORRECT THE SHAPE OF THE HULL, WHICH HAD BECOME SERIOUSLY DISTORTED OVER THE YEARS. PHOTOGRAPHS AND DOCUMENTS KEPT BY THE STIRES FAMILY HELPED TO ENSURE THAT THE WORK WAS ACCURATE



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COMPANY THAT PIONEERED ELECTRIC BOATS

The Electric Launch and Navigation Company, later known as The Electric Launch Company (ELCO), was established in 1892 and made its name and reputation with the electric launches it built for the 1893 Chicago Exposition. The man behind its success was Henry R. Sutphen, who joined the company in 1892 and ran it for over 50 years, right through until 1949.

Although electric boats were its first products, the company also offered launches with gasoline engines, and later branched out into the construction of larger motor cruisers and yachts ranging up to 129 feet in length. It built lifeboats for the US Coast Guard, various military craft and, during World War II, many PT boats.

After the war ELCO struggled to get boatbuilding work and diversified into a range of woodworking ventures that included producing bowling alleys and station wagon bodies. It became a small branch of the rapidly expanding Electric Boat Company, which built nuclear submarines for the US Navy and later became part of the General Dynamics group.

ELCO was closed in 1949 but returned to business in 1987 under the leadership of Joseph W. Flemming, whose stepfather had been employed as a woodworker in the old ELCO workshop.

Today the company is building electric boats again and offers a wide range of traditional designs. It also provides electric propulsion systems to other builders and to private owners who want to convert.

The tradition that started with the introduction of electric boats continues to this day, and with the growing interest in this type of propulsion ELCO look set for a bright future.

of the period. The electric motor is a DC series-wound type designed to deliver about 3hp at 800 to 900rpm. It is controlled by an eight-position, ten-pole rotary mechanical selector switch that provides five speeds forward, a neutral gear and two speeds in reverse.

The motor was found to be in surprisingly good condition and was sent to be rewound and have new brushes installed. It has bushed bearings with oil sumps and automatic self-

lubrication. By today's measure it is large and heavy for its power rating, but it is very efficient, consuming a minimum amount of battery power.

The mechanical rotary motor control switch is operated by a small bronze wheel located next to, and concentric with, the boat's steering wheel. The switch is formed from a round wooden cylinder approximately three inches in diameter and 14 inches long mounted on a metal shaft

THIS PAGE: AFTER A CENTURY OF USE, THE ROTARY MOTOR CONTROL (BELOW LEFT) WAS IN POOR CONDITION AND MANY PARTS WERE MISSING. IT WAS STRIPPED DOWN, REPAIRED AND CLEANED, NEW PARTS WERE MADE, AND THE ASSEMBLY IS NOW IN PERFECT WORKING ORDER. THE ENGINE (BELOW RIGHT) IS THE ORIGINAL, BUT CONTEMPORARY STORAGE BATTERIES PROVIDE MORE RANGE



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that is connected to the operator control wheel. Mounted on the cylinder are a large number of copper straps that are shaped around it and interconnected to form sliding contact points that determine the speed and direction of the motor.

Mounted on a separate fixed piece of wood are 10 spring-mounted fingers made of copper and bronze that slide against the copper straps on the wooden cylinder to create the eight different circuit combinations. These change the battery voltage and polarity as well as inserting resistors, as needed, to achieve the required motor control functions.

The controller was found to be in poor condition and the entire assembly had to be taken apart. The wooden cylinder was repaired, all the copper straps were cleaned and the interconnections were soldered together and reassembled. Many of the electrical spring wiper finger parts were missing so new ones had to be made. Each finger consists of a cast bronze mounting structure, flat

brass spring arm, and copper wiper pad where all of the wear takes place. Enough of the mounting structures were located and, thanks to the skill of a gifted machinist, new brass springs and copper pads were fabricated to look and work like the originals, so it was possible to restore the assembly to good-as-new condition.

The three power resistors had to be taken apart and the whole unit cleaned, tightened and reassembled. The old wiring diagram was inaccurate so a new one had to be developed and built up. Today the electrical system works as it did when installed in 1899 with the exception that the range is now 100 to 120 miles on one charge thanks to newer batteries with greater capacity.

Wenona has been lovingly restored and today is largely back to her original condition. She is probably the only electric boat of her era still running with the original motor, and to match her heritage her new owner also now owns the property at Shelving Rock that was the original home of the Stires family and their cherished boat.

SPECIFICATIONS

LOA
10.05m (33')
LWL
9.4m (31')
BEAM
1.85m (6' 10")
DRAUGHT
0.79m (2' 6")
DISPLACEMENT
9,500lb
ENGINE:
1 x 3+hp electric
SPEED
8mph
RANGE
122 miles at 6mph
POWER SOURCE
12 DC batteries

OWNER AND GUESTS

11

CREW

1

CONSTRUCTION

Oak, cedar, pine

PAINT

Pettit white

CLASSIFICATION

Launch

ORIGINAL BUILDER/YEAR

The Electric Launch Company/1899

EXTERIOR STYLING

1800s launch

OWNER'S PROJECT MANAGER

Nic Lamando

REFIT YARD/YEAR

Halls Boat Corporation, Lake George, NY/2008-2013

