

Full speed ahead

Newest classes of containerships are incrementally faster than their predecessors, but does it really make a difference to shippers?

By ERIC JOHNSON

Reprinted with permission of American Shipper.

All rights are reserved and no part of this file may be reproduced or redistributed in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without written permission from the Publisher.

Notice is given that a fee of US\$2500.00 will be charged for each incidence of content being reproduced or redistributed without prior permission in writing from the publisher.



The 6,500-TEU, 27-knot *Hanjin Bremerhaven*.

Increasing the speed of goods movement from factory to market is typically the goal of every logistician.

So one would expect that the announcement in July by Hanjin Shipping that the Korean carrier had unveiled the first of eight high-speed, 6,500-TEU container ships — capable of shaving two days off the transit time from Asia to Europe — would be met with something resembling euphoria.

Instead, the deployment of the 27-knot *Hanjin Bremerhaven*

has been met mostly with indifference and skepticism. The indifference comes from shippers, who typically are less aware of vessel characteristics than they are rates and service. And the skepticism comes from analysts and other carriers, who say escalating fuel prices will likely force Hanjin to run the ships at least a couple of knots below their top speed.

Hanjin has reasons for pushing ahead with their speedier ships. While most of the industry's attention has been focused on mega-containerships of 10,000-TEU capacities or more, Hanjin said there's space in the market for the moderate-sized ships (remember when 6,000-TEU ships were the



Running a little short of top vessel speed has its advantages. First, fuel consumption is reduced, but the carriers can also build a cushion into their schedules if they plan to run the ships at less than full speed. Small disruptions on a rotation can be made up at sea by going full speed on a certain leg.

Still, the increased vessel speeds don't seem to be all that crucial to shippers, who tend to focus on the end product, not the nitty-gritty of how the carriers achieved that end.

For instance, a ship that sails a little faster between Hong Kong and Los Angeles matters little to a shipper if port and rail delays once the container hits L.A. makes the ultimate delivery of the shipment late. Additionally, the port rotation is more significant than the speed of the vessel, as shippers of time-sensitive goods are usually willing to pay a higher price for a direct service than one which stops at several ports before hitting the shipper's destination, even if a faster vessel is used.

But carriers still find the impact of vessel speed hard to ignore.

"Vessel speed is an important consideration in the purchase of new vessels," said Jeff Sprawls, manager of marine and terminal operations for Hyundai Merchant Marine, another Korea-based steamship line. "On a typical service deployment

one knot of speed will not allow you to reduce the number of vessels in a service, but it may allow you to add an additional port call. This additional speed along with the increase in vessel size allows us to better service our customers' needs with more direct port-to-port calls, with a faster transit time and schedule reliability."

In an age of sky-high fuel prices, schedule reliability may be the biggest advantage of increasing vessel speeds because a one- or two-knot increase on a typical transpacific service cuts about half a day off the round trip voyage, said Philip Damas, research director at Drewry Shipping Consultants.

That's not a huge gain considering the potential delays on the landside: Asian logistics networks are still works in progress, while U.S. port congestion and intermodal delays hamper on-time deliveries of goods.

Gradual Rise. Incrementally increasing vessel speeds have been a hallmark of the industry for two decades now, even as ships sizes have increased more markedly, Sprawls said.

"Container vessel speeds have increased seven to nine knots over the last 20 years while size has increased dramatically, so speed and size are not mutually exclusive," he said. "Containerships have realized their net speed increases primarily through improved hull forms and bigger, more efficient engines. On a displacement vessel the theoretical maximum hull speed actually increases with the length of the water line."

The latest ships are continuing the gradual trend toward increased speed that's been evident since the late 1980s. In the early 1990s the average vessel speed was around 20 knots, whereas now it's nearer 25.

But the fuel factor may reverse that trend, Damas said.

"You used to be able to get much better profit by using faster ships because the unit cost has been relatively low," he said. "So it made sense to run the ships very fast."

With bunker prices at record levels, that's no longer the case.

"When you have a ship and you raise the speed on a linear basis, the proportion of fuel consumption goes up by three times," Damas said. "Carriers are thinking about

running ships more slowly, especially on the Asia lanes, where it doesn't make so much of a difference because of the length of the journey."

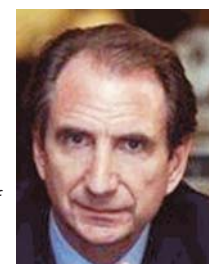
As evidenced by their consistent drive to recover higher fuel costs through shipper surcharges, bunker prices are a significant worry for carriers.

"Let's not forget fuel, which is a huge issue right now," said Dick Craig, vice president of network planning and yield management for MOL America. "It's like your car. You can go 70 mph, but you're

burning more fuel doing that. A vessel can go 26 to 27 knots, but is it more efficient to do it that way? You might give up some of that outer edge speed capability as a trade off for better fuel consumption."

Sprawls said that for carriers, vessel speed can be broken down to one issue — cost.

If it's affordable to increase the vessel speed and get a quicker transit time (presum-



Roland Bullard
president and chief executive officer, FastShip

"Speed without time-definite service doesn't really help. It's never one element. It's speed, frequency, visibility, consistency, and doing it all at a lower logistics cost."

big ones?) that have a little extra oomph.

"Every customer wants to go faster," said O-Han Kim, senior manager of fleet planning and management at Hanjin. "Asia to Europe is a long journey and if we can take two to three days off the transit time, we think that will be something quite attractive."

First, a little perspective. When a ship has a top speed of 27 knots, it is rarely operated that fast on a long-term basis. Even Kim said that the operating speed of the *Bremerhaven*, which was deployed on the Far East Europe Express Service July 11, would be somewhere around 25.5 to 26 knots.

ably garnering higher ocean freight rates) then a carrier might do that on a particular service. But for most carriers, the fuel costs outweigh any efforts to run ships at maximum speeds.

"Speed then becomes a function of costs — both capital and operating," Sprawls said. "Only governments can afford to buy and operate vessels — warships — that perform at near theoretical maximums since fuel consumption increases exponentially as you approach full speed."

Previous Efforts. Attempts to rapidly ramp up containership speeds have been tried before, and have usually failed.

In the early 1970s, Sea-Land unveiled a class of ships that could sail at 33 knots, but then the 1970s oil crisis hit, causing fuel prices to skyrocket, eventually scuppering that endeavor.

According to Drewry's Damas, Abu Dhabi Container Line, a joint venture established in 1999 between the Swiss shipping line Norasia and United Arab Emirates government entities, employed 25-knot 1,400-TEU vessels — ships that were very fast for their size at that time — but the joint venture failed in 2001.

And one that's been on the drawing board for a good decade — FastShip — is still searching for capital to fund a string of ships that could go 38 to 40 knots on the transatlantic lane.

FastShip President and Chief Executive Officer Roland Bullard said he believes the market is still there for a rapid ocean service between the U.S. East Coast and Europe.

"There's a market space looking for a combination of speed and reliability," Bullard said. "The fact that we can do 38 knots is significant in itself. Shippers will have a cushion and we feel very strongly that's where the market is headed.

"If you look at the goods we're looking at, they're the high-value, time-sensitive, air freight-type goods. That's the niche we're talking to. It's definitely not a solution for everything."

Bullard said that his service would be 98 percent reliable, once up and running. Of course, that's a big roadblock at the moment. Bullard said FastShip has invested \$50 million to date, has a debt-financing structure in place, but needs to find equity.

Damas, for one, is skeptical.

"If you run a ship as fast as they are talking about, the freight rates would be very high, and it doesn't seem to have any takers," he said. "The proposed FastShip venture, which aims to operate 38- to 40-knot vessels in the transatlantic trade, has been on the drawing board for at least 10 years. It does not seem to have been able to

attract sufficient financial backers."

But Bullard said the concept of faster container vessels could also tap into new global markets that previously considered ocean transportation too slow and air transportation too expensive.

"We could create new freight," he said. "We really look at this as creating demand for goods that aren't moving in foreign trade currently. Speed without time-definite service doesn't really help. It's never one element. It's speed, frequency, visibility, consistency, and doing it all at a lower logistics cost. What does the low-cost, higher-density commodity shipper want? Maybe he cares nothing about speed or data integrity. The ocean transportation leg is just one part of the total proposition."

"On a typical service deployment one knot of speed will not allow you to reduce the number of vessels in a service, but it may allow you to add an additional port call."

Jeff Sprawls
manager of marine and terminal operations, Hyundai Merchant Marine

Craig, of MOL, said that sometimes too much focus is placed on vessel speed.

"There's marginal improvement in vessel speed," he said. "The new class we're introducing is nominally 26 knots, compared to about 23 or 24 knots that's the standard, so there's an incremental rise.

"But with ships getting larger, they're taking more time at port. Not to diminish the importance of the ocean leg, but there's so much more in the supply chain from the factory to the warehouse than the speed of the ship. Whether you're operating 24 or 25 knots and you can shave six hours off a transpacific crossing, everyone's focused more on reliability than vessel speed."

That said, vessel speed can have a major bearing on reliability by giving carriers a chance to build cushion into their schedules, Craig said.

"You can schedule any speed of ship at any reliability — it just depends on what your contingency plan is," he said. "It's easier to run a 26-knot ship on a 24-knot schedule. If you plan carefully, you can

give yourself more reliability."

Sprawls agreed. "Since vessel sail plans are typically developed using something less than maximum vessel speed, there is some reserve speed available to regain lost time due to weather or port delays and schedule integrity is a crucial part of the service we provide," he said.

The key to maximizing the benefits of faster ships is to have a homogenous string of vessels that all have the same speed. Kim, of Hanjin, said that once Hanjin has deployed more of its faster 6,500-TEU vessels on the Far East/Europe service, customers would really begin to see the advantages of faster transit times and more reliable service.

Craig, on the other hand, said that the engineering details of the vessel are less important in luring customers than a carrier's track record and its previous relationships with shippers.

"I'm not sure customers are that concerned about the characteristics of the vessels," he said. "They're just concerned about reliability and good service."

Shippers, however, would be greatly intrigued by a service that could cut two to three days off transit time, said Nate Herman, director of international trade for the American Apparel & Footwear Association.

"It's a very important issue because speed to market in the apparel industry is so important," Herman said. "If the ships are arriving two or three days earlier, then the industry will definitely take note and refine their sourcing strategies."

Herman said the more fashion-oriented sectors often find it hard to set up supply chains where the sourcing location is so far from the retail outlets.

"If you're talking about a product that may only be in fashion for only a few weeks, then it's hard to ship from China," he said. "You either have to go by air, which is expensive, or by ocean and wait for three weeks, by which time you may have missed your window for that piece of apparel."

Carriers definitely market services with shorter transit times to the apparel industry, Herman said, though that may be less a function of speedier ships than more direct sailings from Asia to, say, the U.S. West Coast. And in certain cases, U.S. apparel companies are willing to pay a premium for a more direct service.

"Time is money, as it is with any industry," he said. "And it's particularly the case with the fashion industry.

Herman added that apparel suppliers are typically more concerned with issues like port congestion, the impact of port security regulations and the possibility of container fees (like one being considered in

the California legislature) than the precise sailing speed of container vessels.

For most shippers, schedule reliability trumps all the other potential benefits of faster ships. “It’s the certainty of knowing exactly when you’ll get your shipment so you can get it through customs and to your distribution center,” Herman said.

That’s where the speedier ships could be more valuable in allowing carriers to make up for unscheduled delays in service.

“It makes a lot of sense,” Damas said of running 26-knot ships at 24 knots. “It allows the carrier to have buffer time in their schedule by using a reserve of speed. For instance, it could help a vessel catch up if it had a delay in the previous port.”

One thing carriers don’t seem to have to worry about is a trade-off between capacity and speed. As Sprawls alluded to, there doesn’t necessarily seem to be a tradeoff between size and speed with the new classes of vessel coming online.

It’s not just Hanjin’s 6,500-TEU vessel that can go fast — Maersk Line’s newest ship, the *Emma Maersk*, is thought to have an actual capacity of between 13,000 and 15,000 TEUs (though Maersk announced only 11,000), yet it still has a top speed of 25 knots.

And shipbuilder Hyundai Heavy Industries last year unveiled a design for a 13,000-TEU ship with a top speed of 25.5 knots.

If fuel prices ever decrease, it may be the bigger ships that are more apt to go full speed ahead to recover the longer time it takes to load and unload the mega-vessels in port.

“It’s impossible for the next generation of bigger ships to have shorter port times and the same rotations as today, so the question is how do you keep that schedule stable?” Damas said.

Meanwhile, carriers have some choices to make in the near future.

“The container shipping industry is facing a crossroads — fuel prices are so high that a further significant increase in vessel speed beyond 25 knots would be unaffordable using current technology, but the larger ships must sail faster to compensate for the longer time spent in port,” Damas said. “Conceivably, investors could copy what Malcom McLean did in the early 1980s and set up a venture based on slow, large economical ships, but few shippers nowadays would accept the slow transit times that would result.” ■

<p>Daily News Updates americanshipper.com</p>	 <p>Your subscription to <i>American Shipper</i> brings you both</p>	<p>Feature Articles & Analysis <i>American Shipper</i> Magazine</p>
--	--	--