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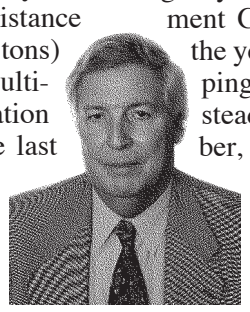
Coal movements at Thunder Bay Terminal

# Seaway counting on traditional final quarter burst

***The Great Lakes and St. Lawrence Seaway system are on a pace to break last year's record for the decade but a strong final quarter is needed to set a new mark.***

By Leo Ryan, AJOT

Despite some headwinds, cargo movements through the St. Lawrence Seaway have managed to remain within striking distance of the highest total (41 million metric tons) achieved in a decade in 2018. The ultimate throughput for the 2019 navigation season hinges on performance in the last quarter. For US and Canadian ports on the Great Lakes/Seaway system, the outlook was positive in a number of cases, with some gateways on pace to beat 2018 cargo volumes.



"Seaway activity remains at elevated levels in terms of both domestic and ocean ships currently in the system," says Terence Bowles, president and CEO of Canada's Seaway agency, the St. Lawrence Seaway Management Corporation. "As the final quarter of the year is characterized by a burst of shipping activity, we are looking forward to a steady level of demand throughout October, November, and December as industrial and agricultural shippers race to meet their clients' demands. Despite some inclement weather in Western Canada, volumes should increase as the grain harvest comes to market."

Cargo shipments in September were buoyed by road salt, iron ore exports and general cargo

*(**BURST** – continued on page 5)*

# US Seaway top executive extols marine highway's record of technology and innovation

***The introduction of HFM [Hands Free Mooring] technology has boosted Seaway efficiency.***

By Leo Ryan, AJOT

As the St. Lawrence Seaway's 60th anniversary year comes to a close, recent developments in technology and innovation have played a crucial role in improving the penetration of commercial ships into the industrial heartland of North America and in exporting products to overseas markets. So went the central message of Craig Middlebrook, deputy administrator of the Washington-based Saint Lawrence Seaway Development Corporation (SLSDC), while addressing, in mid-November, the 15th annual Highway H20 conference in Toronto.

"Since the opening of the Seaway in 1959, no other project will have made such a significant impact on the way commercial ships transit the locks as the now, fully implemented, Hands Free Mooring technology or HFM," he said.

Such a technology, first applied in Australia, uses vacuum pads instead of lines to hold ships in place as they transit locks. It enables faster and more efficient transits while also enhancing workplace and operational safety for employees and for customers. In recent months, HFM was installed in the two US locks (Massena, NY) after being previously installed at the 13 Canadian locks over the past two years.

It is estimated that HFM can reduce lock transits by up to seven minutes. Nine to 12 vessels typically navigate each Seaway lock daily.

Craig Middlebrook, deputy administrator of the Washington-based Saint Lawrence Seaway Development Corporation

"But the benefit of HFM to the system extends beyond the significant increase in transit safety and efficiency," Middlebrook said. "The elimination of Seaway Fitting requirements

*(**EXTOLS** – continued on page 6)*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# Port Milwaukee rehabilitating infrastructure to better serve customers

By Robert L. Wallack, AJOT

Port Milwaukee is increasing its competitiveness among the 33 inland waterway ports that account for The Great Lakes St. Lawrence Seaway system (GLSLS). The $3.7 million rail rehabilitation project is underway to bring back intermodal container flows to the region. In addition, the Port applied for a Harbor Assistance Program (HAP) grant of $3.969 million to enhance logistics operations as well as applying for the United States Department of Transportation's Port Infrastructure Development Program (PIDP) grant to build the first agriculture facility for exporting of Distiller's Dried Grains and Solubles (DDGs).

Port Milwaukee is situated between Port of Chicago to the south and Port of Green Bay to the north on the west bank of Lake Michigan and is designated Foreign Trade Zone (FTZ) Number 41. Since 2012, Canadian Pacific (CP) Rail cut service to the Port, yet demand continued to rise. Now, importers and exporters of southeast Wisconsin haul intermodal containers through Chicago suburbs which takes a full day. These inefficiencies, poor transit times, higher costs, road congestion and environmental concerns all came to the fore on November 5th at the "Milwaukee Regional Intermodal Freight Summit" sponsored by the Metropolitan Milwaukee Association of Commerce (MMAC). Business and government leaders discussed the Port's role in the future as an intermodal hub in southeast Wisconsin.

Port Milwaukee is a premium deep-water inland waterway seaport. Its 20 plus tenants shipped 2.4 tons of cargo in 2018. Recent surveys indicate demand increases for international container exports of 121% and for imports of 15.6% over the next 5 years. The Port contributes more than 100 million in regional economic activity, annually and is a designate of the Maritime Administration (MARAD) Marine Highway Program.

Adam Schlicht became director, Port Milwaukee in August 2018.The Port is part of the City government and has a seven-member Board of Harbor Commissioners to oversee operations on 467 acres. "As of November 1, 2019 overall tonnage at the Port Milwaukee is up 22% compared to this time in 2018. Traditional Port commodities are respectively experiencing double digit increase, including salt, cement, limestone and steel shipments. The Port attributes this growth to both increasing awareness and strategic marketing of its logistics capabilities to domestic and world markets as well as its world-class stevedoring partners," said Director Schlicht in a recent

*(**REHABILITATING** – continued on page 5)*

*(**BURST** – continued from page 2)*
such as aluminum and wind energy components.

However, overall Seaway volumes were slower due in part to the late Prairie harvest. From March 22 to September 30, Seaway cargo shipments totaled 24.8 million tons, down six per cent from 2018. The figures reflect a combination of factors including the decrease in U.S. grain exports from earlier in the spring and current delays in the Canadian harvest due to the wet field conditions.

Slow harvest progress in Western Canada is delaying the movement of grain to prairie elevators and export terminals on the West Coast and at Thunder Bay. With harvests estimated to be 20% to 30% behind where they would be normally, it is expected there will be more exports late this fall and into December.

Aluminum ingot shipments from Canada to the United States remain up from 2018, following the lifting of American tariffs last year and dry bulk continues to be a strong category due to salt shipments.

Despite the later Prairie harvest, the fall period was strong at the Port of Thunder Bay where year-to-date shipments to end October reached 6.9 million tons, 10% ahead of last year. October was notable for strong coal potash and coal movements.

"Grain shipments have trended upward this season as a result of increased canola deliveries from Western Canada being shipped to Europe," indicated Tim Heney, CEO of the Thunder Bay Port Authority. He added total canola volumes to date are two-thirds higher than 2018. There has been more stock available throughout the year due to China not buying canola from Canada and more demand after the European canola crop was much smaller this year.

### New Agri-food Business

For HOPA Ports (Hamilton Oshawa Port Authority), optimism stems from new agri-food related cargoes. At the Port of Oshawa, a new, $6 million grain export terminal under construction by Sollio Agriculture and QSL is expected to deliver its first overseas exports of Ontario-grown grain this fall.

"This new terminal will be an enormous service improvement for grain farmers east of Toronto. It is also a major step in diversifying the cargo mix through the Port of Oshawa," said Ian Hamilton, president and CEO of the newly-merged entity which is Canada's largest Great Lakes port.

At the Port of Hamilton, imports of raw sugar have exceeded 30,000 MT already this season, supplying the newly-expanded SucroCan sugar refinery located at the port. This facility is already highly integrated into Hamilton's $1 billion regional food processing supply chain, and an example of the value-added businesses that the port has been attracting in recent years.

The Port of Johnstown in eastern Ontario on the St. Lawrence Seaway had a strong September with vessels arriving carrying road salt, wind energy components and steel beams. Total cargo is up by 21% this season over 2018 with salt deliveries and wind energy components making up the increase. A total of 523,577 tons of cargo was handled by vessel vs 432,268 tons in 2018.

Robert Dalley, general manager, Port of Johnstown said: "Overall, we've had a good third quarter, however, grain movement by vessel remains flat and this is expected to continue into the 2019 harvest as soybeans sales continue to be affected by current global trade practices."

### Duluth-Superior Sets Wind Energy Cargo Record

Among U.S. Great Lakes ports, the cargo numbers have been especially robust at Duluth-Superior, Green Bay and Milwaukee.

"U.S. Great Lakes ports are reporting cargo growth as they support the region's construction activity and energy needs and help the cities prepare for the winter ahead," noted Bruce Burrows, president of the Chamber of Marine Commerce. "Iron ore exports from Minnesota to Japan and China via the St. Lawrence Seaway are also continuing."

The autumn months saw impressive growth at Duluth-Superior, the top tonnage port

*(**BURST** – continued on page 6)*

*(**REHABILITATING** – continued from page 4)*
interview with the *American Journal of Transportation*.

### Port Grant

In November 2018, the Wisconsin Department of Transportation's (WisDOT) Freight Rail Preservation Program (FRPP) awarded the Port a grant of $2.99 million to modernize 8,000 feet of rail track, including new ballast, ties, turnouts and 115-pound rail. Enhanced Port property includes the Intermodal Yard as well as the West Classification Yard in the South Harbor Tract of the Port. This will improve container service and establish an intermodal hub. This rehabilitation project will benefit regional manufacturers, growers and international shippers needing rail to water, water to rail and rail to truck connections. The Port matched funds with $748,480 for a total project amounting to $3.7 million. "The Port intends to pursue an aggressive project schedule. Ideally, all work will complete in mid-2020," said Director Schlicht.


Adam Schlicht – port director, Port Milwaukee

No decision is made yet on whether Union Pacific (UP) or Canadian Pacific (CP) will use the rehabilitated

*(**REHABILITATING** – continued on page 6)*

Hands Free Mooring technology that reduces transit times has now been installed in all U.S. and Canadian locks. (Photo courtesy of St. Lawrence Seaway Management Corporation)

*(**EXTOLS** – continued from page 2)*
on vessels through the use of HFM brings a significant increase in vessel accessibility, increasing the number of vessels that can now transit the Seaway by almost tenfold. And we have begun seeing this benefit first-hand with first time entrants entering the system on a regular basis."

He described HFM as "a harbinger of the future technology-driven changes coming to commercial vessel operations and navigation, and a truly exciting operational advancement."

### Vessel Traffic Management

Otherwise, Middlebrook noted things were at the early stages of the latest technology project to modernize the Seaway's vessel traffic management system –incorporating Big Data concepts and how one can harness their benefits. This is a joint effort with the Canadian Seaway and the Volpe National Transportation Systems Center in Cambridge, Massachusetts to develop a new vessel traffic flow management system.

"Just like AIS was in its day, and HFM is today, this new technology will be a groundbreaking advance in the way we manage, schedule, and predict vessel traffic in the Great Lakes Seaway System," he said. "This system would enable extremely precise and accurate voyage planning capabilities for each vessel transiting throughout the entire Great Lakes St. Lawrence Seaway System. While we are several years away from the final product of this effort, our vessel and port stakeholders are very excited about the potential of this technology to improve their operations."

As with new technologies, the SLSDC is also constantly working to increase system efficiencies with upgraded infrastructure. The U.S. Seaway's Asset Renewal Program has completed over a decade of focused project work to modernize our locks, equipment, and facilities.

Meanwhile, a bill recently introduced in Congress would rename the SLSDC by taking on the words Great Lakes. It would be retitled the Great Lakes St. Lawrence Seaway Development Corporation – in recognition of the broader role the agency plays, aside from operating the locks on the US side of the St. Lawrence River through Lake Ontario. The chief sponsor of the bill, Marcy Kaptur (D-Toledo) has bi-partisan support from around the Great Lakes, including Michigan and Pennsylvania.



*(**BURST** – continued from page 5)*
on the Great Lakes (35 million short tons) and the premier inland port in North America. Both grain and iron ore volumes were up. But the big highlight was the handling by early November of 306,000 tons of wind blades and other energy components at Duluth's Clure Public Marine Terminal, overtaking the 2018 throughput of 302,000 tons.

Deb Deluca, executive director of the port, affirmed this was "no accident" – pointing to the more than $25 million in strategic investments made to the terminal over the past four years.

"Wind energy has been an important part of our cargo portfolio, dating back to our first shipments more than a decade ago," recalled Jonathan Lamb, president of Duluth Cargo Connect.

*(**REHABILITATING** – continued from page 5)*
facility. "The Port is equally invested in offering the opportunity to both Union Pacific and Canadian Pacific, as the two Class 1 rail lines currently servicing the Port, daily. The endeavoring rail lines in partnership with the Port, would select the logistics operator for the site," said Director Schlicht. At this time, there is not any implementation or installation of new information systems/technologies. "This will be subject to a lease negotiation with the container yard operator at the Port," he said.

The efficiencies, reduction of road congestion from trucks and environmental advantages of inland water transportation for project cargoes are found on the Great Lake Ports. "Shipments of project cargo are particularly noteworthy, a number of U.S. Great Lakes ports are reporting an outlook for continued movement," said Craig H. Middlebrook, Deputy Administrator of the U.S. Saint Lawrence Seaway Development Corporation. These project cargoes include high value windmill components, cranes and heavy machinery. Port Milwaukee has seen a 220 percent increase in project cargo. "The Port continues to seek new commodity diversification opportunities, including fuller utilization of our outdoor laydown capabilities. For the first time in recent history, the Port received new project cargoes, including international lumber via import in Milwaukee," said Director Schlicht.

The MMAC November Intermodal Summit showed a strong customer base for international container service in southeast Wisconsin and beyond. Some of those 150 attending were existing Port tenants and stevedores such as Federal Marine Terminals (FMT) and Kinder Morgan/Milwaukee Bulk Terminals (MBT). Future customers of the Port's intermodal container service include the AIM Group of Companies, Berco of America, C.H. Robinson, GKM WI Global Supply Chain, JUSDA (the freight forwarder of Foxconn), Lake States Lumber Association, PAK Technologies, Via Rail Engineering and WATCO among many others.

### Two Potential Projects

A further bolstering of the Port's competitive position in the region comes from two potential Port projects. The Port is awaiting approval by the WisDOT to the Port's Harbor Assistance Program (HAP) grant application. The proposed $3.969 million project includes logistics improvements, facilities and equipment upgrades beyond the rail work identified in the FRPP. This includes entrance gates, rail crossings, paving, inspection racks, fencing, lighting and other rail equipment. "An announcement could be made by WisDOT anytime from November 2019 to March 2020," said Director Schlicht.

The PIDP grant application is for DeLong Co., Inc., an agriculture products wholesaler, to lease a parcel of property at the Port Milwaukee, Jones Island facility. The Port grantee will develop an agriculture commodity transload facility for bulk shipments in Milwaukee inner harbor. This will be the first on the GLSLS system specifically for the transload and export of Dry Distiller's Grain with Solubles (DDGs). Supplemental service is also envisioned for the export of soybeans, corn and grain via deep-draft, Seawaymax vessels. Port Milwaukee transportation infrastructure will need to be modernized which includes demolition work and construction of upgraded moorings, fabric building, transload facility and equipment for rail and truck bulk loading into deep-draft bulk cargo vessels. The project cost estimates are budgeted into the Port's grant application totaling $31,366,928, according to the Port Milwaukee website report on the PIDP grant application.


Steel beams being discharged from the *Federal Caribou* at the Port of Milwaukee


First LNG ship to bunkering operations

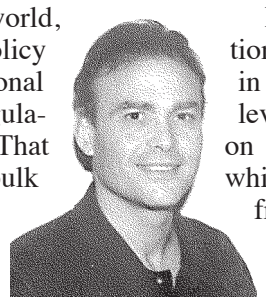
# It's make or break with IMO 2020

***Ocean carriers must recover most of their additional fuel costs or the industry will take a turn from bad to worse.***

By Peter Buxbaum, AJOT

Cost recovery has already begun for IMO 2020.

On September 1st Zeamarine, one of the largest breakbulk operators in the world, announced a bunker adjustment policy related to IMO 2020—the International Maritime Organization's (IMO) regulation to limit maritime emissions. That made the Hamburg-based breakbulk and multipurpose carrier one of the first in the sector to implement a surcharge in an effort to recover additional costs associated with the IMO policy. Company executives said the adjustment is based on the difference between the costs of traditional heavy fuel oil and the marine gasoil to be used in compliance with IMO 2020.



RTM Lines, an Ocean Transportation Intermediary (OTI) specializing in breakbulk cargo, has already started levying a bunker surcharge "based on web-based bunker platform reports which will be provided along with the freight invoice," according to Richard Tiebel, the company's head of operations. The OTI reserves "the right to adjust [the charges] at time of quotation, time of loading, and at time of

*(**IMO** – continued on page 8)*

# Complying with IMO 2020 - the options

***Many carriers are taking a hybrid approach.***

By Peter Buxbaum, AJOT

Shipowners have several alternatives to lower exhaust emissions. Using liquefied natural gas (LNG) provides a nearly 100% reduction in SOx emissions compared to heavy fuel oil (HFO), while marine gas oil (MGO) contains 0.10 percent sulfur m/m (mass of sulfur/total mass), compared to HFO's sulfur levels of 3.5% m/m.

Scrubbers, which require substantial upfront investments, allow ships to use HFO while reducing SOx emissions by spraying exhaust gas with water. Other technologies include heat recovery, which converts wasted fuel into electricity; lithium-ion batteries, which are already in use on ships; and fuel cells, a future potential alternative to today's ship engines, which have been the subject of recent testing.

Some carriers that have been public with their plans have indicated that they intend to take a hybrid approach, using lighter fuels and also investing in scrubbers. An Alphaliner report noted that some transpacific carriers are outfitting their vessels with scrubbers. *(See main story on left column of this page.)*

Zeamarine, the breakbulk and multi-purpose vessel operator, signaled a fuel switch when it announced that its bunker adjustment will be based on the cost difference between IFO 380, the traditional 3.5% sulfur heavy fuel oil, and marine gasoil (MGO), a pricier alternative.

CMA CGM announced that it will "favor the use of 0.5-percent fuel oil for its fleet," will use LNG to power some of its future containerships, while also ordering several scrubbers. In addition to the LNG, a number of companies like Wilhelmsen are looking into LH2 – Liquid Hydrogen – as a bunker fuel.

In 2018, CMA CGM signed an agreement with Total Marine Fuels Global Solutions covering the supply

*(**OPTIONS** – continued on page 13)*

*(**IMO** – continued from page 7)*
discharge," he added.

The new IMO regulation, which will enter into force on January 1, 2020, aims to reduce the sulfur oxide (SOx) emissions of the world's 50,000 merchant ships by 80%. While a positive step for the environment, the IMO implementation will add significant additional costs for carriers, and, by extension, for shippers. Carriers have the option of complying with the regulation in several ways, including burning alternative fuels and implementing technologies that reduce the sulfur content of heavy fuel oil emissions. *(See sidebar on page 7)*

### Breakbulk Sitting on the Sidelines

Breakbulk carriers have lagged behind container lines in implementing IMO-related increases. Maersk and Hamburg Süd both revised their bunker adjustment factors effective January 2019, a full year ahead of the sulfur cap implementation. COSCO Shipping Lines introduced a new monthly-reviewed surcharge effective May 1st. Zim and Crowley were among the other steamship lines that announced rate increases in advance of the IMO requirements.

Whether it is for breakbulk cargo, containers, or other cargo types, the general consensus is that IMO 2020 will increase shipping costs worldwide. Many ships will be burning more expensive fuel, while others will be retrofitted with new technologies such as scrubbers. The maritime consultancy Alphaliner found that carriers in the transpacific trades are taking vessels out of service for extended periods for these retrofits. According to Alphaliner, as many as 90 containerships will be out of the water at any given time during the fourth quarter of this year, resulting in reduced capacity and potentially inflated rates.

It has become clear that carriers need to pass along at least a significant proportion of these increased costs to their customers. "Fuel costs already represent more than 50% of total operating expenses," said Nikos Petrakakos, vice president of Seabury Maritime, an investment and advisory firm. "IMO 2020 poses an increase too significant for carriers to absorb and stay operational." A Seabury Maritime analysis showed that shipping a container from China to the United States East Coast will cost $600 more after IMO 2020 takes effect.

The analysts at Drewry believe that carriers will be fairly successful in collecting the surcharges thanks to the wider market acceptance of burden sharing and the fact that carriers started discussing the issue with shippers early on. "It is essential that carriers increase their fuel recovery ratio, or else there will be serious consequences," said Simon Heaney, Drewry's senior manager for container research.

A Drewry analysis concurred with Seabury that the ability of carriers to pass on cost increases could be make-or-break for the industry. Under a scenario that assumed carriers would manage to pass on 75% of the cost difference, Drewry's calculations showed securing the higher rate would lead to a profitable industry in 2020. But under an assumed 50% recovery rate, losses to carriers would result.

### IMO 2020 – An Opportunity Docks

As is often the case, business problems yield opportunities in some quarters. One, not surprisingly, is that gasoil exports from the United Arab Emirates are running at recent highs. The biggest rise has been in gasoil bound for Singapore, the world's largest bunkering port. Gasoil exports bound for Southeast Asia jumped from 10,000 barrels per day in September to 70,000 in October. A year ago, those levels were close to zero.

Another opportunity, this one a bit more surprising, is that the United States is importing record volumes of heavy fuel oil. As prices of high-sulfur fuels sink globally—at $41.56 per barrel on November 6, they reached a three-year low—it has become economical for U.S. concerns to import heavy fuel oil from Russia and former Soviet Union countries, and those reached a multi-year high of 1.35 million tons in October. U.S. ports also received fuel oil from Jordan at the end of October, with another tanker set to arrive around the end of November.

Why the interest in fuel oil that will soon become obsolete? U.S. refiners have greater capability than others around the world to break down cheaper, heavy fuels into higher-margin, compliant products. Their vacuum distillation capacity can break down heavy fuel oil and their coking capacity can upgrade cracked fuel oil. Industry experts say that the increased imports are a sign that U.S. refiners are taking delivery of the heavy fuel oil, as its price declines ahead of the IMO 2020 implementation, in order to upgrade it.

As always, there are also potential snafus associated with the introduction of a new regulatory scheme. LuminUltra, a microbial monitoring specialist, has expressed concerns that reducing sulfur content can result in increased microbial influenced corrosion on vessels. In other words, as Patrick Taylor, LuminUltra's director of global business development, put it, "Less sulfur means more bugs."

### IMO 2020 Enforcement an Issue

Enforcement of the new rule is also a potential weak spot with reports indicating that some countries might not fully implement IMO 2020. The "enforcement regime is something that is still evolving," said Sam Ruda, port director at the Port Authority of New York and New Jersey.

The World Shipping Council (WSC) says there must be a level playing field if the regulation is going to work. "We urge any country considering deviation to abandon those ideas," said John Butler, the WSC CEO.

# The Netherland's ports are trying to balance traditional energy business and renewables

***Renewables, particularly offshore wind power are big business for the ports of the Netherlands. But so are the traditional energy businesses that are mainstays in ports like Amsterdam and Rotterdam, Europe's largest. It is a tough balancing act not only for the ports but all the stakeholders.***

Matt Miller, AJOT

The Port of Rotterdam is Europe's largest. It stretches westward some 25 miles from its original 19th century site adjacent to the old city center. On reclaimed land, near that far western tip, past miles and miles of oil refineries, crackers and storage facilities and close to the port's first fully automated terminal, towers the prototype of the world's largest offshore wind turbine.

GE Renewable Energy finished installing its 12MW Haliade-X turbine mid-October. GE has begun to undergo stress testing on the giant windmill.

The turbine's location is both practical and symbolic. It stands next to the 500-meters-long Sif Group factory that assembles and marshals the columns, called monopiles, used in offshore wind. On the seaside, Sif operates a 400 meters quay capable of simultaneously receiving turbine components and dispatching them to North Sea wind parks. When the port was visited recently, jackup vessels were anchored, ready to pick up the monopiles, and deliver them to the North Sea.

Wind turbine installation at the Sif Group factory at the Port of Rotterdam

### Renewables Power New Business

In August, Sif announced it was substantially expanding its operations in this newest, decade-old area of the port, known as Maasvlakte 2. It has leased a total of 62 hectares and acts as a terminal operator, handling offshore-wind related logistics, as well as component production. Part of the expansion will involve the lengthening of the quay by 200 meters.

The wind turbine, which soars some 860 feet high, is also a dramatic indicator of the direction being taken by the Rotterdam Port Authority and other port authorities in the Netherlands. They

*(**BALANCE** – continued on page 15)*

# Port of Flevokust Haven built to serve the wind

By Matt Miller, AJOT

Flevokust Haven, the Netherlands' newest port, is a mere speck of land compared to its enormous counterparts in Amsterdam and Rotterdam. However, this inland port on the country's largest lake is as aggressively pursuing renewable energy-related business as are the bigger ports.

"We are dependent on the windmill industry," said Rogier Wilms, Flevokust's program manager.

In October, the port signed a contract with a yet unnamed offshore wind developer to lease 2.5 hectares for storage and assembly. The contract will last until the end of 2021.

Other developers are also interested, according to Wilms. "We have more demand than we can provide," he said.

Flevokust opened for business just one year back with a private container terminal on half the port's initial five hectares' area. The Flevoland provincial authorities constructed the port on land reclaimed from the IJsselmeer. This large fresh water lake is actually an inland bay, cut off from the North Sea by a dyke constructed almost a century back. The new port offers a 400 meters' quayside.

Flevokust is about 37 miles from Amsterdam port. It's the last link in a series of inland ports built to support the country's extensive transport and logistics system. It's also just down the road from the Lelystad Airport, which is being expanded to serve as a "twin" to Schiphol Airport, if it can overcome local opposition.

Concurrent with the port, the government is also developing a 160 hectares' industrial area. This includes a 30-hectares solar park.

When planning the port, provincial officials had windmills in mind. The area around Flevokust in Flevoland province now hosts upwards of 800 onshore wind turbines. That has created an aesthetic concern.

"There are so many windmills. It's basically disturbing the landscape," Wilms said. And as the industry has developed, the turbines have grown larger and larger. The region wants to take advantage of that. "We want less windmills, but bigger ones," Wilms said.

This transition will take

*(**SERVE** – continued on page 15)*


# Octopi by Navis gives general cargo better productivity

By Robert L. Wallack, AJOT

Improving productivity in general cargo terminals by real-time automation of operations is realized by Octopi by Navis terminal operating systems (TOS). Octopi is automating challenges faced by thousands of small to medium general and mixed cargo seaports worldwide. Vessel discharge, item tallies and yard management are easily managed by the web-based platform.

Navis, a part of Cargotec Corporation and known for their N4 TOS, acquired Miami, Florida based Octopi in March of this year. Luc Castera, founder and director of product, Octopi explained in a November 12th webinar, "Understanding General Cargo: Challenges and Opportunities" that over the past five years they visited many general cargo terminals to better understand their difficulties. Customer challenges in the small to medium mixed and general cargo terminals are numerous and technology providers have ignored them for many years. His webinar presentation explained intense intra-regional competition, high labor costs, extreme weather events, complex mechanization and standardization of operations, uncertain trade issues and their non-specialized facilities.

### Out of the Box TOS

Director Castera also provided information to a recent interview with the *American Journal of Transportation* that "smaller general cargo terminals are left with pen and paper, Excel spreadsheets, or limited software solutions built in house." As a result, they track

*(**OCTOPI** – continued on page 16)*

# Oversize.io web based platform permits project cargoes

By Robert L. Wallack, AJOT

Axle spacing, weight distribution, and frost laws are some of the permit, regulations and routing options that shippers, truckers and brokers confront in moving oversize and overweight (OS/OW) cargoes. The labyrinth of details from counties, cities, states and federal governments is a formidable task that some truckers try to avoid which can be costly in penalties, dangerous to the traveling public and exact wear and tear on road and bridge infrastructures. These problems perplexed Drew Jahnke, founder and director of sales of the web-based platform, Oversize.io, based in Kansas.

"This company was created out of the pain I was experiencing as a dispatcher and broker in the open deck/heavy haul industry. I spent 6 years between being a dispatcher [working with trucks to book loads] and as a broker [working with shippers to move their freight on trucks]. My largest frustration with working in the oversize/heavy haul industry was the time it took to do proper due diligence, build quotes, and mostly navigate all the rules, regulations and pricing for each state," he told the *American Journal of Transportation* in a recent interview.

Director Jahnke estimates that the addressable market is 25,000 OS/OW permits per day in the United States which includes full lane loads of 150,000 pounds, 14-16 feet wide or 15 feet tall cargoes of bulldozers, cranes, boomers, last mile trucks for wind farms and large construction and oil equipment moving across states. These non-divisible loads are breakbulk requiring permits that can be very expensive depending on the state. Each state has a manual for OS/OW permits that are like tax rules and regulations with loopholes. "There are so many variables. So, the Oversize.io platform navigates and calculates all these variables," he said.

### Digitizing the Problem

For example, Oklahoma has a flat rate per weight for no matter how many miles and for 150,000 pounds a

*(**PLATFORM** – continued on page 17)*


Wilhelmsen LH2 – Liquid Hydrogen fueled vessel

*(**OPTIONS** – continued from page 7)*

of 300,000 tons of LNG per year for 10-years starting in 2020. The LNG will fuel CMA CGM's nine new 22,000-TEU container ships, scheduled for delivery beginning in 2020. "LNG is the fuel of the future for shipping," said Rodolphe Saadé, CEO of CMA CGM, in a statement.

COSCO also took steps to secure alternative fuel sources when it signed a supply agreement with Double Rich Limited to provide the carrier with low-sulfur fuel oil in March 2019. COSCO also installed scrubbers on two of its vessels on a pilot basis, and announced it will be investing further in that technology.

Maersk is also planning on running the vast majority of its fleet on low-sulfur fuel and to invest in scrubbers—to the tune of $263 million—for retrofitting selected vessels. "The purpose of the strategy," said Vincent Clerc, chief commercial officer of Maersk Shipping, "is to mitigate the risk of fuel price uncertainty in 2020."

Hamburg Süd was somewhat ahead of the curve when it launched a pilot with its customer Electrolux in the Chilean Port of Iquique over two years ago, expanding the program in 2018 to other Latin American ports. Auxiliary engines and boilers switched from HFO to MGO during layovers, while the shipper and carrier divvied up the additional costs. Using MGO decreased the SOx emissions attributable to the Electrolux cargo by over 95 percent.

All in all, industry experts say $30 billion in additional costs will be incurred to comply with IMO 2020.

# Breakbulk, coming of age in a digital world

*By Matt Guasco, AJOT*

During the golden age of sail, cargo ships were worked by hand. Stevedores, "breaking the bulk" of the ships hold, unloaded freight by part and parcel. Thus, the term breakbulk was born. Shipped in bags, barrels, crates, and drums, cargo had to be extracted in smaller lots. With the advent of containers, general freight could be unitized. The nature of the cargo hadn't changed but handling and inventory control needed to keep pace with the speed at which containers could be loaded and discharged. Container terminals realized this early on, while the handling of breakbulk didn't seem as critical.

## The Resurgence of Breakbulk

The container industry has exploded since Malcolm McLean's Ideal X first sailed in 1956. As ships got bigger, terminals kept pace, expanding their footprint to match the growing volume. The science of tracking and dispatching containers also kept pace, integrating electronic identification with the automated handling of ships and the positioning of boxes within the yard. But, just as you can't fit round pegs into square holes, not all freight is suitable for containerization.

Commodities such as steel, lumber and bulk paper lend themselves to ships and terminals designed for loose freight. Project cargo such as wind turbines are often overweight and out of gauge. They require dedicated ships and yards to marshal and dispatch these units. The need for niche facilities has never gone away. In fact, it is on the rise.

Many breakbulk terminals today can be described as "special service providers." They have a closer relationship with the cargo owners than traditional container

*(**DIGITAL** – continued on page 14)*

*(**DIGITAL** – continued from page 13)*

ports. These facilities provide a range of services tailored to the handling of distinctive material both from the yard and warehouse perspective and the loading and unloading of the specialized ships which carry these cargos.

Many stevedores see the value of this unique market. Ports America, for example, currently operates 27 breakbulk terminals around the country. Some as standalone facilities or as part of a larger port complex, others in cooperation with additional operators such as Cooper T Smith and Delaware River Stevedores. Metro Ports operates 15 facilities from the Great Lakes, South Atlantic, and Gulf through the West Coast and Canada. So how can automation be applied to this type of cargo? To answer this question, we need to start at the beginning of the data stream.

### SCADA - Gathering Hard Data

The nature of breakbulk is that each load is different. Different quantities, delivery schedules, and specific steps to handle a particular lot according to the situation. As much as this is true, certain parameters remain the same. Individual units or lots can be tagged and measured. Dwell time can be recorded and analyzed. We simply need to go to the grassroots of record keeping.

In the 1950s the first industrial computers supervised the manufacturing and monitored the data which was generated: counting parts on an assembly line, timing the completion of a manufacturing process, looking for errors in production. By 1960 computer engineers had developed the ability to monitor field data across remote sites and by the 1970s, microprocessors automated the manufacturing process and provided access to data across work platforms from the factory to inventory, stocking, and distribution. Supervisory control and data acquisition (SCADA) had come of age.

Applying the same principles of data collection and transmission, allowed container terminals to begin automating receiving, loading and discharge operations. With unitized cargo, this was not much of a stretch.

### Integrating Data for Multipurpose Cargo

The TBA Group has developed software to solve this complex task. Glynn Thomas, Sales Consultant for the group explains, "TBA Group's CommTrac, Terminal Operating Software (TOS) for multipurpose terminals, enables terminal operators to plan, track and manage inventory, people and assets (manned/automated) across the terminal, or terminal network, in real-time. CommTrac provides the tools, control and management information to optimize operations." This software allows the breakbulk operator to reduce risk, ensure compliance and maximize growth potential and profitability. According to TBA Group, "CommTrac is configurable to the requirements of the end-user and can manage all commodities and storage types."

According to Thomas, this would include Steel (bars, beams, and coils), Timber (as boards, logs, or palletized), Paper (rolls or pulp), Bulk type commodities (loose, in bags) and all other types of unitized cargo. Profitability is increased by reducing demurrage through higher equipment utilization, reducing pilferage and waste. Administrative costs are reduced by increasing operational efficiency and higher throughput. This integrated software allows for the capture of all billable activity around the terminal and reduces cargo claims caused by loss and contamination.

"…CommTrac's strength is in its ability to integrate with 3rd party software, such as ERP (Enterprise Resource Planning) for finance, PLC (Programmable Logic Controllers) and SCADA for automation, RFID for locations or weighbridge integration for real-time inventory management. This integration allows stakeholders to be proactive in their decision making with real-time information at hand." Thomas went on to explain, "Inventory can be easily tracked with CommTrac for unitized cargo, utilizing handheld bar code scanners, and for bulk commodities, via weighbridge, belt scale or weigh hoppers. This gives the operators, management, and customers an accurate real-time view of their inventory and respective storage locations. The web-based application allows devices with a web browser and correct permission …access to the system". Thomas continued, "Not only does this facilitate direct access for 'on the ground' operators, it also allows customers, and agents, access to key information around vessel progress, inventory, collections and deliveries via the TOS."

### Challenges Facing Breakbulk Automation

While TBA Group continues to make progress in digitizing cargo handling, they also recognize the challenges inherent in this process. Digital conversion of manual records is required for large amounts of data involving the terminal and ship, across many IT platforms.

A calculation of service costs must be adopted between multiple levels of cargo movement, connecting the ship to the terminal, or within the warehouse and yard and with the gating of cargo in or out of the facility. To add to this challenge, many breakbulk terminals have smaller operating budgets than their sisters in the container world. Will breakbulk facilities find it economical to digitize operations? With smaller footprints, the need to automate may not seem necessary if throughput inventories remain fairly constant.

Finally, as breakbulk facilities continue to develop closer ties to their cargo owners, will there be any need to adopt higher levels of inventory control? This may be especially true in the movement of certain types of logs and lumber or where project managers have a firm handle on what is moving through a particular facility. Raw material makes up a good portion of the breakbulk cargo.

*(**BALANCE** – continued from page 10)*

seek to support the businesses necessary as energy production moves from fossil fuel to renewables.

Offshore wind is the most visible of these efforts, but not the only one. Solar and biofuels are also in the mix. And hydrogen is likely to become a major presence as that fuel source is developed. (A consortium led by the Swedish energy giant Vattenfall announced in July plans to retrofit a gas-fueled power plant in northern Netherlands to use hydrogen by 2023.)

"We embrace it all," said Joost Eenhuizen, business manager maritime and offshore industry at the Port of Rotterdam Authority.

Providing logistical support for a shift to renewable energy underscores a growing national ethos in Netherlands. It also is proving to be increasingly good business for the country and its ports. "We are at the eve of a big new industry, and a big change," said Femke Brenninkmeijer, the Port of Amsterdam's commercial director, who heads the energy, cargo and offshore department. "One thing for sure, it will demand a lot of space from the ports."

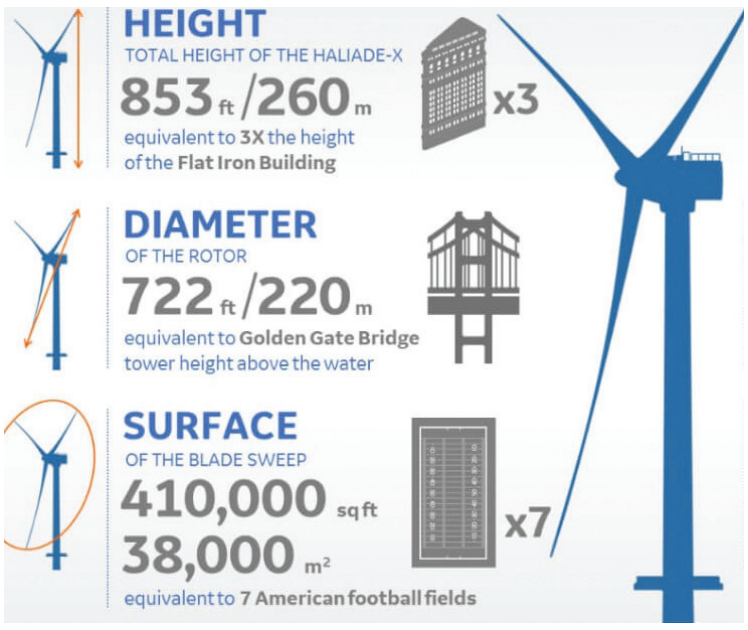
This is true for the major ports of Rotterdam and Amsterdam, as well as some of the country's smaller ports. Most notable is the far northern port of Eemshaven, the Netherlands' biggest wind-related port, and one of the major entrepôts for the offshore wind industry in the world. In addition to staging of new wind farms and maintenance of existing ones, Eemshaven has emerged as a prominent "landing port" for international power, with converting stations for transmission of electricity. It hosts power plants as well. *(See story on page 18)*

"Eemshaven lives and breathes offshore wind," the port proclaims in a marketing brochure.

To a far more modest degree, the country's newest port, Flevokust, is targeting wind farms as well. It has just signed an agreement with a yet-unnamed wind farm operator for use of the port as a staging area. *(See story page on page 10)*

### Balancing Fossil Fuels and Renewables

The country known for its quaint windmills is in the forefront of modern-day wind energy, with onshore wind being increasingly augmented and supplanted by wind generated on the North Sea. The Netherlands predicts it could produce 11.5GW of offshore wind energy by 2030. That equals about 37% of current electricity needs. Some 10% of the North Sea is scheduled to be an energy production area by this time.




This focus on wind and other renewable energy sources is indicative of efforts by Dutch ports to better incorporate sustainability into their operating mindset, and their marketing focus. "We would like to facilitate and catalyze as much as possible the move to a more sustainable world," said Eenhuizen.

This experience is useful for ports in other countries grappling with similar issues.

It's a hard balancing act. The Dutch populace increasingly demands a greener future and the ports are eager to demonstrate they can embrace environmentally progressive policies.

But that's not an easy task, necessarily. Ports represent one of the Netherlands' most important economic centers. They aren't just transportation and logistics hubs. Heavy industrial zones lie within their borders.

For many Dutch, the ports continue to embody a greenhouse-gas emitting, fossil-fuel dependence, with their high-profile depots, crackers, tanks and pipelines. Two of ten power plants on the Rotterdam port premises are still coal-fired.

The Port of Rotterdam is highly dependent on petroleum-related business. It forms the foundation of the port's industrial core. Supertankers unload crude at Rotterdam terminals. Five refineries

*(**BALANCE** – continued on page 18)*

*(**SERVE** – continued from page 10)*

maybe seven years, with many more after to maintain the turbines, he said.

At the same time, offshore wind generation is coming to IJsselmeer, with three wind parks on the drawing board. And, Wilms added, Flevokust could become a staging port for wind parks in the North Sea itself if and when existing locks linking IJsselmeer to the ocean are strengthened and expanded, a project now in its beginning stages. This will allow short-sea vessels to dock at the port.

Road access to the port is a critical aspect of the design, Wilms said, since wind turbine components must be transported overland. The port developers made sure the heavy transport trucks could carry the blades without removing poles or traffic signs. The province's relatively straight roads help.

(*OCTOPI – continued from page 12)*
their inventory loosely and management has poor visibility of cargo at the port. This can cause cargo loss and slow operations to take the time to locate cargo. "All of this has direct impact on the operating cost of the terminal."

These general cargo terminals will not take business away from box terminals, as containerization has limits. In fact, Octopi estimates 3.2% average annual growth of general cargo from 2016-2021 period. However, container terminals lack the special needs of smaller terminals and general cargo terminals and can be made "more efficient and cost-effective so that they can better compete in the marketplace," he said.

Octopi by Navis is a web-based TOS with their numerous functionalities accessible on a desktop or a tablet. This is a software as a service (SaaS) platform hosted on the cloud so there is no need to buy and manage servers. Some of the features are Over, Short and Damaged (OS&D) reports for accurate inventory automation, especially useful for general cargo pallets containing a diversity of cargo: packages, drums, boxes, cans; as well as, dynamic yard by satellite view and graphic representation; real time tracking and visibility; barcodes, since pallets look the same, but the software reads different barcodes after discharge; invoicing, stock transfers, equipment management, key performance indicators (KPIs) and a business intelligence (BI) dashboard that appears when users log in to the Octopi TOS.

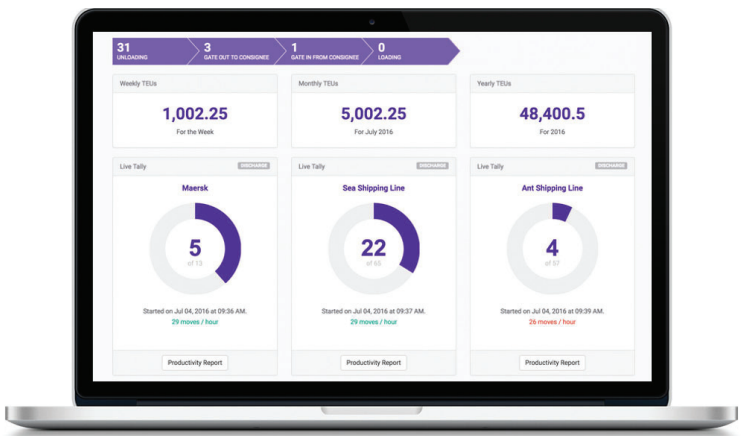
### Cost Efficiency

Improving productivity is essential to reducing costs and to generate more volume in smaller general cargo terminals. Director Castera explained two main ways to *AJOT*. "Octopi reduces back office data entry work to once with friendly interfaces in real-time. Some of our customers have processes that would take them a whole day and are now converted to a 15-minute process in Octopi. The second way is better transparency in "building a culture of KPIs" on-site by the BI dashboard in Octopi. "You basically apply gamification to terminal operating processes. People start to compete with themselves to beat their numbers and that culture of statistics makes a huge improvement to your productivity," he said.

Octopi offers a set of new features and updates. The reefer (refrigerated container) BI dashboard now shows a visual in colors: which reefers have not had monitoring for temperatures recently, which reefers have abnormal readings and which reefers are scheduled to arrive soon at the terminal to better prepare. All Octopi features translate into cost savings.

"A customer took a whole week to go through tons of spreadsheets and to produce invoices to charge for a general cargo storage at their terminal. We automated that process to zero minutes," exclaimed Director Castera. Another cost savings was found in a customer reconciling their vessel tallies with the shipping agents by comparing two tally sheets row by row. "We built a way for the shipping agents to have access to Octopi and verify each tally moved reconciled by the terminal in real-time so that at the end of the operation, the reconciliation is automatically completed and they can get paid," stated Director Castera. Finally, with tighter inventory controls, customers have less claims and pay less in penalties.

At present, Octopi by Navis has implementations in 13 sites and 7 countries. In the second half of this year, Octopi signed a subscription agreement for Octopi by Navis with Tropical Shipping in St. Thomas that has 1500 short tons of general cargo and 95,000 twenty equivalent unit (TEU) containers throughput per year. Octopi will improve inventory accuracy, operation efficiencies and visibility with direct access to ports in the United States of America, Canada and the Virgin Islands. Also, Port Fernandina, northeast Florida, signed an agreement in their modernization project by Worldwide Terminals Fernandina to implement Octopi for better vessel planning and to attract new liners as well as tracking of cargoes by truck, vessel, rail and share real-time data by electronic data interchange (EDI) with customers. The Port has 300,000 tons of breakbulk cargo per year now near the South Atlantic in Fernandina Beach, Florida.




Earlier this year, Octopi went live in three months from spreadsheet-based pen and paper system at the Port International Du Cap Haitien. The Port went from manual process inaccuracies to automated inventory tracking. Other improvements were individuals mapping the yard with Octopi graphic representation and the ability to handle EDI manifests and vessel cargo information.

Director Castera concluded the webinar by giving a demonstration of the discharge of breakbulk general cargo at a port terminal in real-time on the "pending tallies" page in Octopi. He first created a new yard to store the general cargo by pallets in the graphic representation "satellite view" page on Octopi. Details of each terminal operation are easily learned and viewed on the platform

*(**OCTOPI** – continued on page 17)*

*(**PLATFORM** – continued from page 12)*
rate of $780 for a 30-mile route. Louisiana has a per ton per mile $30,000 permit to go across the state for half a million-pound cranes. A 100,000-pound weight load can include the truck weight of which 80,000 is legal and 20,000 pounds is extra weight with fees of $300 to $500 to a few thousand dollars. Over 150,000 pounds in certain states can require 3rd party engineering reviews that can cost thousands of dollars per state. Engineering reviews analyze bridges to not cause damages. Essentially, trucks are paying to damage the roads and some states can reject it so would need to reroute to other states.

Civilian escorts for 1000 miles run can cost $1500 to $2000 and police escorts can cost three to four times that amount which all differ by states. "There are so many variables," admonished Jahnke. So, the Oversize.io platform navigates all these variables by carriers putting in their data and the system calculates if they can do the transport through all the states.

Some of the Oversize.io clients include large and small freight forwarders involving Komatsu shipments, Berard mega transport experts in Louisiana and DSV as well as the top 20 of 25 brokerages. Importers and exporters for project cargoes involving China fabrications for factories and European heavy machinery as well as oil and gas projects through Houston port make use of the platform. The platform Oversize.io gives users confidence in the bureaucracy that can be opaque to a freight forwarder not knowing the United States market. "The platform gives real prices on permits to clarify. Drivers, shippers and brokers all get the same information from the platform. We are not a dog in the fight to make money," he said. The dog in the fight is illustrated by oil companies willing to pay to move equipment to their North Dakota oil fields, and counties will charge for permits amounting to $10,000 for a 250-mile route. Drivers will be assessed a penalty of $25,000 without a permit based on frost laws. There are also 150,000-pound super heavy load per ton, per mile charges.

### Advantages of Software for Project Moves

The advantages and cost savings by using Oversize.io are significant to all stakeholders. The frost laws require chains on trucks in Colorado, Wyoming and the northwest United States for winter months. The spring thaw applies to states of North Dakota, South Dakota, Wyoming and Michigan as well as Canada after heavy loads avoiding the extra expenses riding on the ice during the winter. But when the ground thaws and softens, overweight loads become a problem by damaging roads and trucks stuck in mud. Oversize.io does the daily updates with all states involved which can impact the specific route selected to travel. The maximum axle weight on the platform calculates for all states since each state formula is different. The federal bridge formula, states' rules, interstate and non-interstate rules are all covered by the Oversize.io platform.

Oversize.io charges an annual or month to month subscription pricing model. Typically, brokers can get a quote in 15 minutes to one hour, but with Oversize.io the quote is ready in one minute to calculate all costs faster with all the due diligence. Cost savings derive from the platform foreseeing issues that drivers did not calculate. For example, a heavy load from Maryland to Florida did not experience weight issues until the Florida border. The driver had to scale in Florida because the axle weight was too high on the truck's axles. Costs piled up from $2000 to $5000 for the crane to transload to another truck, then had to pay to the end of the route for the tractor, trailer and driver. Use of the Oversize.io platform maximum axle weight calculator shows the extra axle requirement to use other equipment or say no to the heavy transport.

"A shipper can do a price check on what a driver or broker charges them since they have no idea. There is price and information transparency," said Jahnke.

Oversize.io isn't alone in the sector. For example, Bentley Systems Inc., SUPERLOAD, "Vehicle Permitting and Routing Software" platform is web-based available on desktop or mobile devices. They work with 20 state-level departments of transportation (DOT) to automate the OS/OW permit and routing process for the trucking industry. "Systems process between 50,000 and 400,000 OS/OW permits per year", explained Bentley's, Dan Vogen, vice president, Roadway Asset Management Transportation Asset Performance to the *American Journal of Transportation,* recently.

The Maryland DOT estimates carrier savings of $24.6 million per year from a $200 per hour load expense and 123,000 permits per year because of the benefits of SUPERLOAD. Carriers avoid manual delays from processing permits which includes a real-time bridge analysis of their location and clearance for routing. "Carriers and shippers no longer have a reason to run without a permit. They are also alerted if conditions change along the trip they were permitted and need to make adjustments. The public can be confident that these large loads move safely through the highway system and are not causing harm to the infrastructures," said Vice President Vogen.

*(**OCTOPI** – continued from page 16)*
by crane name, items discharged such as 140 boxes of Amazon Kindles, 2 pallets of rum, 2 drums of clothes, and 5 bundles of rebar. The mapped-out yard area on the platform page is where the tallies such as an allocation of 20 Amazon Kindle boxes would be inventoried in the yard and by "splitting and merging" functionality of the diverse cargo discharged from the vessel.

*(**BALANCE** – continued from page 15)*
operate within the port complex, including the Shell refinery, which is Europe's largest. Add to that another nine tank terminals for oil products and pipelines connecting the crude to other industrial sites in the south of the Netherlands and to refineries in Germany and Belgium, plus 28 chemical manufacturers.

Port authority officials recognize this dilemma. "Oil and oil products is quite a big commodity," said Steven Jan van Hengel, senior business manager, shippers and forwarders, at the Port of Rotterdam. However, he added, "that is changing and evolving now, with the Paris Climate Agreement and the energy transition we're in. So, that's a big, big challenge," He addressed a group of journalists hosted by Netherlands Foreign Investment Agency.

"Rotterdam is very much a fossil-oriented port. That's where we've seen our biggest growth in the last decades," added Eenhuizen. "The port area itself accounts for a large share of the emissions in the Netherlands."

The port's response, Eenhuizen said, isn't to immediately jettison existing business, but to welcome new business "It's an 'and, and' strategy, in which we slowly move from one industry toward the other, not in a single day, not in a single year, but something that will happen over time."

This will eventually result in a new business model, Eenhuizen said, that is sustainable and centered on renewables.

He cited the port's power plants, which are connected to the high-voltage power grid through onsite transformers. New transformers linked to the grid will also be installed for use by the wind farms.

The Port of Amsterdam also relies on fossil fuel as a revenue source. It's the world's largest gasoline port. Aviation fuel is piped from the port to Schiphol Airport, 15 miles away.

Rather than turn its back on these refineries and gasoline transporters, the port should work with them to develop and promote a greener future, Brenninkmeijer believes. She cited as one example the development of bio-kerosene as a synthetic jet fuel.

"They have the knowledge, the expertise and the people equipped for the new future fuels," said Brenninkmeijer.

The ports see a role for themselves as well in moving ships and shipping toward environmental responsibility.

*(**BALANCE** – continued on page 20)*

# Port of Eemshaven shows the profit in going green

By Matt Miller, AJOT

The far northern Netherlands port of Eemshaven has ridden to great success the rapid rise of offshore wind development and concurrent electricity generation. Eemshaven now boasts of launching 16 North Sea wind farms, plus another four with a contract for operations and maintenance. It also hosts one of the country's largest onshore wind parks, a 213MW complex.

Some 70% of the port's business is now wind-related," estimated Erik Bertholet, the port of Eemshaven's business manager for offshore wind.

One-third of all energy produced in the Netherlands now comes from Eemshaven, with its three large power stations, although by no means is that all wind-generated. A high-capacity submarine cable linking the Netherlands and Britain reaches landfall at Eemshaven.

The availability of plentiful renewable energy is one big reason why, for example, Google located an immense data center nearby, investing more than 1 billion Euros, with a further expansion recently announced. (It can rightly say the energy is non-fossil fuel, since 69MW of wind-produced electricity is generated directly to the center.) Rival QTS also located its mega data center in Eemshaven.

"If you have big wind farms, you can directly lead it with the grid to your location," explained Bertholet.

Not only do these centers require huge amounts of electricity, they need reliable sourcing and speed. Two electric grids radiate from Eemshaven to the Netherlands and elsewhere in Europe, insuring both redundancy and latency.

Hard to believe all this has happened only over the past decade. Eemshaven demonstrates how economic gains can be generated through hitching itself to a green future.

Of course, being in the right location plays a big role as well. Not only is Eemshaven on the North Sea, but it's close to German waters, where many wind farms developed as well, supplying that country with renewable energy.

Eemshaven is a relatively new port, opened only in 1973. The port now boasts of more than five kilometers of quay in four basins.

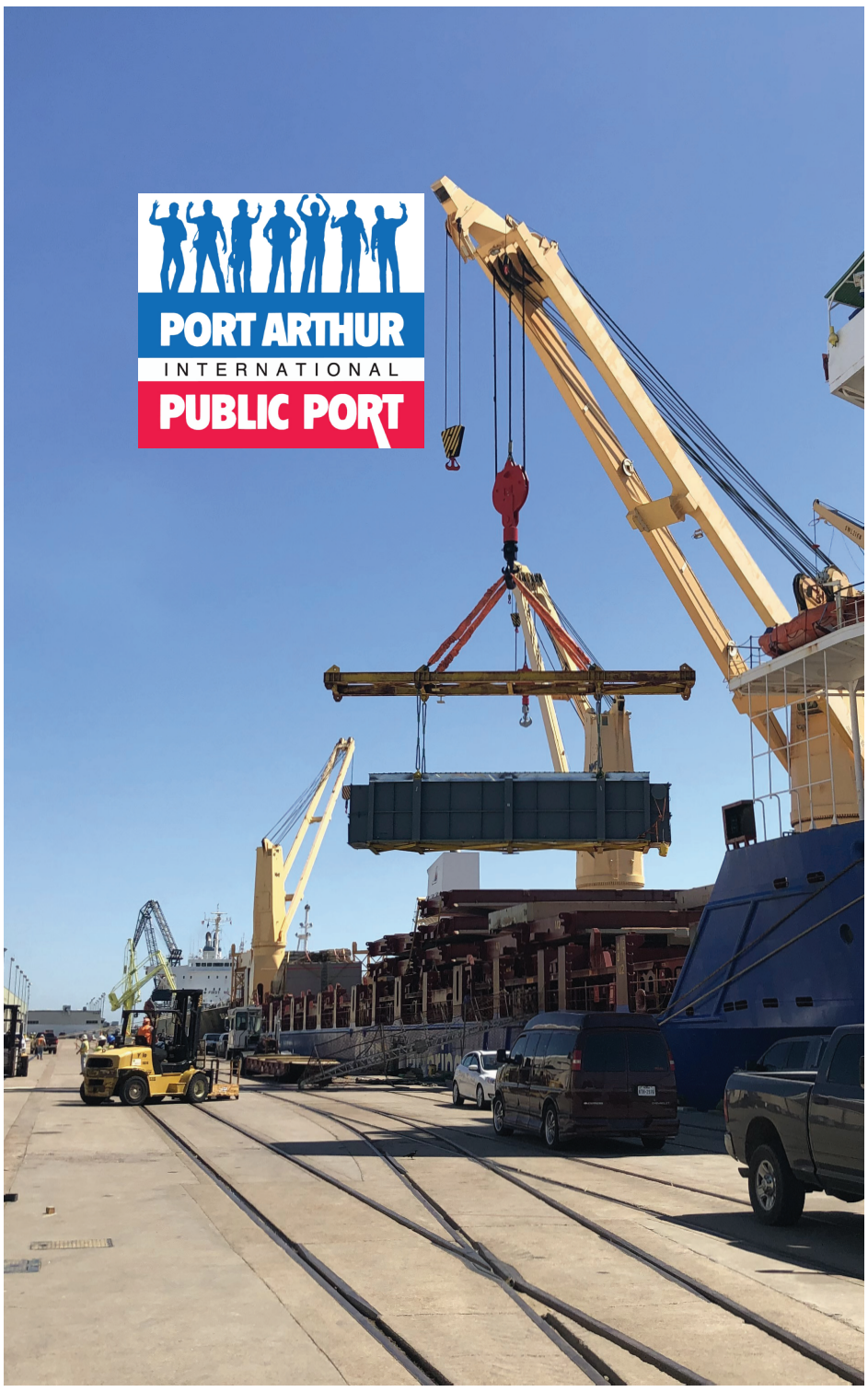
In about 2008, Germany's first offshore wind farm, Alpha Ventus, began to take shape in the North Sea. Because Eemshaven is a deep-water port that offers heavy load capabilities, some of the turbine components destined for the wind farm were shipped via Eemshaven. And, said Bertholet, this exposed Eemshaven to wind farm developers and demonstrated what the port could do.

Perhaps the biggest single boost came in 2015, when construction began on the Gemini Wind Farm, some 50 miles north off the coast. It is now the world's third largest offshore wind complex, generating 600MW of electricity.

However, it's a steady stream of business that has brought lasting benefits. Offshore construction and support vessels now make frequent calls on Eemshaven; some base themselves there. "If you're in Europe in the

*(**GREEN** – continued on page 24)*



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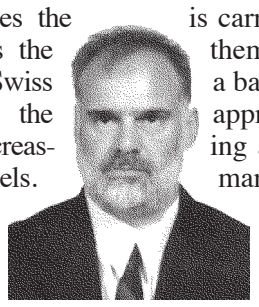
# Is the MPP fleet in for an upswing… or not?

***The fleet of multi-purpose vessels has posted a remarkably steady year – a year in which other sectors have performed erratically. Does that bode well for an uptick in MPP business? Or does stability mask inherent weaknesses in the MPP's position?***

By George Lauriat, AJOT

There probably isn't a ship class less defined than that of the *multi-purpose* fleet that primarily services the breakbulk niche. It's the ship equivalent of a Swiss Army knife sailing the seas in an era of increasingly specialized vessels.



A wide variety of ship types and sizes compete to handle breakbulk and high and heavy freight. These vessels range from self-sufficient (deck cranes) ships, larger dry bulk carriers, to more exotic vessels like semi-submersible and heavy lift ships, ro-ro vessels, and even containerships.

## The TMI

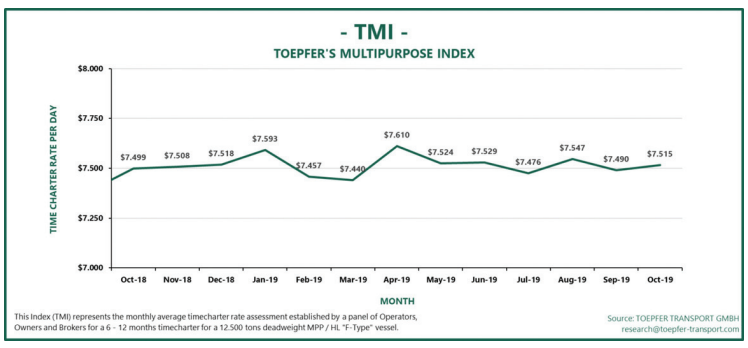
While all the above is true, the MPPs - also known as MPVs (***M***ulti***p***urpose ***V***essels) - still carry a bulk of the breakbulk cargo as their deck cranes and relatively small size and shallow draft offer flexibility in calls [often by inducement] that's hard for other vessel types to match.

Still, because it is a sector more defined by *what* is carried than the vessels themselves, establishing a baseline for an orderly approach to analyzing an inherently messy market isn't easy.

Yorck Prehm, head of research for Toepfer Transport, a Hamburg, Germany-based shipbroker said in a phone interview with *AJOT*, "We [Toepher Transport] invented the Toepfer Multipurpose Index [TMI]" to create a tool for analyzing the MPP sector. The shipbroker already had established indexes and reports for other sectors of the market but the MPP is an unusual sector by any measure. The TMI graphically represents the monthly movement in timecharter rates for MPPs.

Prehm was referring to the F-Type MPP vessels that are the linchpin of the index. Overall the TMI uses vessels 12,000-13,000 dwt, full tweendeck, with two cranes of 240-360 mt capacity built between 2004-2012 for the timecharter baseline. Toepfer's logic in choosing the F-Type class is that this vessel type is deployed by many of

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




*(**BALANCE** – continued from page 18)*

One question the industry is being asked: "How do we get the current maritime industry changed to what's more sustainable?" explained Brenninkmeijer. "The ports can accelerate this transition."

As ports turn more of their attention to offshore wind and other renewable energy-related business, it would seem to result in overheated competition. Not so, said Brenninkmeijer. "We can't do this alone, so we have to work with all the other ports to meet the challenges," she said. "The complexities are so big, the investments needed nationally are so big that you cannot build alone."

Paying for this transformation isn't easy, either. "One of the big dilemmas is about changing the infrastructure for the future," said Brenninkmeijer. "We have to invest [as a port] in this infrastructure. but we have to do this with our partners."

In wind alone, this reflects increased demand for marshaling facilities as more and more developers seek to harness the North Sea energy. Part of this involves ancillary operations such as cables production and storage. Part of this involves production and assembly of the components themselves.

Space is one big constraint. Marshaling yards must be large enough to accommodate massive wind turbine components. And because these components are so large, it's becoming increasingly necessary to construct or assemble onsite. The port of Amsterdam, for example, has reserved 35 hectares for wind-related production companies.

Wind farm operators demand precise timetables for construction; the purpose-built vessels necessary are hugely expensive. So, to insure exclusivity, even more space is necessary.

Then, there's the maintenance of these farms when operating. And, there's the decommissioning and dismantling of oil rigs and demobilizing of older generation wind turbines, which will be shipped elsewhere in the world.

"The whole system is going to change. The production of energy will be close, in the North Sea," said Brenninkmeijer. However, she added, it will take some time, with planners looking at 2030 to 2050 for this transformation.

"We shouldn't look at this as one player who profits from this," Brenninkmeijer concluded. "In the end, we will all profit from this." The Netherlands will profit from this.


# Tariffs, a manufacturing slump and the steel industry

***Demand, production, and share prices are all down; layoffs are on their way up***

By Peter Buxbaum, AJOT

A superficial reading of United States steel industry statistics could tend to bear out President Donald Trump's trade policy. Through August 2019, U.S. imports of steel decreased 13.4% on the year in terms of tonnage and 15.7% in terms of value. In August 2019, the steel trade deficit was 42.7% lower than the year before.

Year-to-date production as of early November was up by 2.5% from the same period last year for the domestic industry, and the capability utilization rate stood at 80.3%—up 2.4% from 2018 when the year-to-date utilization rate was 78.1%. (See sidebar for more statistics.)

But other numbers tell a different story. Output by U.S. mills began to decline in early November, as did the average mill utilization rate. In September, U.S. mills saw a decrease in domestic shipments of over 700,000 compared to the month before as well as a small decline in total exports. Steel import permit applications in October increased by 29.2%.

### Manufacturing Recession

There has been much talk about whether the U.S. is experiencing a manufacturing recession, all of which may be beside the point since there is no accepted definition of what constitutes a recession in a particular industry. It is clear, however, that Trump's trade war has led to a global trade slump and, in turn, slowdowns in manufacturing and in capital spending by U.S. businesses.

Manufacturing output in the U.S. is down 0.9% in the past year, while factory shipments are down 0.4% year-on-year according to the Census Bureau. These numbers are not as severe as those experienced during the 2008 recession or even the 2015-2016 manufacturing slump, but they do indicate a downturn. So, does the plunge in the Institute for Supply Management's manufacturing index, which fell from 60.8 in August 2018 to a 10-year low of 47.8 in September.

The steel industry, domestically and worldwide, are bearing the brunt of these trends, as are the workers employed in that sector. The most recent U.S. jobs report beat expectations, but held some ominous import for manufacturing workers, with a decline in hours worked. In the steel sector, lower demand and production cutbacks have meant layoffs at several steel companies this year.

As a case in point, the Luxembourg-based ArcelorMittal, the largest steelmaker in the world, recently reported its second quarterly loss in a row—a third-quarter deficit of $539 million, compared to a profit of $899 million in last year's third quarter. The company blamed lower shipments and weak steel prices in markets all over the world. *(Some U.S. steelmakers are still reporting profits. See sidebar to the right)*

For the nine months ending September 30, ArcelorMittal reported a decrease of 1.8% in total steel shipments compared

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

# Steel: By the numbers

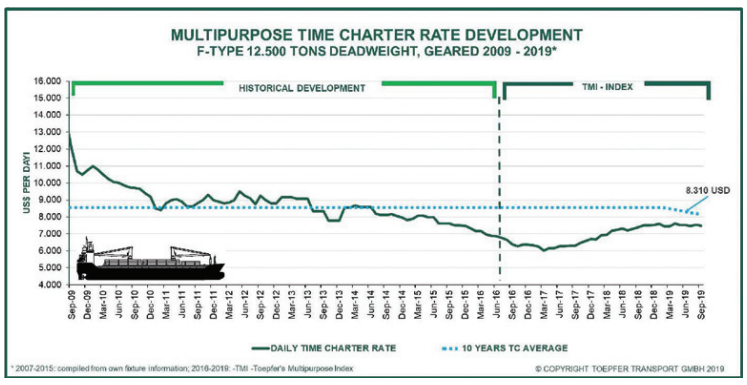
***ITA numbers suggest declines, and reversal of trade deficit reductions brought on by tariffs***

By Peter Buxbaum, AJOT

According to the latest report from the International Trade Administration (ITA), August 2019 steel imports were down but license data suggests the October numbers will show a significant increase in imports. Year-to-date through August, U.S. steel imports were 18.8 million metric tons, a 13.4% decrease from 21.7 million metric tons last year. In value terms, imports decreased 15.7% to $17.4 billion from $20.6 billion.

Brazil accounted for the largest share of U.S. imports by country so far this year at 18%, followed by Canada, at 16.7%, and Mexico, at 11.1%. The U.S. imported 6.3 million metric tons of flat products so far this year, accounting for 33.8% of total steel imports, the largest category

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




*(**UPSWING** – continued from page 20)*

MPP shipowners and with more than 80 units in operation – is the "workhorse" according to Prehm - of the 1,000 unit plus MPV fleet. To ensure the index is representative of the MPP sector, the TMI's timecharter rates are established by a 10-25 member panel composed of MPP Operators, Owners and Shipbrokers.

## The MPP Sandwich

The MPP is different from most other types of vessels. In the main, containerships compete with containerships, tankers with tankers and bulk carriers with bulk carriers. Shipping is a seagoing bazaar largely dictated by supply and demand – freight versus space. But the MPP situation is different. "We say that the MPVs are in a 'sandwich position' as they are not only impacted by 'supply & demand' but by other market influences," Prehm said. For example, if container ship rates are low, the carrier could move to poach project or breakbulk freight from the MPPs. The same holds true for ro-ro carriers, which are often actively looking for freight to supplement their primary freight of vehicles with back haul cargos. And ro-ro carriers with their enormous open space below decks are a natural competitor to MPVs for oversized cargo. And it happens with much the same caveat as containerships – in times when rates are low and the cargo fits the routing schedule. Even other larger dry bulk carriers can come into play in the MPP market. There are cases when a bulk carrier doesn't get the 30,000 tons it was expecting, it might parcel out the loads and pilfer freight from the smaller MPP market.

While one would expect that the larger mega-containerships running upwards to over 20,000 TEUs with fewer port calls and often in VSA (vessel sharing agreements) that enable a number of ocean carriers to divvy up slots and cargo priorities within one ship, to abscond from dipping into the breakbulk market, not so according to Prehm. He cited two recent occasions, one when Airbus parts were moved via a 10,000 TEU boxship from the manufacturing plant in Germany to assembly in China and another more dramatic case, where wind turbine blades on flatbed racks were loaded on a 20,000 TEU CMA CGM ship. As Prehm points out CMA CGM has a large division dedicated to breakbulk and they are not alone.

## MPP Market

As a MPP neophyte looking at the TMI *(see graph on page 20)* for the last twelve months [Oct.-to-Oct] what stands out is how little stands out. The timecharter index moves in a very narrow band or as Toepfer in their latest quarterly MPP shipping report noted the paradigm, "The TMI is oscillating around USD 7,500 and we anticipate that this will continue to be the case for some time."

Such steadiness is unusual for niche shipping markets as the vacillations in supply and demand often rock rates like ships in a tempest. But in the case of the MPP fleet, this is the calm following the storm – "ten bad years" as Prehm puts it.

Analysts cite a number of interrelated reasons for the relative steadiness in MPP sector. Right now, newbuilding amount to a miniscule 2% of the existing fleet and the fleet's average age is a modest 13-years old with a normal life span of 25 years. As Prehm pointed out, some of the 10-12 year old vessels built in China were built to lower standards and likely will have shorter lifespans which could

*(**UPSWING** – continued on page 24)*



*(**TARIFFS** – continued from page 21)*

to the same period last year. The company expects steel consumption in the U.S. to contract by one percent due to ongoing weakness in automotive demand and a slowdown in the machinery sector. Cost cutting may have motivated ArcelorMittal to announce the recent shutdown of one of the three blast furnaces at its Indiana Harbor steelmaking plant in East Chicago, Indiana.

ArcelorMittal isn't the only steelmaker shutting down production capacity and laying off employees. Lower demand and lower production are now bearing their fruit, in the form of job cuts at major steel producers in the United States over the past few months.

AK Steel announced the closing of its mill in Ashland, Kentucky, by the end of the year, throwing 260 employees out of work. Earlier this year, TMK Ipsco Tubulars Inc. announced it was laying off 159 workers at its plant in Wilder, Kentucky, due to dropping demand from the oil and gas industry.

NLMK steel in Farrell, Pennsylvania, which imports steel slabs from Russia and rolls them into finished products, laid off 100 workers in its hot mill over the summer, citing the higher costs of steel imports. In October, United Structures of America closed its plant in Portland, Tennessee, putting 45 employees out of work. The company blamed the layoffs on falling demand for steel in the construction industry.

Barber Steel Foundry in Rothbury, Michigan, part of the Pittsburgh-based Wabtec (Westinghouse Air Brakes Technology) Corporation, which manufactures locomotives and freight cars, is closing this month, laying off 61 employees. Bayou Steel in Louisiana filed for bankruptcy October 1 and announced it was closing, putting 439 people out of work, including 72 workers at its Harriman, Tennessee, operations.

Earlier this year, United States Steel (USS), the second largest steel producer in the U.S., shut down one of its blast furnaces at its Great Lakes Works near Detroit, cutting 250 jobs through September. USS also announced it is idling its tin mill in East Chicago, Indiana, laying off some 300 workers.

## Falling Demand

During his election campaign, Trump repeatedly promised he would revive the steel industry through trade war measures primarily aimed at imports from China and Europe. The tariffs at first sent steel stock prices up in anticipation of higher profits.

But these protectionist measures have had the opposite effect. Steel giants like U.S. Steel, Nucor, and ArcelorMittal all brought additional domestic capacity on line in anticipation of greater demand. While demand rose modestly earlier on, the additional capacity led to a situation of overproduction in the U.S. market, with the ultimate result of falling steel prices.

And it's not just steel prices that have fallen of late; so have stock prices of publicly held steel concerns. Nucor has seen its share value fall by over 20% since its early-2018 high. ArcelorMittal's stock has fallen by well over 50%, from a high of $37.50 in January 2018 to just $16.00. U.S. Steel has dropped from a 52-week high of $28 to around $13.50 recently.

Those numbers may be good news for investors, who may find shares in the steel sector cheap enough to be worth taking the plunge and buying. But the numbers on the whole do not bode well for the steel sector anywhere, unless and until the impediments to the international trading system are fixed.

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*(**NUMBERS** – continued from page 21)*

of steel product imported. This was followed by semi-finished products at 25.9% and pipes and tubes at 22.4%.

U.S. steel exports have remained relatively flat for the past nine years, according to the ITA. Compared to the trade balance one year ago, the August 2019 steel trade gap has narrowed by 42.7%.

Compared with August 2018, August 2019 exports were up 0.6% by volume and down 19.8% from three years ago.

In terms of NAFTA trade, total steel imports into the U.S., Canada, and Mexico decreased 12% this year, while intra-North America steel imports and exports have been on the rise. Imports among the three countries account for a 38.3% share of total NAFTA steel imports so far this year, followed by Brazil's share with 13.7%, and South Korea, at 8.6%.

After peaking in the third quarter of 2018, domestic steel prices have been on the downslide. U.S. domestic prices for hot-rolled band in September 2019 were down 34.5% from last year; for cold-rolled coil, they were down 21.5%; and for standard plate they were down by 22.2% from a year ago.

US steel production decreased by 0.3% to 7.4 million metric tons in August compared to the month before, marking a 1.1% decline from the August 2018 production level. Capacity utilization decreased in August 2019 by 0.3% from the month before as well as from one year ago and down 1.1% from five years ago. By November it was up slightly. *(See main story on page 21)*

"Though capacity utilization has increased 38.3% points from the thirteen-year low reached in April 2009," the ITA report noted, "it remains well below the prerecession historical averages."

Steel demand in August 2019 decreased two percent from a year ago and six percent from five years ago. Steel demand in 2018 amounted to 100.9 million metric tons, a one-percent increase from 99.7 million metric tons in 2017.

The U.S. steel industry posted a combined net income of $472 million in the third quarter of 2019, with five out of six companies tracked by the ITA reporting quarterly gains. Nucor reported the highest quarterly net profit at $275 million, followed by Steel Dynamics at $151 million, Commercial Metals Company at $86 million, Carpenter Technology at $41 million, and AK Steel at $2.8 million. U.S. Steel reported quarterly net loss of $84 million.

# Indian PM Modi seeks investments in India's infrastructure and the BGBF was the place to start

By Manik Mehta, AJOT

The Bloomberg Global Business Forum (BGBF), which is held in New York, traditionally, in the third week of September, when the high-level United Nations General Assembly takes place, is proving to be an effective platform for world leaders to address the top representatives of America Inc.

Comparisons between the BGBF and the World Economic Forum (WEF), Davos, Switzerland, become inevitable: both events have their charm, appeal and, also, drawbacks. While the WEF is a far bigger and internationally established venue located in the picturesque snow-capped Alpine region, it seems to be bursting at the seams, with participants sometimes "looking lost" and struggling to maintain the overview of their objectives as delegations of high-ranking dignitaries, senior government officials, experts and business leaders descend on Davos for a couple of days in January.

The BGBF, by comparison, is smaller in size but offers greater compactness, affording the participants an opportunity to talk serious business and get their message across to the gathered business leaders.

### Courting America: India Comes a Calling

That the BGBF is evolving into an effective platform to court America Inc., was demonstrated by Indian Prime Minister Narendra Modi who as the keynote speaker at this year's BGBF held on September 25, made a strong investment pitch, harping on the virtues of India's "4 Ds" – democracy, demography, demand and decisiveness – that would greet U.S. investors in India.

Modi's address at the BGBF was a slight shift from the original script: the broad theme at the BGBF was climate change but the Indian Prime Minister dwelt on what he called the "golden opportunities" awaiting U.S. corporations interested in doing business and investing in India. The Bloomberg group's chief executive and founder, Michael Bloomberg, sitting next to Modi, moderated the conversation with the Indian Prime Minister, extracting information about India's reform course that would interest U.S. investors.

While the highly-publicized "Howdy Modi" rally held earlier in Houston, Texas, which attracted over 50,000 guests - President Donald Trump also attended it – was, essentially, a display of support from the burgeoning Indian diaspora, the BGBF turned out to be an important business event where Modi could address CEOs and others representing a wide spectrum of industries.

Sprinkling his speech with metaphors – the speech was delivered in Hindi amid an occasional burst of English - to highlight investment opportunities for U.S. companies, Modi said that this was "only the beginning", adding that "today's India is in a unique position. If you want to invest in a market where there is scale, come to India. The Indian government respects the business world and wealth creation." India, offers, as Modi put it, a "very business-friendly environment".

### Investment in India

Modi spoke of two new initiatives to be taken to strengthen India's investment base and make it attractive for international investors: Bloomberg is going to partner with India for inclusion in global benchmark indices and building up a financial services sector in Gujarat - Modi's native state of which he was the chief minister before becoming the Prime Minister.

Modi emphasized in the keynote address that India was taking steps to push the pace of growth, and maintained that India's economy, currently slightly less than $ 3 trillion, would touch the $ 5 trillion target by 2024, even though some see this as "unrealistic". "To achieve that target in the next five years would require India's economy to grow at 11% to 12% annually," one Indian businessman, prefer-

*(**START** – continued on page 26)*

# US-India free trade agreement expected to further strengthen bilateral trade

By Manik Mehta, AJOT

India is working towards concluding a free trade agreement with the United States, particularly after Prime Minister Narendra Modi recently announced in Bangkok that India was dropping out of the China-led Regional Cooperation and Economic Partnership (RCEP) which comprises of the 10 ASEAN member states, China, Australia, New Zealand, South Korea and Japan.

India's commerce and industry minister Piyush Goyal, who held recent talks with senior American officials, said that both India and the U.S. were "optimistic about the free trade agreement even as certain issues need to be discussed further".

India is trying to get the Trump administration to remove U.S. tariffs on steel and aluminum imports from India as well as the restoration of special preferential trade benefits under the Generalized System of Preferences, which was suspended in June. The U.S., on its part, would like greater access to the Indian market for dairy products and medical devices, and lower Indian tariffs on information technology products, etc.

According to the Office of the U.S. Trade Representative, U.S. goods and services trade with India totaled an estimated $142.6 billion in 2018. Exports were $58.7 billion; imports were $83.9 billion. The U.S. goods and services trade deficit with India was $25.2 billion in 2018.

India also benefited, though not in a big way, from the ongoing US-China trade war; India's exports to the U.S. rose by $ 755 million in the first half of 2019, according to UN Conference on Trade and Development (UNCTAD); though the trade diversion resulting from the US-China trade war was "smaller compared to some other countries, (it was) still substantial".

According to a recent U.S. Congressional Research Service (CRS), U.S.-India bilateral trade in goods and services is about 3% of U.S. world trade, and has grown in recent years. The trade relationship is more consequential for India; in 2018, the United States was its second largest export market (16% share) after the European Union (EU, 17.8%), and third largest import supplier (6.3%) after China (14.6%) and the EU (10.2%). Defense sales also are significant in bilateral trade. Civilian nuclear commerce, stalled for years over differences on liability protections, has produced major potential U.S. supply contracts. Two-way trade amounted to roughly US$ 125 billion in 2018, with indications of growth ahead, particularly after the FTA's finalization.



*(**GREEN** – continued from page 18)*
installation of wind farms and you have not been to Eemshaven, well, probably there's something wrong with you," Bertholet quipped.

He also rattled off a list of major players in offshore wind equipment manufacturing with offices now in Eemshaven: Siemens, Mitsubishi, GE, Vestas.

Eemshaven has developed into a supply chain of companies large and small that construct, supply and maintain offshore wind farms and their ancillary functions. That's the model Eemshaven follows. It's investing in new support facilities for these players. The latest is a heliport the port inaugurated in September. "We're constantly innovating what we can do as a port," Bertholet said.

*(**UPSWING** – continued from page 22)*
factor into a future scenario of demand lifting rates.

While many analysts are expecting freight volumes to improve as macro-economic indicators are forecasted to trend up for many of the industrial sectors serviced by MPVs, there are a number of caveats. For example, the impact of the implementation of IMO 2020 *(see Peter Buxbaum on page 7)* could dramatically alter the forecast for the MPP in 2020 and beyond. One of the outstanding questions is whether the post-IMO fuel surcharges will stick with the BCOs (beneficial cargo owners)? If MPV owners can't recover fuel costs, will it result in a trimming of assets and potentially shipowners exiting the business? Another question related to IMO 2020 is what impact it will have on MPV fleet renewal? Relative to newbuildings, shipowners have some difficult choices in equipment and propulsion (engines). For example, what would the service impacts be if an owner opted for an LNG powered MPP? MPPs often call at smaller ports frequently located in developing nations – what's the likelihood of such ports having LNG bunkering facilities?

There is also a great uncertainty in how the next generation of MPPs are financed. The German ship financing system which provided the underpinning to the last industry growth spurt (and subsequent overtonnaging) is all but gone. And institutional financing favors big ticket items at a $100 million a pop while MPPs are around $20 million a ship. And traditional banks are risk adverse to financing newbuildings.

So far, as the 2% orderbook implies, most MPP shipowners have adopted a "wait and see" approach to newbuildings, holding the fleet size in check.

But there are shortcomings to a stable market. While stability can lead to rate increases, it also means the fleet isn't modernizing and is less efficient in fuel and other operational aspects. Some BCOs – particularly in the wind industry - are already worried about the ships carrying their freight and won't take a ship older than 12.5 years because of the high insurance premiums. After all, any setback on a major project because of a delay in delivery whether it is in the O&G [oil & gas] or wind power sectors could cost multiple years and many millions of dollars.

Still there are lots of reasons to be sanguine. The O&G business keyed to rising energy prices is putting projects back online that have been on the shelf for seven years or more - offshore oil and LNG projects are showing life. And there are still the mainstays like paper, lumber, steel and steel products to keep the MPPs afloat.

Prehm says in the short term he's forecasting "the market improving steadily but slowly." And when asked about the future for MPPs, he's "carefully optimistic." For a class of ships sandwiched in business by other vessel types, even a modest uptick would be welcomed.

# AIR CARGO NEWS


## United Airlines signs up with WFS for debut Cape Town services

United Airlines will partner with Worldwide Flight Services (WFS) as its cargo handling provider for the first-ever nonstop service by a U.S. carrier between New York/Newark and Cape Town.

WFS in Cape Town has been awarded a three-year contract by United to serve its three-times weekly Boeing 787 Dreamliner flights, which will depart South Africa every Monday, Thursday and Saturday. The new route is a seasonal service, commencing December 15, 2019 through to March 28, 2020.

"For WFS to be selected as United's partner in Cape Town is testament to the high service standards we strive to achieve. The WFS team in Cape Town take great pride in the quality of service we deliver for our airline customers and look forward to contributing to the success of United's new route. The airline is a welcome addition to our growing business in South Africa and this direct cargo capacity to and from New York will be a great boost for the local cargo community," said Malcolm Tonkin, General Manager-Cargo for WFS in South Africa.

WFS handles over 65,000 tons of cargo a year in South Africa at its handling operations in Johannesburg and Cape Town. This new contract follows an announcement earlier this month that WFS had become the first air cargo handling company in South Africa to be awarded Good Distribution Practice (GDP) certifications for its temperature-controlled pharma facilities, aligned to ISO9001:2015, in Johannesburg and Cape Town.

## Tokyo to join Virgin Australia's international cargo network

Virgin Australia will add Japan to its international cargo network in March with the launch of daily services between Brisbane and Tokyo-Haneda.

Commencing on 29 March 2020, cargo space on the new route will be marketed by Virgin Atlantic Cargo under its longstanding international long-haul sales and marketing agreement with Virgin Australia. The daily Airbus A330 flight will offer between 15-20 tonnes of cargo capacity.

The new route, Virgin Australia's first-ever service to Tokyo, is expected to attract strong demand from both passengers and cargo customers.

With the launch of the new Brisbane-Tokyo route, Virgin Australia will be suspending its existing Hong Kong-Melbourne service with effect from 11 February 2020 due to softening passenger demand but will continue to closely monitor the route and look to re-enter the market in the future if it is financially viable to do so.

Dominic Kennedy, Managing Director of Virgin Atlantic Cargo, said: "Cargo customers in Australia and Japan will be very pleased to see the launch of Tokyo-Haneda services and we expect this new direct route to open up significant opportunities for both imports and exports when it commences in March. We also wish to acknowledge the strong support we have enjoyed from the cargo industry for Virgin Australia's Melbourne-Hong Kong services. Although this route will be stopping in February, we will continue to offer capacity on Virgin Australia's daily Sydney-Hong Kong flights and provide a direct trucking service between Melbourne and Sydney to ensure customers retain access to the important Hong Kong cargo market."

Virgin Atlantic Cargo also markets cargo capacity on Virgin Australia's direct services connecting Sydney, Melbourne and Brisbane with Los Angeles, where they also link directly into Virgin Atlantic's international network.

## dnata expands operations at IAD

dnata, one of the world's largest air services providers, significantly expands its operations at Washington Dulles International Airport (IAD). Having been awarded a three-year contract by Lufthansa Group, the company invested US$ 4 million in equipment and hired 125 aviation professionals to its team to provide dedicated support and best-in-class services to its newest airline customers and their passengers at the airport.

Starting from November, dnata delivers quality and reliable ground-, and passenger handling, aircraft cleaning and de-icing services for four airlines of the airline group, including Lufthansa, Swiss International Air Lines, Austrian Airlines and Brussels Airlines, which will operate up to a total of six flights a day from Dulles Airport. dnata now serves 14 airlines with a team of over 300 customer-oriented staff at IAD, managing 5,200 aircraft movements annually.

David Barker, Chief Executive Officer of dnata USA, said: "We are delighted to expand our long-standing partnership with Lufthansa Group at Washington Dulles. The airlines of Lufthansa Group all share our passion for safety, quality and service excellence, and we are proud to be their ground handler of choice at nine airports in the United States. We keep investing in our team, infrastructure and equipment to cement our leading position and continually provide the best possible services to all of our over 60 airline customers in the world's largest aviation market."

Holger Bremes, Director Commercial Airport Infrastructure, Lufthansa Group, said: "Lufthansa and Austrian Airlines are excited to grow the North American relationship with dnata at Washington Dulles International Airport (IAD). With our very positive service experience from destinations like BOS, LAX, SFO and JFK we are looking forward to providing first class service to our customers with our handling partner at Washington Dulles."

dnata commenced ground handling and cargo operations in the United States in 2016.

## Lufthansa Cargo powers up digitalization

With smartBooking, Lufthansa Cargo now offers a new digital interface (application programming interface, or API for short). It provides customers and partners with a binding offer that can be booked online immediately. It contains the available routings, capacities and prices and automatically executes all relevant checks. This means that the offer can be booked in real time and confirmed straightaway. With smartBooking, Lufthansa Cargo has completely digitalized the offer and booking process.

Aside from Lufthansa Cargo's direct customers, partners such as significantly growing cargo.one can also use the smartBooking API to make their platforms even more informative and customer-oriented with immediate access to available capacities and prices.

"We want to offer our customers seamless digital solutions. To achieve this, we connect digitally with our partners along the transport chain. SmartBooking is another major step in our digital transformation process. APIs will continue to gain in importance as an interface to our customers. We are delighted that as first platform our partner cargo.one is using smartBooking, making our services digitally available to many customers," said Peter Gerber, CEO of Lufthansa Cargo.

Oliver T. Neumann, Managing Director of cargo.one, adds: "We are delighted to see that cargo.one adds real value as a digital distribution channel by delivering significant booking volumes. Our aim is to deliver the best customer experience possible and to drive value and efficiency for the airfreight industry. Accordingly, we are excited to be the first Lufthansa Cargo partner to benefit from the new smartBooking API."

APIs are state of the art interfaces in a digital world and enable system-to-system communication. They allow networking both with booking platforms and directly with forwarders. Air cargo customers can access the cargo.one booking platform directly via the Internet. The API also enables Lufthansa Cargo data to be directly integrated into customers' systems.

Lufthansa Cargo joined forces with the digital booking platform cargo.one in July 2018. Now, about a year after launching, the platform is a rapidly growing third-party distribution channel next to Lufthansa Cargo's own ebooking channel.

# Intermodal & Logistics News

## Volvo Trucks launches sales of electric trucks

Volvo Trucks announces the start of sales of its Volvo FL and Volvo FE electric trucks in selected markets within Europe, meeting the increasing demand for sustainable transport solutions in city environments.

In the absence of exhaust emissions and with reduced noise levels from electric trucks offer huge potential in urban areas. First, the reduced noise levels make it possible to carry out deliveries and refuse collection in early mornings, late evenings or even at night, helping to improve transport logistics and reduce congestion during peak hours. Second, with better air quality and less noise, electric trucks create new opportunities for city planning and road infrastructure. An electric truck can, for example be used in indoor loading areas and environmental zones.

"Global urbanization requires urban logistics and truck transport with zero emissions and less noise with increasing urgency. With the Volvo FL Electric and Volvo FE Electric we are able to meet both the strong environmental demands as well as the high commercial requirements of our customers," says Jonas Odermalm, VP Product Line Electromobility.

One challenge is to maximize the payload at the same time as optimizing the driving range.

Volvo FL Electric and Volvo FE Electric were developed in close collaboration with selected customers operating in Gothenburg, Sweden. Feedback has been very positive, and the drivers involved in the collaboration are particularly impressed by the responsive driveline, seamless acceleration and how quiet the trucks are.

## Gore fund leads $400 million deal with trucking startup

In the four years since it was founded, Convoy Inc. has assembled a lineup of big-name investors that includes Bill Gates, Jeff Bezos and Marc Benioff. It's adding one more to the list: Al Gore.

The former U.S. vice president's sustainability-focused investing fund, Generation Investment Management LLP, led a $400 million funding round for Convoy, which makes software to connect freight shippers with truck drivers. T. Rowe Price Group Inc. co-led the investment with Gore's firm, Convoy said. The deal values the startup at $2.75 billion.

Convoy is often described as "Uber for trucking"—a moniker that took hold before Uber Technologies Inc. set up a competing business. Uber has committed to hire 2,000 people to expand freight operations in Chicago. Another rival business in the United Arab Emirates, Trukker, said it received a $23 million investment led by a Saudi Arabian venture capital fund.

A big part of Convoy's pitch is that it can improve the trucking business by making it more efficient, both financially and environmentally. Transportation is the largest source of U.S. emissions today, and heavy-duty trucks represent about 13% of those emissions. Convoy's service is designed to eliminate unnecessary driving by ensuring trucks can get loads on each trip. The business isn't yet profitable, but Dan Lewis, the chief executive officer, has said it will be eventually.

Customers include Procter & Gamble Co. and Anheuser-Busch InBev NV. Among the investors in the new funding round are Alphabet Inc.'s CapitalG, Baillie Gifford, Durable Capital Partners, Fidelity Investments and Lone Pine Capital. The new funds are expected to help the company accelerate its expansion and fend off competition from upstarts, as well as the likes of J.B. Hunt Transport Services Inc.

*(START – continued from page 24)*

ring to remain anonymous, told the *American Journal of Transportation* at the BGBF.

To reach the $ 5 trillion goal, Modi spoke about linking laws, rules and governance to a global benchmark and thus strengthening the confidence of the world to invest in India. "In the coming years, we are going to invest $1.3 trillion on modern infrastructure," Modi said in his address. The infrastructure development will include modernization of roads, railways, ports and airports, but also concentrate on "clean energy" which will mean gradually moving away from the pollution-contributing coal used for energy production.

There has also been some skepticism expressed in U.S. financial circles about the slowdown in India's economic growth – the country's economy is expected to grow at 6.1% this year, down from 9% a few years back – but there is also optimism over the future growth potential inherent in the country which, thanks to its burgeoning middle class, continues to attract investor interest. Modi pointed out in his speech that his government had cut corporate tax – this has been, generally, well-received in U.S. business and government circles - from 30% to 22%, but taxation on new investments funneled into manufacturing would be even lower, falling from 25% to 15%.

The new tax structure enhances India's appeal as an investment destination that can offer competition to other countries, notably Indonesia, Vietnam and other member states of the Association of Southeast Asian Nations (ASEAN) that are vying for a share of the money flowing out of China following the US-China trade war.

The Indian prime minister said that his government had abolished some 50 laws that were outdated and not conducive to growth. And, as said earlier, he emphasized that this was "only the beginning", promising there will be "much more to come in the future". "India is waiting for you. India is the only destination for you," he declared.

### Climate Change

Modi did speak, eventually, on climate change and attributed the slow pace in replacing coal as a source of energy – India uses coal to produce some 72% of the country's electricity, even as India's Power Ministry has targeted reduction of coal burning to 50% by 2030 - to India being denied entry into the Nuclear Suppliers' Group which consists of uranium suppliers around the world. Because of its exclusion from the NSG, India is not able to get a steady supply of uranium to enable it to reduce its dependency on coal. India has been knocking at the NSG door for some time, but it has not gained admittance to the club thanks to objections by China. The NSG has 48 member countries. The Indian Prime Minister was responding to a question by Bloomberg as to when India could reduce the burning of coal. Modi said that India has the potential to create a "new environmental model for the world" if it had access to NSG fuel.

As a contribution to reducing the impact on climate, Modi observed that India intends to achieve 450 gigawatts of renewable power capacity in the "near future" and is ahead of schedule in implementing a more immediate goal of 175 gigawatts capacity from solar, wind and biomass.

India, China and the U.S. together generate some 50% of the global carbon dioxide emissions.

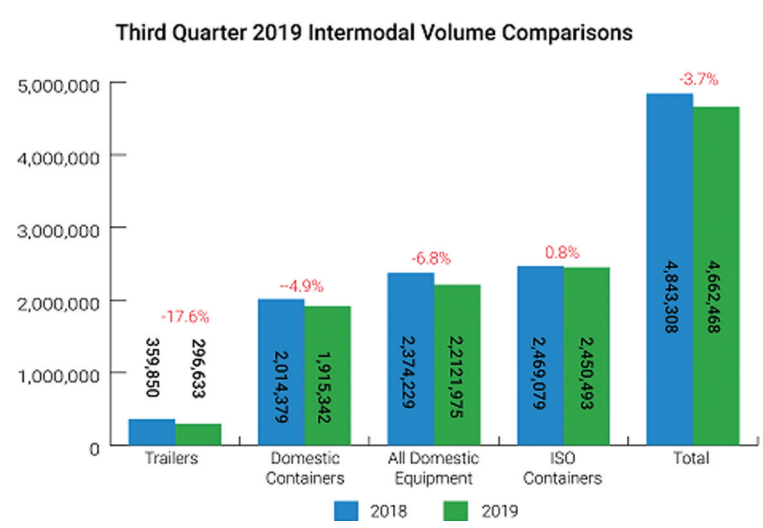
## Intermodal downturn continues in Q3

Total intermodal volumes dropped 3.7 percent year-over-year in the third quarter of 2019, according to the Intermodal Association of North America's Intermodal Market Trends & Statistics report. International shipments nudged down 0.8 percent from 2018, while domestic containers and trailers fell 4.9 percent [corrected] and 17.6 percent, respectively.

"Looser trucking capacity, continuing uncertainty about Chinese tariffs, and tough comparisons to 2018 volumes are the primary factors driving intermodal traffic," said Joni Casey, president and CEO of IANA.

The seven highest-density trade corridors, which collectively handled 62.8 percent of total volume, were down 3.1 percent. The Southeast-Southwest corridor topped Q3 growth at 3.3 percent followed by the Intra-Southeast and Trans-Canada, which came in at 1.8 percent and 1.3 percent, respectively. Four corridors recorded decreases: the Midwest-Northwest at 2.1 percent; the Southwest-Midwest, 4.1 percent; the South Central-Southwest, 6.6 percent; and the Northeast-Midwest, 7.3 percent.

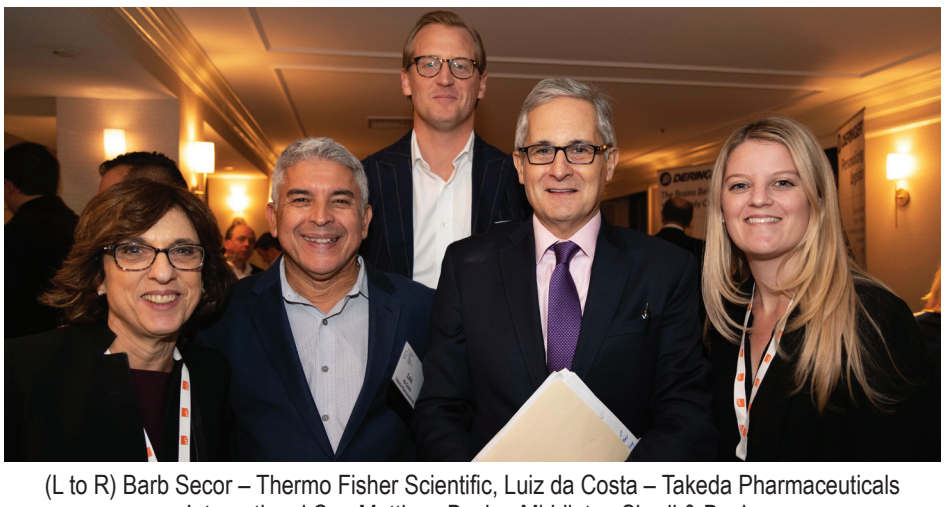
Total IMC volume fell 7.6 percent year-over-year in Q3. Both intermodal and highway loads were down for only the third time since the Great Recession.



# CONECT hosts 18th Annual Northeast Cargo Symposium at Graduate Hotel in Providence, RI

CONECT's 18th Annual Northeast Cargo Symposium was held at the Graduate Hotel, Providence, RI on Wednesday, November 6. Over 160 trade and transportation professionals enjoyed top-shelf educational sessions covering many facets of trade with China, alternative sourcing, tariff updates, U.S. port competition, transportation tech advances, and new Customs initiatives. Multiple opportunities to socialize were provided during the day and evening for attendees to expand business networks. *(Photos by Andrew Held, Andrew Held Photography)*

(L to R) Michelle Bergeron – Janel Group, Paul Pacewicz – Bob's Discount Furniture, Kristen Skroskis – EFL Expofreight, Eric Gauthier – Brooks Brothers Group



(L to R) Barb Secor – Thermo Fisher Scientific, Luiz da Costa – Takeda Pharmaceuticals International Co., Matthew Bock – Middleton Shrull & Bock, Peter Friedmann – FBB Federal Relations, Spencer Young – FBB Federal Relations

(L to R) Phil Marlowe – Acuitive Solutions, Michelle Darling – BJs Wholesale Club, Debby Bosselman – Acuitive Solutions


(L to R) Kendall Kellaway – RoadOne IntermodaLogistics, Lauren Gleason – Port of Boston, Ken Uriu – Port of Long Beach

(L to R) Rado Saragih – Port Authority of NY/NJ, James Frostick – IMS Logistics, Greg Brinkman – Bob's Discount Furniture

(L to R) Paula Connelly – Sandler, Travis & Rosenberg, P.A., Kevin Bruning – Clarks Americas, David Murphy – Grunfeld, Desiderio, Lebowitz, Silverman & Klestadt

(L to R) Eric Rivera – Jofran Sales, Kevin Laffey – Port of Boston, Joe O'Connor – Franklin Sports, Paul Pacewicz – Bob's Discount Furniture

(L to R) Jack Bender – A.N. Deringer, Pam Baker – A.N. Deringer

(L to R) Michelle Bergeron – Janel Group, Liz Dann – Burton Snowboards, Mike Bolduc – Wen-Parker Logistics

(L to R) Andy Rosener, Christmas Tree Shops Co., David McLaughlin – RoadOne IntermodaLogistics

(L to R) Beth Green – Destination XL Group, Linda Wood – Bennett & Company

(L to R) Lauren Gleason – Port of Boston; Amy Elmore – Bob's Discount Furniture

(L to R) Nicole Uchrin – Gemini Shippers Association, Jude Fokum – Port of Boston

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