

SAGT's secret of success is a highly accurate container yard

INTELLIGENT CONTAINER POSITIONING HELPS

High productivity and efficiency backed by Konecranes' container positioning system helped South Asia Gateway Terminals (SAGT) in Sri Lanka to handle 1.9 million TEUs in 2010. An excellent figure for a terminal with a designed capacity of 1.1 million TEUs, don't you agree?

It is a hot and humid August morning, approaching eight. The monsoon season with the rain is far behind. As a distant memory of it, partly cloudy weather is forecast for Colombo, the usually oh so sunny commercial capital of Sri Lanka (formerly known as Ceylon before 1972) Colombo, only +28 degrees Celsius.

The Indian Ocean and the sea of cranes rising at the container freight terminal in the harbor loom in the horizon. Some of the crane booms are up in accordance with the safety policies, as if to remind the vessels that they can come here. Some of the crane booms are down, meaning that the cranes are at work loading and unloading vessels. The container freight terminal never sleeps.

The Port of Colombo with its state owned Jaya and Unity Container Terminals and Sri Lanka's first modern private container terminal, South Asia Gateway Terminals (SAGT),

is rated amongst the top container ports in the world. SAGT took over the historic Queen Elizabeth Quay in the Port of Colombo in 1999 on a 30-year Build-Own-Transfer (BOT) concession.

Sri Lanka, an island nation in South Asia, located about 31 kilometers (19.3 miles) off the southern coast of India, is a strategically brilliant naval link on the main East-West shipping route, linking the Far East with Africa, Europe, and the East Coast of the US, providing ideal connections to the trade in the Indian sub-continent.

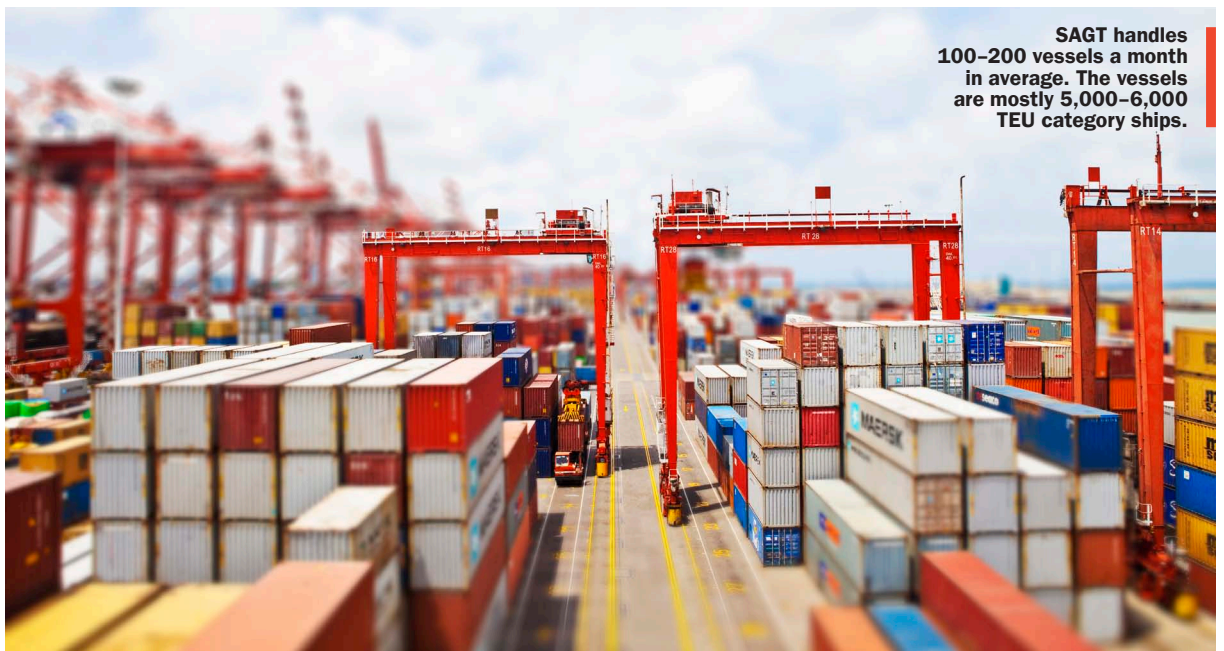
IT MAKES THINGS HAPPEN

According to Upul Jinadasa, SAGT's General Manager, Information Technology, his role is to identify the right technology and solutions. After the identifying part he implements and supports the chosen conclusions.

"Our main focus as a port is to maintain world class service levels. The right IT solutions will play an important role in making things happen," Jinadasa says.

"Earlier we had 28 RTGs that came with PDS based on transponders. Basically, the system didn't work no matter how we tried to fix it. We needed a good solution fast. So we turned to Konecranes and had their container positioning information system installed in one of our RTGs as a pilot test in late 2006. It worked perfectly. In 2007 we installed their system in our 31 RTGs and 70 trucks."

Jinadasa is very pleased with Konecranes' system.



SAGT handles 100-200 vessels a month in average. The vessels are mostly 5,000-6,000 TEU category ships.

KONECRANES®

“Thanks to it our container inventory is very accurate. If there are problems with the location of containers both the planning and productivity go wrong. And you cannot have a successful terminal without proper planning,” says Jinadasa.

ACCURATE RECORDS RULE

The accurate container records, once again, play a key role also for Laksiri Nonis, SAGT’s General Manager Operations.

“My goal is to minimize the traffic and prevent any congestion in the terminal area allowing a smooth and efficient operation. This is a compact terminal so we closely monitor everything and make sure we get the maximum utilization of the container yard,” says Nonis.

“It not only makes a huge difference to the customer but also to us if a box is staying in the yard longer than it is supposed to. So, the sooner we get the transshipment connection on its way, the better.”

“Containers are stored in the yard by linking the container number to the yard location and we are very much dependent on that information. We cannot run without technology, so we wanted to make sure we got a reliable system with a good back-up. If everything stopped, just for a few minutes because of power failure or so, it would have a big impact on the terminal’s efficiency.”

INTELLIGENCE INSTEAD OF IRON

Mikko Sampo, General Manager, Konecranes YardIT, has 27 years background in machine automation and service. He oversaw the system deal and says that terminals nowadays tend to increase productivity and efficiency by purchasing IT solutions.

“Now we focus more on intelligence,” Sampo states.

“Another equally important thing is that with the help of our remote connection service team based in Hyvinkää, Finland, the support agreement made with SAGT and its engineering team at the site, and with the local spare part arrangement we can guarantee the functioning of the system under all conditions,” Sampo says.

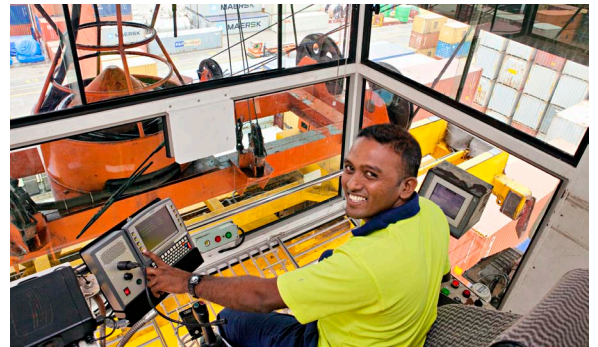
And just to make everything perfect, all the positions are updated to the Terminal Operation System (TOS) database even if the crane operator accidentally tries to put the box in a wrong place.

“Then the whistles are blown, that is, the system sounds an alarm, which is transmitted to operators, and the guy in the control tower. The result: 100 percent accurate inventory of the container yard,” Sampo explains.

According to him, the operation of the Konecranes IT solution is ingenious in its simplicity.

“The crane operator stacks the container and leaves it in place. The system then intakes a signal from the crane PLC (twistlock activity) and satellites. Based on the information the container location’s X,Y and Z coordinates are defined and reported directly to the TOS software database.”

“And what’s best is that the crane operator does not need to do anything, he can fully concentrate on his container handling tasks, because reporting to TOS is fully automatic. So this is also an important safety issue. In the case



“A very easy handling system. Now I can just concentrate on my real work and focus on achieving the productivity targets,” says Crane Operator Viraj Priyadarshana.

of SAGT, we installed the system in other manufacturers’ machines—our system is usable in all types of container handling equipment.”

TRANSSHIPMENT IS THE NAME OF THE BUSINESS

Erwin Haaze, CEO of SAGT says their business consists of 80 percent of transshipment container traffic with around 70 percent coming from Indian origin. The terminal’s volumes have been increasing steadily during the last years.

“We are fully booked berth wise. We have ten cranes on a 940-meter berth and we hit almost 2 million TEUs in 2010, and 2011 was the best year ever. It has been a tremendous performance by the SAGT team and shows the commitment and dedication of our staff as well as the potential that is available in Sri Lanka! This year we are also doing well, but the closer you get to the maximum throughput, the more challenging it is,” Haaze says.

The statistics are impressive. From 2006 to 2010, with exception of the year 2009 in which SAGT still managed to achieve a marginal increase in throughput (1.3 percent) despite the economic turmoil, SAGT has realized year to year increases of 15.8 percent, 11.6 percent and 12.6 percent, doubling the throughput achieved in 2005. Productivity wise the trend showed similar developments leading to productivity levels averaging 27 crane moves per hour on all vessels including the smaller feeders with regularly hitting 30+ crane moves per hour.

Haaze says also the busier SAGT gets, the more they need to focus on strategies and make sure that all the primary structures are in order.

“Installing Konecranes’ container positioning system in our cranes was one of those good strategic decisions,” Haaze says.

As part of the Colombo South Harbor Development Project initiated by the Sri Lankan Ports Authority, the construction of the new South Harbor adjacent to the Port of Colombo is currently underway in order to meet the increasing need for greater capacity. The new facility will provide four more container terminals and can accommodate the next generation of container vessels. ■

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