

RIVER TRANSPORT NEWS

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Nucor, U.S. Steel Pick River Sites for New Steel Mill Projects

The inland barge industry is expected to benefit from a huge increase in steelmaking activity once recently announced projects for new steel mills become operational. Earlier this month, Charlotte-based Nucor Corporation and Pittsburgh-based U.S. Steel announced that they each would be proceeding with the construction of new major steel mill projects at sites along the inland river system.

In September 2021, Nucor and U.S. Steel each announced plans to build large new steel mill projects that would be equipped with state-of-the-art electric-arc furnace technology. Nucor announced at that time that its board of directors has approved the construction of a new state-of-the-art, three-million-ton sheet mill that would be built at a greenfield site to serve steel markets located primarily in Northeastern and Midwestern states. Nucor initially indicated that it was evaluating sites in Ohio, Pennsylvania, and West Virginia.

At around the same time, U.S. Steel announced plans to build a new “three-million-ton mini mill flat-rolled facility to be constructed in the United States. The planned mini mill will combine two state-of-the-art electric arc furnaces (EAF) with differentiated steelmaking and finishing technology.” The company did not provide further details regarding potential sites.

Nucor Picks West Virginia

Earlier this month, Nucor announced that it had selected a ...*Continued on page 5.*

Skyrocketing Steel Prices Depress 2021 Hopper Builds Industry Takes Delivery of 300 New Barges

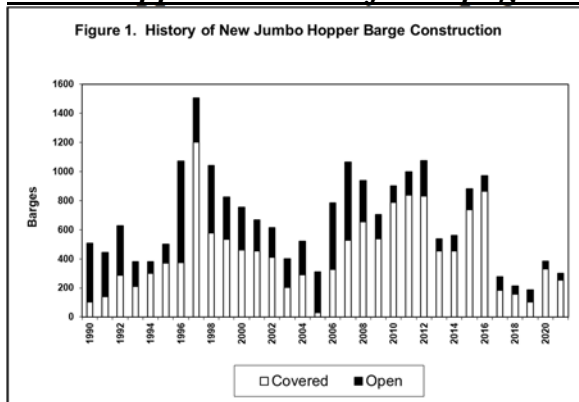
In 2020, U.S. shipyards reversed a three year slide in new jumbo hopper construction activity despite the widespread adverse economic effects of the COVID-19 pandemic. While 2021 marked a substantial recovery in U.S. economic activity, deliveries of new hopper barge equipment retrenched last year. According to *RTN*'s annual survey of new hopper barge construction activity, barge operators active on the Mississippi River System and its connecting waterways took delivery of 300 new jumbo hopper barges in 2021. Deliveries were down 22 percent from the 385 new hopper barges that were delivered to the barge industry in 2020. Not surprisingly, new hopper barge building activity was subdued by recent historical standards. As recently as 2016, new hopper barge deliveries totaled nearly 1,000 barges (see Figure 1, page 2).

According to multiple industry sources, there was one primary development that depressed new barge construction activity last year: skyrocketing steel prices. Market observers note that the vast majority of hopper barges delivered to the inland marine sector in 2021 were from orders placed during the third or fourth quarters...*Continued on page 2.*

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Of 2020 or early in the first quarter of 2021. During this period, the price of plate steel, the primary component used to build hopper barge equipment, had been hovering between \$500 and \$600 per ton. By the end of the first quarter, these prices had begun to skyrocket with values exceeding \$1,000 per ton (sometimes by a considerable margin) for the remainder of the year. New orders dried up. Shipyard operators, meanwhile, slowed deliveries of their existing order books in order to preserve jobs and maintain existing shipyard viability.

To the extent possible, **RTN** seeks to identify new deliveries by the entity that ultimately will be operating the equipment. In many cases, this is not possible and the company identified as the barge recipient is leasing the barges to others. In addition, to the extent possible, **RTN** seeks to identify new hoppers by the service for which they were built to operate. In most cases, this is straight forward. Barges delivered with covers are classified as “covered hoppers”, while those delivered without covers are classified as “open hoppers.” However, there are occasional instances where the new equipment is delivered without covers from the shipyard. The barges are then retrofitted with covers from an alternate source at some point after delivery. In these cases, these types of barges will be identified and classified by **RTN** as “covered” equipment.

Florida Marine Leads

A total of 12 barge owners/operators took delivery of new hopper equipment last year, down from 17 in 2020. Among individual barge owners/operators taking delivery of new equipment last year, Mandeville, LA-based Florida Marine Transporters took the leading position for the second year in a row. Florida Marine took delivery of a total of 80 new covered hopper barges in 2021. Heartland Fabrication delivered a total of 50 of these new covered hoppers while Arcosa Marine Products delivered the remaining 30 (see Table 1). The equipment was a combination of purchased and chartered equipment. In 2020, Florida Marine also led the industry in new hopper deliveries, adding 70 new covered hopper barges to its fleet. These all were built that year by Heartland Fabrication.

Table 1.
New Hopper Barge Deliveries by Customer, Builder, and Type: 2021

Company	Number	Type	Builder*
Florida Marine	50	Covered	Heartland
	30	Covered	Arcosa
M/G Transport	45	Open	Arcosa
	20	Covered	Arcosa
Heartland			
Barge Mgmt	63	Covered	Heartland
Ceres Consulting	28	Covered	Arcosa
Cooper Marine & Timberlands	17	Covered	Arcosa
RTI Barge Mgmt	10	Covered	Arcosa
Tiberinus Holdings	9	Covered	Arcosa
Robert B. Miller	7	Covered	Arcosa
PML	6	Covered	Arcosa
JEM Transportation	5	Covered	Arcosa
ROI Logistics/RNR	5	Covered	Arcosa
SCF Marine	5	Covered	Arcosa
Total	300		

* Shipyards building new hopper equipment last year were Arcosa Marine Products, formerly known as Trinity Marine Products and Heartland Fabrication, formerly Brownsville Marine Products

M/G Transport also was active in taking delivery of new hopper equipment last year. M/G took delivery of 65 new hopper barges, all built for M/G by Arcosa. Among barge operators, M/G was the only carrier to take delivery of new open hopper equipment, taking delivery of 45 of these barges. M/G's remaining 20 barges built last year were covered. M/G also was active in 2020, taking delivery of 15 barges that year, all of which were open hoppers. Arcosa delivered 10 of these barges, while Heartland Fabrication delivered the remaining five.

Heartland Barge Management also remained active in the new hopper market last year, taking delivery of 63 new covered hoppers from its affiliate, Heartland Fabrication. Heartland Barge took delivery of 46 new jumbo covered hoppers from its affiliate in 2020.

Ceres Consulting also was active in the new hopper market last year, taking delivery of 28 new covered hopper barges from Arcosa, Ceres took delivery of 20 new covered hoppers from Arcosa during the previous year.

Cooper Marine & Timberlands also returned to the new hopper market in 2021, taking delivery of 17 new covered hoppers from Arcosa. These deliveries were down slightly from the 20 covered hopper barges that were built for Cooper Marine & Timberlands by Arcosa in 2020.

O'Fallon, IL-based RTI Barge Management took delivery of 10 new Arcosa-built covered hopper barges in 2021. In 2020, RTI's delivery total was eight covered hoppers, also from Arcosa.

2021 witnessed the debut of Tiberinus Holdings in the new hopper segment. Texas-based Tiberinus took delivery of nine new

covered hopper barges from Arcosa last year. Additional information on Tiberinus or the principals behind the company was not available as *RTN* went to press.

Like many other barge owners/operators, Robert B. Miller, was active in the new hopper market in both 2020 and 2021. Robert B. Miller took delivery of seven new Arcosa-built covered hopper barges last year. In 2020, Arcosa built five new covered hoppers on Robert B. Miller's behalf.

Joliet, IL-based PML, meanwhile, continued its multi-decade pattern of building new hopper barges each year, taking delivery of six new covered hoppers from Arcosa in 2021. In 2020, PML took delivery of 24 new covered hoppers, all from Arcosa.

Investors affiliated with two entities, JEM Transportation and ROI Logistics, each took delivery of...*Continued o page 4.*

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New Hopper...Cont'd from page 3.

five new covered hoppers from Arcosa last year. JEM Transportation was not active in the new hopper market in 2020, while ROI Logistics and its various investors took delivery of a total of 20 covered hoppers from Arcosa that year.

Finally, Arcosa Marine delivered five new barges that began operating in covered service in SCF Marine's fleet last year. Arcosa delivered six new covered hopper barges to SCF Marine in 2020.

Covered Hoppers Dominate

Notwithstanding last year's surge in natural gas prices and modest recovery of demand for both domestic and export coal, deliveries of covered hopper equipment dominated new hopper barge construction activity last year. Covered hopper barge deliveries in 2021 totaled 255 barges, accounting for 85 percent of all new hopper construction. Open hopper deliveries in 2021, meanwhile, totaled 45 (see Table 2). The proportional split in new hopper deliveries was similar to 2020, when the industry took delivery 331 covered hoppers (including barges delivered as opens and later retrofitted with used fiberglass covers) and 54 open hopper barges.

Builder	Jumbo Covered	Jumbo Open	Total
Arcosa	142	45	187
Heartland	113	0	113
Total	255	45	300

Arcosa Retains Lead

Among barge shipyard operators, Arcosa Marine Products retained its leading position

in 2021 delivering a total of 187 new inland hopper barges in 2021. These consisted of 142 barges that ultimately entered covered hopper service and 45 new open hopper barges. In 2020, Arcosa delivered a total of 262 hopper barges. These consisted of 213 covered hoppers and 49 that were delivered to operate in open service.

Brownsville, PA-based Heartland Fabrication, meanwhile, delivered a total of 113 new jumbo hopper barges last year, all of which were equipped with covers. In addition, Heartland also delivered 10 new deck barges last year.

In 2020, Heartland Fabrication delivered 123 new hopper barges to the inland marine industry. These consisted of 118 covered hoppers and five that were delivered into open hopper service.

Fleet Shrinks Again

Concurrent with its survey of new hopper construction activity, *RTN* also surveys the industry to estimate the number of barges scrapped or otherwise permanently removed from revenue service. This survey, however, is a preliminary effort and historically has consistently undercounted fleet losses. One of the primary reasons for this undercount is that it is extremely difficult to track the fate of barges coming off lease and being returned to a non-operating entity such as a bank, leasing company or a non-operating barge investor. In addition, our current survey has been extremely difficult to complete due to ongoing disruptions caused by the COVID-19 pandemic on office operations. Response rates to *RTN*'s scrapping survey generally were below those of past years due to the prevalence of remote office operations and difficulties making contact with appropriate personnel.

Despite the difficulties encountered with this year's survey, it appears that the inland hopper fleet contracted once again in 2021, however, slightly. Based on *RTN's* abbreviated survey, a total of 307 jumbo hopper barges have been identified as having been scrapped or permanently removed from revenue service in 2021. As noted earlier, this does not represent the final scrapping total. Given the substantial number of non-respondents to *RTN's* scrapping survey this year, the actual number of barges scrapped in 2021 likely exceeded 400 and may have even approached 500. At this point, however, these estimates are speculative.

2022 Outlook

While it remains early in 2022, at this point, it appears that new hopper construction activity will remain subdued this year due to the ongoing spike in steel prices. While prices of hot-rolled sheet steel have retreated from recent record peaks, market observers note that plate steel remains at or near record high levels. The observers indicate that these prices were hovering between \$1,800 and \$1,900/ton as *RTN* went to press. Given this steel pricing level, few if any will be willing to place new orders for hopper barge equipment. Shipyards will no doubt continue to deliver new hoppers through the first half of 2022 from their existing order books having been priced with steel costs at substantially lower levels.♣

St. John Fleeting to Expand Fleeting at Garyville Site

St. John Fleeting is planning to expand barge fleeting capacity at the company's Garyville, LA fleeting and harbor service facility. Agents for the company have filed permit applications with the New Orleans District of the U.S. Army Corps of Engineers to add two

additional blocks of fleeting capacity at a site located along the right descending bank of the lower Mississippi River at approximately milepost 143.0.

According to the project's Public Notice, each of the planned new fleeting blocks will hold a total of 56 barges arranged in a seven long by eight wide configuration. According to project drawings, each fleeting block would be anchored by 15 48-inch diameter pipe monopiles. Two monopiles will secure each of the seven tiers of barges contained in each block. A single monopile or anchor buoy, meanwhile, will secure the center of each fleeting block at its upstream end.♣

Steel Mills...Cont'd from page 1.

1,300-acre site on the banks of the Ohio River in Mason County, WV for its new steel mill complex. The proposed plant site is located near Apple Grove, WV which is approximately 15 miles downstream from Point Pleasant, WV.

In its release announcing its siting decision, Nucor stated that "the West Virginia location on the Ohio River provides Nucor with important transportation and logistics advantages, and a strengthened ability to serve customers in the Midwest and Northeast, the two largest sheet consuming regions in the U.S. When fully operational, the new mill will employ approximately 800 full-time teammates." In addition to the actual steel mill, Nucor indicated that it also was considering additional sites in northern West Virginia to serve as "a transload and processing facility." Additional details regarding these plans were not disclosed.

Nucor indicated that construction on the new steel mill, which is projected to cost \$2.7 billion, is expected to take approximately two years once all necessary permits are in place.

Under optimal conditions, the facility should begin commissioning operations sometime before the end of 2024. Nucor stated that the new mill will be “equipped to produce 84-inch sheet products, and among other features, will include a 76-inch tandem cold mill and two galvanizing lines. Galvanizing capabilities will include an advanced high-end automotive line with full inspection capabilities as well as a construction-grade line.”

The West Virginia line is only the latest major steel mill project being developed by Nucor along the inland river system. Nucor recently completed work on a new 1.5 million ton-per-year EAF expansion at the company’s Gallatin, KY steel mill, which is located at milepost 535 of the Ohio River. In addition, Nucor is working on a new 1.2 million ton-per-year plate mill near Brandenburg, KY. This facility is located at milepost 645 of the Ohio River. This project is expected to be completed before the end of this year.

U.S. Steel Selects Osceola Site

U.S. Steel, meanwhile, announced earlier this month that it had selected a site near the Mississippi River near Osceola, AR for its new 3.0 million ton-per-year steel mill complex. In fact, the proposed mill site is located adjacent to U.S. Steel’s existing Big River Steel Osceola complex. The Big River Steel complex currently consists of two electric-arc furnaces with a combined annual steel production capacity of 3.3 million tons per year. The first EAF was completed in 2017. The second unit began melting operations in November 2020. U.S. Steel completed its acquisition of Big River Steel in January 2021. Big River Steel currently makes extensive use of the inland river system primarily for the receipt of raw materials such as scrap steel, pig iron and

direct-reduced iron (DRI). Most of this tonnage is handled at terminal facilities operated by WATCO at milepost 782 of the lower Mississippi River.

In announcing the Osceola site, U.S. Steel stated that the Osceola location “affords abundant, increasingly renewable and clean power from Entergy Arkansas, superior Class 1 rail service from BNSF with connections to other railroads, Mississippi River docks and interstate trucking access.” U.S. Steel stated that permitting of the project has begun and that it expects to break ground on the project later this year. The new mill, which will create a 6.3 million ton-per-year mega steel facility in Osceola, is expected to become fully operational by the end of 2024.

Surge in Raw Material Volume?

While an increase in steelmaking capacity along the inland river system should generate additional demand to move finished steel by barge, the vast majority of the impact of new EAF capacity generally has been to substantially boost barge demand for the shipment of raw materials. Initially, this led to higher barged volumes of scrap iron and steel. As EAF capacity expanded, however, the barge industry witnessed a surge in demand for the shipment of higher quality scrap substitutes such of pig iron and DRI, most of which originate on the U.S. Gulf Coast.

While it is too early to determine the impact of the new steel mills on barge demand for raw material movement, both Nucor and U.S. Steel apparently recognize the substantial raw material sourcing flexibility resulting from access to the inland river system.

While the total impact of the new steel mills on barge demand is not yet known, U.S. Steel already announced during the fourth quarter of 2021 that it would be building and operating a new pig iron machine with a

partner at the company's Gary, IN integrated steel works. U.S. Steel indicated that pig iron from the new facility, which is expected to have the capacity to produce 500,000 tons of

material annually, will be used as a raw material at the Osceola steel complex. The pig iron can be shipped from Gary by either rail or barge.♣,

November 2021 Lower Mississippi Petroleum Coke Exports*					
(Metric Tons)					
Country	Nov. 2021	Nov. 2020	Ytd 21	Ytd 20	Ytd 20 to 21 % Change
Argentina	0	0	30,534	0	
Benin	0	0	0	38,500	
Brazil	0	87,999	771,019	607,318	
Bulgaria	0	0	130,427	0	
Cameroon	0	0	7,900	0	
China	40,010	0	1,664,066	887,420	
Costa Rica	0	0	0	30,000	
Denmark	27,500	0	57,625	0	
Dominican Republic	35,374	36,000	101,369	105,500	
Ecuador	0	0	143,500	95,955	
France	16,713	0	125,325	114,363	
Germany	0	0	33,000	0	
Greece	5,000	0	142,101	156,073	
Guatemala	0	0	0	121,028	
Honduras	0	0	0	102,803	
India	163,055	114,118	472,855	1,699,921	
Ireland	0	0	88,360	0	
Israel	0	0	80,052	242,788	
Italy	0	0	239,874	329,301	
Jamaica	0	0	0	14,105	
Japan	49,004	0	753,085	238,578	
Jordan	0	0	0	56,553	
Lebanon	0	0	20,764	0	
Malaysia	0	0	80,000	0	
Mexico	33,000	107,354	491,597	417,895	
Morocco	0	31,777	182,311	261,943	
The Netherlands	44,138	0	403,383	114,500	
Nigeria	0	0	0	48,872	
Norway	0	0	0	27,000	
Pakistan	0	0	55,000	164,899	
Portugal	0	0	34,419	25,000	
Romania	0	0	13,000	55,000	
Singapore	50,000	0	50,000	0	
South Korea	0	0	0	42,210	
Spain	3,000	53,850	280,527	269,148	
Tunisia	0	27,369	109,438	90,057	
Turkey	54,999	0	802,061	838,018	
United Arab Emirates	0	0	81,500	68,627	
United Kingdom	0	0	67,870	50,000	
Uruguay	0	31,800	32,500	95,344	
Total	521,793	490,267	7,545,492	7,438,719	1.4

* Includes Lake Charles, LA. Excludes calcined petroleum coke products.

RTN Spot Coal and Grain Freight Rate Survey

Origin	Destination	February 2022		March 2022		April 2022		February 2021	
		High	Low	High	Low	High	Low	High	Low
Coal									
Big Sandy	Davant	\$24.00	\$23.00	\$24.00	\$23.00	\$24.00	\$23.00	\$21.00	\$19.00
Marmet, WV	Davant	\$26.00	\$25.00	\$26.00	\$25.00	\$26.00	\$25.00	\$23.00	\$21.00
Cora	Davant	\$16.50	\$15.50	\$16.50	\$15.50	\$16.50	\$15.50	\$14.00	\$13.00
Mt. Vernon, IN	Davant	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$13.00	\$12.00
Big Sandy	Pittsburgh	\$12.00	\$8.00	\$12.00	\$8.00	\$12.00	\$8.00	\$8.00	\$7.50
Big Sandy	St. Louis	\$15.00	\$12.00	\$15.00	\$12.00	\$15.00	\$12.00	\$11.00	\$10.00
Big Sandy	Cincinnati	\$12.00	\$11.00	\$12.00	\$11.00	\$12.00	\$11.00	\$6.00	\$5.75
Marmet, WV	Cincinnati	\$14.50	\$13.00	\$14.50	\$13.00	\$14.05	\$13.00	\$7.00	\$6.75
Marmet, WV	Pittsburgh	\$14.50	\$15.50	\$14.50	\$13.50	\$14.50	\$13.50	\$8.25	\$7.75
Birmingham	Mobile	\$13.25	\$13.00	\$13.25	\$13.00	\$13.25	\$13.00	\$13.00	\$11.00

Origin	Destination	High	Low	High	Low	High	Low	High	Low
Export Grain									
Illinois River	NO/BR	700	650	550	515	525	475	435	425
St. Louis	NO/BR	625	575	500	440	450	400	315	300
Twin Cities	NO/BR	NA	NA	NA	NA	525	500	NA	NA
Lower Ohio	NO/BR	585	550	450	425	425	375	330	325
Mid-Mississippi	NO/BR	NA	NA	NA	NA	475	450	NA	NA
Lower Miss	NO/BR	475	450	425	400	350	350	260	260

Northbound Covered or Open Dry Bulk								
Destination	February 2022		March 2022		April 2022		February 2021	
	High	Low	High	Low	High	Low	High	Low
Twin Cities	NA	NA	\$20.00	\$19.00	\$20.00	\$19.00	NA	NA
Chicago	\$22.00	\$19.00	\$20.00	\$18.00	\$20.00	\$18.00	\$17.00	\$16.00
St. Louis	\$13.00	\$12.00	\$12.00	\$11.00	\$12.00	\$11.00	\$10.00	\$9.50
Cincinnati	\$20.00	\$18.00	\$18.00	\$17.00	\$18.00	\$17.00	\$15.00	189-
Pittsburgh	\$30.00	\$26.00	\$28.00	\$26.00	\$28.00	\$25.00	\$23.00	\$22.50
Catoosa, OK	\$25.00	\$21.00	\$23.00	\$20.00	\$23.00	\$20.00	\$19.00	\$18.00
Salt Diff.	\$6.00	\$5.00	\$6.00	\$5.00	\$6.00	\$5.00	\$5.00	\$4.50