

By Bill Mongelluzzo

THE LATEST VESSEL productivity numbers derived and analyzed from The Journal of Commerce Port Productivity Database should be welcome news for marine terminal operators and port authorities. Productivity at many terminals improved in the first six months of 2013 compared to the previous numbers covering all of 2012.

Productivity improvement was especially noticeable at the port level. Nine of the top 10 U.S. ports improved, and globally, nine of the top 10 ports also improved their vessel berth performance.

Among individual terminals in the U.S., six of the top 10 improved vessel productivity, two experienced a decline and two new terminals joined the top 10.

Seven of the top 10 container terminals globally recorded increased productivity, two experienced a decline and one new terminal entered the top 10.

The Journal of Commerce, after working with ocean carriers for five years, released its first ranking of the top ports and container terminals in July. A total of 17 ocean carriers, representing more than 70 percent of global vessel capacity as defined by research analyst Alphaliner, provided their 2012 vessel productivity data based on the industry's standard measurement of gross moves per hour across the vessel.

The rankings for January-June 2013 are based on 12,500 vessel calls in the Americas and 63,500 ship calls at major ports around the world. The Journal of Commerce will update productivity numbers on a regular basis.

Industry experts aren't surprised by the improvement. "The productivity numbers should go up," said Mark Sisson, leader of the maritime analysis group at Oakland, Calif.-based engineering firm AECOM. Container ships are continually getting bigger, which

allows for more efficient working of the vessels. Terminal operators also are using advanced technology and are refining their operating techniques, he said.

Overall, the key factor in improving berth productivity isn't the top-end capacity of the cranes, but rather the fluidity of the container yard and the support that terminals provide the crane operators. "It's all about the yard," Sisson said.

Ed DeNike, chief operating officer of SSA Marine, cited the ability of the crane operator and the yard support as the two key factors in berth productivity. He used the Port of Oakland as an example. SSA's crane drivers during the night shift regularly handle 35 to 45 lifts per crane per hour because there are no trucks moving around in the yard.

During the dayshift, though, SSA's crane operators average 28 to 30 moves per hour because the terminal is handling truck operations, as well. SSA will process 4,000 to 5,000 truck moves per day. Sometimes the yard gets so congested that a section must be closed off to truck traffic. It's therefore the responsibility of the terminal operator to provide as much yard support as necessary. "If we're not getting containers to and from the crane quickly enough, we're doing something wrong," DeNike said.

Crane density is also important. To control costs, however, terminals will only work as many cranes as necessary to get the vessel in and out of berth in the window for which the shipping line is paying. Sisson said terminals generally assign one crane for every 1,000 moves. Therefore, a ship calling at a smaller port will work up to two cranes for 2,000 or fewer moves. Terminal operators in Los Angeles-Long Beach often work five or six cranes because vessels discharging 80 to 85 percent of their cargo generate 5,000 to 6,000 lifts.

Many Asian ports achieve higher productivity than U.S. ports because labor is cheaper and terminals assign more yard tractors and dockworkers per vessel than U.S. terminals do. The busiest Asian ports work as close to 24 hours a day as possible.

Asian ports therefore work 50 percent more hours than the busiest U.S. ports. Los Angeles-Long Beach frequently runs two shifts a day under the PierPass program, working a maximum of 16 hours a day.

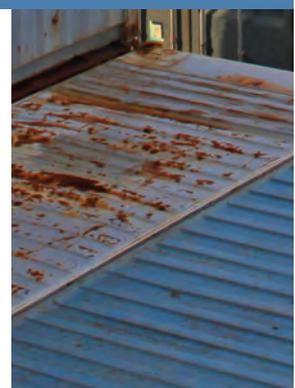
That helps to explain why seven of the top 10 most productive ports are in Asia: Qingdao, Ningbo, Tianjin, Shanghai and Dalian in China; Busan, South Korea; and

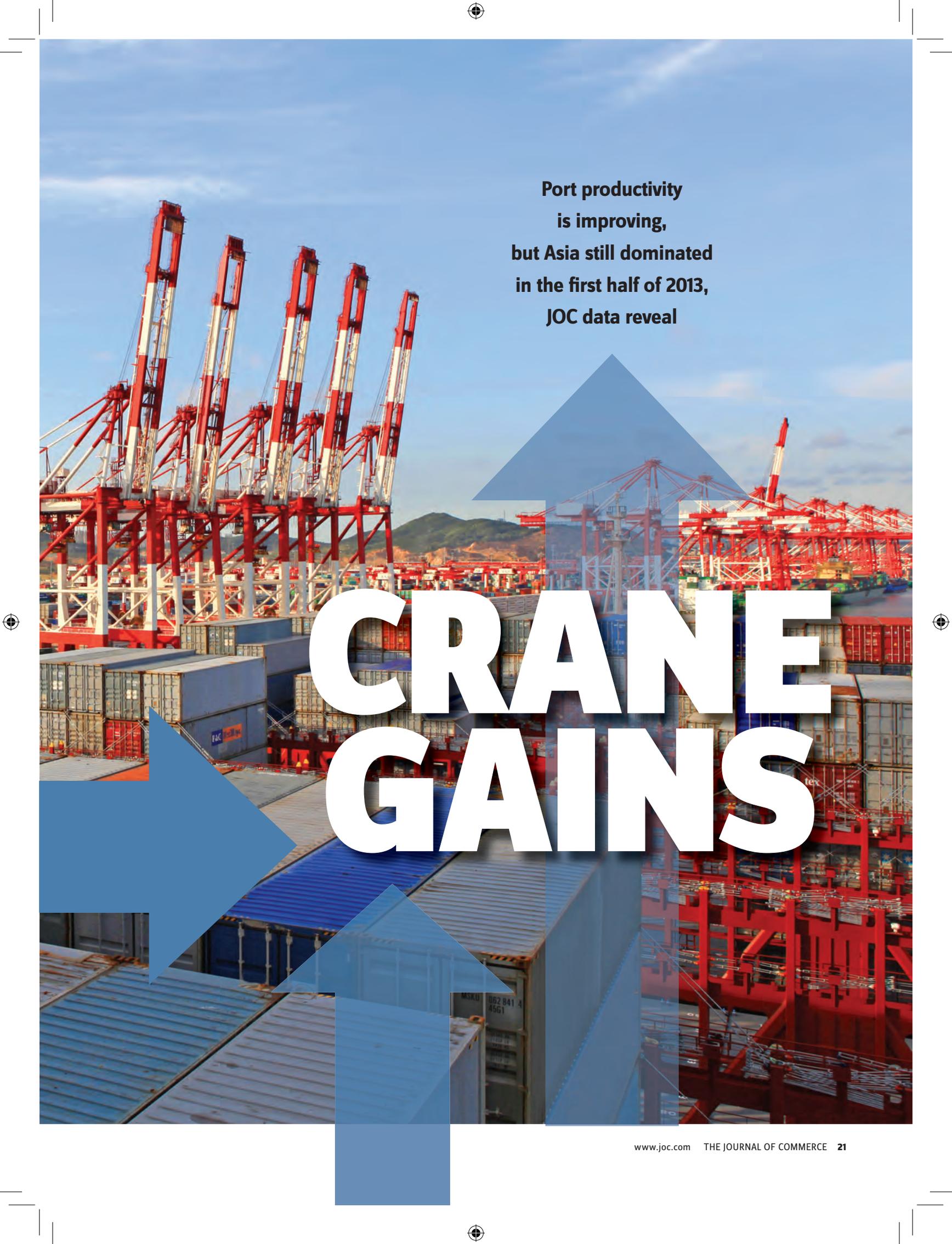
"IF WE'RE NOT GETTING CONTAINERS TO AND FROM THE CRANE QUICKLY ENOUGH, WE'RE DOING SOMETHING WRONG."

Nhava Shiva, India. Only Jebel Ali in the United Arab Emirates and Long Beach, Calif., kept it from being a clean Asia sweep.

Sisson said a gauge of U.S. productivity would be to see if Asian ports get 50 percent greater berth productivity than U.S. ports. As the charts for the top 10 ports and terminals show, Asian ports aren't outperforming their U.S. counterparts by 50 percent, so the top U.S. ports have relatively good productivity considering their operating conditions, Sisson said. **joc**

Contact Bill Mongelluzzo at bmongelluzzo@joc.com and follow him at twitter.com/billmongelluzzo.





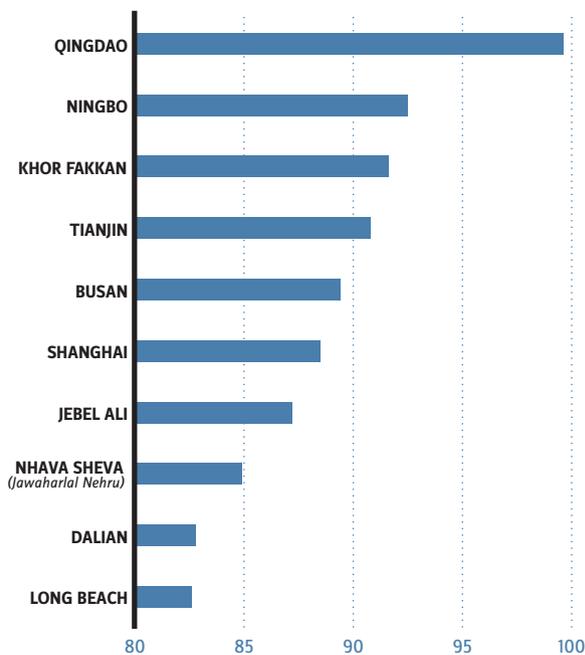
**Port productivity
is improving,
but Asia still dominated
in the first half of 2013,
JOC data reveal**

CRANE GAINS

Top 20 ports, by region, first six months of 2013. Rankings based on average container moves per hour while ship is in port.

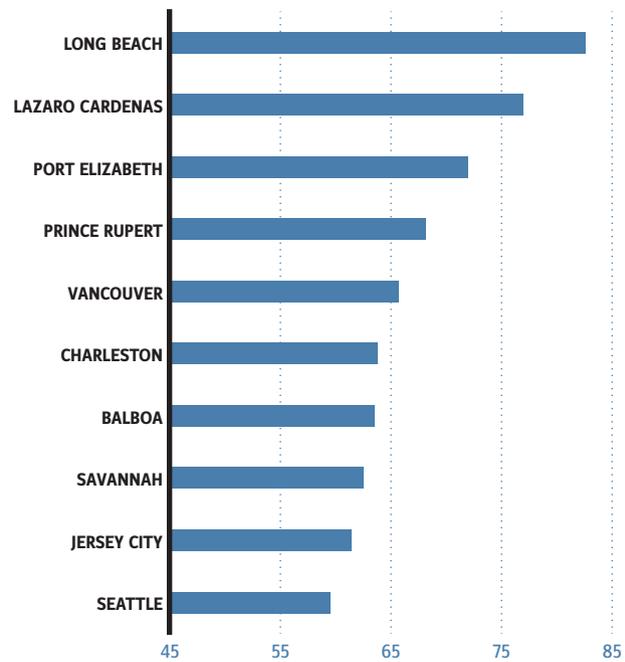
TOP PORTS: WORLDWIDE

PORT	COUNTRY	BERTH PRODUCTIVITY
Qingdao	China	99.6
Ningbo	China	92.5
Khor Fakkan	United Arab Emirates	91.6
Tianjin	China	90.8
Busan	South Korea	89.4
Shanghai	China	88.5
Jebel Ali	United Arab Emirates	87.2
Nhava Sheva (Jawaharlal Nehru)	India	84.9
Dalian	China	82.8
Long Beach	U.S.	82.6



TOP PORTS: AMERICAS

PORT	COUNTRY	BERTH PRODUCTIVITY
Long Beach	U.S.	82.6
Lazaro Cardenas	Mexico	76.9
Port Elizabeth	U.S.	71.9
Prince Rupert	Canada	68.1
Vancouver	Canada	65.7
Charleston	U.S.	63.8
Balboa	Panama	63.5
Savannah	U.S.	62.5
Jersey City	U.S.	61.4
Seattle	U.S.	59.5



Source: JOC Port Productivity Database, www.piers.com/port_productivity

ABOUT THE JOC PORT PRODUCTIVITY RANKINGS

THE JOC PORT Productivity rankings included in this section are based on seven rigidly defined elements provided by 17 participating carriers. Other data points such as operating time, crane density, total time a ship is in port and crane productivity will be added later.

The data points for this report are vessel name, terminal name, port city, port country, berth arrival,

berth departure and number of moves (including lifts on, lifts off and re-stows). Berth arrival and departure refer to "lines down" and "lines up" – that is, the actual arrival and departure of the ship at the berth. The calculation of moves per hour between these two times is referred to as unadjusted gross berth productivity.

It is the same calculation for all 400 terminals and 600 ports

the JOC evaluates, allowing for a basic apples-to-apples comparison globally. The data enters a data warehouse in standardized format so that it's accessible for reports, rankings, analysis and other uses.

Interaction with global carriers resulted in data whose definitions are consistent across all carriers. Rankings were determined by analyzing nearly 65,000 port calls in the first half of 2013.

Productivity is defined as the average of the gross moves per hour for each call recorded last year.

Gross moves per hour for a single vessel call is defined as the total container moves (onload, offload and repositioning) divided by the number of hours for which the vessel is at berth.

To learn more about the JOC Port Productivity data and to join, go to <http://tinyurl.com/pau8jbd>.



Top 20 ports, by region, first six months of 2013. Rankings based on average container moves per hour while ship is in port.

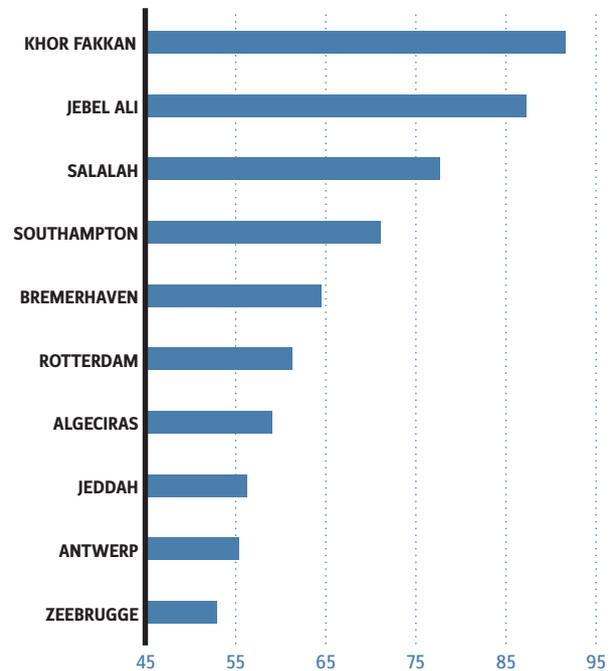
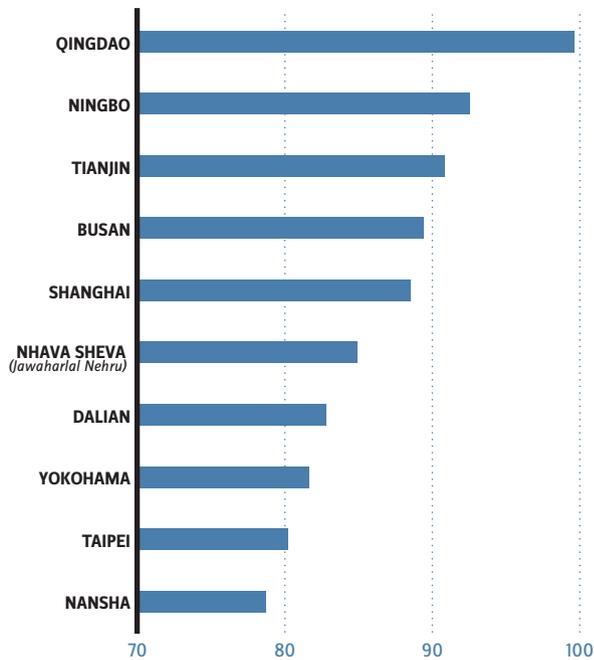


TOP PORTS: ASIA

PORT	COUNTRY	BERTH PRODUCTIVITY
Qingdao	China	99.6
Ningbo	China	92.5
Tianjin	China	90.8
Busan	South Korea	89.4
Shanghai	China	88.5
Nhava Sheva (Jawaharlal Nehru)	India	84.9
Dalian	China	82.8
Yokohama	Japan	81.6
Taipei	Taiwan	80.2
Nansha	China	78.7

TOP PORTS: EUROPE, MIDDLE EAST, AFRICA

PORT	COUNTRY	BERTH PRODUCTIVITY
Khor Fakkan	United Arab Emirates	91.6
Jebel Ali	United Arab Emirates	87.2
Salalah	Oman	77.7
Southampton	U.K.	71.1
Bremerhaven	Germany	64.5
Rotterdam	Netherlands	61.3
Algeciras	Spain	59.0
Jeddah	Saudi Arabia	56.3
Antwerp	Belgium	55.4
Zeebrugge	Belgium	52.9

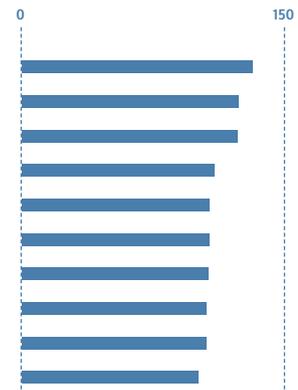


Source: JOC Port Productivity Database, www.piers.com/port_productivity

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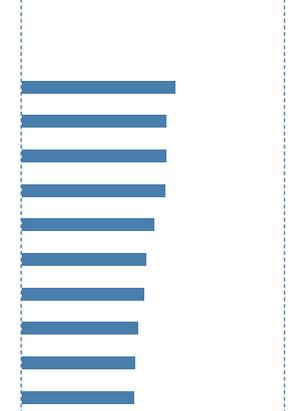
TOP TERMINALS: WORLDWIDE

TERMINAL	PORT	COUNTRY	BERTH PRODUCTIVITY
Xiamen Songyu Container Terminal	Xiamen	China	130.8
Tianjin Five Continents International Container Terminal	Tianjin	China	123.3
Ningbo Beilun Second Container Terminal	Ningbo	China	122.5
APM Terminals Yokohama	Yokohama	Japan	110.0
Hyundai Pusan Newport Terminal	Busan	South Korea	107.3
Qingdao Qianwan Container Terminal	Qingdao	China	107.2
Nhava Sheva Gateway Terminal	Nhava Sheva (Jawaharlal Nehru)	India	106.6
APM Terminals Mumbai	Nhava Sheva (Jawaharlal Nehru)	India	105.4
Tianjin Port Euroasia International Container Terminal	Tianjin	China	105.3
OOCL Kaohsiung Container Terminal	Kaohsiung	Taiwan	100.9



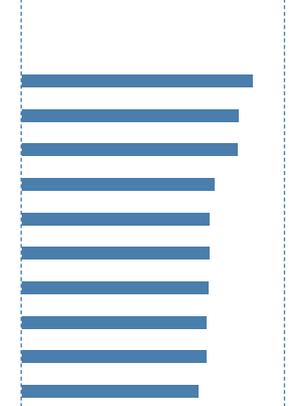
TOP TERMINALS: AMERICAS

TERMINAL	PORT	COUNTRY	BERTH PRODUCTIVITY
APM Terminals Port Elizabeth	Port Elizabeth	U.S.	88.5
Global Gateway South Terminal (APL Terminal)	Los Angeles	U.S.	83.5
Pacific Container Terminal - Pier J	Long Beach	U.S.	83.1
Total Terminals International - Pier T	Long Beach	U.S.	82.6
Lazaro Cardenas Terminal Portuaria de Contenedores	Lazaro Cardenas	Mexico	76.9
Evergreen Container Terminal-Los Angeles	Los Angeles	U.S.	72.1
APM Terminals Houston	Houston	U.S.	70.9
Prince Rupert Fairview Container Terminal	Prince Rupert	Canada	68.1
Deltaport	Vancouver	Canada	66.3
Bayport Container Terminal	Houston	U.S.	65.6



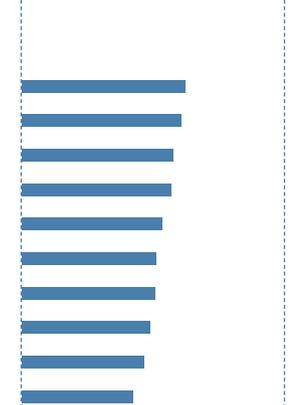
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TERMINAL	PORT	COUNTRY	BERTH PRODUCTIVITY
APM Terminals Rotterdam	Rotterdam	Netherlands	94.1
Khorfakkan Container Terminal	Khor al Fakkan	United Arab Emirates	91.6
DP World-Jebel Ali Terminal	Jebel Ali	United Arab Emirates	87.2
Euromax Terminal Rotterdam-ECT	Rotterdam	Netherlands	86.3
Eurogate Container Terminal Hamburg	Hamburg	Germany	81.0
Salalah Container Terminal	Salalah	Oman	77.7
ECT Delta Terminal	Rotterdam	Netherlands	77.1
NTB North Sea Terminal Bremerhaven	Bremerhaven	Germany	74.6
DP World Southampton Container Terminal	Southampton	U.K.	71.1
HHLA Container Terminal Tollerort	Hamburg	Germany	65.3



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