PRESORTED
FIRST-CLASS MAIL
U.S. POSTAGE PAID
PROVIDENCE, RI
PERMIT # 558

American Journal of Transportation
116 Court Street, Suite 5, Plymouth, MA 02360

Visit ajot.com for the most up to date conference & events information

AJOT
American Journal of Transportation

BREAKBULK QUARTERLY
PORT EQUIPMENT & TECHNOLOGY
ajot.com JULY 25 – AUGUST 7, 2016 ISSUE #630

'Technology company' UPS investing $1 billion a year in intelligent logistics

By Paul Scott Abbott, AJOT

With its $1 billion-a-year investment in technology, UPS is empowering its intelligent logistics network with more efficient delivery routes that save money and reduce emissions while advancing such leading-edge tools as 3-D printing, drones and robotics.

"We really feel we are a technology company," said David Abney, chairman and chief executive officer of the global supply chain megafirm, which boasts fleets of more than 600 aircraft and 100,000-plus delivery vehicles – and an information technology network that can hold more than 20 quadrillion bytes of data.

"We have a lot of planes; we have a lot of trucks," Abney said at a June 30 gathering at UPS headquarters in Atlanta suburban Sandy Springs, Georgia. "But we really are a technology company."

UPS Chairman and CEO David Abney explains that his firm is truly a technology company. (Photo by Paul Scott Abbott, AJOT)

Since the company was initiated in 1907 by two Seattle teens as a messenger service and especially from around the time Abney began his UPS career in the mid-'70s using strip maps to navigate his delivery route in Greenwood, Mississippi, UPS has clearly moved to the logistics industry forefront when it comes to technology.

"Technology is really a foundation for our growth initiatives," Abney said, noting that it is facilitating UPS expansion in international markets, encompassing more than 220 countries and territories, while serving demands of e-commerce and such fast-growing segments as healthcare and aerospace.

Indeed, for a company that in 2015 took in $58.4 billion in revenue, the $1 billion annual technology outlay isn't seen as an expenditure.

"We clearly look at that as an investment, not an expense," said Mark Wallace, UPS senior vice president for global engineering and sustainability, who, like Abney, relied on strip maps to find his way through his early UPS career.

No fewer than 40 scientists and engineers have been engaged in development and delivery of the company's ORION technology, which combines package-level detail and customized online map data – what Wallace called "Mapquest on steroids" – with expansive fleet telematics and advanced algorithms to provide drivers with the most efficient routes for some 16 million daily deliveries in the United States alone.

UPS even employs meteorologists to provide input on routings and plan around potential and impending weather events.

ORION, according to Wallace, has annually brought about cost reductions of between $300 million and $400 million, 10 million fewer gallons of fuel used, 100 million fewer tons of greenhouse gas emissions and, at full implementation, 100 million fewer miles driven.

To that last point, Wallace quickly noted, "The greenest mile is the mile not traveled."

Those miles being driven increasingly are being done so using environmentally friendly technologies, with 1 billion miles to be driven annually by alternative fuel vehicles as early as next year. Such fuels include compressed natural gas, liquefied natural gas, propane, hybrid electric, electric and hydraulic hybrid, with such energy sources as hydrogen and even chicken waste under study.

Mark Wallace, UPS senior VP for global engineering and sustainability, sees technology outlays as an investment. (Photo by Paul Scott Abbott, AJOT)

Another key aspect of UPS innovation is automation, with all top-tier UPS hubs being automated with

*(**INVESTING** – continued on page 16)*

Kerry says no US-UK trade deal until Brexit talks concluded

There can be no trade deal between Britain and the U.S. until the country's exit from the European Union is complete, U.K. Foreign Secretary Boris Johnson and Secretary of State John Kerry said.

"Though clearly you can begin to pencil things in, you can't ink them in, and that's entirely right and proper," Johnson told reporters in London when asked about the possibility of a bilateral post-Brexit trade agreement. Kerry told a joint news conference with Johnson that it would be "physically impossible" to negotiate a deal with the U.K. while it remains part of the EU.

The comments came after Johnson and Kerry said the "special relationship" between the two countries would continue despite last month's Brexit vote. After a meeting in which the two discussed foreign-policy issues including the Middle East, Kerry said he's "absolutely confident" the countries will continue to have "special and unbreakable ties."

The attempt to offer continuity on diplomatic policy comes as the new U.K. government under Prime Minister Theresa May seeks to end weeks of turmoil in British politics following the Brexit vote. Kerry said he's "gratified by the reassurances" he got at a meeting with May. She's "clearly ready to hit the ground running," he said.

Johnson, who was surprisingly named as foreign secretary by May after he pulled out from challenging her for the premiership, was grilled by reporters on previous gaffes.

US trade measures finally helping domestic steel producers

Corporations showing improved performance thanks to lower import levels

By Peter Buxbaum, AJOT

Three leading U.S. steel companies have reported enhanced profitability recently, in one case, less egregious negative results. All three attribute their brighter financial picture to falling steel imports and those thanks to the trade sanctions the United States government has imposed on foreign steel producers, most notably China, but others as well.

These results come at a time when a stronger U.S. dollar could have contributed to high levels of steel imports into the U.S. market, bolstering the argument that trade measures are starting to work to the benefit of the domestic industry. They also come on the heels of the American Iron and Steel Institute's 2015 statistical report which showed steel imports near record levels. This year's import picture is decidedly different.

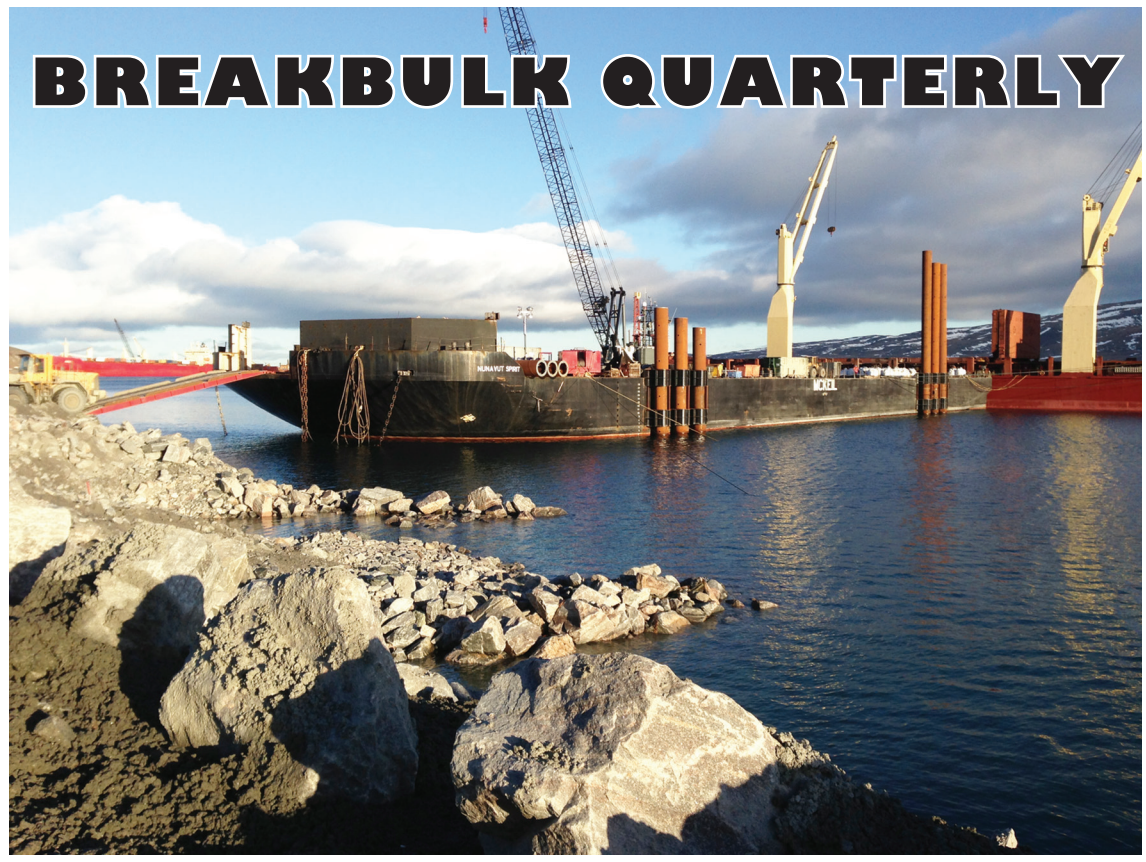
These more favorable conditions have also brightened the financial picture of a large U.S. scrap dealer and recycler, which reported big gains in productivity in its recent quarter.

Steel Dynamics, Inc., one of the largest U.S. steel producers and metals recyclers, provided guidance recently on its second quarter 2016 earnings, which have not yet officially been released. The guidance projected earnings in the range of $0.53 to $0.57 per share, compared to first quarter 2016 earnings of $0.26 per share and 2015 second quarter earnings of $0.22 per share, a remarkable spike in profitability. Demand in the automotive sector was strong and the construction market continues to improve, the company's report noted, while demand from the heavy equipment, agricultural, and energy remained slack.

Nucor Corporation, a Charlotte-based manufacturer of steel bars, beams, sheet, plate, piling, joists, girders, and cold finished steel, among other products, also announced guidance for its second quarter. Nucor expects second quarter results to be in the range of $0.65 to $0.70 per share, an increase compared to the second quarter 2015 earnings of $0.39 per share and the first quarter of 2016 earnings of $0.22 per share, another healthy spike in profits.

United States Steel Corporation, the New York-based integrated steel producer, reported a first quarter 2016 net loss of $340 million, or $2.32 per share. This was worse than its first quarter 2015 net loss of $75 million, or $0.52 per share, but much better than its fourth quarter 2015 loss of $1.1 billion, or $7.74 per share. Despite its losses, U.S. Steel projects earnings for 2016 in positive territory, near $400 million, provided current

(***HELPING** – continued on page 7)*



After providing a temporary dock for the Canadian Royalties nickel mine in Deception Bay, McKeil Marine delivered a 10-year solution using the Arctic dock barge. *(see story on page 8)*

The other story: IT's important to breakbulk

While technology drives the containerized supply chain and is responsible for stunning efficiencies and cost reduction, it's another story with breakbulk. Many in the industry continue to resist investing in information technology, even as the needs become more obvious and the benefits become more apparent. But slim margins are warranting a closer look at IT.

By Matt Miller, AJOT

While technology drives containerized freight and logistics and is responsible for stunning efficiencies and cost reduction, it's another story with breakbulk. Many in the industry continue to resist investing in information technology, even as the needs become more obvious and the benefits become more apparent.

"The environment is completely different than with container terminals where implementing technology is absolutely accepted," said David Trueman, a director at DBIS, a solutions provider for bulk and breakbulk terminals. With breakbulk, "we've been in this for 15 years and we still feel we are evangelists. It's getting better but it's still difficult."

To be sure, breakbulk presents some unique challenges, problems and issues. After all, it's one thing to move, monitor, store and control 500 40-foot containers, whose contents have long since been identified, tallied and checked before being transported. It's quite another to keep tabs on 5,000 steel rebars of various lengths, thicknesses, alloys and weight.

"A box is a box and it's got a number," said Trueman. "It's very straightforward." Breakbulk, by contrast, "is so disparate," in type, size, weight, shape and value.

That can require some different software-based solutions. Breakbulk-associated software can be "quite difficult from a technology standpoint," said Keith McSwain, vice-president client services at Jade Software Corp., which specializes in logistics-related IT. "It's an operational challenge."

A complexity and lack of uniformity is one reason why breakbulk-related IT has lagged behind the technology related to containers.

The breakbulk-related logistics industry is "climbing the technology ladder," said McSwain, whose company has been developing cargo-related software for 20 years. "I'd say over the last five or six years, you've seen the [breakbulk-related] technology products really mature."

There's a Catch 22 at play, however. Using state-of-the-art technology to improve efficiency is more important than ever for the industry. But that doesn't mean the industry is ready to spend. "Many breakbulk operators don't have the appetite for IT investment," said another specialty software provider.

IT's Important to Breakbulk

Part of this is just resistance from an old guard to new ways. But many breakbulk-related shippers and terminal operators are simply unwilling to spend in hard times. While better IT saves money, it also costs money to install these systems.

"It's getting the industry to accept that technology has real value," said Trueman. "You need to make a business case, that [IT] will reduce administrative costs

*(**OTHER** – continued on page 6)*

The plan behind Cargoplanner

It took Erik Törnblom a nearly 3,000-mile bicycle trip to fine tune the plan for Cargoplanner.

By Matt Miller, AJOT

A Swedish startup called Cargoplanner is attempting to load information technology into ship holds. The Web-based software optimizes cargo space, and stowage. The company launched its initial product aimed at containers and trucks a year back. Its newest offering focuses on break bulk, a particularly tricky exercise when cargo is in wildly varied shapes and sizes.

Cargoplanner is the brainchild of a young software engineer, Erik Törnblom, who previously developed a mobile app aimed at documenting vehicle damage on ro-ro carriers. Törnblom got the idea for Cargoplanner from his father, a sea captain and company director with 30 years experience in break bulk and project cargo. "He always told me it would be nice to have this kind of software," said the younger Törnblom.

Erik Törnblom – Cargoplanner

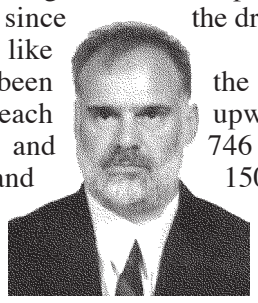
*(**PLAN** – continued on page 10)*

How low can it go?

Since 2015 the dry bulk market has been dancing the limbo, with each month a seemingly new, and lower, challenge to freight and charter rates. But in recent weeks the Baltic rates have inched upward, is the limbo dance over?

By George Lauriat, AJOT

There has been very little good news in dry bulk shipping since the beginning of 2015. It's like the dry bulk sector has been dancing the limbo, with each month a seemingly new, and lower, challenge to freight and charter rates. Snapshots of the BDI (Baltic Dry Index) over the past few years tell the story. On December 13, 2014 the BDI was 2,330. Soon the limbo dance began and by November 7, 2015, the BDI was at 1,457. At that time, dry bulk operators were wondering what the "new normal" was going to be? After all, it had plunged to 555 on February 27, 2015 but "recovered" to 1200 by August 7th. But the real limbo challenge didn't begin until this year. On February 8th the BDI sank to 297 and four days later bottomed out at 291. Dry bulk shipowners might have been inclined to have thrown themselves out a window had they not already been in the basement.



The BDI was so low that it called into question the value of the assets – the ships themselves. Asset-wise was the dry bulk industry bankrupt?

Since that sobering moment, the BDI has been inching upwards and at this writing is 746 – a long way from 1,000 or 1500 and still off over 30% for the year but heading in the right direction. But this is still troubling for the banks and finance houses vested to the industry.

Banking on it

According to Reuters and a number of other reports, the European Central Bank (ECB) recently began a review of banks' lending to shipowners/operators - many in the dry bulk sector. Even before the ECB assumed responsibility for supervising lenders from State institutions lending to the industry, the ECB already had run an assessment through its Asset Quality Review of the largest Euro Zone lenders in 2014.

No surprise, banks and finance houses, particularly in Germany, look

*(**LOW** – continued on page 13)*

*(**OTHER** – continued from page 4)*

and improve operational efficiencies."

Just who will push more technology is also an open question. Terminals are an obvious leader, but the actual owners of the cargo may be necessary to pressure a thrust in technology. After all, better identification and tracking means the cost of transport will come down.

"The whole supply chain needs to get together," said Trueman.

As often chronicled, breakbulk rates have plummeted and its market share steadily eroded. The consultancy Drewry predicts the breakbulk market will remain weak at least until 2017.

Those that have invested in breakbulk-related IT have demonstrated some dramatic results. Last year, for example, Georgia Ports Authority inaugurated a new tracking system aimed specifically at breakbulk. The General Cargo System software enables the Port of Savannah to monitor where a particular breakbulk shipment is en route to the port. This, the authority said, allows better preparation, including railcar availability and order stuffing. According to a press release quoting Bill Sutton, the director of information technology, railcar ordering, which had taken two hours of manual processing, is reduced to 15 minutes. This system uses electronic data interchange (EDI) that transmits and receives automatic status updates and automated shipping instructions. It also uses bar code scanning to identify individual items.

When it comes to breakbulk, technology must touch several key points along the logistical chain. It begins with a manifest. Unlike with containerized freight, where electronic manifests are pretty much standardized and universal, breakbulk manifests are still often transmitted in paper, fax or email form. "People have learned to survive with paper and pen and spread sheet," Trueman said.

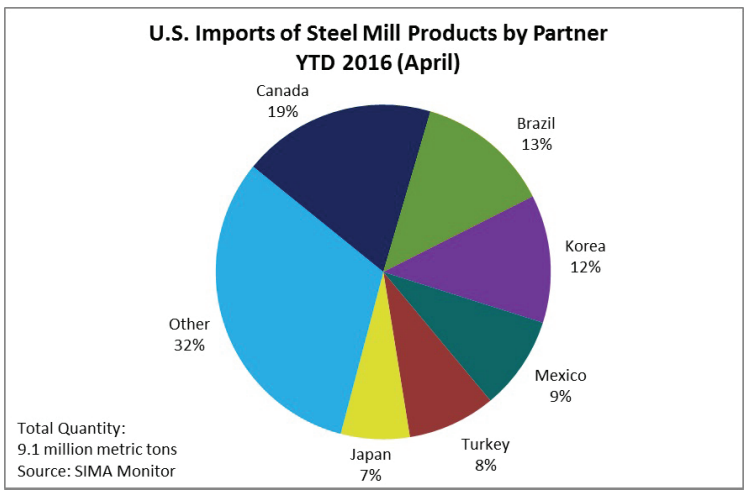
That complicates the process considerably. The terminal, for example, has a more difficult job in preparing for and tracking the cargo, unless it reenters the data into its own system, a process itself open to errors.

David Trueman, DBIS, "We've been in this for 15 years and we still feel we are evangelists. It's getting better but it's still difficult."

According to Trueman, DBIS is now working with one general cargo terminal in the Mideast that is requiring agents to enter manifests into the terminal's electronic data and tracking system. That has the added benefit of enabling agents to see where the cargo is as it goes through the terminal.

Document storage and retrieval can be daunting and especially voluminous for breakbulk, said Symcha Bergman, vice president with Logistical Data Solutions, which offers

*(**OTHER** – continued on page 10)*



*(**HELPING** – continued from page 2)*

market conditions continue.

"During the first quarter 2016, positive changes in the flat roll steel supply environment resulted in significantly improved sequential consolidated operating earnings, which increased over 175 percent to $132 million," said Mark D. Millett, the company's president and CEO. "Flat roll steel import levels have declined and customer inventory levels are better matched with actual demand requirements, supporting higher domestic steel mill utilization." Millett agreed with the Steel Dynamics assessment that the heavy equipment, agricultural, and energy markets remain weak, while the automotive sector continues strong and construction is in recovery mode.

Statistics supplied by U.S. Steel indicate that imports of flat-rolled products are beginning to decline. Although import levels for rolled-steel products have fluctuated over the last year and half, the overall trend for imports of hot-rolled coil steel, cold-rolled coil steel, and galvanized steel has been down, and down dramatically since November 2014. Imports of hot-rolled coil steel in the month of November 2014, which were over 700,000 tons, sank in March 2016 to under 300,000 tons. Imports of cold-rolled coil steel—over 200,000 tons in November 2014—halved to around 100,000 tons in March 2016. Imports of galvanized steel dropped from 400,000 tons in November 2014 to 300,000 in March 2016.

"The decline is partially due to favorable trade case rulings," said Millett, "but we are also seeing global prices rising, providing incentive for certain non-subject imports to stay in their home market rather than come to the U.S. Steel imports are down in the first four months of this year compared to the same period last year with preliminary duties in place and being collected."

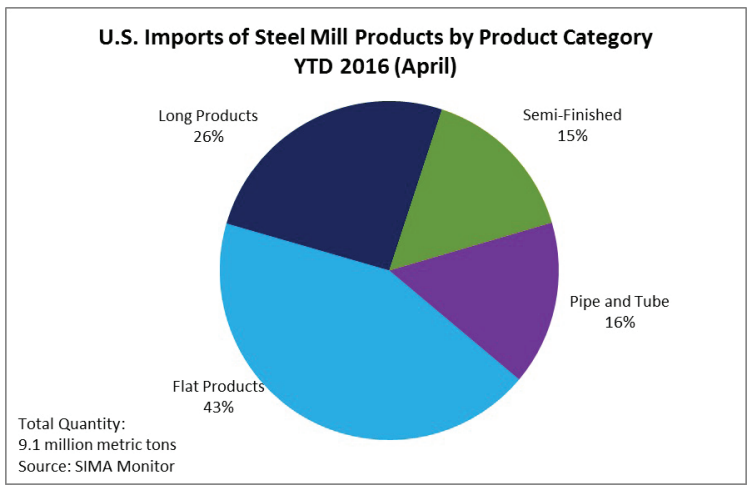
Trade Action Cases

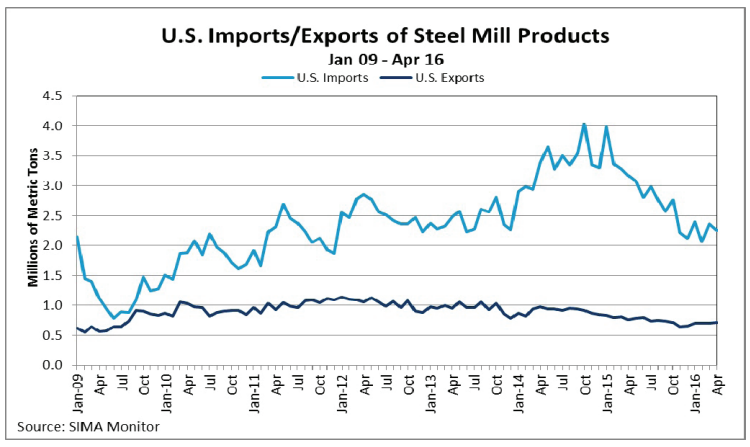
The most significant improvement for Steel Dynamics was from the company's flat roll operations, the company report noted. "Customer flat roll inventory levels are better aligned with steady consumption," the report said. "As such, the reduction in imported flat roll steel due to trade case actions has resulted in supply-driven price appreciation."

Domestic producers first launched cases before the U.S. Department of Commerce and the International Trade Commission in an effort to stem the increased flow of allegedly unfairly traded corrosion-resistant cold-rolled and hot-rolled steel products into the U.S. market in June 2015, that requesting anti-dumping and countervailing duties be imposed in the offending parties. Those proceedings resulted in countervailing duties of as high as 235.66% and anti-dumping duties of 255.8% on Chinese imports, and much lower sanctions against imports from the other markets in question.

In July 2015, U.S. steel companies filed a cold-rolled product case. The petitions charged that unfairly-traded imports of cold-rolled steel products from Brazil, China, India, Japan, South Korea, Netherlands, Russia, and the United Kingdom are causing material injury to the domestic industry. Those proceedings resulted in countervailing duties of as high as 227.29% and anti-dumping duties of

*(**HELPING** – continued on page 12)*



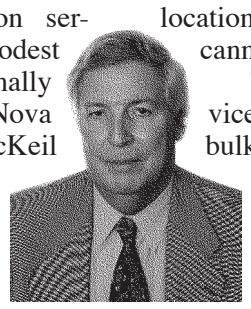


McKeil Marine at 60

Canadian 'Underdog' morphs into big league niche player

By Leo Ryan, AJOT

A unique Canadian success story in breakbulk and project transportation services had the most modest of beginnings. Originally from Pugwash, Nova Scotia, Evans McKeil and his father William built in 1956 a 35-ft long wooden boat powered by an automobile engine in Hamilton Harbour on Lake Ontario that was used to transport workers building the St. Lawrence Seaway.



Sixty years later, the fledging enterprise today known as McKeil Marine has morphed into an important niche player in North American shipping - boasting a fleet of 24 tugboats, 31 barges, numerous workboats, plus two recently-acquired bulk carriers. The tug and barge units can access shallow water ports and dock locations that larger vessels cannot.

Transportation services are provided for bulk and project shipments throughout the Great Lakes, St. Lawrence River, East Coast and the Arctic region, sometimes in collaboration with such global heavy lift operators as Mammoet. Headquartered in the Port of Hamilton, McKeil Marine has satellite offices in Montreal, Rothesay NB and St. John's, NL. It is also currently developing an "Atlantic Base" in Sydney Harbour, Nova Scotia.

Family Owned

The family-owned company employs about 300 shore-based, sailing and seasonable workers. Each staffer is called crew as part of a deeply-ingrained, family-friendly culture.

Blair McKeil reports double-digit annual revenue growth over the past five years. (Photo by Leo Ryan)

"We are proud of what we do," said Blair McKeil, chairman and CEO, who succeeded his father at the helm in 1992. "Robots don't build companies – people do."

In an interview, McKeil said "without great people, you can't have a great company – and we have quite a few."

Indeed, the people dimension has long been instilled in the company's culture. In the early days, for instance, Blair McKeil would spend the Christmas Holidays with his father breaking up the ice on the Welland Canal so that tugboat and barge crew could have time with their families.

Interestingly enough, senior executives and employees still like to describe their company as an "underdog" compared with the large Canadian bulk shipping firms with much longer histories and substantial fleets trading domestically and internationally. This reflects a certain humility but also a feistiness inherent in the personality of Blair McKeil.

The entrepreneurial vision of the second-generation owner is fuelled by seemingly boundless energy and unbridled exuberance. And the facts suggest that, under his stewardship, the company based at Canada's leading Great Lakes port has emerged as much more than an "underdog."

To begin with, how many maritime carriers in this millenium's turbulent times for global shipping can report robust revenue growth? "The company has achieved double-digit annual growth over the past five years," McKeil revealed, without going into further details.

Like other Canadian shipping firms trading on the Great Lakes/St. Lawrence waterway, McKeil Marine has invested in new assets. The more than $120 million allocated in five years demonstrate that McKeil has significantly broadened its reach.

Fleet Additions

A 15,000 dwt bulk carrier, the *Evans Spirit* (named after founder Evans McKeil), joined the fleet last autumn. It has been complemented since June by a similar vessel (the Arkow Willow) that will soon bear the name of Evans' wife Florence and be called the *Florence Spirit*. All told, the two Canadian-flag vessels have created 50 full-time sailing crew positions.

A 'Scrappy Upstart' with Bold Instincts

"Once a scrappy upstart operating on Hamilton's docklands, the company has grown in size and in scope to one of the most recognizable names in Hamilton business and the Canadian maritime industry," comments Ian Hamilton, Vice-President, Business Development and Real Estate, Hamilton Port Authority.

Hamilton considers that "the company hasn't lost the bold instincts of its early days, thriving on innovation. Mckeil is developing new ways of delivering service in some of North America's most challenging environments."

Longstanding relationships with companies like Aluminerie Alouette in Sept-Iles have served McKeil well. McKeil introduced the Evans Spirit to its fleet after signing another long-term contract (to 2021) last October with Aluminerie Alouette.

The two parties have been

(**MCKEIL** – *continued on page 9*)

*(**MCKEIL** – continued from page 8)*

partners for over 10 years, with Alouette depending on McKeil's Alouette Spirit barge to ship aluminum towards the Great Lakes and the ports of Oswego, NY, Toledo, Ohio and Detroit, Michigan. Since 2005, Alouette has shipped more than 2 million tonnes of aluminum via the "Blue Highway."

"On the overall transportation side, our focus is on moving cargoes ranging from 9,000 to 15,000 metric tons," indicated McKeil president Steve Fletcher.

The *Evans Spirit*, he went on, "is not dedicated just to Alouette. The important thing was to find a vessel that could be very versatile to move aluminum but also flexible enough to carry agriculture, cement and other dry bulk products as part of its trading pattern with the East Coast and Great Lakes region."

Daunting Long Harbour Processing Plant Project

Especially daunting was the Long Harbour Processing Plant project in NL and Labrador. Mckeil Marine was contracted by Mammoet to provide the marine transportation of modules for Vale Limited's construction of a new nickel processing plant. Most of the cargo pieces were sourced from the Gulf of Mexico, the eastern seaboard and Great Lakes. Complex logistics schedules prevailed throughout the operations.

At the peak, McKeil had nine tug and barge units transporting modules and equipment. The fleet included five 400'x100' barges chartered from U.S. operators which typically sailed between the Gulf of Mexico and Newfoundland. A total of 56 cargo loads at 14 different ports occurred between March 2011 and December 2013.

Recalling the many challenges in transporting production modules that could be up to five stories (60 feet) high, Boag stressed the importance of good weather cooperating in order to meet tight sailing schedules for delivery to the Long Harbour site.

"This was not always the case. A normal trip would take 10 days. But some shipments took up to 40 days due to bad weather conditions forcing our units to seek a port of refuge or protected bay along the east coast. There were occasions when we even had to send in another tug to supply fuel to a unit that had spent so much time on standby in midst of strong winds and high waves."

Present Market Outlook

How are present markets shaping up for McKeil Marine?

Here, Steve Fletcher sees continuing opportunities in its existing regional markets "where we have more room to grow. I don't think that expanding into international markets (beyond North America) is that close to our future."

For his part, Blair McKeil notes, first of all, that there is more and more competition from foreign flag vessels, for example, in areas like wind energy components.

And, taking the Great Lakes as a whole, McKeil suggests that there are some clear challenges: "The Great Lakes do not have a revenue base that is growing for marine carriers. More and more, the manufacturers are moving south, whether it's Louisiana, Alabama, Mississippi or Mexico. As a result, the Clevelands, Eries, Chicagos and Toledos of this world are busily re-inventing themselves. Much the same is also happening at cities like Hamilton. Toronto, Oshawa and Windsor. Monumental change is a constant. You have to be open to change, or it will pass you by."

Evans Spirit passing through the Welland Canal with a load of aluminum from Sept-Iles for final destination at US Great Lakes ports. (Photo by Paul Beesley)

*(**OTHER** – continued from page 6)*

electronics document system software to customs brokers and freight forwarders. Yet, many continue to rely on paper, which is both extraordinarily time-consuming and prone to error.

Rebar Revelation

Tracking those items as they're unloaded from a vessel, moved into storage and eventually retrieved and shipped out is absolutely essential. Terminals are increasingly reliant on hand-held, mobile devices. Tagging technology is critical.

Take that rebar example. Locating, identifying and pulling particular rebars in a storage area that contains thousands can be a nightmare. Even the initial unloading of breakbulk from a ship's hold and transferring to a storage area can easily result in misplaced items or defeat any designs for first-in, first-out. Yet, amazingly, rebars could have no more identification than color-coded paint that is sprayed on.

"A lot of decisions are made on the fly," said McSwain.

While anything but cutting edge, bar code identification, scanning and tracking is one widely used, go-to technology. It's cheap and universal. Trueman reports that some operators will even apply their own barcodes, if necessary, to allow them to track within their terminals.

The problem with barcodes is that they are easily damaged, the labels could fall off in transit or they are located on a part of the item that can't be reached. What's more, the amount of information stored on a barcode is limited.

One newer technology using radio waves to track cargo is radio frequency identification, or RFID. It can track items at a further distance with greater accuracy and more data input. But while its price tag has been coming down over time, its still costs quite a bit more than barcode technology. So, it's proving attractive in higher value breakbulk.

Trueman reports one interesting project now underway. The exporter of recycled newspaper bales and plastic bottles is turning to RFID because of trouble with compensation claims from customers. RFID identification will enable the exporter, who also operates a terminal, to document and demonstrate the condition of the bales as they're loaded on the ships.

The high cost of compensation is just one compelling argument for better technology. Just one bad delivery or incorrect shipment can wipe out meager profits. Then, the return on investment for IT becomes a lot more obvious.

*(**PLAN** – continued from page 4)*

Törnblom spent several years developing the product including stints done during a two-month bicycle ride from New York's Time Square to the Golden Gate Bridge in San Francisco.

While most facets of logistics, inventory control and ship management have been highly dependent on IT for years, ship-born cargo space optimization remains almost quaintly old-fashioned and can be extremely time consuming. It's tied to cumbersome Excel sheets and relies on the trained eyes of highly experienced cargo loaders.

Törnblom's Göteborg-based company democratizes the task with software that it claims is so easy to use, it doesn't require much support or special training. Users copy and paste cargo dimensions and weights from Excel and the software displays the needed units and space. Due to be released in a few weeks time, a new version allows users to quickly design actual cargo shapes and sizes, including ones that are relatively complex, attach them to a packing list and the software will load the images into a hold.

The software enables a number of parties to plan where cargo will be stowed, before the actual loading. Because it is Web-based, it allows freight forwarders and shippers to see exactly where their cargo will be stowed.

Customers include shipping operators, freight forwarders and ship operators.

As Törnblom explained, his software helps automate the step before weight and load balancing, which has relied on software assistance for some time, technology now well developed.

American Journal of Transportation
is published by Fleur de Lis Publishing, Inc.
No responsibility is assumed for unsolicited manuscripts.
Subscriptions:
Domestic.....$199.00
Canadian.....$287.00
International.....$448.00
phone: 508-927-4188; fax: 508-927-4189

George Lauriat.....Editor-in-Chief
Robert Kirk.....Managing Editor/ Print Production
Eric Nelson.....Web Manager/ Ad Design
Carole Lauriat.....Office & Circulation Manager
Peter Buxbaum.....Northeast Correspondent
Paul Scott Abbott.....Gulf region Correspondent
Stas Margaronis.....California Correspondent
Leo Quigley.....Pacific Northwest Correspondent
Leo Ryan.....Canada Correspondent
Matt Miller.....Business Correspondent
Manik Mehta.....International Correspondent
Robert Wallack.....International Correspondent

William Bourbon.....Publisher

Dave Cantwell.....Southeast & Gulf Coast Sales Rep
phone: 954-328-9335.....email: dcantwell@ajot.com

Brendan Dugan.....East Coast & West Coast Sales Rep
phone: (908)499-8737.....email: bdugan@ajot.com

Ed Andrews.....Europe Sales Rep
phone: +44 7880 702227.....email: ed@duvelmedia.com

McKeil's project business

By Leo Ryan, AJOT

The main sectors for McKeil project services include marine construction, mining, oil and gas, bridges, major infrastructure, offshore and Arctic development.

The project fleet consists of a range of flat deck, jack-up and sectional barges, tugs, workboats, cranes and other equipment. Loading ramps, spuds and other modifications are made to service temporary dock facilities, drilling platforms and cargo staging.

"Some of the more difficult moves are those we have no control over – like beach landing in the Arctic," says Olous Boag, Vice-President, Operations who leads the project and engineering development portfolios.

"There's no dock to tie up to. Even the soundings from existing charts can be unreliable," he points out.

"So, often we end up doing our own surveying with underwater cameras in remote locations. The barge is anchored in a known area and then we send the tugboat to do its own soundings."

Standard roll-on/roll-off operations carrying components in the hundreds of tons in coastal and inland waters can be technically demanding. "But once things are set up, it can be as close to routine as you can get," Boag says.

Generally speaking, he notes that "tug and barge operators can react quickly on one-off situations. We have the versatility, too, to pick up components at odd-ball locations, and get a particular party out of a jam."

Last year was a busy period on the project services front. It included moving large tanks from Sarnia to Thunder Bay, a large reactor from Sarnia to Duluth, support for 34 oversized pieces from a heavy lift vessel anchored in Bath, Ontario, and shipments of turbines and generators from Montreal to Bath.

This summer, between July and October, McKeil Marine is moving 52 pre-fabricated homes from Wemindi, Quebec destined for an aboriginal community on James Bay in Canada's Far North.

Over the past few years, several substantial highlight undertakings.

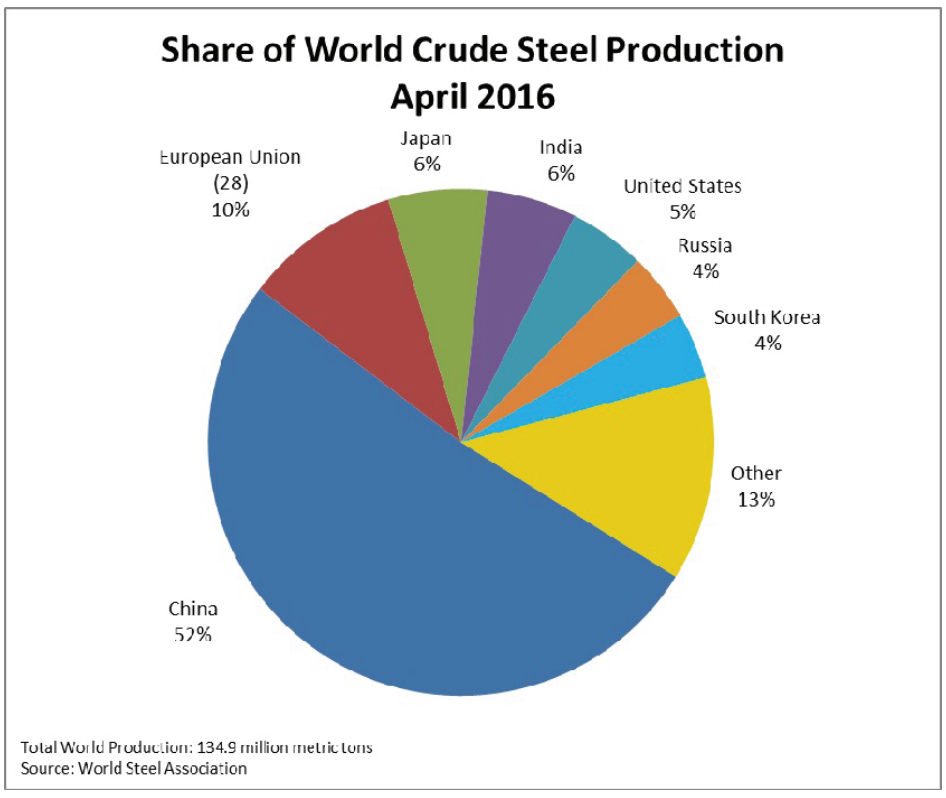
• McKeil Marine was contracted by Kiewit-Kvaerner Contractors on behalf of ExxonMobil to support the construction of the massive Hebron Project Gravity Based Structure (GBS) located in offshore Newfoundland.

• McKeil supplied 15 barges used as platforms for mobile cement plants and staging GBS construction. Nine of the barges were built in China over a six month timeframe and delivered to Canada via heavy lift ship to expedite deployment to the site.

• McKeil Marine was contracted in 2013 to work with Mammoet Eastern Canada Ltd. for the movement of two project cargo components, including a 1,200 mt stacker used for ship loading, from Belledune, New Brunswick to Port Cartier on the St. Lawrence River.

• Also in 2013, McKeil Marine was contracted by Canadian Royalties Inc. to utilize the collective resources of in-house design and engineering, project management and skilled sailing crew to erect a temporary dock along a remote, rugged Arctic shoreline. The Nunavik Nickel Mine and related port location in Deception Bay lacked a permanent dock infrastructure.

McKeil was contracted by Mammoet to provide marine transportation of large modules for the construction of Vale's nickel-processing plant at Long Harbour, NL. Most pieces were sourced from the Gulf of Mexico.



(*HELPING – continued from page 7*)
265.79% on Chinese imports, and lesser sanctions against imports from the other countries. Imports from Brazil were hit 7.42% countervailing duties and up 35.43% in anti-dumping duties, while the other countries received lesser penalties and the Netherlands was excluded from the case.

In August 2015, six domestic steel producers filed petitions for the imposition of duties on hot-rolled coil imports from Australia, Brazil, Japan, South Korea, the Netherlands, Turkey, and the United Kingdom. Imports from the UK received anti-dumping duties of 49.05%, Australian imports were hit at a 23.25% rate, and sanctions on Brazilian products were as high as 34.28%.

Affirmative final determinations in the anti-dumping and countervailing duty cases of corrosion-resistant steel products were announced by the Department of Commerce in May. Final determinations in the three flat-rolled trade cases are expected within the next few months.

"Our efforts to improve U.S. trade laws and their enforcement have started to be reflected in preliminary trade rulings," said Millett. "This is a positive step toward establishing a fair market environment in the U.S., but we remain a long way from truly resolving the trade practices that are harming the domestic steel industry. While we will benefit from the improving market conditions, the global steel industry continues to face many challenges."

One such challenge is that the overcapacity in the global steel industry, and in China in particular, has yet to be addressed. If China chooses to ramp up its production once again, U.S. producers may still have to face downward pressure on global steel prices.

US scrap exporter also shows healthier financial results

By Peter Buxbaum, AJOT

Schnitzer Steel Industries, Inc., one of the largest manufacturers and exporters of recycled ferrous metal products in North America, also reported positive financial results at the end of its third fiscal quarter, May 31.

The company reported earnings per share of $0.41 for the fiscal on the quarter, as compared to losses of $0.31 in the third quarter of 2015 and $1.48 in the second quarter of 2016.

"Successful execution of our multi-year strategy to reduce costs and improve productivity led to our auto and metals recycling business delivering its best quarterly performance since 2011," said Tamara Lundgren, Schnitzer's president and Chief Executive Officer.

The dramatic improvement over the second quarter came about as a result of a combination of improved market conditions and the achievement of the company's savings and productivity initiatives. Last year, Schnitzer announced a reorganization of two of its divisions and the idling of some of its recycling capacity.

Schnitzer's ferrous sales volumes in the third quarter increased 13% from the second quarter, "due to stronger seasonal demand and the impact of the higher price environment on supply flows of scrap metal," said Lundgren. But volumes were down 17 percent from the prior third quarter due to weaker global demand. Export customers accounted for 61 percent of total ferrous sales volumes in this year's third quarter. Ferrous and non-ferrous products were exported to 14 countries with Turkey, India and South Korea the top export destinations for ferrous shipments.

The improvement in export and domestic demand led to market prices increasing significantly from February to mid-May, when they slid somewhat. Overall, average ferrous selling prices during the quarter increased $46 per ton, or 27% from second quarter levels. That represented a decline of nine percent, or $20 per ton, from the 2015 third quarter, primarily as a result of weaker export demand.

Schnitzer's operating income in the third quarter increased substantially from the second quarter, and, in a departure from the other financial results, from the third quarter of 2015 as well. A combination of stronger market conditions, higher volumes, and cost savings drove that performance, according to Lundgren.

Finished steel sales volumes increased 21 percent over the second quarter but declined six percent from the third quarter of last year "primarily," said Lundgren.

*(**LOW** – continued from page 6)*
exposed to the need to provide more capital against higher loss provisions on loans to the shipping industry. And similar to the 2008/2009 financial crash the idea of stripping "bad" risk from the portfolio is again vogue.

Like breaking up, dropping shipowner assets from the investment portfolio is hard to do…but this isn't the first time around. Back in the Depression of 2009 European banks trimmed their beleaguered ship owning assets by the creation of "bad banks" which lumped together the "losers" in the bank's investment portfolio.

This time around it is a little different. The migration of assets to the Far East has shifted the source of finance, setting up a new dynamic and for now makes the process a little less unsettling. In fact, from a purely statistical perspective, little has changed. According to Greek-based Petrofin, the volume of global ship financing from the banking sector has remained steady over the course of the past 12 months, amounting close to $400 billion, almost identical to 2015. During that time, the world fleet rose by 1.76%, from 89,676 to 91,526 vessels.

But why? Petrofin's bank research, (released in June) suggests an answer.

Enclosed were a number of significant observations on ship finance by the research house:

"It is important to see the total ship finance figure in another light. Between 2014 and 2015, the total number of vessels in the world fleet rose by 1.76% from 89,676 to 91,256 vessels (Clarkson's World Fleet Register). Such growth and fleet investment was achieved without an increase in ship finance. As such, it is fair to conclude that there was more reliance on non-bank finance sources and/or enhanced equity by owners."

Another important research factoid from the research was "*ship finance is not a leading contender for loans*."

While this refers to traditional European lenders, there are significant questions concerning the capacity for Far East lenders to pick up the slack in a deeply depressed market. The real question, which somewhat involves the nature of the Brexit negotiations, is should Western banks abandon the ship finance business, and will Far East interests fill the void? At this time, it is an open question as a market rebound could amount to a reset for European finance interest. There is transportation oriented funding available but it has been chasing non-asset based companies or technology based interests over hard assets such as ships.

The real unknown factor in the mix is the non-banking lenders in the Far East. These include entities like the Chinese ship leasing companies – many of which are tied to local finance institutions and other public and private viaducts to investment monies. At this moment, alternative lending for shipbuilding purposes looks to be slowing down.

This might be partly because of the restructuring in Chinese shipyards (weeding out underperforming units) and a general slowing in ship building demand with the current over capacity.

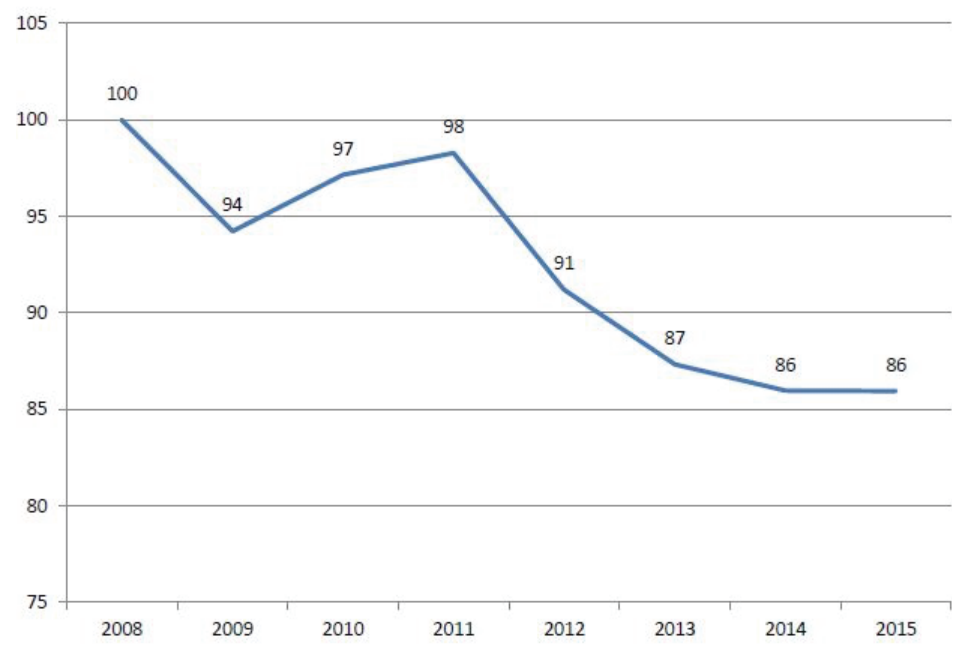
How Low Tomorrow?

The unbalanced supply-and-demand equation in the market means rates won't rebound as too many vessels keep chasing too few shiploads. The beginning of 2016 was difficult even with the current first quarter bounce. Will China's commodity inventory slow demand in second half and sabotage rates? Can the unexpectedly resilient U.S. market drag along the world economy? And in Asia, can Vietnam, Indonesia and indeed all of Southeast and South Asia offset potential slowdowns in Japan or Korea? At this writing the outlook for the remainder of the year remains very uncertain.

And what hangs in the balance? More ships chasing incremental increases in volumes doesn't bode well. Although vessel demolitions in 2016 are expected to hit a record high of 40 million deadweight tons (DWT) that won't offset the 50 million new DWT expected to enter the fleet.

So how low will it go with the new limbo?

Petrofin Global Index of Top 40 International Shipfinance Banks July 2016



Ro-Ro equipment

By Marty Pilsch, AJOT

In the US, today's auto traffic is handled by ro-ro, including both imports and exports. Heavier ro-ro cargo includes large rolling stock such as farm and construction implements driven or towed on or off the vessel rather than lifted. Many of the larger pieces are broken down and loaded on specially designed Roll Trailers, while loose or large and heavy cargo, paper rolls and bales as example, are loaded onto trailers and towed to or from the vessels by specially designed yard tractors. Many ro-ro commodities are handled by lift trucks designed to work in the low, tight confines of the ro-ro decks.

The cargo handling industry has always been adept at designing material handling tools to suit its needs and the ro-ro trade has not been an exception. Ro-ro encompasses such a wide variety of cargo that terminal operators and stevedores often require access to different tools. In many cases, the similarities between the equipment used to handle containers and ro-ro often allow a crossover, however, many aspects of ro-ro demand specialized applications. For ro-ro cargo, the equipment utilized ranges from cargo securing gear to heavy duty, multi-wheeled trailers and specially designed lift trucks and shuttle tractors.

The interior of many ro-ro vessels are configured much like a high rise parking lot with multiple decks with low ceilings, narrow interior ramps and tight turns. To meet these challenges, the evolution of the tools used to work the vessels is a continuing process. As newer vessels are launched or cargo configurations changed, ro-ro cargo handling techniques rise to meet the challenges. In this respect, the industry has responded, offering multiple equipment choices in almost every category.

Lashing Gear:

As the last thing to be completed before sailing and the first thing to be done after docking, the securing of any cargo type cannot be overlooked. Stevedore gear lockers were once the creative forces behind fashioning lashing gear, however, there are now a number of corporations offering the ro-ro industry a variety of chains, straps, deck fittings and other securing equipment. Today there are five major companies actively handling this type of gear including Martec International, Cordstrap, Peck & Hale, Jost, and Buffers USA.

With headquarters in New Jersey, Martec International operates four locations in the United States with over 100,000 square feet of inventory. Martec distribution centers and warehouses are located in Elizabeth, New Jersey; Hialeah, Florida; Houston, Texas and Los Angeles, California. Martec's inventory includes chain and binder assemblies, ratchet straps, deck fittings, heavy securing rods and twist locks. Martec also has the ability to manufacture specialty items.

Ro-ro Tractors:

Terberg is a family owned business that began in 1869. Today the Dutch company

(*EQUIPMENT – continued on page 16*)

Two Liebherr mobile harbour cranes LHM 800 on their journey from Rostock to Montevideo.

Kalmar Ottawa's Wood enjoys advancing productivity of equipment and technology

Industry Profile

By Paul Scott Abbott, AJOT

As a gearhead at heart and accomplished sawdust maker, David L. Wood, vice president of sales, marketing and service for the Americas Region of Kalmar Ottawa Terminal Tractors, firmly believes it pays to like machines.

Bringing enhanced productivity to terminal technology and equipment, just tinkering in his shop or giving grandchildren tractor rides around the family farm, Wood finds joy in the smooth humming of gears and the associated benefits.

In an interview with the *American Journal of Transportation*, Wood shares his thoughts on terminal automation and the newest-generation terminal tractors, as well as the pleasures of being a granddad six times over.

What efficiencies in equipment and technology do you see being facilitated by increasing automation, including integrated software systems?

That's a very timely question.

Our trucking and distribution customers have been using yard management software and hardware systems on yard tractors for many years. Those systems are focused on moving the maximum numbers of semi-trailers through a distribution facility with efficiency and accuracy. That equipment mounted in the truck is fairly simple and more telematics than automation.

At this point, trucking/distribution companies are not trying to automate in the same sense that port operators are. Port customers, by comparison, are pursuing automation of the operation and the equipment.

The requests we see from customers affecting the terminal tractor specifications are all focused on better communication and ultimately reducing the cost to move each container. To date, we have not seen requests for an autonomous – or driverless – tractor, but that technology is within our reach.

More specifically, how is your company engaged in such endeavors?

Navis, the terminal operating system provider, was bought a little over five years ago by our parent company, Cargotec. Gradually, we've been integrating their products into the hardware on a more proprietary basis, because we know the machines intimately – the terminal tractors, the straddle carriers and all the different machines they're using to move containers around the port and intermodal yards.

It's easier to integrate the software now from our own company into those machines. We think that creates an advantage for our customer.

(*PROFILE – continued on page 21*)

David L. Wood, Vice President of Sales, Marketing and Service for the Americas Region of Kalmar Ottawa Terminal Tractors, is pleased with the company's introduced T2 model. (Photo by Paul Scott Abbott, AJOT)

*(**INVESTING** – continued from page 1)*

devices such as high-speed diverters and tilt trays and smaller facilities undergoing automation retrofits. Wallace said that, by 2020, about 60 percent of total UPS volume is to be sorted via automated facilities, including a $108 million Paris hub for which ground was broken in June. Further advances are in the works, with UPS engaging with vendors on deployment of robotics.

Of course, the UPS Global Air Hub remains in Louisville, Kentucky, where activity is centered for another UPS technology initiative – 3-D printing – with more than two dozen 3-D printers in close proximity to runways.

The Louisville 3-D printing operation began in May 2015, and, according to Alan Amling, UPS director of global logistics and distribution marketing, the company, through partnerships, has access to more than 300 3-D printers throughout the world. Already, 60 UPS Store sites are equipped with 3-D printers, with plans to eventually have such a printer in each location. Additional 3-D printing factories also are planned worldwide.

"We think 3-D printing is going to be disruptive," Amling said, concluding with a word that is associated with both opportunities and challenges as a new factor enters the supply chain equation.

Alan Amling, UPS director of global logistics and distribution marketing, displays an ATM-card-accepting bezel. (Photo by Paul Scott Abbott, AJOT)

Juan Perez, chief information officer for UPS, used the word "disruptive" as well to describe the positive impacts of technology, saying, "As innovators, we continuously disrupt ourselves and our industry, as we help our customers disrupt their industries."

Perez described the "UPS innovation trifecta" as providing new value to customers; expanding global capabilities across regions and markets; and increasing operational efficiency to improve service and reduce costs, stating, "UPS is a technology company with trucks and planes operating at the intersection of the physical and virtual world."

It's a very busy intersection. So busy that UPS currently manages a staggering 16 petabytes of data, with capacity to handle 21.5 petabytes. (One petabyte equals nearly 1.13 quadrillion bytes.) The company utilizes 23,000 physical servers and still has eight mainframes, while supporting 127,000 newest-generation mobile driver devices. And, according to Perez, UPS is "a patent machine," holding more than 1,300 active patents.

"Technology is at the core of everything we do," Perez said, describing the firm as "a technology company fueled by data," and noting that UPS has some 4,700 information technology professionals among its 444,000-strong global workforce. "We have transformed into a technology company that offers logistics services to our customers."

UPS Chief Information Officer Juan Perez perceives his company operating at the intersection of physical and virtual worlds. (Photo by Paul Scott Abbott, AJOT)

Perez said security of all that data is a priority for UPS, as is advancement of innovations that enhance

*(**INVESTING** – continued on page 22)*

*(**EQUIPMENT** – continued from page 14)*

is in the hands of the family's fourth generation. Terberg Tractor Americas is located in Miami, Florida.

Terberg's offers four models of ro-ro tractors including the RT223, 283, 323, and 403. All of these featuring robust design and exceptionally powerful 4x4 drives. These trucks also feature spacious cabs with Terberg's Ergoturn driver's seat. This allows the operator to swivel 180 degrees for improved visibility in difficult areas inside ro-ro vessels and on the steep ramps. Terberg's tractors offer capacities ranging from 150 tons GCW to 190 tons. Fifth wheel lift specifications offer from 36 to 45 tons lift at from 962mm to 1335mm height.

Terberg's Safeneck attachment is a feature that replaces standard goosenecks, providing increased safety and capacity for handling heavy loads on vessel ramps. Safeneck lifts the trailer off of the ground utilizing its hydraulic cylinder rather than using the tractor's 5th wheel. Safeneck transfers a greater portion of the load to the tractor's front axle improving stability and safety as well as increased capacity.

Kalmar

Kalmar has produced over 4,500 ro-ro tractors and a total of 60,000 yard tractors.

The original version of their ro-ro truck was introduced in 1960 by Finnish equipment manufacturer SISU. Kalmar purchased Sisu in the late 1990's. Today, Kalmar offers ro-ro tractors with high tractive power allowing their trucks to easily climb steep, slippery ramps with the heaviest of loads. The machine's turning radius is the tightest in the industry at just over 20'. All around visibility allows the driver access to his outside environment. The Kalmar TR618i is a heavy model, however, the TR6261/6321i are their heaviest, with 50 ton lift and 320 tons gross combination weight capable

*(**EQUIPMENT** – continued on page 19)*

AIR CARGO NEWS

Cathay Pacific expands cargo presence in Americas with new freighter service to Portland, OR

Cathay Pacific Airways has announced an expansion of its freighter services in the Americas with the addition of a twice-weekly scheduled service to Portland International Airport (PDX) launching on November 3, 2016, subject to government approval. Portland will be Cathay Pacific's 18th cargo station in the Americas. The new Portland service will operate on a Hong Kong - Anchorage - Los Angeles - Portland - Anchorage - Hong Kong routing every Thursday and Saturday, using Cathay Pacific's newest and biggest freighter, the Boeing 747-8F. The service will meet growing demand to move a wide range of commodities from the Pacific Northwest and the United States to various parts of Asia, providing shippers with greater choice and flexibility when connecting to Cathay Pacific's international cargo network through the Hong Kong hub. The Boeing 747-8F aircraft offers more cargo space to carry the anticipated high volumes of semi-finished footwear and apparel, electronics, and perishables from Portland and its catchment area into Asia. Portland is also one of the fastest-growing hubs for e-Commerce related shipments in the Pacific Northwest region.

Cathay Pacific was the first Asia Pacific airline to take delivery of the Boeing 747-8F in 2011 and currently has 13 of this aircraft type in its cargo fleet. The Boeing 747-8F employs innovative technologies to bring about significant efficiency improvements to the airline's ultra-long-haul freighter services, particularly on North American routes, and at the same time reduce the environmental impact of its operations.

The state-of-the-art Cathay Pacific Cargo Terminal at Hong Kong International Airport offers a broad spectrum of logistical solutions for the airfreight industry. Combining advanced technology with streamlined workflows to set new service benchmarks for the industry, customers benefit from extended cut-off times, last-minute cargo acceptance and reduced connection times for transhipments.

"The importance of this new service to Portland cannot be overstated," said Philippe Lacamp, Senior Vice-President, Americas for Cathay Pacific. "The high density of technology companies, athletic and footwear manufacturers, and exporting businesses in the region make it a natural extension to our existing Hong Kong - Anchorage - Los Angeles service. Cathay Pacific is in a prime position to link this economic hub of the Pacific Northwest to Hong Kong, one of the world's key international airfreight hubs. We look forward to a successful partnership of increased trade and economic development between these two regions."

Port of Portland credits the support of its International Air Service Committee and regional businesses in attracting Cathay Pacific to PDX. The new route will help grow business and support trade in the region, serving large Oregon companies like Nike and Columbia Sportswear, and small businesses as well.

"We could not be more pleased with the commitment by Cathay Pacific to launch PDX-Hong Kong service this fall," said Keith Leavitt, Port Chief Commercial Officer. "Our goal over the past two years of recruitment has been to secure service from a world class carrier that will meet the needs of local shippers and forwarders to get Oregon exports to markets, and Cathay Pacific is that carrier."

"It's essential we do everything we can to help Oregon's businesses, especially in rural Oregon, get their goods to market," said Governor Kate Brown. "Seventy percent of new jobs are created when Oregon's existing businesses expand. When our businesses grow, Oregon's economy grows, offering more opportunities for all Oregonians to thrive."

Volga-Dnepr Group and GE announce global strategic partnership

Volga-Dnepr Group and GE Aviation signed a strategic cooperation partnership agreement that will utilize the two companies' unique strengths and expertise to develop collaborative solutions to benefit each company and their customers. This incorporates a long-term Logistic Support Program in which Volga-Dnepr Group's Boeing 747-8F and An-124 freighters will provide transportation support for GE Aviation.

The agreement also covers the expansion of Volga-Dnepr Group's TrueChoiceTM Flight Hour agreement with GE for the maintenance, repair and overhaul of 88 additional GEnx-2B engines that power its Boeing 747-8 Freighters. The TrueChoice Flight Hour agreement is valued at close to $1.4 billion (USD) over the life of the contract.

This enhanced level of cooperation builds on the successful 20-year partnership between Volga-Dnepr and GE and represents a strategic milestone in the development of both companies, each acknowledged specialists in the aviation industry. It aims to bring widespread benefits for customers and the global air transportation market.

"We perceive GE Aviation not just as a leading vendor of jet and turboprop engines and components. They stand out as a reliable partner of our Group of companies, and our partnership has been strengthened over many years through our successful Antonov 124 charter operations and Boeing 747 scheduled services for GE companies. By signing this partnership agreement, we undertake to further develop the global air transportation market by offering our customers state-of-the-art logistics solutions to deliver their goods anywhere in the world," said Alexey Isaykin, President of Volga-Dnepr Group.

"Volga-Dnepr has set itself apart in the international air logistics and cargo market, and our two companies have forged a strong relationship over the years," said David Joyce, president and chief executive officer of GE Aviation. "We look forward to finalizing this strategic partnership that will create winning solutions for both Volga-Dnepr and GE and allow each of us to take advantage of the other's core competencies to benefit our businesses and our customers."

Air freight is giving the cargo industry tummy trouble

Here's a fact bound to upset anyone who's ever been forced to pay an airline a hefty excess baggage fee: on long-haul flights, there's a fair chance the hold in the plane's belly isn't close to being full.

Air's Share of Global Freight by Tonnage: 1%

Passenger air travel is booming—but in freight, growth in capacity has outpaced tepid demand. For airlines, freight companies and aircraft manufacturers that means lost revenue and wasted capital. Removing this surplus is essential but it won't be painless.

Transporting goods by air is many times more costly than putting them on a ship, so tends to be reserved for time-sensitive or high-value products like pharmaceuticals. Although it represents just 1 percent of global trade by tonnage, air freight accounts for more than one third of the value. Your new iPhone probably took the plane to reach the Apple Store.

The old industry rule of thumb holds that air freight grows twice as fast as GDP. Since the global financial crisis that relationship has come unstuck. Average annual air cargo traffic growth was a paltry 1.5 percent between 2010 and 2015, while passenger air traffic increased 6 percent a year in that period.

Global trade remains sluggish and supply chains are getting shorter. Goods are increasingly produced where they are sold. With container shipping rates also plunging to record lows, some goods are being sent by sea instead.

But that's not all. Airlines typically try hard to match passenger seat capacity with expected demand—but they haven't applied nearly as much rigor to adding cargo space.

Airlines are adding lots of new passenger jets, and modern wide-bodied aircraft hold far more freight than their predecessors. The recent entry into service of Airbus's A350 will only worsen the problem.

You'd think the fall in the cost of jet fuel would help air cargo carriers—but the opposite is the case. A fall in the price adds to overcapacity by delaying the retirement of less-fuel efficient aircraft. It also means airlines can't impose the fuel surcharges they levy when the price is high, so yields have fallen.

Freight was traditionally a good way for European airlines to supplement their seat income—but those days are gone. Competitors from the Middle East have added huge

*(**TROUBLE** – continued on page 22)*

NC Ports, CSX announce Queen City Express

North Carolina Ports and CSX announced have the arrival of the Queen City Express. This intermodal rail service, with best-in-class transit times, will traverse the existing CSX Class I network between the Port of Wilmington and CSX's intermodal terminal in Charlotte, NC.

"The return of intermodal rail to the Port of Wilmington expands our reach into an underserved market," said Executive Director, Paul J. Cozza. "The Queen City Express will provide premier rail service over competing ports for existing and future container customers."

The Queen City Express service will initiate in September and be the only direct service into the Greater Charlotte area from a port in the U.S. Southeast. This double stacked train is a non-stop, overnight service with availability of containers at the Charlotte Inland Terminal owned by North Carolina Ports.

"Our customers constantly remind us of the need for intermodal rail service," said Chief Commercial Officer, Greg Fennell. "Now, we not only have a direct connection into Charlotte but we'll also have access to a transformational, state-of-the-art intermodal rail terminal in Eastern North Carolina – the Carolina Connector."

The Carolina Connector (CCX) was announced in Rocky Mount, N.C. This critical infrastructure project will serve as a key transportation hub in the Southeast for containerized freight. CCX along with the Queen City Express will lower transportation costs for businesses while taking trucks off the road, thus reducing emissions, improving road safety and minimizing wear and tear on the State's highways. North Carolina's Ports are direct beneficiaries of both rail announcements and represent its commitment to improve upon its operational efficiencies, to keep cargo moving and to remain congestion free.

"CSX is proud to partner with the State of North Carolina to bring this transformational project to Eastern North Carolina which will provide cheaper, faster and more environmentally-friendly connections for North Carolina's businesses and ports to domestic and international markets," said CSX Chairman and Chief Executive Officer, Michael J. Ward.

When completed, the Port of Wilmington will have direct, daily service to the CCX hub connecting intermodal customers throughout CSX's entire network. This service provides a substantial advantage for North Carolina Ports as first-class, intermodal connections will be available for its beneficial cargo owners and carriers alike.

Seaboard Marine expands New Orleans service to include South Central America and Colombia

Seaboard Marine has announced the launch of a new weekly service commencing Sunday, July 24, 2016, from New Orleans connecting U.S. exporters to Colombia, Panama, and Costa Rica in addition to Honduras, Guatemala, El Salvador and Nicaragua.

The expanded service, which previously served only north Central America, will now provide U.S. importers and exporters in Colombia, Panama, and Costa Rica with fast, direct transit to the United States Gulf.

Jose Concepcion, Seaboard Marine Vice President, said "This is a positive development for our existing customers as well as those currently moving cargo between the Gulf and Central and South America. We are very excited about this new weekly fixed-day service and the broad possibilities for increased trade that such a fast transit time - both southbound and northbound - offers our clients."

New Orleans Terminal LLC works ships for Seaboard Marine at the Port's Napoleon Avenue Container Terminal.

"We are pleased to notify shippers of the enhanced Central American and new South American service Seaboard Marine will offer from and to New Orleans," said Gary LaGrange, President and CEO of the Port of New Orleans. "These are new direct calls with larger ships. Seaboard Marine is a great partner of the Port and provides fast and efficient connections to Central America and now South America in Colombia. We look forward to Seaboard's continued growth from New Orleans."

Seaboard Marine will offer direct service to and from New Orleans to Cartagena and Turbo Colombia; Manzanillo, Panama; and Puerto Limon, Costa Rica.

2M signs MOU with HMM

MSC Mediterranean Shipping Company has confirmed that the 2M partners have signed a memorandum of understanding with Hyundai Merchant Marine (HMM). The MOU provides for HMM to join the 2M VSA when their current agreement with the G6 alliance ends next year.

MSC is pleased to have signed this MOU, the addition of HMM to the 2M VSA will allow them to offer improved services on their trans-pacific trade.

The "FAST" Act in motion

By Matt Guasco, AJOT

The Georgia Port Authority announced receipt of $44 million from the "Fixing America's Surface Transportation" Act also known as (FAST).The grant will be used to increase rail capacity at the Port of Savannah. In December President Obama signed the bill into law authorizing $305 billion in federal funds over five years for rail, highway development, public transportation and motor vehicle/motor carrier safety. Originally introduced under the "Developing a Reliable and Innovative Vision for the Economy" or DRIVE Act, funding for infrastructure projects was reviewed by the House Ways and Means and Senate Finance Committees resulting in the FAST Act which was signed into law on 12/4/2015. In February the Federal Highway Administration quickly set guidelines for the National Highway Freight Program. The interchange of intermodal freight has been widely studied by the FHA through the Office of Freight Management, which conducts and updates freight connector studies on multimodal corridors.

The GPA plans to utilize the $44 million in conjunction with an additional $84 million on a five-year project known as the Port of Savannah International Multi-modal Connector. Situated on 1,200 acres along the Savannah River, Garden City Terminal operates a "Cross Dock" rail yard at Tomochichi Road and an "Off Dock" facility adjacent to the marine terminal but separated by SR-25. Last year Savannah handled just under three quarters of a million intermodal containers via the CSX and Norfolk Southern railroads. Hoping to cash in

*(**MOTION** – continued on page 20)*

(***EQUIPMENT** – continued from page 16)*
of multi-trailer trains and heavy roll trailers.

Ro-Ro Forklift Trucks:

Wiggins Lift Company has produced a ro-ro lift truck model for over 15 years. The company recently unveiled its new, dual purpose ro-ro/lift truck. Michael Marzahl, President of Wiggins dealer XLLift, indicates that, "This is a first in the industry," offering the capability to handle almost every category of cargo.

What makes this new product special is the design of the lift truck. It offers ro-ro forklift features but can also accomplish the mission of a standard lift truck as well. The first model manufactured was delivered to Ports America at their Port Hueneme operation. Based upon very exacting specifications, this lift truck's mast has an overall lowered height of 9'2" critical to ro-ro operations with a 12 ft maximum lift, important to general cargo handling. It is the first lift truck with the capability to operate in the tight confines of a ro-ro vessel and make a lift of up to 12' in the field. The machine has a Tier 4, Volvo870VE 8 liter 6 cylinder engine. The Ports America specification did not call for a turnaround operator's seat, but one has been designed and can be installed.

Taylor Machine Works

Taylor is in the process of completing the first of a new ro-ro/lift truck design that will be capable of lifting 70,000 lbs.

Taylor's most popular ro-ro/lift truck, Model T550RR has an overall height of 112" to the top of the cab and an overall width of 134 in. This truck is well suited to operate in the tight confines of ro-ro vessels. The cab is off set and features dual operating controls and a 180 degree rotating seat. With a wheel base of 160 inches and a load center of 48 inches, the truck can lift 25 tons up to 9' high and 23 tons up to 12' high. Taylor reports that they are in the process of manufacturing a heavy ro-ro/lift truck that will handle 70,000 lb lifts.

Kalmar

Kalmar has manufactured ro-ro/lift trucks for 40 years. It could be said that the company pioneered the ro-ro cargo handling lift truck, with the then emerging roll-on roll-off industry in Scandinavia and Europe. Their latest ro-ro/lift truck versions, the DCE 280 RoRo and the DCE 330 RoRo offer 25 and 33 ton lift capacities respectively. The truck features a turn-around driver's seat for 360 degree visibility. Kalmar's ro-ro/lift truck design offers compact external measurements and a free-lift mast slightly less than 10 feet high. The truck is capable of lifting loads just over 9' high. Kalmar's ro-ro standards provide a low center of gravity and exceptional maneuverability and stability.

Roll Trailers & Goose Necks:

Martec Leasing pioneered roll trailer concepts in the North American market by offering equipment inventory in major ro-ro ports with a variety of lease and purchase options available. Martec partnered with Danish manufacturer Novatech to introduce roll-trailer products that included a variety of sizes and capacities with options of fixed or detachable goose necks.

TAL International Container Corporation purchased the roll trailer division of Martec Leasing and acquired the Martec inventory of ro-ro trailer products. Ania Mierzejewska, who moved to TAL from Martec, continues to manage and sell the inventory in the USA.

Ro-ro carriers and terminal operators utilize roll trailers to move oversized and heavy cargo to and from the vessels as well as stowage onboard for ready discharge. The most popular sizes include 100 ton and 60 ton trailers. In addition to the detachable goose necks, a number of TAL roll trailers have permanent goosenecks attached. Empty roll trailers can be stacker for return service or storage.

New to the inventory is TAL's railcar roll trailer. This 100 ton trailer has rails added for easy loading and discharge of the railcar cargo. The trailer has two sets of two rails each to handle most rail cars destined for the U.S.

ACL's third new G4 vessel, the ATLANTIC SEA, is delivered

ACL has announced that it officially took delivery of the third new vessel in the G4 fleet, ATLANTIC SEA on June 30, 2016. The ATLANTIC SEA sailed from China on July 4th and will take its place in the Company's transatlantic schedule in early August. The remaining two G4 vessels will be delivered during 2016.

The ACL G4 vessels are the first of their kind and the largest multipurpose ro-ro/containerships ever built. They incorporate an innovative design that increases capacity without significantly changing the dimensions of the vessel. The G4s are bigger, greener and more efficient than their predecessors. Their container capacity is more than doubled at 3800 TEUs, with 28,900 square meters of ro-ro space and a car capacity of 1300+ vehicles. The ro-ro ramps are wider and shallower than those in the G3 vessels and the ro-ro decks are higher (up to 7.4 meters) with fewer columns, enabling much easier loading and discharge of oversized cargo. Emissions per TEU are reduced by 65%. The fleet continues to employ cell-guides on deck, a feature that will allow ACL to extend its enviable record: ACL ships have never lost a container over the side during the last 30+ years.

The ATLANTIC SEA will be registered in the United Kingdom. Her sister vessels, ATLANTIC STAR and ATLANTIC SAIL are also flying the British flag. ACL's current schedule and port rotation will be maintained until all five G4 vessels are in service.

Ports America said to explore sale of company at $1 billion

Ports America is exploring a sale, people with knowledge of the matter said. Highstar Capital, the private equity firm that owns Ports America, is working with investment bank RBC Capital Markets LLC to find a buyer, said the people, who asked not to be identified because the information is private. The company could be valued at about $1 billion in a sale, the people said.

Ports America, which is based in New Jersey, has expanded since a predecessor company was acquired by Highstar in 2007. Highstar added the Marine Terminals Corporation the same year, according to Ports America's website, and an interest in Kao Ming Container Terminal in Taiwan in 2012.

Highstar, which can trace its origins back to insurer American International Group Inc., was purchased by Oaktree Capital Group in June 2014. The Highstar team continues to manage the investments, with the exception of those in the firm's 2011 vintage pool, which is controlled by Oaktree.

*(**MOTION** – continued from page 18)*
on more tonnage transiting the expanded Panama Canal, now is the time for Savannah to fully address the interchange of containers from quay to rail.

This project hopes not only to increase rail capacity and velocity but also improve commuter traffic and reduce the environmental impact on surrounding communities.

Savannah is not the only port to cash in on the Fast Act. Massport will receive $42 million for improvements to Conley Terminal and the Port of Coos Bay will fund their Tunnel Rehabilitation Project with $11 million designed to repair nine tunnels within the system. In the Port of New York and New Jersey the PANYNJ plans to use $10.67 million of FAST money for its "Cross Harbor Freight Project". The 2011 Environmental Impact Report laid out two ambitious plans to take almost half a million vehicles off local roadways and the George Washington and Verrazano Narrows Bridges. The first plan favors a freight only rail tunnel between Jersey City and Brooklyn while the second calls for enhancements to the "New York Dock Railway, "a railcar float operation between Bush Terminal Bay Ridge and the Greenville Yard in south Jersey City". In Maine the Port Authority has earmarked $7.72 million for the "Maine Intermodal Port Productivity Project" upgrading track and grade crossings at the International Marine Terminal Portland. Improvements will enable the port to double its throughput into the Northeaster rail corridor in the hopes of capturing additional trading partners from Canada, Scandinavia and North Europe.

In all Congress will spend $800 million on FAST related projects this year.

Hapag-Lloyd shares drop as forecast cut overshadows UASC merger plan

Hapag-Lloyd AG shares have recently fallen the most since its initial public offering in November as a forecast of lower profit and a share-sale plan overshadowed a final deal to join forces with United Arab Shipping Co. to become the world's fifth-largest container carrier.

"The market was shocked by the revised outlook by the company," Oliver Drebing, an analyst at Hamburg-based Alsterresearch, said by phone. Investors are still getting familiar with Hapag-Lloyd following its IPO and with the fact that shipping markets are volatile, he said. "Strategic aspects linked to the merger are more important in the longer term."

Germany's biggest shipping line expects "clearly decreasing" earnings before interest and tax in 2016 because of costs related to the UASC merger as well as freight rates that aren't recovering and an increase in fuel costs, Hapag-Lloyd said in a statement. The German company was originally forecasting an increase in Ebit. Stock will be offered to existing investors within six months after the UASC deal's closing, with "some" of the main current shareholders in both companies committing to buying as much as $400 million, according to a separate statement.

Hapag-Lloyd dropped as much as 11 percent to 16.725 euros, the lowest intraday price since April 21, and was trading down 8.4 percent as of 11:39 a.m. in Frankfurt. The stock has fallen 15 percent this year, valuing the company at 2.03 billion euros ($2.24 billion).

Shipping lines worldwide have been plagued by depressed freight rates as trade slowed following the global recession of 2008, and as larger vessels ordered before the crisis continue to enter fleets. The UASC merger, which the parties plan to complete by the end of 2016, will be Hapag-Lloyd's second in two years, following its 2014 takeover of Latin American rival Cia. Sud Americana de Vapores SA's container business.

Qatar Investment Authority and Saudi Arabia's Public Investment Fund, the two largest shareholders in UASC, will become key owners of the combined carrier, together holding a 24 percent stake, according to terms of the deal.

(***PROFILE*** *– continued from page 15)*

Further regarding gains, can you fill us in on the recently begun expansion of Kalmar's terminal tractor manufacturing plant in Ottawa, Kansas?

We've had good results especially over the past five years with Ottawa. We had invested in the factory in terms of increasing productivity. We set a goal in 2012 to get our production on one shift from a maximum of 10 trucks per day up to 15 trucks per day, and we timed that with the introduction of the new product – the T2.

We tried to design the T2 as not only a much better truck for our customers but easier to build and service. We were successful in getting the build rates up to 15 nominally per day on one shift and were actually close to 20 for a while in the peak year of 2015.

Because we've had good results, the Cargotec management board had its board meeting in Ottawa and had the turning of the first shovel of dirt ceremony for the expansion project in May.

It's a $12 million to $15 million investment in the factory, starting with adding our own test track, a little less than a mile long, with hill-climb grade, broken blocks and the usual things needed for durability testing, plus our noise level testing.

The next phases include expanding the parts distribution center by almost 50 percent. The parts business has grown and is now pushing the limits of the current building. With our strong new truck sales of the last several years, we've got a lot more machines out in service. Through that parts warehouse, we cover all the Kalmar machinery – the reachstackers, the forklifts and cranes and so on – not just the Ottawa trucks.

We'll also be adding a new lobby to the building, hopefully with enough space for display of two trucks, including our restored 1967 Ottawa terminal tractor. We're very active in our community, with the Salvation Army, Law Enforcement Torch Run for Special Olympics and so on, and now we will have a place to display all these nice plaques and awards.

And we'll be modernizing our office space to improve productivity.

How have the terminal tractors produced in Ottawa evolved over the years to better serve customers at distribution centers, intermodal yards and ports and in other applications?

They have evolved steadily over say the past 30 years, but, to be honest, they didn't really change that much prior to 2014, when we introduced the new Kalmar Ottawa T2 model.

The T2 is an all-new chassis platform. When we talked to customers and brought in the drivers, the maintenance technicians, the purchasing people, the business owners, there were three basic categories identified to drive our designs.

One was productivity and efficiency. Everybody wants a truck that gets more work done in the same amount of time. Of course, they wanted to pay less, but that's generally not possible, especially when engine emissions systems are going up in cost.

They wanted drivers to be less fatigued, so we built a cab that's quieter inside. They wanted a better heater and air conditioning system so he's more comfortable. That means better insulation, higher airflow for cab temperature control and window defrosting. And then we changed our hydraulic and lift cylinder system so it's faster to lift a load with the T2, meaning more productivity.

The second category was serviceability, so we made it easier to do routine service and repairs.

Lastly, loud and clear the drivers wanted improvements in comfort, function and safety, including a larger cab with a wider door. They thought we were the best in terms of arrangement of controls and instruments on the dash and the ability to reach them, but there was still room for improvement, so we cleared a spot on the dash for the yard management system screen.

We defined the T2 product based primarily on driver and maintenance man input to be easier to work on, easier to drive, quieter, more comfortable and safer. We beefed up the cab structure and made it ROPS [rollover protection structure] certified, which, although not required in the United States, is required in other parts of the world.

Honestly, there'd been a lot of minor evolution, but we at Ottawa, the market leader, hadn't done much in terms of significant changes in probably 25 years. By now, we've built almost 5,000 T2s, or will have by the end of this year , and I think our customers have confirmed we have achieved our three primary objectives.

It was a pretty radical change with the T2. Terminal tractors hadn't really changed much, not near as much as the Class 8 tractors in the over-the-road trucking business. Somebody has to make the first move and, as the big gorilla of the terminal tractor business, nobody can do it like we can do it. We wanted to push the pace of evolution up a notch or two to incorporate appropriate technologies and at the same time not get beyond what people really can use and take advantage of.

As your work requires extensive travel, do you ever tire of spending so much time on airplanes?

Yes, I do, but I love the work, and I love working with the people in this business. Their feet are on the ground. They're salt-of-the-earth folks. I've been doing it now for 45 years, and they've been great years.

I truly feel blessed I ended up in a career that I could really enjoy so much, and all of that makes the travel easier to tolerate. And it doesn't hurt that I travel enough that I don't spend a lot of time in the coach section.

When someone asks what I do for a vacation, I generally tell them it won't involve airplanes.

While your work has for decades involved machines, specifically trucks, going back to Kenworth in the early '70s, do you find it interesting that you spend quite a few of your nonwork hours restoring old machines and otherwise tinkering?

What else would a gearhead like me do?

I do like to buy old machines and restore them, maybe modify them a little bit. I built my air compressor out of old pieces, and I built an off-road motorbike just because it's fun to do.

But I'm also an avid woodworker and accomplished sawdust maker at the other end of the shop. Sawdust does come in handy for cleaning up oily messes on the mechanical end of the shop, by the way.

I'm also an avid reader. Of course, airplane time gives me lots of time to read. I'm fascinated by presidential biographies, and the history of the presidency itself is a little hobby of mine. I like adventures, spy novels.

I probably never read a book cover to cover when I was in college [getting a bachelor's degree in 1971 from Principia College in Elsah, Illinois, before post-graduate work in the '90s at the University of Virginia Darden School of Business and Stanford University Graduate School of Business] because I was a science and math kind of guy.

Soon after, I discovered reading just for pleasure and have always enjoyed that. I don't know how many books I've read, but there are over 600 on my Kindle.

But I'm still a gearhead at heart. Most of the things I do involve nuts and bolts. That's my relaxation, my R&R.

What joys are associated with being a grandparent several times over?

Joys is the perfect word when you're talking about grandchildren. My wife of 45 years and I are blessed with six grandchildren.

I like to tell people that grandkids are the frosting on the cake of life. They bring so many grins and say so many cute things, creating vocabulary words that you hang onto forever.

While I love being a parent to our own three kids – most of the time that is – it's even better being a grandfather and a part of their lives.

Intermodal & Logistics News

AAR, freight rail officials and regulatory expert urge FRA to withdraw two-person crews

The Association of American Railroads (AAR), freight rail industry leaders and one of the nation's top regulatory experts at a hearing with the Federal Railroad Administration (FRA) urged the safety regulatory agency to withdraw its proposed rule mandating two-person crews for freight railroads.

"For the freight rail industry, there is no greater priority than safety, but there are no data supporting this proposed rule and it will provide no safety benefit to railroads, their employees, or the public," said Edward R. Hamberger, President and CEO of the AAR, in his testimony. "With no data showing that one-person operations compromise safety, there is no basis - other than anecdotal storytelling - for enacting a general prohibition on crew size reductions.

"The proposed rule is a textbook example of unnecessary regulation. In fact, while perhaps well-intentioned, the proposed rule is actually misguided and will undermine the very goal of both the FRA and the freight rail industry - making a safe rail network even safer."

Hamberger added: "While the Department of Transportation is throwing its full support behind development of autonomous vehicles as a way to improve safety on our roadways, it is backing a rulemaking for the rail industry that goes in the opposite direction and would freeze rail productivity and chill innovation."

Hamberger was joined at the hearing by Cindy Sanborn, Chief Operating Officer at CSX Transportation; Robert Babcock, Senior Vice President of Operations and Development for the Indiana Rail Road Company (INRD); David Brown, Chief Operating Officer of Genesee & Wyoming, Inc. and John D. Graham, Dean of the Indiana School of Public and Environmental Affairs and former Administrator of the Office of Information and Regulatory Affairs.

Hamberger pointed out that in its Notice of Proposed Rulemaking, the FRA itself admitted it had no safety data to support the proposal. "The FRA has not provided data suggesting that one-person crew operations are less safe than multiple-person crew operations," he noted.

"We have said time and time again that the FRA should conduct a fact-based - not emotionally driven - data-gathering process," Hamberger said. "If a safety risk is identified, then rulemaking might be appropriate. But we are confident that an independent, objective analysis will conclude that no regulation is needed." Hamberger pointed out that Oliver Wyman, a leading global management consulting firm with worldwide expertise in railroad operations, provided the FRA with an analysis of data on single-crew rail operations around the world that proves railroads can safely operate with one-person crews, and have been doing so for years.

Cindy Sanborn of CSX Transportation told FRA representatives that the railroad industry has negotiated numerous reductions in crew size with its employees in the past, and the evidence shows that such reductions have been accomplished with continuous safety improvement. She noted that during the period of time that the industry's injury and accident rates have declined to record lows, crew sizes have been reduced.

Moreover, Indiana Rail Road Company's Babcock noted in his testimony that U.S. railroads using one-person crews have consistently maintained exemplary safety records. "INRD has been safely deploying one-person crews for nearly two decades, and there is no evidence that one-person operations are unsafe," he said.

In his testimony, David Brown of Genesee & Wyoming Inc. similarly noted that railroads throughout Europe and Australia have for years been safely operating with one person in the locomotive cab. Brown said that for 34 years he has been involved in the transition of crew size from as many as six crew members down to the one-person crews that now comprise the vast majority of train crews in the U.K. and Europe and other operations in the United States and Australia. During that time, Brown noted, rail safety performance has continuously and dramatically improved.

John D. Graham, who as former Administrator of the Office of Information and Regulatory Affairs reviewed thousands of proposed federal regulations, told the FRA that its crew size proposal was "one of the analytically weakest regulatory packages" he has ever reviewed.

UPS tests Saturday delivery as web shoppers' clout increases

United Parcel Service Inc. may join its rivals in offering Saturday delivery for standard ground packages, as the company adapts to surging online shopping and an increasing reliance on home-based customers.

The world's largest package-delivery company will test the service this summer in a few U.S. locations to see if the volume of shipments justifies the cost, said Steve Gaut, a spokesman for the shipper.

"We just continue to see more and more demand for e-commerce shipments," he said.

UPS may need to adopt Saturday delivery to defend against FedEx Corp., which already drops off ground-shipped items at homes that day. So does the venerable U.S. Postal Service, which also makes Sunday deliveries in some markets on behalf of Amazon.com Inc. Many customers prefer receiving items on weekends, and home deliveries are expected to account for more than half of UPS's total by 2019.

"UPS is feeling pressure on that front and they feel the need to contemplate a comparable solution to maintain their share in the marketplace," Glenn Gooding, executive vice president of consulting firm iDrive Logistics and a former UPS executive, said by telephone.

Initial Markets

The initial test markets include Atlanta, Philadelphia and Los Angeles, according to a person briefed on the company's plans. The service is expected to start this summer.

While its Teamsters-represented drivers typically work Monday through Friday, UPS's contract with the union lets it evaluate new services without violating work rules, Gaut said. A spokesman for the Teamsters' package division, which represents UPS workers, declined to comment on the Saturday tests.

The Atlanta-based shipper is remaking its worldwide network to accommodate online shopping while watching potential competitors move into its industry, including courier services now pitching same-day delivery. U.S. e-commerce sales totaled $343 billion last year, according to consulting firm AlixPartners, and had a compound annual growth rate of 17 percent from 2000 through 2015.

The proportion of UPS's domestic packages going to homes rather than businesses is expected to rise to 51 percent in 2019 from the current level of 46 percent, the company told investors earlier this year.

Efficiency Challenge

That growth is challenging UPS's formidable efficiency. While it earns a bit more per parcel for home deliveries, it averages only 1.2 packages on each residential stop, compared with 3.6 at each business, said Satish Jindel, president of shipping consultant ShipMatrix in Sewickley, Pennsylvania.

UPS offers Saturday delivery for pricier airmail in its Express unit, but it's been slow to add weekend duty for the vast ground-based unit. Those slower-moving parcels accounted for more than eight in 10 packages in its domestic package operation last year.

*(**INVESTING** – continued from page 16)*

productivity. Among those being evaluated are robotics and drones, which are being tested in conducting cycle counts and inspections at facilities, as well as inspections of aircraft. He said he anticipates drones will be used in making deliveries "at some future date."

Another current UPS use of drones, in conjunction with partners, is in delivery of vaccines to remote areas of the African country of Rwanda, where most roads wash out each year.

While UPS technology is put to use on the medical front in the United States as well, including in getting clinical trial drugs to patients and speeding specimens back to labs, its application is perhaps less sensational but nonetheless impactful for a typical U.S. address.

Trademarked initiatives such as UPS My Choice and the recently launched UPS Follow My Delivery option give recipients the ability to better determine when and where shipments are delivered, as well as precisely track shipment location.

"An investment in technology really is making an investment in customer flexibility as well," said Chuck Holland, UPS vice president of industrial engineering,

Chuck Holland, UPS VP of industrial engineering, is proud of the new UPS Follow My Delivery offering. (Photo by Paul Scott Abbott, AJOT)

Technology-facilitated enhanced visibility of shipments is one of the attributes that drew Alexander Keechle, chief executive officer of Monster Moto, to collaborating with UPS as his company recently began shifting its assembly of minibikes to Ruston, Louisiana, from China and as it looks to double sales while reducing freight costs and improving transit times.

Keechle said members of the UPS customer solutions group, using high-tech whiteboards, analyzed order data and, among other things, helped Monster Moto determine that it did not yet need additional distribution facilities. UPS technology is now being utilized to evaluate Monster Moto's warehouse management system, with an eye toward integrating UPS systems with Monster Moto's enterprise resource planning software.

Decades ago, Jim Casey, one of the Seattle teens who co-founded UPS in 1907 as American Messenger Co., said, "Our horizon is as distant as our mind's eye wishes it to be." With technology, UPS is now leading the logistics industry journey to that horizon and beyond.

Alexander Keechle, CEO of Monster Moto, sees his minibike company's success being driven by UPS technology. (Photo by Paul Scott Abbott, AJOT)

*(**TROUBLE** – continued from page 17)*

amounts of capacity, increasing supply and driving down prices.

Air France KLM's money-losing cargo unit had 25 dedicated freight aircraft in 2008. By last year had cut this to just nine. Sensibly, IAG, owner of British Airways, has given up operating all-freight aircraft altogether.

Operating profit at Lufthansa's cargo unit shrank 98 per cent to just 3 million euros ($3.3 million) in 2015. The German group is cutting 800 jobs and will remove two freighter aircraft from service this year.

Even logistics company Fedex is also retiring aircraft and sending more lightweight goods in the bellies of partner airlines.

But, if you listen to Boeing, you'd struggle to guess that this surplus space on passenger planes is a big problem. The U.S. company is still bullish about demand for dedicated freighters. But then it has to be. With orders for the passenger version of the 747 jumbo jet drying up, the company is relying on freighter orders to keep the program going.

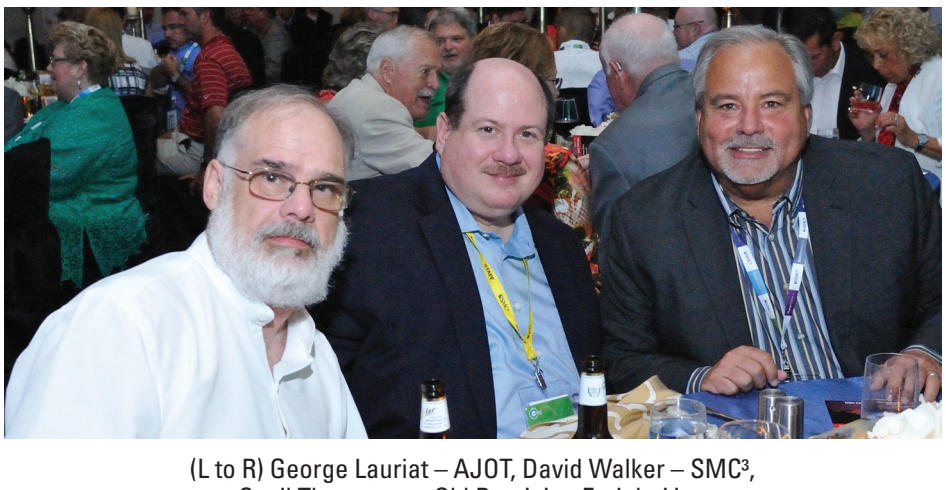
Boeing expects the volume of air cargo will grow by an average of 4.2 percent a year over the next 20 years—almost three times the average rate over the past five years. This growth, it says, will require 930 new freighter aircraft. Will it?

There will always be a place for all-freight planes which can fly routes and schedules that passengers shun. Some hazardous cargo, like lithium-ion batteries, can't be transported on regular passenger flights.

SMC3 holds Connections 2016 in Chicago

SMC3 held its "Connections 2016" on June 27-28 at the Swissotel Chicago. The conference attracted over 370 attendees, which featured a wide number of panels and special sessions in addition to other activities such as golf (72 golfers) and sightseeing. The group's ongoing success was reflected in nearly 90 first time attendees.

(L to R) Ed Burns Jr. – DDC FPO, Marrisa Crotty, Chad Crotty – DDC FPO, Steve Doyle – DDC FPO, Phil Holliday – Nebraska Transport, Amy Dunn, Art Zipkin – DDC FPO



(L to R) George Lauriat – AJOT, David Walker – SMC³, Cecil Thompson – Old Dominion Freight Line

(L to R) Andrew Slusher – SMC³, Frank Luntz – political consultant and pollster

(L to R) Mark Davis – Averitt Express, Hillary Crosby, Will Crosby – SMC³

(L to R) Jim Belushi, Ed Burns Sr. – Burns Logistics Solutions

(L to R) Scott Vanderweele – Try Hours, Dave Brady – Dayton Freight LInes, David Sexton – SMC³, Sam Ely – uShip

(L to R) Phil Cote – Roadrunner, Megan O'Rourke – FreightSnap, Jason Fox – Asahi Kasei Plastics, Art Zipkin – DDC FPO

Scott Lane – Beaverstreet Fisheries

(L to R) Andreas Katsaros, Trevor Novotny, Andrew Rivers (all with BlueGrace Logistics)

Adrian Gonzalez – Adelante SC

(L to R) Jeff Boyd – SMC³, Dirk Willet – AAA Cooper, Greg White – Roadrunner, Tom Sanderson – Transplace

(L to R) Bryan Anderson – Wicker Services, Phil Holiday – Nebraska Transport, David Knight – SMC³, Spenser Askew – Efreightsolutions

BETTER FASTER STRONGER

HMM

We Carry the Future...

Hyundai Merchant Marine is a leading global shipping company operating 130 state-of-the-art vessels encompassing more than 50 sea routes to over 100 ports of call. HMM strategically collaborates with customers to develop customized supply chain solutions for dry, refrigerated, and specialized cargo. With a global business network of vessels, terminals, railroads, trucks, and offices around the world. HMM is highly regarded as one of the world's top integrated logistics companies with a commitment to operational excellence.

HMM is committed to delivering World Class Customer Service as a key differentiator. Our immensely trained staff assures that your valued cargo moves On Time, Every Time!

1-877-7HYUNDAI

www.hmm21.com