

Port of Charleston Tests Its Mettle

Problems and responses are like those of giant trade ports, just 'writ small.' BY DAN MCCUE

There is perhaps no better place to watch a container ship approach Charleston Harbor than from the bicycle and pedestrian walk of the Arthur Ravenel Jr. Bridge.

Named for the still-living former Congressman and State Senator who helped establish the state's infrastructure bank, the bridge links the historic City of Charleston with the Town of Mount Pleasant, its fastest growing suburb.

Designed to provide the world's largest container vessels unimpeded access to the three Port of Charleston terminals that lie upriver from the harbor, the roadbed of cable-stayed bridge is suspended nearly 200 feet above the water below.

From this vantage point, the 997 foot long *MSC Marina*

initially appeared as a slow moving smudge on the horizon—a ship, obviously, but one that's capacity of 6,402 twenty-foot equivalent units was largely obscured by a late afternoon haze and the shadows of the disappearing day.

Harbor pilots wound their way past the shattered remains of Fort Sumter, scene of the start of the Civil War, and moved smartly off the coast of Sullivan's Island, the sands of which once supported lonely walks by a young Edgar Allen Poe during his brief, unsatisfying military career.

In fact, the offshore rendezvous point for the pilots and their ocean-going charge is itself steeped with history. It was in these waters, within site of the nineteenth century skyline that still dominates the harbor, that the *C.S.S. Hunley* became the first submarine to sink another

The Cost of a Debarkation

The figures below represent the typical costs associated with a cargo container ship call on the Port of Charleston, South Carolina. Sergio Fedelini, Vice President of Mediterranean Shipping Company (USA) Ltd., said the costs are roughly similar to those associated with calling on others ports in the Southeastern U.S.

VESSEL PORT-RELATED CHARGES

Pilotage	\$12,000
Tugs	\$8,000
Mooring/unmooring	\$1,300
Dues	\$100
Customs clearance/quarantine	\$900
SUBTOTAL:	\$22,300

CARGO EXPENSES

Discharging full container	\$30,000
Loading full container	\$80,000
Discharging empty container	\$5,000
T/shipment load full container	\$100
Re-stows full via quay	\$2,500
Container royalties inbound	\$10,000
Container royalties outbound	\$39,000
Tonnage dues. Inbound assessments	\$3,000
Tonnage dues. Outbound assessments	\$20,000
Change of status/DG Inspection/BL fee	\$4,000
Other (terminal handling excess full)	\$110,000
SUBTOTAL:	\$303,600

REEFER EXPENSES

Loading full reefer	\$1,000
Reefer kit spare parts	\$2,000
SUBTOTAL:	\$3,000

AGENT COMMISSIONS

Inward commission	\$7,000
Outward commission	\$35,000
Forwarding agent commission	\$21,000
SUBTOTAL:	\$63,000

CREW/SHIP RUNNING COSTS

Crew changes	\$2,500
SUBTOTAL:	\$2,500

TOTAL DISBURSEMENT: \$394,400

** Figures courtesy the Mediterranean Shipping Company.

ship in battle before plunging to the sandy bottom itself under still mysterious circumstance.

Handed control of the Marina by Capt. Salvatore Esposito, the pilots guide it into the shipping channel through wind and tidal currents, and on toward Charleston Columbus Street terminal.

Despite a sharp, global decline in international trade, every cargo vessel afloat represents an extraordinary investment and a profound economic impact on the communities on which they call.

In the case of ships owned by the Mediterranean Shipping Company, the total average cost of disembarkation in Charleston is \$394,400, according to the vice president of its U.S. operations.

And that's just for one ship call. MSC, the Port of Charleston's second-largest customer, is still making five such calls a week, in what most industry analysts agree is the toughest climate ever for the global container industry.

"In this economic climate, at all shipping lines, people are constantly looking at the numbers, weighing the cost of running a ship with the amount you absolutely must earn to make it commercially viable," said Sergio Fedelini, who in addition to being vice president of Mediterranean Shipping USA Inc. is also honorary consul general of Italy.

"The challenge to that is, you never really know how much cargo you'll have over time and what kind of capacity you'll need," Fedelini said. "You make estimates, of course, but cargo volume is entirely controlled by the market."

Making the fiscal shoals confronting the industry all the more harrowing is the fact expenditures for ports calls remained fairly static as the global financial meltdown worsened.

In the meantime, Fedelini said, his industry entered a period beset by "a lot of horse trading among shipping lines on the rates that are being offered to customers."

"It's all because it has become more difficult to fill one's ships," he said. "People are cutting deals on excess capacity. Some people are even changing rates on the spot."

"That creates pressure on shipping rate to decline," Fedelini continued. "You see changes fairly rapidly."

A captain gets some quiet time

Shortly after dusk, the Port of Charleston's Columbus Street terminal had already begun to take on the lonely cast of a late night. Dockworkers who had worked the day shift walked heavily toward the refurbished school bus that would take them to their parking lot beyond the terminal's gate.

Nearby, a member of the lashing crew, still wearing his hard hat and protective vest, called out for the bus to wait as he negotiated a path to it, his progress impeded by his balancing the poles he used to knock out locking pins and liberate the highest of stacked containers from others lashed to a ship's deck.

Although once considered a behemoth at 74,000 tons—for a time the *MSC Marina* was the largest container ship calling on the East and Gulf Coasts of the United States—the vessel is now dwarfed in its own fleet by the *MSC Daniela*, the world's largest container vessel with a capacity of 14,000 20-foot equivalents units (TEUs).

As Fedelini made his way up the *MSC Marina*'s gangway, Esposito, a 35-year veteran of the shipping industry, stood near the officers' dining room, ready to enjoy some rare leisure time aboard the vessel.

As Port of Charleston cranes raised containers from his ship, Esposito was about to hold court over a four-course meal. But as a white-jacketed waiter poured the first glass of Montepulcino D'Abruzzo, an Italian varietal, for the captain's guests, the conversation still flowed toward dollars and cents.

A Captain's Life at Sea

Over a dessert of sliced pears and bananas, a tumbler of Averna Amaro Siciliano—an Italian liqueur—and later, a cup of piping hot espresso, *MSC Marina* Capt. Salvatore Esposito offered random glimpses into his life at sea.

He started as a navigator—“When navigating was something beautiful,” he said—and worked his way up to captain, sailing to and from every port of call imaginable.

While the cargo onboard his ships has run the gamut from computer boards to consumer products to chemicals to explosives, there were some unusual voyages along the way, such as the time his ship transported an entire zoo from Australia to South Africa.

Or, the time he ferried thoroughbred race horses from the United States to the United Arab Emirates.

“Containers truly are excellent for transportation,” he said. “Whether it’s lions and tigers or horses, you can make them comfortable and safe so long as you make their container a home, take the responsibility to protect it, and have people on board to look after them.”

Inevitably, given the prominence Somali pirates have had in the in news in recent months, Esposito himself offered a pirate tale.

“It happened in 2001, off the coast of Ecuador,” he said. “It was a different, smaller ship, and we had crossed through the Panama Canal, fully loaded, when we were attacked by pirates on the open sea,” Esposito said.

“Pirates,” he said dismissively. “They were fishing people with nothing better to do.”

Esposito described a scene in which a boatload of armed marauders came up along the cargo ship and then shimmied up poles to get onto its deck. Once there, they fired their guns in the air to put an end to any ideas the crew might have had of fighting back.

But company policy and tradition demands that the captain protect his ship, protect his cargo and protect his crew, so Esposito said



he had no intention to sit idly by.

“I called the crew to quarters and had them lock themselves inside,” Esposito said. “Then I turned the fire hoses on the thieves and put out a distress call.”

Undeterred by the torrent of water, the pirates pried open 21 containers, stopping only when they found one with computer equipment inside. Loading their technological booty onto their small craft, they were gone in minutes.

A few hours later, the authorities arrived on the scene but that only proved more frustrating, Esposito said.

“It seemed that they really didn’t want to apprehend these people,” he said. “When I told them the pirates escaped to the south, they wouldn’t hear of it. ‘Surely you’re mistaken,’ they told me.”

The incident had not one, but two epilogues. The first came less than 24 hours after the attack, when another small boat appeared. This time, however, instead of pirates, it carried entrepreneurs, wanting to sell the crew computer equipment.

The second came a year later, after MSC had paid Ecuadorian officials to provide security for cargo in transit.

“Believe it or not, the guys who came to protect us were the same guys who had robbed us a year earlier,” Esposito said. “Only now they wore uniforms and were there to see that our cargo got through.”

Although Esposito looked and acted many years younger than his probable age, he said it takes commitment to remain in shipping as long as he has.

“I’m pushing younger men, so I have to keep myself in shape, but of course you always know there will come a day when you must retire,” he said. “When I am tired, when I no longer have that feeling of discovery I still feel on every voyage, then I will be replaced. Absolutely.”

“You know, it’s a funny thing about the younger generation that is going to sea. They don’t have the same sense of adventure we had when I got into this business. Today, the mysteries end with a tap on a computer keyboard.”

On the open ocean, the *MSC Marina* costs roughly \$50,000 a day to operate, said Fedelini. The captain and crew are well aware that time literally is money in the shipping business. At full speed, roughly 24 knots, the ship burns 240 tons of fuel per day. At 20 knots it uses 185 tons of fuel per day.

“That’s why it’s important to plan and important to keep in constant contact,” Esposito said. “If you know that, for whatever reason, a berth isn’t going to be available when you’re expected, you can slow down just a little bit and save a tremendous amount of money on fuel.”

The bulk of the \$394,400 Fedelini said is spent on the average port call—a full \$303,600—goes to the S.C. State Ports Authority and to the stevedores who arrange for and pay members of the International Longshoremen’s Union (ILA) to work the ship out of their share.

Of that total, “terminal handling fees,” which cover the cost of moving containers around the terminal compound and storing them as they await pick up, come to \$110,000. Loading full containers onto the ship costs \$80,000, while removing full containers from the ship costs \$30,000.



The view from the bridge of the *MSC Marina*

Fedolini estimated those fees cover an average 435 container moves per port call.

The next biggest piece of the pie—a total \$63,000—consists of the commissions paid to agents and freight forwarders.

Other per vessel port related charges include \$12,000 for pilotage into Charleston harbor, \$8,000 for the tugs that guide the ships to dock, \$1,300 to pay for the mooring and unmooring of the ship, and \$1,000 to cover the cost of customs clearance, quarantine/sanitary issues and dues.

Finally, nearly all of MSC's ships arrive at port with a percentage of cargo in refrigerated containers. The costs associated with these typically run about \$3,000, Fedolini said.

"And of course, that's without taking into consideration other potential costs, which vary depending upon whether its being chartered from another party or is wholly owned by the line, meaning they're likely paying hefty finance charges on it," Fedolini said. "And then there's the matter of insurance. While a shipping line's liability on cargo is limited, you nonetheless have to insure the ship."

Asked for estimates of those numbers, Fedolini apologized, explaining that those more global costs are the purview of the line's headquarters in Switzerland, and that he knew little of the specific details.

Ship calls Antwerp home

Founded in 1970, the Mediterranean Shipping Co. S.A. is currently the second-largest container shipping line in the world, operating 318 vessels with a combined capacity of 1,022,044 TEUs.

It is headquartered in Geneva, Switzerland, with its main European hub being Antwerp, Belgium.

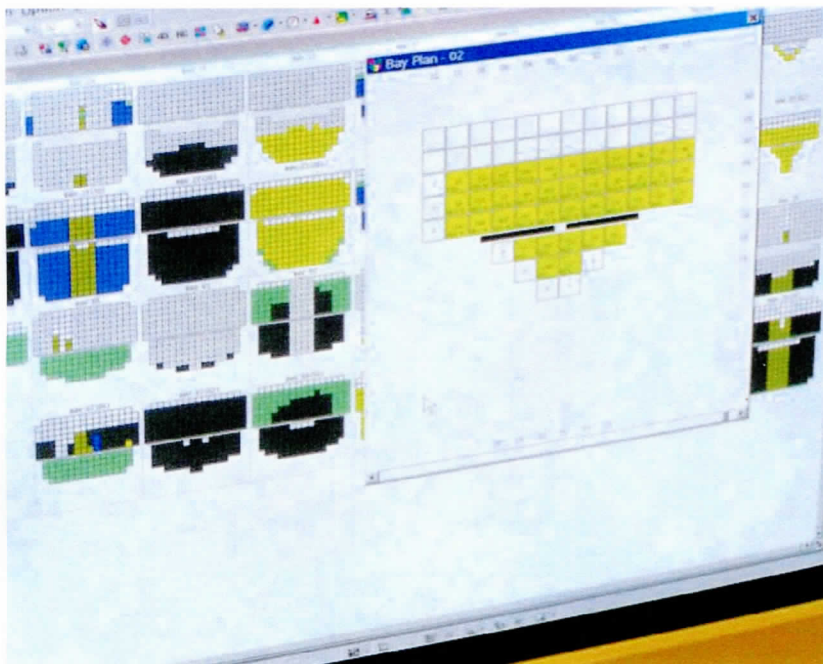
Although it charters some of its vessels to other companies in order to keep its fleet flexible, ships bearing the large white MSC on their hulls call on more than 215 ports on six continents.

In addition to Charleston, the *MSC Marina's* itinerary on this journey included 12 other ports of call. Four of those are in the United States (Savannah, GA; Port Everglades, FL; Houston, and New Orleans), while five are in Europe: Antwerp, Belgium; Felixstowe, England; Hamburg and Bremerhaven, Germany; and Le Havre, France.

It takes about a week to make the Atlantic crossing in good weather. The captain said he and the crew typically make several runs back and forth before taking a day off. In all, Esposito spends about six months at sea before taking a few weeks off.

When Esposito started sailing, containerization of cargo was still in its infancy and ships routinely stayed in port for up to a week as they were loaded and unloaded.

"These days a normal call is 12 hours, but there are times, like today, when it is much shorter than that.



Planning software is used to optimize the loading and stowage of containers.

Today, we called on two ports in one day," he said. "We did 217 container moves in Savannah before leaving at 4 a.m. to come here. We'll do another 420 container moves here and then we'll be on our way again."

Prior to departing from Antwerp on a cargo run, Esposito received a loading plan from a ship agent at MSC, telling him what cargo was being loaded and where it will be stowed on the vessel for the most efficient passage.

Typically, the captain concerns himself little with the specifics, delegating the implementation of the stowage plan to another of the ship's officers, Fedelini said.

"The captain always knows if dangerous cargo is being loaded aboard his vessel, but beyond that, his main concern is the safe operation of his ship," Fedelini said.

"You see, my job is this," Esposito chimed in. "Even if you handle a container a thousand times, so long as it reaches its destination in a good manner, a safe manner, then you're giving the clients what they want."

The cargo manifest was entered into a computer that had a software system specifically designed to make handling cargo easier and more efficient. Every container on the vessel's manifest was assigned an address denoting in which bay, row and column it was located. The software also color-coded the containers on the screen, so that with the click of a mouse, the captain and crew could quickly see where the box was going.

On this given night, for instance, cargo bound for Antwerp from the United States was stowed below deck and color-coded brown; cargo destined for Hamburg, meanwhile, was color-coded light green.

Hong Kong, Italy and Greece, just about every corner of the world," Esposito said.

While at sea, each man on board has a specified set of tasks, Esposito said. Some of the crew was assigned

to perform the overall maintenance of the vessel, others work in the engine room tending to a 77,000-horse-power engine that encompasses four stories at the back of the vessel, and others cook or do the wash.

As for the captain, international regulations restrict him and anyone who works on deck to working eight hours a day on a split schedule: four hours on, eight off.

"While rest is mandated, I can tell you there's never a single day that I have absolutely nothing to do," Esposito said. "Besides operating the ship at sea, as captain you do an amazing amount of paperwork. And, of course, you're constantly communicating with people on land, telling them where you are and when you think you'll arrive at your next destination."

Port provides some relief

The main reason port costs for shipping lines remain so stable, crisis or no, is that they're locked into contracts extending out two, three or five years. Volume isn't the main consideration, once the ink is on the contract; it's the calendar that matters.

But that's not to say that ports have not been responsive to the unique situation into which the global economy has cast the shipping industry.

For instance, Fedelini noted—and lauded—a decision

In this economy,
you are **constantly**
weighing the cost of
running of ship with the
amount you must earn.



The engine room of the *MSC Marina*.

by the S.C. State Ports Authority to impose an across-the-board, five percent discount for the Port of Charleston's container carrier customers.

The agency called the move, something it had never done before, a "mid-winter rate rollback."

Fedelini said the rollback could save the Mediterranean Shipping Co. an estimated \$10,000 per ship.

"This was a very unusual move, and it is a nice amount of money," he said. "But more than the money, it is important the port is showing it is aware of the economy."

Fedelini said the rate cut should make Charleston more competitive among Southeast ports. But that's not to suggest that he wouldn't like to see port communities and the states that surround them be more proactive in their support of the industry.

Over the past 18 months, Fedelini has overseen the construction of a new U.S. headquarters in Mount Pleasant that currently houses 220 workers handling import, export and back office functions for activities at ports throughout the Southeast. It also has room in its parking lot for the vehicles of an additional 450 workers.

When the company decided to expand in Charleston, the state of South Carolina provided incentives tied to the number of new jobs the company was creating in the city. However, Fedelini believes the industry as a whole is

short changed when it comes to the incentive game—not just in South Carolina, but also throughout the country.

"What I've maintained is that incentives should be geared toward the total economic impact of what I'll call the transportation industry. Millions of dollars worth of economic activity are generated by trade, thousands of jobs are created by it, but people don't seem to realize how significant the impact is, and how it should be fostered," he said.

"People don't see us as all one industry or entity... and I think we as an industry should be recognized. Our impact is about a lot more than the jobs that are created on the waterfront."

The challenge, Fedelini said, is quantifying the impact in such a way that participants in the industry could qualify for a set, after-the-fact incentive.

Perhaps, he said, based on overall volume, an incentive could be offered to defray certain costs associated with a call on the state's port.

The rate cut by the Port of Charleston came on the heels of Maersk Line's announcement that it would abandon the city when its contract runs out at the end of this year. The Danish line, the port's largest customer, accounting for nearly one-quarter of its container business, said it had to pull out of Charleston unless it could get some financial relief.

Maersk has faced "shortfall" fees for not meeting the volume set forth in its contract with the South Carolina State Ports Authority (SPA). To improve its bottom line, Maersk wanted to move its operations to a "common-use" area of the port where non-union SPA employees would perform jobs that now fall to organized labor.

However, the three maritime unions in the city collectively rejected that proposal.

While staying firmly out of the fray of that situation, Fedelini said the ILA possesses an interesting challenge for shipping lines calling on U.S. Ports: In Europe, he said, the ship will be unloaded whenever it docks and the lines pay only for that time their ships are being worked.

While ILA will also work a ship at any time, its contract dictates that they are paid by an 8-hour shift. What that means is that if you come in at 2 a.m., you'll get your ship worked, but you'll also have to pay the workers for the beginning of the midnight shift, while they were waiting for your ship to arrive.

"So your choice is, do you pay for the standby time, or do you pull up to the dock and wait for the next shift to begin so you're not paying for the time that your ship isn't being worked," Fedelini asks. "Of course, if you wait for the next shift, you're adding to the overall time it takes to get from port-to-port and to get the goods to market."

Another thing that distinguishes port calls is the matter of regulatory compliance. The *MSC Marina* visits seven countries, all of which have different regulations related to the ship-borne movement of international trade. MSC routinely sends Esposito regulatory updates that he familiarizes himself with while at sea, he said.

"Every port we visit, inspectors come onboard, looking for some kind of discrepancy," Esposito said. "This afternoon here in Charleston, a U.S. Coast Guard safety team, consisting of five individuals, came onboard, checking the safety and security of the vessel, and, I'm proud to say, we had no discrepancies."

Captain relishes Charleston's harbor

Esposito has visited Charleston many times during his career, but this was his first call to the port in the past six years.

"Container terminals, generally speaking, are all the same around the world," he said. "Typically, they're huge, away from the town, and we almost always talk about them in terms of their productivity, in terms of container moves."

"In that regard, the ports that have really impressed me over the years are those in the Far East: China, the Port of Shanghai, Tianjin, Hong Kong, Singapore. In Tianjin, they did 5,000 container moves in less than 10 hours and did them so precisely, removing the boxes in sequence, that they did it without affecting the ships, without listing them."

But Charleston is one of the captain's favorite U.S.

ports, both because of the efficiency of its workers and because it's a natural harbor close to the open ocean.

"The Port of New Orleans is 10 hours up the Mississippi River, so if something happens, a sudden storm blows in or something, I cannot get away," he said. "The safest place to be on a vessel like this when the weather turns against you is out on the open water."

"The Port of Houston is eight hours up river, and that can lead to all kinds of complications."

In fact, the last time the *MSC Marina* was due to call on Charleston, a combination of fog and local regulations prohibiting nighttime departure from the Port of Houston caused Esposito to bypass the port completely in order to make up time.

"These ships are very forgiving for the planner," Esposito said. "If you plan ahead and do things smart, you can deal with situations that are out of the captain's hands. You can reroute cargo and make other arrangements for its delivery."

Getting the job done

As Esposito spoke, members of his crew were monitoring every

move of the port workers and longshoremen, making sure the containers were unlatched properly and hatches closed correctly.

"It's all about making sure the job is done without complication, so that when (the port) tells us the job will be done in a few minutes, we'll be ready to sail," he said.

As Esposito prepared his exit, he stood before a computer keyboard and monitored the weather for the coming week.

"The North Atlantic, right now, it looks good, but the weather is so changeable," he said. "We have a good forecast for the next two days, but the ocean can change dramatically in a short amount of time."

"This vessel is good, powerful, strong. But you never try to fight the sea, because it will destroy you. Never challenge it. Never fight it. It's something you have to abide by, no matter what your schedule."

But at that moment, the captain seemed pleased by the radar imagery passing before him.

"Now seems to be the right time to follow the low pressure system," Esposito said, motioning toward the image of a significant low-pressure system bringing snow and ice to Midwest.

By the time the *MSC Marina* would be ready to leave the following morning, the low-pressure system would be pushing off the U.S. coast and over the ocean.

"I'd like to get the wind at our back," he said, adding mischievously, "Then I can open the sails." **WT**

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