FREIGHTERS

Bi-Monthly Periodical on the Latest Great Lakes Shipping News
Edition #53 – September-October 2020
Official newsletter of Shipwatcher News – Since 2014 – Written by Brendan Falkowski – www.shipwatcher-news.com

Welcoming the William Richard

- ArcelorMittal sells U.S. assets to Cleveland-Cliffs in $1.4 Billion Deal
- Barge Michigan Trader delivered to VanEnkevort Tug & Barge
- Work progressing quickly on Interlake's Mark W. Barker
- In the Design: The Leading End – a look at bow design on Great Lakes ships

Editor's Pick

Short Articles on various happenings around the lakes

ArcelorMittal sells U.S. assets to Cleveland-Cliffs

September 28, 2020

ArcelorMittal USA entered an agreement to sell their U.S. assets to Cleveland, Ohio-based mining and steel manufacturer Cleveland-Cliffs Inc. The sale will go for a total of $1.4 billion, and will include ArcelorMittal steel mill facilities at Indiana Harbor and Burns Harbor, Indiana, the ArcelorMittal Gary Plate facility at the U.S. Steel Gary mill complex in Gary, Indiana, and an interest in I/N Tek JV and I/N Kote JV steel mills, which are jointly owned by ArcelorMittal and Nippon Steel, based out of Japan. In total, the deal will come with a total of 6 steel mills, 8 finishing facilities, 2 iron ore mining and taconite pelletization operations, as well as 3 coal and coke making plants. The deal will likely take a few months to undergo final government approval.

Headquartered in Luxembourg, ArcelorMittal came to be in 2006 when Arcelor and Mittal steel merged together. ArcelorMittal acquired the International Steel Group facility in 2006 during the merger, and acquired the Ispat International facility in Indiana Harbor in 2008, continuing the charter of the Central Marine Logistics fleet.

The deal does not include the Central Marine Logistics fleet, contrary to some sources. The ships included in part of this fleet, the *Edward L. Ryerson*, *Joseph L. Block*, and *Wilfred Sykes*, are all under the ownership of the Indiana Harbor Steamship Company, and are managed by Central Marine Logistics. The vessels are under a cargo contract charter to Arcelor Mittal, and could possibly be chartered by Cleveland-Cliffs for operations serving the mills in Indiana Harbor and Burns Harbor. At this point in time, this situation is still unknown. ◻

Michigan Trader undergoing final preparations for delivery, July 25, 2020.

Photo by Daniel Lindner

Barge Michigan Trader delivered to VanEnkevort

October 8, 2020

Fincantieri Bay Shipbuilding announced on October 8, 2020, that they have delivered their latest construction project, the self-unloading barge *Michigan Trader*, to her owners, VanEnkevort Tug & Barge Inc. of Escanaba, Michigan.

Michigan Trader is 740' long, 78' wide, and will be able to carry up to 37,000 tons of cargo. She will be paired with the tugboat *Dirk S. VanEnkevort* when she enters service. *Dirk S. VanEnkevort* is currently undergoing some finishing touches at Erie, ➲Pennsylvania, before sailing to Sturgeon Bay, Wisconsin, to pick up the barge.

"This *Michigan Trader* will be the fourth self-unloading barge in our Great Lakes fleet, and we couldn't be happier to welcome her into service," said David Groh, president of VanEnkevort Tug & Barge.

"The completion and delivery of the *Michigan Trader* to Dave Groh and his VanEnkevort Tug & Barge team is another proud event for Fincantieri Bay Shipbuilding and our talented shipbuilding team." Said Todd Thayse, Vice President and General Manager of Fincantieri Bay Shipbuilding.

Check back in our next issue for another article about entrance of the *Michigan Trader / Dirk S. VanEnkevort* to the Great Lakes shipping scene.◻

Sources:

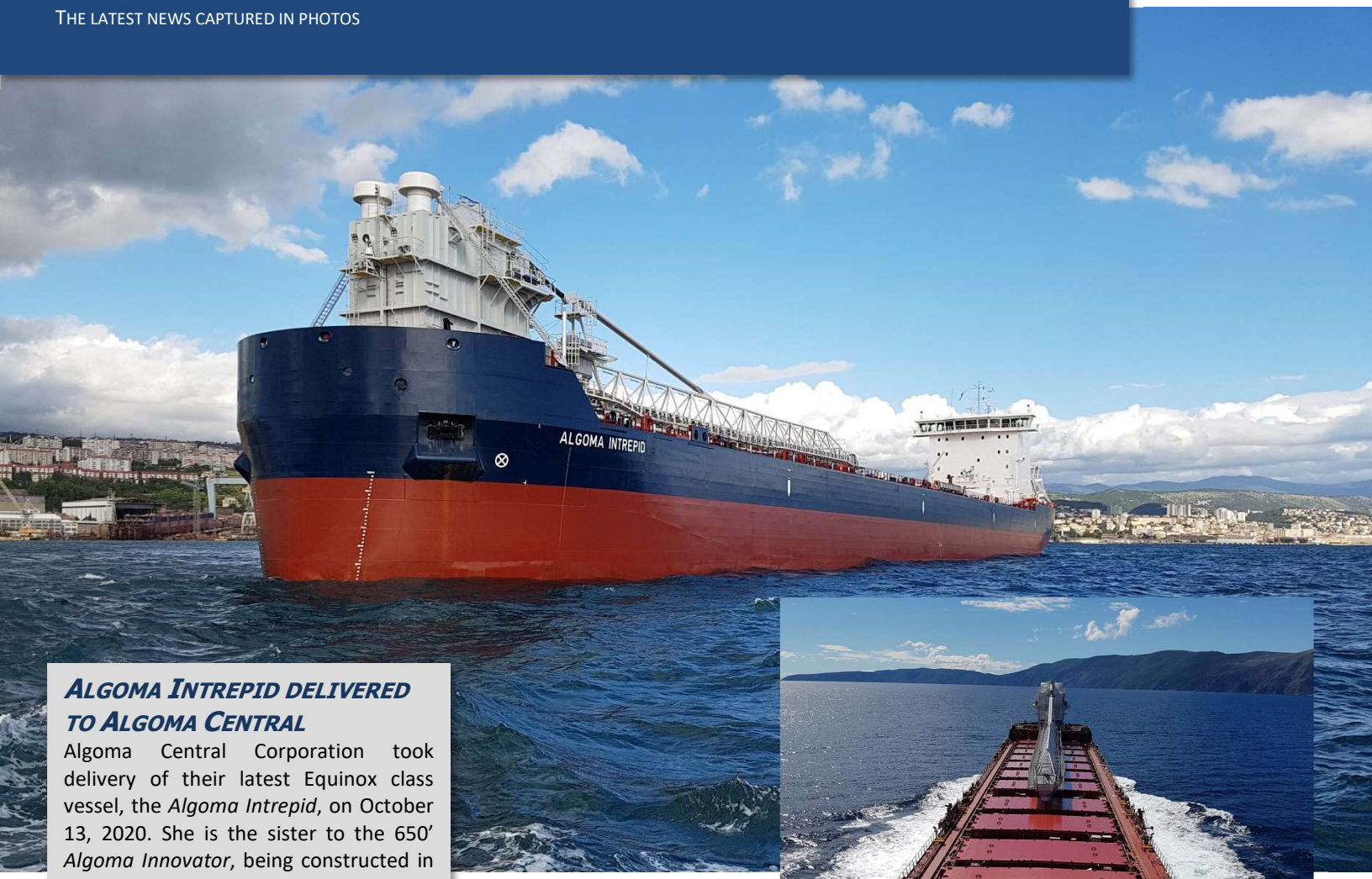
"Algoma Central Corporation takes delivery of the Algoma Intrepid". Algoma Central Corporation. 13 October 2020. Accessed 15 October 2020. https://www.algonet.com/the-company/news/news-release/?news-release-id=6588

"Fincantieri Bay Shipbuilding delivers new self-unloading barge to VanEnkevort Tug & Barge Inc.". Fincantieri Bay Shipbuilding. 8 October 2020. https://fincantierimarinegroup.com/10-9-20/

Pete, Joseph S. "ArcelorMittal USA sold to Cleveland-Cliffs for $1.4 billion in end-of-an-era merger". Northwest Indiana Times. 28 September 2020. Accessed 15 October 2020. https://www.nwitimes.com/business/local/arcelormittal-usa-sold-to-cleveland-cliffs-for-1-4-billion-in-end-of-an-era/article_b27cbb71-866f-5765-8e14-798d8dda2bb1.html

News in Photos

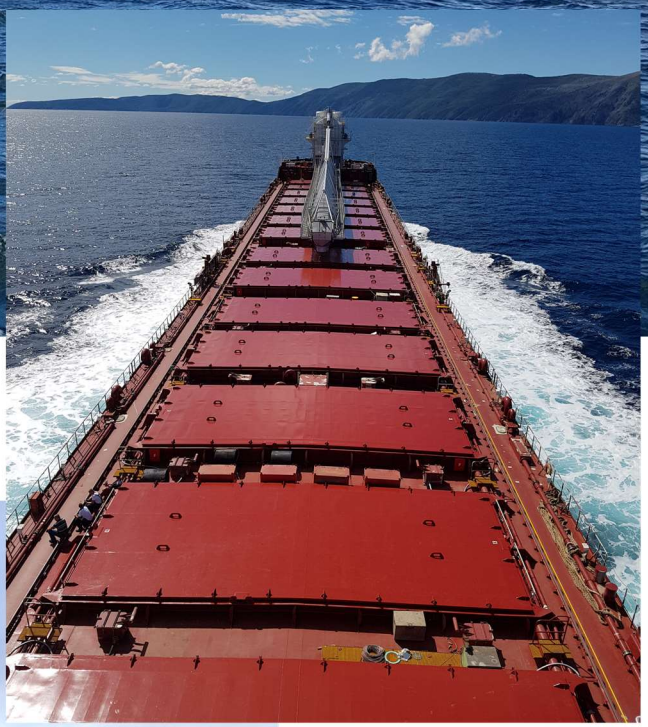
THE LATEST NEWS CAPTURED IN PHOTOS



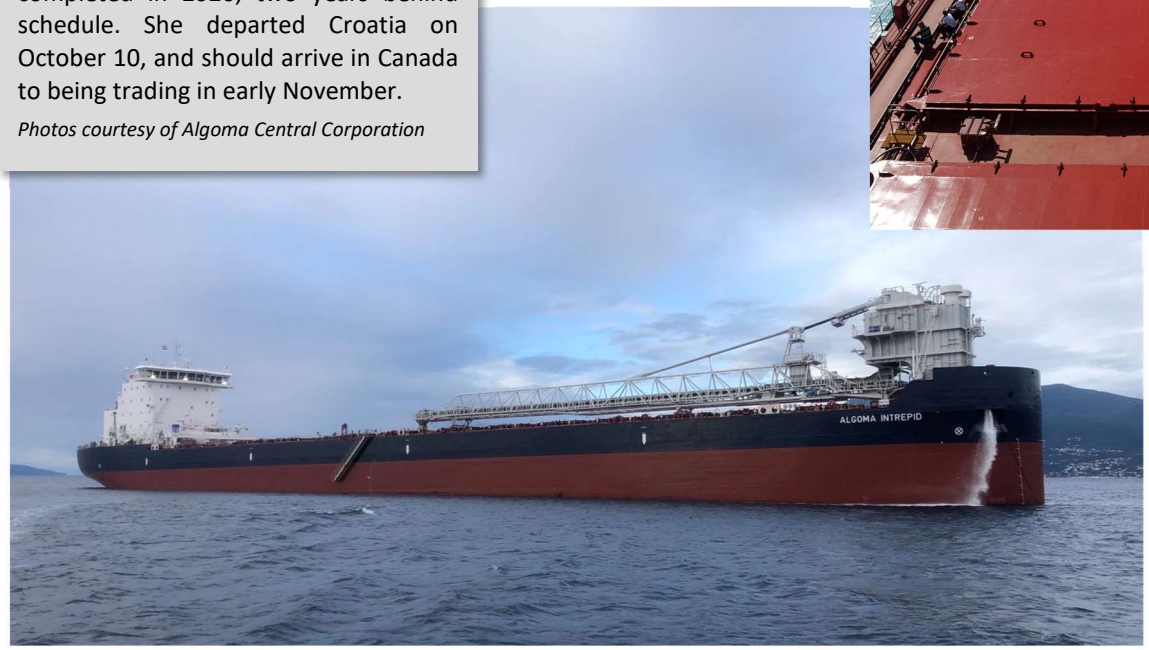
Algoma Intrepid delivered to Algoma Central

Algoma Central Corporation took delivery of their latest Equinox class vessel, the *Algoma Intrepid*, on October 13, 2020. She is the sister to the 650' *Algoma Innovator*, being constructed in Croatia. Early in her construction, the shipyard experienced financial delays, but Algoma renewed the construction contract and the *Intrepid* was completed in 2020, two years behind schedule. She departed Croatia on October 10, and should arrive in Canada to being trading in early November.

Photos courtesy of Algoma Central Corporation



Sea Trials



Algoma Intrepid on the Adriatic Sea off of Croatia, October 5, 2020.

Construction Update: M/V Mark W. Barker

Work Progresses on Interlake Steamship Company's new ship

October 20, 2020

The hull of the *Mark W. Barker* takes place in the graving dock at Bay Shipbuilding.
Photo courtesy of Interlake Steamship Company

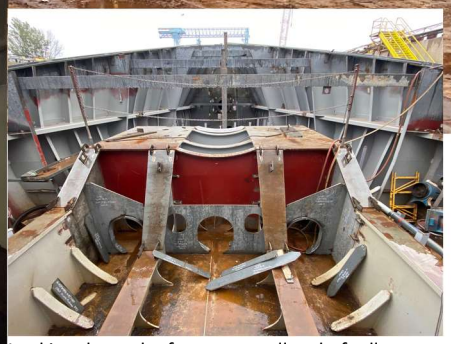
Construction has been progressing steadily on Interlake Steamship Company's new vessel, the *Mark W. Barker*. Currently, a portion of the midbody and stern section have been erected in drydock, with sections of the bow will be fabricated this fall and be added to the growing ship soon. Program Manager Amelia Ott from Fincantieri Bay Shipbuilding said putting the ship together is like building "a giant Lego set". Modules for the accommodations block, engine room, and stern section are in the process of fabrication and are currently on schedule.

The engine room equipment, such as gearboxes, the port and starboard main engines, and shaft generators will be arriving at the shipyard for installation inside the ship soon.

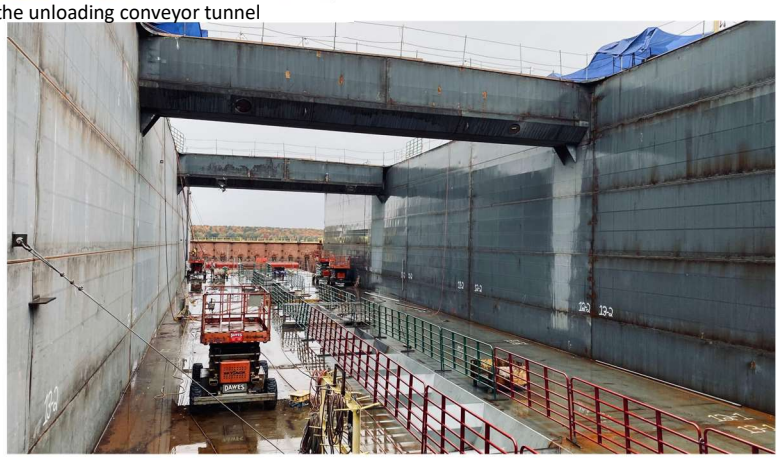
Thus far on the project, about 4,100 short tons of steel have been fabricated and about 1,700 short tons have been assembled in the graving dock at Fincantieri Bay Shipbuilding. The vessel will be 639' long and 78' wide, and will be completed in time to begin trading in 2022. ☐

Special thanks to Chrissy Kadleck for providing the information and photos for this article

Looking down the unloading conveyor tunnel



Looking down the future propeller shaft alley

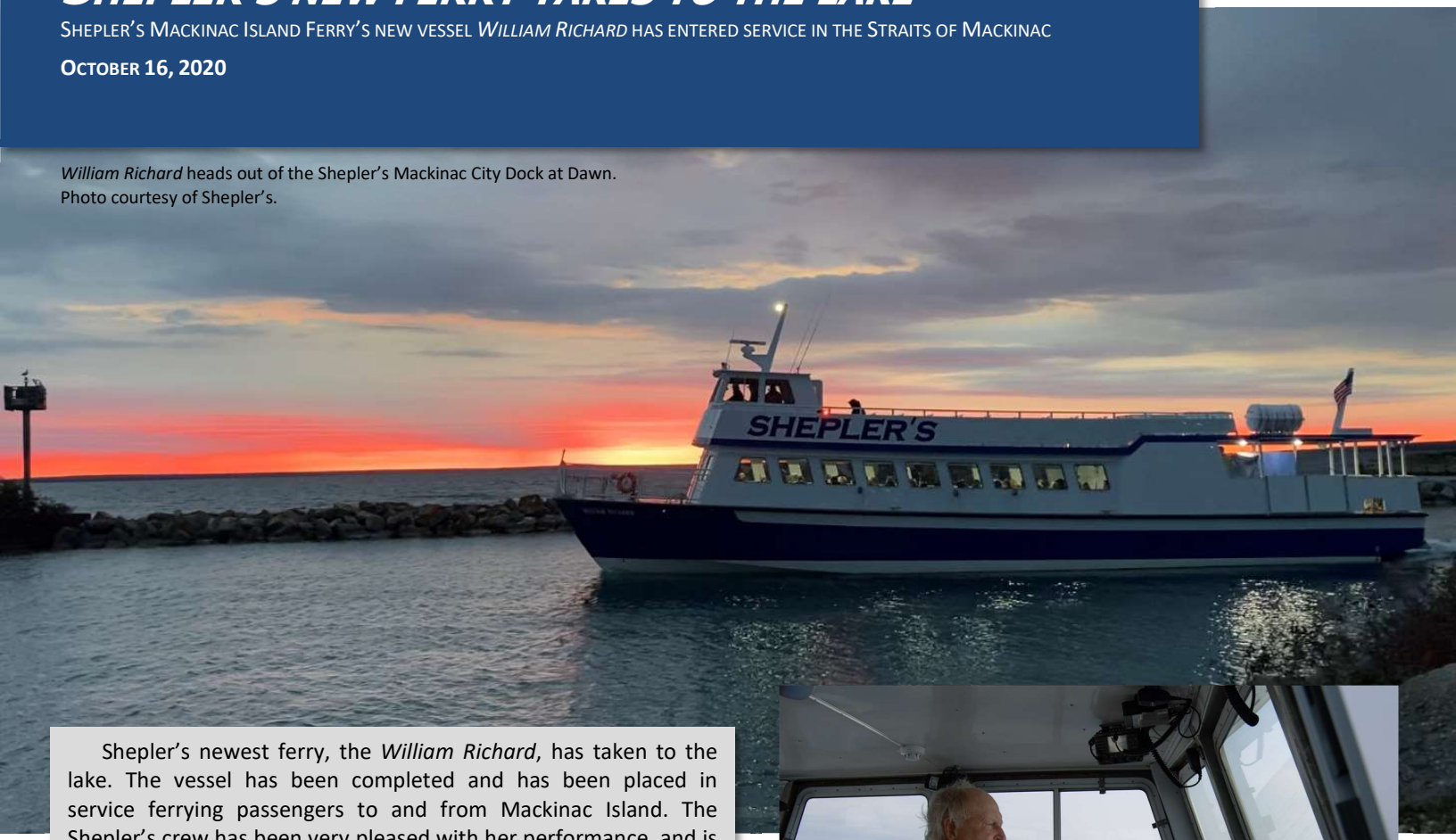


Inside the cargo hold

Shepler's new ferry takes to the lake

Shepler's Mackinac Island Ferry's new vessel *William Richard* has entered service in the Straits of Mackinac

October 16, 2020



William Richard heads out of the Shepler's Mackinac City Dock at Dawn. Photo courtesy of Shepler's.

Shepler's newest ferry, the *William Richard*, has taken to the lake. The vessel has been completed and has been placed in service ferrying passengers to and from Mackinac Island. The Shepler's crew has been very pleased with her performance, and is outperforming expectations. Captain Billy Shepler has been primary captain onboard, and has been preparing to train other captains for the Shepler's fleet. Since they have gotten the chance to get out with the new boat, Shepler's have been able to answer one of their big questions – will the jet drives be as, less, or more maneuverable than the boats with propellers? The answer is, yes, the jet drives aboard the *William Richard* have proven to be more maneuverable than the other boats with propellers, performing amazingly around the dock without an issue in wind.

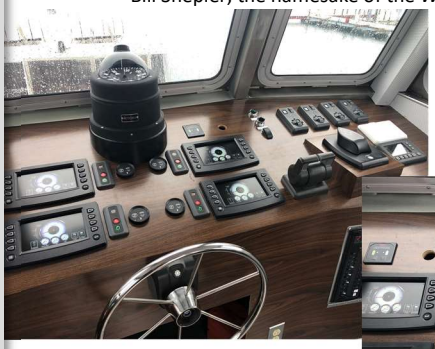
Currently, the Shepler's team is installing weather curtains on the fantail. The *William Richard* features a large fantail with lots of space for luggage. It is still unknown whether the new boat will operate out of the Mackinaw City or the St. Ignace dock. That will likely be decided next season, or she may alternate which dock she operates from.

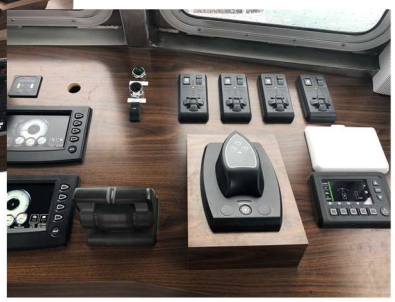
While the boat has been completed, there are still a few things that have to be worked out. Since she has a more robust HVAC system for heating and cooling, *William Richard* requires a higher voltage shore power connection, which is not currently in place at the dock. A new connection will be installed this winter.

Things are moving along quickly onboard *William Richard*. Over the next few weeks, she will see more service, and next season she will start out operating full-time. A formal christening ceremony will be hosted by the Shepler's family in May 2021 to properly introduce the *William Richard* to her element.

Special thanks to Shepler's Mackinac Island Ferry and Chris Shepler for providing the information for this article– Brendan Falkowski

Bill Shepler, the namesake of the *William Richard*, at the helm





Modern helm controls aboard the *William Richard*. The computer-mouse appearing control at center can be used to steer the ship and pivots 360 degrees. Photo by Chris Shepler

In The Design: The leading end

A look at the design of the bows of Great Lakes ships

The Classic styled laker *Alpena* features a pointed bow, common on Great Lakes ships until the early 1970's. Photo by Brendan Falkowski

Background

After the development of the "standard" Great Lakes freighter in the late 20th century, the design of the bow of Great Lakes ships remained largely constant throughout most of the next century. It was not until the early 1970's that Great Lakes shipbuilders began to break away from the norm of the classic-styled pointed bow of the Great Lakes freighter. New designs made way for the more modern rounded bow, found on almost all Great Lakes freighters constructed post-1973. Even though the rounded bow took hold of Great Lakes ship design, other variations of the classic pointed bow and the rounded bows came forward, but were not very common.

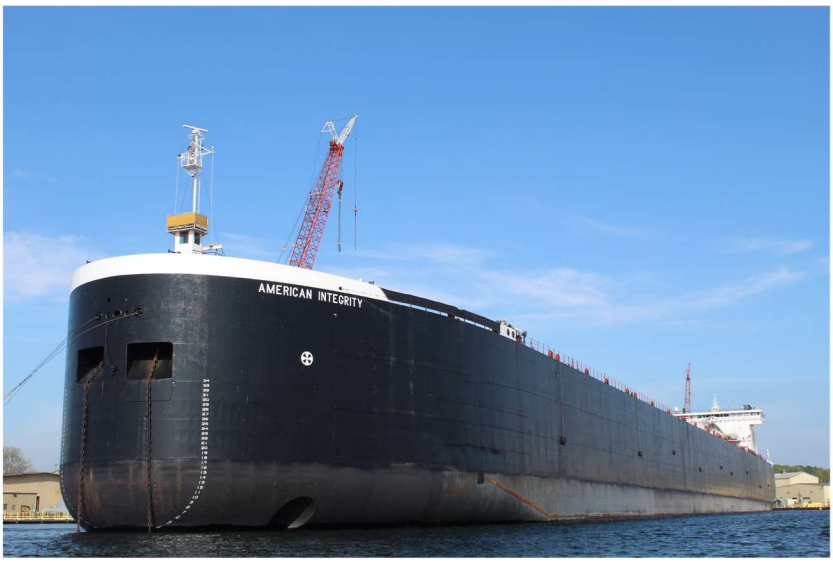
The "Classic" Pointed Bow

By the early 1900's, Great Lakes shipbuilders had developed the standard Great Lakes bulk carrier, with a cargo hold situated between a pilothouse forward and engine room aft. Naval Architects at the time designed these ships with a gracefully curved bow, coming to a point on the forwardmost end. The transition to the midbody had a lot of curvature to it. Examples of bows such as these could include the *St. Marys Challenger*➲of 1906, the *Wilfred Sykes* of 1949, or the *Frontenac* of 1968. These ships all posses the classic styled rounded bow, characteristic of historic Great Lakes ships. As much beauty as these hulls possess, they were very difficult to craft and very expensive to do so. In order to get the curvature on the forward end, the shell plating on the hull must be formed on two axes. With these hulls being difficult and expensive to construct, shipping companies, shipbuilders, and naval architects looked for a more economical alternative.

Introduction of the Rounded Bow

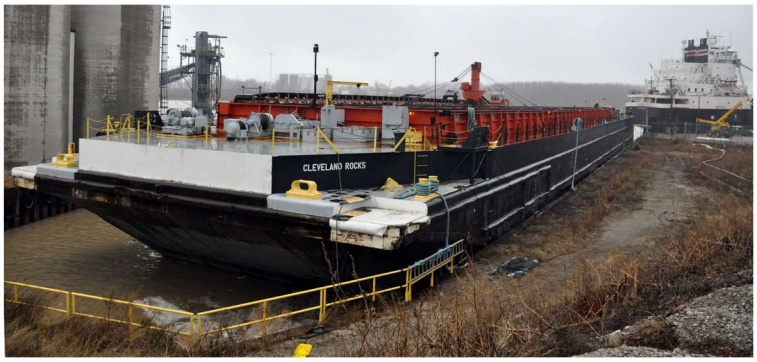
In the 1970's, naval architects began to look into different design variations that would be cheaper to build, as well as have a greater cargo capacity. A study led by naval architects at American Shipbuilding of Lorain, Ohio, in the early 1970's resulted in the Standard River Hull, a ship with a rounded bow and raked stern rather than a pointed bow and cruiser stern of classic styled Great Lakes freighters. This study, along with one conducted on the design of the *Charles E. Wilson* [Now *John J. Boland {4}*] and several others ushered in the rounded bow as the new standard in Great Lakes ship design.

The study conducted on the hull of the *Charles E. Wilson*➲



The rounded bow on the *American Integrity* is evident in this picture. Photo by Daniel Lindner

Algowood's V-shaped icebreaking was common on Canadian lakers constructed during the early 1980's. Photo by Roger LeLievre



The barge *Cleveland Rocks* originally featured a design with a flat bow. She was rebuilt as the cement barge *Commander* in 2018. Photo by Roger LeLievre

➲concluded that a ship with a cylindrical bow and raked stern had 9% less resistance than that of a ship designed with a pointed bow.

Rounded bows allowed for the midbody and cargo section to be carried further forward, taking on a more parabolic shape, allowing more cargo weight capacity, as well as more displacement forward. The relatively flat hull has fabricated curvature towards the lower hull in the transition to the bottom of the ship. This helps improve hydrodynamic efficiency and water flow to the propellers. The "blocky" shape of the hull allows more cargo capacity with little impact on speed and efficiency. Since Great Lakes ships make such short runs and spend a lot of time at the dock, speed on the lake does not matter as much as cargo capacity.

Other Variations in Design

Since the 1970's, rounded bows have taken over as the dominant design in the industry on the Great Lakes. While these are the most common, a few other designs have come up as well. During the late 1970's and early 1980's, Canadian shipbuilders utilized a V-shaped bow designed for icebreaking and operating off of the Canadian East Coast. These ships were similar to a bulbous bow design, and were better for ships operating at higher speeds on longer voyages.

While some bulbous bows have been found on Great Lakes ships, they are not common for several reasons. Bulbous bows are optimized for ocean-going ships traveling on long distance voyages at higher speeds. The purpose of the bulb ➲ is to reduce drag on the hull by reducing the wake at the bow. The bulb forces water ahead of the ship's upper hull and waterline intersection into a "bulb wave", pushing the water out of the way of the main hull. This helps cancel out the effects of the bow wave, reducing weight and drag. This design is most effective when a ship is operating at its designed speed most of the time, and is just extra drag when operating at lower speeds. Since Great Lakes ships operate at slower speeds on short runs, bulbous bow designs are not needed, and waste space when operating in a waterway where ship size is limited by navigation locks.

Flat bows, or a box barge form, have also been found a few Great Lakes barges, such as Port City Marine's barge *Cleveland Rocks* before her conversion to a cement carrier or Andrie's *Endeavour*. These hulls are cheaper to build, good for slow speeds, stable, but are not very hydrodynamic. Most are designed with a slight rake on the bow to help it flow through the water. While these hulls have higher directional stability, they are still not very common on the Great Lakes.

While pointed bows of classically designed Great Lakes ships dominated the Great Lakes shipping industry until the early 1970's, they eventually lost popularity to the numerous benefits of rounded bows and simplified design. Rounded bows since took over and still remain to be the most efficient design when it comes to cargo capacity, construction, and operation. ◘

Special thanks to the naval architects who provided their time and resources to help me write this article. Thank you to Nicholas Posh from Bay Engineering and Nick Hunter from NETSCo. –Brendan Falkowski

American Integrity

American Integrity on the St. Marys River.
Photo by Isaac Pennock

History

Bethlehem Steel Corporation contracted Bay Shipbuilding of Sturgeon Bay, Wisconsin, in late 1975 to construct a 1,000' vessel for their Great Lakes Steamship Division. This vessel, known as yard Hull #717, would be constructed to similar plans to that of the *Belle River* of 1977, and later the *Indiana Harbor, Burns Harbor,* and *Columbia Star*, all designed by Sturgeon Bay naval architect R. A. Stearn. The keel for the 340' stern portion of Hull #717, now assigned the name *Burns Harbor* by her owners, was laid in the graving dock on August 5, 1976. The keel for her 660' bow section was laid on October 8, 1976, on land in the shipyard. Shortly after, the name of Hull #717 was changed to *Lewis Wilson Foy*. The bow section was side-launched on April 28, 1977, and floated into the graving dock with the stern section, where the two pieces were welded together and the remainder of the ship constructed. The second 1,000'-Footer constructed for Bethlehem Steel was launched on June 6, 1978. She is 1,000' long, 105' wide, and 56' deep, and was capable of carrying 80,900 tons at her mid-summer draft of 34'01''. The *Foy* is powered by four General Motors EMD 20-645-E7 diesel engines, producing a total of 14,000 BHP and turning the two massive controllable pitch propellers that move the vessel.

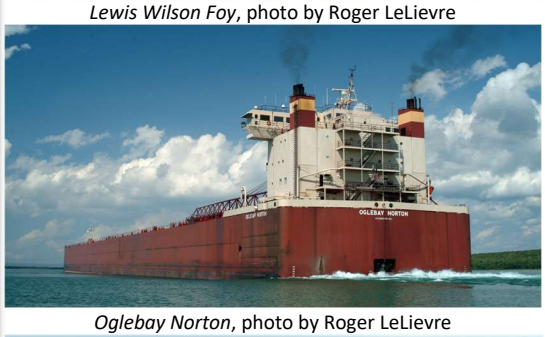
The new vessel was christened *Lewis Wilson Foy* on June 8, 1978, and departed on her maiden voyage later that day to load iron ore at Superior, Wisconsin. *Lewis Wilson Foy* would maintain a standard trade route, typically running iron ore loaded on Lake Superior for Burns Harbor, Indiana, while making occasional trips to the Bethlehem Steel facilities in Lackawanna, New York.

Lewis Wilson Foy collided with the Canadian Steamer *E. B. Barber* on September 15, 1981, at the Soo Locks on the St. Marys River. The *Foy* suffered three holes beneath her waterline on the bow, but was permitted to proceed to Burns Harbor to unload before heading to Sturgeon Bay, Wisconsin, for repairs.

The *Lewis Wilson Foy* got into another incident on July 6, 1982, when she struck the breakwall and ran aground at Taconite Harbor, Minnesota. She suffered damage to her propeller shaft, rudder, and other portions of her hull, requiring a tow to Bay Shipbuilding for repairs.

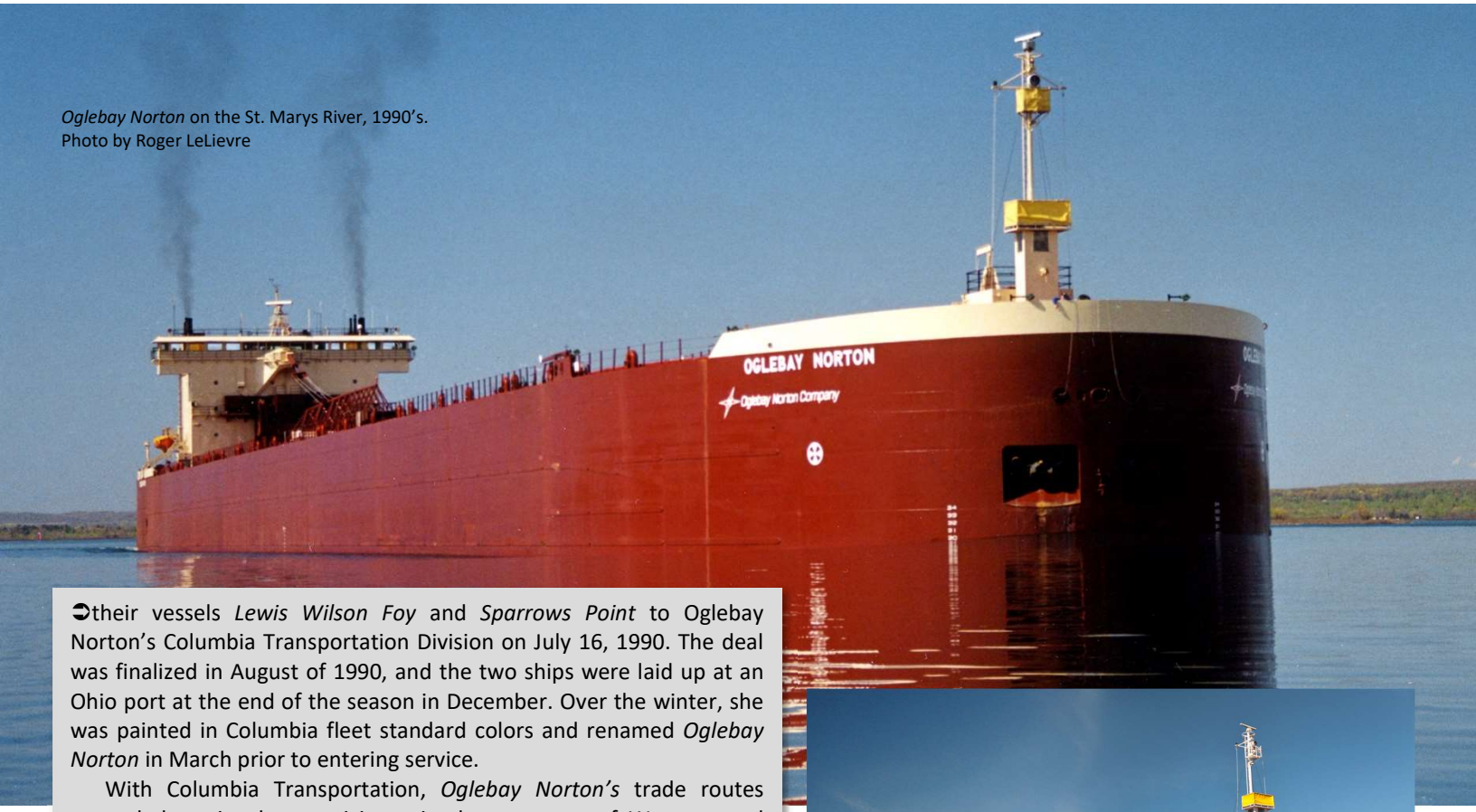
Bethlehem Steel's Great Lakes Steamship Division announced a deal to sell➲

Lewis Wilson Foy, photo by Roger LeLievre



Oglebay Norton, photo by Roger LeLievre

American Integrity, photo by Roger LeLievre



Oglebay Norton on the St. Marys River, 1990's.
Photo by Roger LeLievre

➲their vessels *Lewis Wilson Foy* and *Sparrows Point* to Oglebay Norton's Columbia Transportation Division on July 16, 1990. The deal was finalized in August of 1990, and the two ships were laid up at an Ohio port at the end of the season in December. Over the winter, she was painted in Columbia fleet standard colors and renamed *Oglebay Norton* in March prior to entering service.

With Columbia Transportation, *Oglebay Norton's* trade routes expanded, seeing her participate in the transport of Western coal from Superior, Wisconsin, to Detroit Edison power plants at St. Clair and Monroe, Michigan, as well as Consumers Energy's B.C. Cobb plant at Muskegon, Michigan. Aside from her introduction into the coal trades, *Oglebay Norton* also saw occasional service in the limestone trades. She set a limestone record in 1992, loading a total of 57,749 tons of stone.

In 1994, ownership of the *Oglebay Norton* was transferred directly to Oglebay Norton Company after they dissolved the Columbia Transportation Division. The only change in appearance to the ships was the addition of the Oglebay Norton logo on the bow and replacing the Columbia 5-pointed star with the four-pointed Oglebay Norton star on the stacks.

Oglebay Norton filed for Chapter 11 Bankruptcy in February 2004, and began to sell off their fleet in late 2005. They announced the sale of six of their remaining ships to American Steamship Company of Buffalo, New York, for $120 Million on June 6, 2006. *Oglebay Norton* was renamed *American Integrity* following the sale.

American Integrity broke the Soo Locks iron ore record on September 24, 2017, with a load of 75,095 tons of iron ore. She broke her own record on July 21, 2019, with 76,424 tons, which was later broken by her fleetmate *Indiana Harbor* a few weeks later.

In February of 2020, Rand Logistics announced that they had entered a purchase agreement to buy American Steamship Company from their parent company GATX Corp. The deal was completed in May of 2020, and no immediate changes were made to fleet operations. Due to the economic slowdown from the COVID-19 pandemic, *American Integrity* did not fit out until June of 2020. She continues to serve the iron ore and coal trades.

American Integrity, photo by Roger LeLievre

American Integrity departing Duluth, Photo by Daniel Lindner

American Integrity, Photo by Isaac Pennock

SOURCES:

Ahoy & Farewell II. Marine Historical Society of Detroit, 1996. Pp. 18.
Bawal, Raymond A., Jr. *Superships of the Great Lakes*. Inland Expressions, 2011. Pp. 38-42.
Ferguson, Brian. "American Integrity". Great Lakes and Seaway Shipping Online. N.d. Accessed 26 May 2020. <http://boatnerd.com/pictures/fleet/AmericanIntegrity.htm>
Reaume, Earl J., Jr. *U.S. Freighters of the Great Lakes*. Border Publishing, 2000. Pp. 171-172.

Brendan Falkowski

Is a Great Lakes ship enthusiast who shares his passion for the freighters through his newsletter and his artwork. He is currently pursuing his high school education in mid-Michigan before graduating and moving on to college, where he plans to attend to the University of Michigan to study Naval Architecture and Mechanical Engineering. Brendan is an avid musician, and is a drum major in his high school marching band. He enjoys sailing and spending time with his friends and family.

Special Thanks to our Sponsors

Become a sponsor! Help support the Shipwatcher News website and newsletters! Please see the form at www.shipwatchernews.com/support/

Special thanks to the sponsors of Shipwatcher News:

Bosun Sponsors

John & Kay DeCarli

Ross & Debbie Falkowski

Bud Siudara

Mate Sponsors

Know Your Ships

Captain Sponsors

Aquastar Cruises & Port City Marine Services

Jerry & Dee Heck

Jerry Siudara & Lisa Lemans

Shepler's Mackinac Island Ferry

AQUASTAR
LAKE CRUISES | MUSKEGON

Know Your KYS SHIPS

PORT CITY MARINE SERVICES
PC
MUSKEGON, MI

MACKINAC ISLAND FERRY
75
SHEPLER'S
1945-2020

Cover Photo: Shepler family poses on the bow of the *William Richard*. In photo from left to right: Maddy Fuhrman, Mallory Shepler, Patty Shepler, Bill Shepler, Billy Shepler, and Chris Shepler. Photo courtesy of Shepler's Mackinac Island Ferry.
All images used with permission

Subscribe for free at: www.shipwatcher-news.com/subsribe/
Contact Brendan Falkowski at: brendan@shipwatcher-news.com

Looking for Information on Ships of the Great Lakes?

Visit the Ships of the Great Lakes Archive to find information on hundreds of ships

SGLA

History of the Ships of the Great Lakes

www.greatlakesships.wordpress.com