

Transport, Handling, Warehousing and Distribution of Forest Products

IFPTAJOURNAL

www.ifpta.org

Vol. 36, Number 2/2019

BIG DATA HITS THE FOREST

HOW DIGITALIZATION MIGHT CHANGE THE WHOLE SUPPLY CHAIN



Also inside:

TS 23: An update on the program

Customized logistics solution:

Metsä Fibre sets new benchmark

Investment: Stora Enso Imatra mills' new automated warehouse

Picture: Södra





Warehousing &
Distribution, Inc.



*Murphy Marine
Services, Inc.*

SUCCESS STARTS WITH A WINNING TEAM!

Since our establishment in 1920, we have been providing our customers the best possible service through superior handling and performance, technological advancements, and a constant eye on customer satisfaction. We offer one of the most cost effective and reliable labor forces in the North Atlantic.

We can accommodate a variety of automobile, bulk and breakbulk, container, perishable, and paper and forestry products. Our distinction lies in our ability to closely coordinate your stevedoring, warehousing, and distribution logistics.

WE OFFER OUR CUSTOMERS:

- 2 million sq. ft. of warehouse space
- Customer access to 24-hour inventory tracking
- Container transloading, from / to rail or truck
- 17 berths, 3 RO-RO ramps
- Specially engineered heavy lifting gear
- On-site access to 2 class 1 rail systems
- On-site intermodal facilities
- Efficient distribution to two thirds of the United States and Canadian populations within 48 to 72 hours

FOR MORE INFORMATION CONTACT US AT:

PENN WAREHOUSING & DISTRIBUTION, INC.
2147 South Columbus Blvd.
Philadelphia, PA 19148
TEL: 215-218-3000
FAX: 215-218-3043
WEB: www.pennwarehousing.com

J.H. STEVEDORING, INC.
2147 South Columbus Blvd.
Philadelphia, PA 19148
TEL: 215-218-3060
FAX: 215-218-3078
WEB: www.jhstevedoring.com

MURPHY MARINE SERVICES, INC.
701 Christiana Avenue
Wilmington, DE 19801
TEL: 302-571-4700
FAX: 302-571-4702
WEB: www.murphy-marine.com





International
Forest
Products
Transport
Association

President
Alan Bog
Euroports Asia Terminals, Shanghai, China

Vice President
Einar Didriksen
Saga Welco AS, Notteroy, Norway

Secretary/Treasurer
Tom Mutz
PENN Warehousing & Distribution, Philadelphia, PA, USA

Directors
Targe Bock
Fibria International Trading GmbH, Lustenau, Austria

Annette Thuen Hansen
G2 Ocean AS, Bergen, Norway

Horst Kaupke
BLG Cargo Logistics GmbH, Bremen, Germany

Laurie Kravski
West Fraser Timber Co., Vancouver, BC, Canada

Ana Paula Trilho
Klabin S.A., São Paulo, Brazil

Rhoda Voth
Saga Welco AS, Savannah, GA, USA

Anna Ward
Alabama State Port Authority, Mobile, AL, USA

IFPTA Association Management
TAPPI
15 Technology Parkway S., Suite 115
Peachtree Corners, GA 30092
Tel.: +1 770-209-7265
Fax: +1 770-446-6947
info@ifpta.org



The IFPTA Journal is published by Fastmarkets RISI
Editorial Headquarters
4 Alfred Circle
Bedford, MA 01730 USA
Tel.: +1.866.271.8525, fax: +1.781.271.0337

Managing Editor..... Susanne Haase
(susanne.haase@fastmarkets.com)

Contributing Editor..... Graeme Rodden

Graphic Design Manager Anne-Chantal Bodart

Chief Executive Officer..... Daniel Klein

Advertising Sales:

International: Remy Poos - +32.497.050.735
remy.poos@fastmarkets.com

North America: Greg Porcaro - +1.781.734.8906
greg.porcaro@fastmarkets.com

Vincent Monahan - +1.781.734.8931
vincent.monahan@fastmarkets.com

CONTENTS



- 3 From the editors**
Safety is becoming a priority
- 5 Board Beat**
Where is the pulp market heading?
- 7 Chairman's Corner**
The opportunity to update yourself!
- 9 Terminal Operations**
Pacific Terminal barges ahead
- 11 Digitalisation**
Big data hits the forest
- 15 Customized logistics solution**
Metsä Fibre sets new benchmark in supply chain efficiency
- 18 Internal logistics**
Stora Enso Imatra mills invested in a new automated roll warehouse
- 21 Material Handling**
Supplier meets Kimberly-Clark's high demands
- 24 Industry News**
 - Södra invests SEK 20 million for sustainable transportation solutions
 - Altri Celbi in Portugal achieves new production world record
 - Finnish open forest data system enormously popular
- 27 IFPTA News**
 - Spring Board Meeting Minutes
 - Industry Events
 - New Members
- 30 Market Quotes**

Join us at the
**BEACH CLUB NETWORKING
'CHILL' EVENT**

PPI TRANSPORT **23** **September 16 - 18, 2019**
SYMPOSIUM Tarragona, Spain

Invitations to follow soon but feel free to contact us if you want to participate

Alexander Global Logistics GmbH
Museumstrasse 2-6
28195 Bremen, Germany
phone +49 (0)421 566 46 0
fax +49 (0)421 566 46 200
info@alexander-logistics.com
www.alexander-logistics.com

 **Alexander**
Global Logistics



Safety is becoming a priority

By SUSANNE HAASE, Editor

Dear Readers:

Workers in the pulp, paper, graphical and packaging sectors, represented globally by IndustriALL Global Union and UNI, were using this 2019 Workers' Memorial Day to kick off a year-long campaign around the three fundamental worker rights needed to make work safe: (1) The Right to Know – workers must know the hazards and risks in their workplace; (2) The Right to Act (commonly known as the Right to Refuse Unsafe Work Without Punishment) and (3) The Right to Participate in the safety programs and structures that manage safety in the workplace.

The two international unions bring together unions on all continents across these four industries. IndustriALL Global Union's affiliates represent more than 50 million workers in 140 countries in mining, energy and manufacturing sectors, while UNI Global Union represents more than 20 million workers from more than 150 different countries

Workers' Memorial Day, April 28, is a day dedicated to remember those who have suffered and died on the job and to renew the struggle for safe jobs. According to these unions, worldwide each year more than 380,000 workers die tragically at work and another 2.4 million die from work-related illness.

Current Right to Know laws typically focus on a worker's right to know the hazardous substances and dangerous chemicals they work with, but workers emphasize that they have the right to much more information on dangers at work. The global pulp, paper and packaging sectors were invited to work with workers and their representatives to fully facilitate the right to know and by doing so build safer and healthier workplaces, said Joaquina Rodriguez, president, UNI Graphical and Packaging.

International mobilizations will be conducted in September/October 2019 around the Right to Act; and focusing March/April 2020 on the Right to Participate, culminating with Workers' Memorial Day 2020.

The production process of pulp and paper involves, amongst others, heavy raw material, high-tech machinery, chemicals, pressure vessels, heat and steam – and it doesn't come as a surprise that the pulp, paper, graphical and packaging sectors are known to be dangerous, with a number of fatalities and even more life altering injuries occurring across the globe annually.

That's why transparency with workers on information relating to their health and safety

and employer engagement with workers and their unions is fundamental to address loss of life and limb in the industry.

In recent years, a lot of global players from the industry have launched programmes with the intention to reduce accidents ultimately to zero. Companies have realized that work place safety is a top management issue – and one that has to be on the agenda and taken seriously every day. Furthermore, the view on safety has been broadened – from the production environment to internal and external logistics involved.

A story in this issue – the installation of an innovative automated warehouse with special software and IoT tools at Stora Enso Imatra – underlines this development. One reason for this investment was to reduce the number of people driving forklifts and handling rolls of paper in order to increase efficiency – and decrease potential damage to staff and product.

It seems pretty obvious that this topic is going to become more important for the transport of forest based products as digitalization advances and companies as well as their employees are less and less willing to take a risk.



Angel Brzezinski
BalTerm employee for 7 years

One of our most important assets.

Quality service. Quality employees.

Partnering with BalTerm means you partner with 180 of the most experienced personnel in forest products warehousing, stevedoring and shipping. Their mission: to provide quality service to you... our valued customers. Just-in-time delivery services mean



fast execution and world-class forest products terminal handling. Quality service and quality employees, along with exclusive strategic partnerships are the foundation of over 100 years of warehousing, stevedoring and cargo handling experience.

At BalTerm, our assets are your assets.



www.BalTerm.com

South Locust Point Marine Terminal 2001 East McComas St. Baltimore, MD 21230 410.752.9981



Where is the pulp market heading?

By ALAN BOG, IFPTA President

As I write this, many of us have just returned from the International Pulp Week in Vancouver. Like me many of you have probably come home still confused about where the pulp market is heading.

For IFPTA, International Pulp Week is an important event. We always hold our spring Board Meeting there, which is our last meeting of the Board before the Transport Symposium in Tarragona.

We also hold our regular IFPTA on the Road event on the Monday afternoon. We are very grateful to Bill Craig, VP of Pulp Sales for West Fraser, who took time out from his busy schedule to give us an excellent presentation on his views on the Pulp Market. He gave an excellent analysis and investigated the impact of the Chinese economy and the current trade war with the US.

The event was well attended and all present

were very impressed with Bill's presentation.

By the time this Journal hits your desk we will be in the midst of our election process for IFPTA Board. There are four positions available, with two current Board members standing for a second term, Horst Kaupke and Ana- Paula Trilho.

We will post the details of all the candidates on the web-site, and you will be contacted shortly with details of how to vote electronically



International
Forest
Products
Transport
Association

I F P T A

network

Membership Services

info@ifpta.org

+1.770.209.7265

www.ifpta.org

Have you renewed your IFPTA membership?

Keep an eye on your email for your IFPTA Membership Renewal Notification.

You can easily renew online by following instructions in your email or by visiting the IFPTA website and clicking [Join or Renew Today!](#)

If you have any questions about your IFPTA Membership, please contact us today.

RENEWAL REMINDER

Adding value to your supply chain

We're heading for the future offering additional value for your logistics needs. Welcome on board, reach your markets with competitive and reliable services adapted for increased volumes.

SCA Logistics – We sharpen your competitive edge
www.scalogistics.se





The opportunity to update yourself!

By ALAN BOG, IFPTA President and EINAR DIDRIKSEN, IFPTA Vice President

Registration for TS23 is now open, and early reports show that there is already a very encouraging number of delegates signing up. Don't forget to ensure that your IFPTA membership is up to date, as this gives a very healthy discount compared to the public price for the event.

Einar Didrikson and myself have been working on the program which is now almost complete.

In the last edition we talked about the Fuel Session, moderated by Trond Baardsen, which will examine the impact of the IMO 2020 regulations from both a technical and financial point of view.

We also highlighted the Carriers' Panel, moderated by Ana Paula Trilho, a longstanding IFPTA Board Member, which will focus on how carriers will deal with the increased demand when the upcoming new pulp capacity comes on stream in the next couple of years. This panel will include representatives from Saga Welco and Cosco, as well as container carriers.

Our Ports and Terminals Panel will be moderated by Rhoda Voth, one of our IFPTA Board Members. This panel will examine the trend for ports and terminals and what the future holds for them. Is there a future for specialist breakbulk terminals or is this a thing of the past? The panel will include Anton Verbrugge from Verbrugge Terminals, giving a European perspective, Tony Tang from the Port of Qingdao in China, a representative from a Canadian Port and Milind Balaji, who will be able to enlighten us to the issues faced by shippers.

This will be the first time the Transport Symposium has been to the Mediterranean so

it is very important to examine what is happening in the region. Horst Kaupke, also an IFPTA Board Member will lead our Mediterranean and Middle East Session. So far we have four confirmed speakers on this panel, Antonio Rognoni from CLP Livorno, Emir Kisagun from Unirep who will be able to give an interesting perspective on Turkey, which many claim will be the new China, and Pablo Garcia from Euroports, in our host city of Tarragona

A new item on our agenda will be one to one interview sessions with Senior Players in the Industry. Fabio Almeida from Suzano has agreed to be interviewed, and I am sure many delegates will be interested to hear from this representative of the biggest pulp player in the world.

We will also have an interview with Jyrki Ranki from Metsä who will discuss the issues facing the Nordic producers in shipping their product. We often hear about the expansion in South America, without focusing on the expansions in Finland and Sweden.

We will have a session on Railways, moderated by Tom Mutz, the IFPTA treasurer, which will look at issues with rail on three continents. Paul Terry from Mercer will look at issues facing Canadian shippers, we will have a representative from a US railroad, DB looking at Europe and a representative of the rail-link from Europe to China.

We will have a panel looking at Global Demand and how China has been affected by events such as the restrictions on recovered paper. Alan Bog will moderate this panel which will include Tom Wright from Hawkins Wright and Ranjit Baxi the President of BIR.

Targe Bock, form Suzano who is also an IFPTA Board member will moderate a panel on Digitalization and we will go into more detail about this and other panels in upcoming editions.

All-time favorite panel

Ana Paula Trilho, moderator of the Carriers' session, says:

"Another odd year, and here we go to Tarragona for our TS23 next September!! This is the opportunity to update yourself on the latest happenings of our forest products logistics world. This year we will have what I consider the "all-time favorite" panel subject: SHIPOWNERS - containers x bulk.

We already have confirmation on the participation of the main players on this market: Saga Welco, Cosco x MSC and Hapag Lloyd. You can't miss the opportunity to hear straight from them their point of view of the future of these modals, the advantages of each one, and an odd chance to participate on this debate!! We are counting on your participation/contribution!! A healthy discussion! "

For us, forwarding
business also means:

with over 100 years
— OF EXPERIENCE —
with forest products,



there's no need
to knock on
WOOD.



When it comes to transporting paper, cellulose, and wood, we know exactly what to do. As the world's largest specialist forwarder of forest products, we are familiar with all the challenges that arise when transporting this sensitive cargo. And thanks to over 100 years of experience, we are able to carve a precise logistical solution for every possible need. So you can be sure: with us, your cargo is in the best hands.

www.fms-logistics.com | info@fms-logistics.com

PACIFIC TERMINALS BARGES AHEAD

An IFPTA Journal Special Report

The Seattle-based operator is looking beyond pulp and paper although it is still the core of its business

Pacific Terminals began operations in 1984 as the transportation arm of Crown Zellerbach Canada, at the time, the premier pulp and paper company of the Northwest.

Pacific Terminals, now owned exclusively by Brad Lovejoy, continues its tradition of handling pulp and paper products.

Pacific Terminals operates a 157,000-ft² facility on the water in the heart of the Port of Seattle. It is served by both the BNSF and UPRR railroads, more than 10 cars per day can be loaded and/or unloaded at Pacific Terminals.

It is the barge operation that sets Pacific Terminals apart from any other warehouse/distribution facility in the Puget Sound Region. Operating the barge Whidbey, the local Federal Maritime Commission manager called Pacific Terminals the “Poster child for short sea shipping in the the Puget Sound”.

Pacific Terminals has a lower carbon footprint as it takes the equivalent of 60 trucks off the highways each trip it makes. The tug’s one diesel engine does the work of 60 truck engines.

Pacific Terminals maintains a large fleet of forklifts with clamps that can handle almost any sized bale or roll.

Pacific Terminals has handled pulp and paper from most of the tidewater mills in the area including:

- Port Angeles, WA;
- Port Townsend, WA;
- Port Alberni, BC;
- Port Mellon, BC;
- Crofton, BC;
- Campbell River, BC.

Pacific Terminals strategic location in the heart of one of the nation’s largest ports coupled with its direct freeway and rail access gives it a



Pacific Terminals’ barge Whidbey provides a special type of a transport service

tremendous advantage for handling pulp and paper from inland destinations as well as a variety of other products.

Besides pulp and paper, Pacific Terminals now handles:

- Export mining equipment to Russia;
- Import clothing (most collegiate jackets are distributed from Pacific Terminals);
- Eucalyptus pulp from South America;
- A wide variety of general cargoes.

Picture: Port of Seattle

Picture: Pacific Terminals

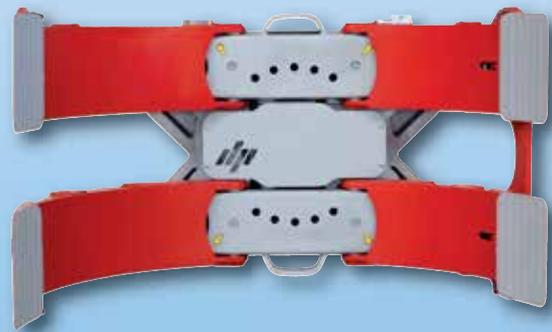
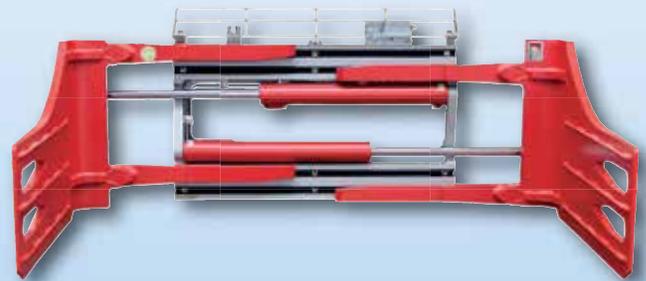


see us at stand 609
PPI 2019 - Spain



More than 70 years experience

high quality products efficiency - durability - service



Management System
ISO 9001:2015

www.tuv.com
ID: 1520001000



Durwen Maschinenbau GmbH
August-Horch-Straße 5

56637 Plaidt - Germany

Phone: +49 26 32-70 00-0
export@durwen.de

www.durwen.de

Södra intends to remain at the front of developments

BIG DATA HITS THE FOREST

An IFPTA Special Report

Södra is at the forefront of developing digital tools to optimize the management of its forests for customers and members alike.

“You are what you eat,” the doctors line to tell us. But the same can also be said of paper: A final product can only be as good as the raw materials used to make it. As consumers become ever-more discerning and competition to innovate intensifies, there has never been a more important time to get the recipe right. That’s why Södra is working more keenly than ever to ensure that it keeps tight control of the ingredients in its pulp, starting where it all begins – back in the forest.

Södra Skog is the division within Södra that handles its members’ wood. One of its jobs is to maximize the value of that wood for the customer, the company, and for the 50,000 small forest owners that make up Södra’s membership. It’s a job which goes hand in hand with that of balancing economics with sustainability. In recent years, a crucial aspect of optimizing forest management within the Group has been via digitalization, as Södra’s IT Manager, Örjan Vorrei, explains: “We have been working with digital solutions to improve our business for a decade now and I can honestly say that we have been at the cutting edge of digital technology for forestry for some years now.”

Södra’s interest in digital tools actually goes back a long way. Vorrei: “Back in the 1960s, some very clever forest companies in Sweden decided to join forces to create a digital hub which could collate their business data on forestry. A company was established called SDC. Södra is still a member of SDC today, along with 654 others, and it remains a very important platform for us.”

Part of SDC’s role is to simplify business transactions between forestry companies in Sweden, enabling the sharing of data, facilitat-

ing trade and invoicing and offering full chain of custody from the initial buyer to the end user in the supply chain.

Södra’s involvement in SDC sparked an ap-

preciation of digital technology but the company knew it would have to go further to really add value. “The hub is an excellent platform but we realized some years ago that we also needed



All pictures: Södra

tools for when we are out in the field - digital aids that could really tell us more about the forest than we could see for ourselves," Vorrei remarks.

As a result, mobile mapping systems were put on Södra's agenda as long ago as 2006, some time before the iPad. "This is quite a success story," Vorrei says. "Initially, we began with a PDA, the small hand-held computer that preceded the iPad. We managed to integrate some simple maps and aerial photos in an attempt to simplify our field services. It was an effective way of defining precise borders on members' land, and so on. However, when we tried to introduce the idea to our field personnel, we found it was unpopular and staff were reluctant to use it. It was not the most practical tool for managing data on the move."



Södra has been working with digital solutions for a decade now

Efficiency:
WE WEAR IT WELL.



THE PORT OF MOBILE
Alabama State Port Authority

www.asdd.com



A bite of the Apple

However, a few years later in 2011, Vorrei and the team realized another opportunity was on the horizon. “The iPad was hitting the market and we realized it was going to prove a lot more popular than the PDA. That Christmas, we gave all key field personnel an iPad and told them to just have some fun with it, to explore it with their families and learn and how to use it.

“At the same time, we were developing an app. At first, it was little more than a powerful map engine with GPS. In contrast to the PDA, it was immediately well received. Everyone loved both the iPad and the app. Since then we have continued to develop the app into one of the most important tools we use out in the forest. We have even sold it to several other forest companies in both Finland and Norway and we could probably sell more if we chose to, but that’s not our core business.”

Today, all Södra’s field work is conducted via the app and its use has been expanded to include the contractors, who harvest and thin the forest, as well as the members. For the latter, the app has been paired with Södra’s Green Plan, the individual plan for each member’s forest which defines how that particular forest should best be managed for the owner, Södra and the environment in tandem. “We’re proud of the original paper green plan but it had limitations, namely that it could be left on a shelf. The app makes the plan live, current, portable and much more powerful,” Vorrei says.

“Although we were at the forefront of developments, digitalization was not a big issue 10 years ago, but today the picture is very different,” he adds. “Then it was about trying to become more efficient, to retain a competitive edge. But today digital technology is about far more for us. It has become an integral part of the strategy. We have used it to create a representation of the whole of our members’ forest area in great detail, where one pixel covers several meters. We have been able to build up a picture that allows us to see exactly what trees are standing where, what volumes of a certain species we have, and this data can be broken down by the age of the tree, its value and more. We are now work-

ing on the next step, which is using GIS - geographical information system - and working with the University of Växjö, to extract data from satellites to include in data mining projects, giving us the clearest understanding yet of the forest and its value.”

Onwards and upwards

One of the components Vorrei is most proud of is an algorithm the team has developed along with Skogforsk, a Swedish research institute



Digital technology has become an integral part of the company’s strategy

for the forest sector, which can predict the outcome of an individual forest harvest with up to 99% accuracy, forecasting how many logs of any given dimension it will yield, for example, how much pulpwood of what age, the number of species, and so on. “If we know exactly what we have and what we will generate during a harvest, we can really tailor our forests to the precise demands of the market at that moment, or even to an individual customer,” Vorrei explains.

The technology has implications for the company, its members, and its customers. “We are really ahead of the game here,” says Vorrei. “We want to empower our forest owners to give them a better understanding of their assets than they could have by standing in the forest itself. In turn, this understanding moves to the pulp mills where we can use it to predict the best use of each forest for each pulp grade. If we can see there is a surge in demand for a pulp that is best made from spruce grown on south-facing slopes, for example, we can be that detailed. The next step is to fully integrate our other business areas such as pulp and timber with the technology. This is only going to become more important for all of us. And we intend to remain at the front of developments for as long as we can.”



The outcome of an individual forest harvest can be predicted with up to 99% accuracy

PPI Transport Symposium 23

Network, exhibit & learn.

Insights from across the forest product transportation supply chain



September 16-18, 2019
Port Aventura Business & Events
Convention Centre, Tarragona, Spain

PPI TRANSPORT
SYMPOSIUM **23**

Register today
risi.com/transport

Sponsored by:



Metsä Fibre's Äänekoski bioproduct mill in Central Finland

A comprehensive and customized logistics solution was needed for the new Äänekoski bioproducts mill

METSÄ VASTLY INCREASES ITS SUPPLY CHAIN EFFICIENCY

By SUSANNE HAASE, Editor

A logistics solution tailored for the needs of Metsä Group raised the efficiency and accuracy of the pulp production chain at Äänekoski bioproduct mill to a new level.

Metsä Fibre has taken careful steps to ensure that pulp deliveries from the bioproduct mill to customers will be handled efficiently. After the bioproducts mill became fully operational, the company's pulp production capacity grew from 2.5 to 3.2 million tonnes/yr in total. In the face of this impressive number, the production chain was carefully planned - in close cooperation with customers and service providers.

The construction of an entirely new production unit has provided Metsä Fibre with an excellent opportunity to increase the efficiency

of the pulp production chain in great leaps. The company has developed new operating models to ensure the bioproduct mill's delivery process.

WOOD NEEDS HAVE SEEN A SIGNIFICANT INCREASE

Metsä Group's bioproduct mill is using 6.5 million m³ of pulpwood a year. The use of pulpwood at Äänekoski increased by a good four million m³ compared with the previous volumes.

The Group's own wood supply in Finland will increase by about a third in the long term. External deliveries and the volume of woodchip purchased from sawmills will also increase. The goal is to purchase most of the wood from Finland and Metsä Group's owner-members and

within a radius of roughly 100 to 150 km. As the pulpwood from Central Finland heads to Äänekoski, more wood will correspondingly have to be purchased from the vicinity of other Metsä Group units in Kemi, Joutseno and Rauma.

The harvesting is carried out by the company's experienced contractors, for whom the increased use of wood offers a chance to grow their business with a long-term perspective. The harvesting resources have been planned and dimensioned in such a way that they can respond to the challenge. Once a forest owner makes a stump sale with Metsä Group, a harvester fells, chops and measures the wood in the forest. Then a forwarder transports the wood to a forest stock by the side of a road.

Steadiness and longevity are words when talking about the bioproduct mill's wood supply. Together with contractors and machine manufacturers, Metsä Group is also actively developing solutions that enable year-round harvesting.

**TERMINALS BALANCE
SEASONAL VARIATION**

In full operation, the bioproduct mill is using some 20,000 m³ of wood and woodchips per day. The unit is receiving an average of 240 truckloads and 70 rail freight carriages of pulp wood daily. The timber trucks transport the wood from the forest stocks either directly to the mill, or to a buffer stock in one of the 15 terminals. The terminals serve to ensure a steady flow of wood for the mill during thawing seasons and on weekends, since the possibility to store wood in the compact mill area is limited.

The network of terminals is operated by two logistics contractors who have cooperated with Metsä Group for a long time. The terminals west of Äänekoski are operated by the Seinäjoki-based transportation company Kuljetus Haavisto Oy, while the terminals on the eastern side of Äänekoski are operated by the Joutseno-based Szepaniak Oy.

The biggest challenge to the production chain in the logistical sense is how to control wood flows in a flexible way. One of the tools used in this work is the new unloading time app, which is used to receive wood shipments at the mill according to pre-arranged schedules.

Another one of the most important areas in handling the production chain in the most efficient way is the cutting-edge automated pulp distribution centre delivered by Finnish supplier Psmel. It improves the quality and accuracy of pulp deliveries by using the new TransBale concept, which was developed in cooperation with Metsä Group in 2013 and was the first delivery of its kind in the world.

**AUTOMATED PULP
DISTRIBUTION CENTRE**

The core of this automated distribution centre is a high-bay storage with two fully automated stacker cranes. The system buffers and sorts pulp bale units by product type and customer order,



Picture: Metsä Fibre

In the distribution center, every pulp bale is furnished with an RFID tag

A rail freight carriage transports 1,400 tonnes of pulp



Picture: Metsä Fibre



Picture: Metsä Fibre

Pulp destined for domestic customers is delivered by truck as well

and controls all dispatch operations. Compared with typical high-bay storage that uses a pallet racking system with several stacker crane aisles where only two pallets can be stored in each, TransBale is deep-lane storage where six pulp bale units can be stored in each storage channel. This makes it possible to store larger amounts of material in a smaller space. The pulp bale units are stored on steel C profiles, and the shuttle car moves the bales from the bottom, which is gentler than the typical way of moving them by the steel wire that holds the bale units together.

The distribution centre is equipped with the Pesimal WMS fully automated warehouse management system, in which warehouse inventory is tracked in real-time. The WMS plays a big role in the operations of the distribution centre as it is connected to both the production automation system and the mill's SAP system. Based on the product and dispatch information obtained from these systems, the WMS controls automated train and truck dispatch and loading operations. With automatic loading, trucks are loaded in five minutes, and a train with 22 cars carrying 1,400 tonnes can be loaded in three hours. In addition to loading efficiency, automation minimizes work safety risks and damage to the equipment and products.

STRONG SOLUTION IN MANY RESPECTS

There are several benefits to utilizing the TransBale concept that make it a strong solution: The automation of the distribution centre lowers operating costs significantly, because there is less need for forklift drivers and supervisors in loading. The functionality can be supervised by the operator at the mill. The high-bay construction enables increased production capacity without the need for additional investments in the distribution centre. The high-bay concept requires less space for building, and it is easy to expand the shelving upwards if future needs dictate without substantially disturbing the operation of the facility.

The TransBale concept supports environmentally friendly principles. The system works totally on the energy produced by the Metsä Group mills, so no fossil fuels are used. In addition,

the stacker cranes store the energy that is produced when the cranes lowers. This energy is supplied to the mill's own electricity network.

The Pesimal WMS allows adjustable sorting



Picture: Metsä Fibre

Timber trucks transport the wood from the forest stocks either directly to the mill or to a buffer stock



Picture: Pesimal

The automation of the distribution centre lowers operating costs significantly

Bioproduct mill

Euro 1.2 billion investment
1.3 million tonnes of pulp annually
40 hectare site
Up to 2,500 workers on site at a time during construction

capacity, which means that there is no longer any need for preliminary sorting, as the stacker crane and WMS keep track of the storage location of each pulp bale unit. This enables the optimal use of space, regardless of how many different grades of pulp are produced.

PULP TO VUOSAARI BY RAIL

In the distribution centre, every bale of pulp is furnished with an RFID tag, which makes the products easy to trace. Export pulp is transported to the Vuosaari (Helsinki) export harbor by train which means 44 railroad cars by day. Pulp destined for the domestic market is delivered to customers in by truck or train.

The loading of a rail freight carriage that transports 1,400 tonnes of pulp from the distribution centre to Vuosaari is carried out in six hours with two automated storage unit lifts and two semi-automatic overhead cranes.

Rail transport partner, VR Transpoint, has been involved in the planning of the logistics solution from the very beginning. The new operating model is indeed tailored precisely for the needs of the bioproducts mill and Metsä Fibre. The pulp producer has also built its own product warehouse at Vuosaari which can house 80,000 tonnes of pulp.

Export logistics are based on a comprehensive new solution as well: VR Transpoint is responsible for the rail transport of goods and for port operations in cooperation with M. Rauanheimo Ab.

ACROSS THE WORLD BY SHIP

Some 70% of the 1.3 million tonnes of pulp produced by the bioproducts mill are exported. At Vuosaari, the pulp is loaded on ships as bulk cargo, in containers or as trailer loads. The greatest growth potential is in Asia, and particularly China. In Europe, demand has remained steady, and growth is also visible in the Middle East and North Africa.

Alongside a quality product, success in the pulp market requires a reliable and efficient production chain. The seller must be able to anticipate the future needs of a demanding customer increasingly accurately. As it seems, Metsä Fibre has realized the needs of tomorrow.

Stora Enso Imatra mills invested in a new automated roll warehouse

THE NEED FOR SIMPLER INTERNAL LOGISTICS

AN IFPTA JOURNAL SPECIAL REPORT

In the summer of 2016, Stora Enso announced plans to invest in its Imatra mills to increase its production capacity for extrusion-coated products, and to further enhance its position as a leading global supplier of premium paperboards. Alongside the new polyethylene (PE) coating plant, Stora Enso also made the decision to invest in a new automated roll warehouse.

Before this investment decision was made, Stora Enso's Imatra Mills had needed to utilize outside warehouses in the region to store its intermediate roll buffer due to space limitations in the warehouse at the mills, which used the traditional clamp truck warehouse concept. This meant multiple clamp truck handling phases between the base paper production, PE coating processes and shipping. This decentralized process inventory was challenging to control, very labor-intensive to manage, and led to quality costs.

All PE-coated rolls had to be fully wrapped twice: once in order to tolerate the maneuvering by clamp trucks in the intermediate storage process, and again after the PE coating before being shipped to the customer. With the automated roll warehouse, the target was to inte-

grate a sufficient intermediate roll buffer in the mill area between the production, converting and shipping processes, and to cut costs by simplifying and automating the internal logistics. After completing lengthy feasibility studies comparing various alternatives, Pesimal's Trans-Roll deep channel rack storage concept proved to be the most cost-effective solution.

Alternative automated warehouse concepts

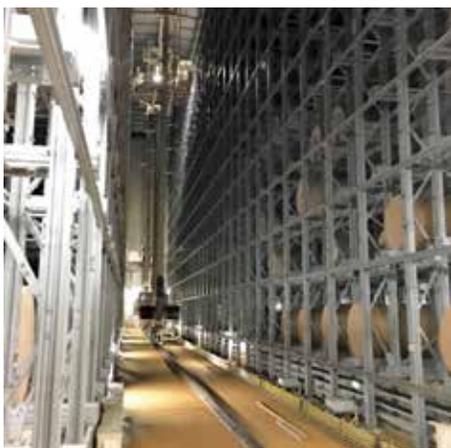
In recent decades, in the paper industry, "automated warehouse" has meant the overhead crane concept, where rather than using clamp trucks, overhead cranes pile rolls on the floor into vertical stacks using a vacuum gripper (for unwrapped rolls) or a mechanical gripper (for wrapped rolls). The best-known suppliers for this warehouse concept are crane manufacturers like Konecranes and Demag. Eliminating the clamp trucks from the warehouse means that the storage density can be improved by 30–40%, as driving aisles are not needed. Piles of rolls stacked by cranes are normally limited to less than ten times the roll diameter to keep

the stacks stable – e.g. a stack of 1.5 m diameter rolls has a maximum height of 15 m.

This is double the height that is possible in a clamp truck-operated warehouse, but the roll handling and sorting capabilities prove to be a bottleneck for the overhead crane concept. With vacuum grippers, cranes can handle only one roll at a time, and with mechanical grippers, handling multiple rolls is very limited due to strict tolerance demands for roll diameter differences. This means that the overhead crane concept requires quite extensive conveyor systems to serve the cranes, especially in cases where the handling capacity requirements mean more than two cranes are needed. This makes integrating these systems with mill layouts difficult and expensive.

Deep channel technology

Automated storage facilities using racks, widely used in other industries, had been thought unsuitable and expensive for paper mill usage due to the odd pallet storage adaptations for paper rolls. But deep channel technology has been developed specifically for paper rolls, tremendously expanding the capabilities of the rack



A sufficient intermediate roll buffer in the mill area could be integrated

The automated warehouse also works as shipping roll buffer for finished customer rolls



storage concept. With deep channel technology, the rolls are stored horizontally in V-shaped supporting channels on both sides of the center aisle where the stacker cranes move. This kind of rack structure has an unlimited number of possible connections from the long side of the storage system, as any channel on any level can be used as in- or out-take lines for the warehouse, as needed. This enables simpler layouts with fewer conveyors than with overhead crane concepts.

For Stora Enso, where this new central distribution buffer required eight connection points, the TransRoll rack concept was much simpler and less space-consuming to implement than any alternative method. An additional benefit is that it can be easily expanded in the future, if needed – the rack just needs to be extended, which can be done without disturbing the ongoing production process.

Project manager Tommi Myller, from Stora Enso Imatra mills says, “This new automated roll warehouse simplified our internal logistics a lot. Now we only need one operator to control the process of buffering and sorting the production between paper machines, PE coating and shipping. This is a huge advantage over the previous decentralized operations, with multiple clamp truck drivers and supervisors to manage and handle the intermediate inventory.”

Key elements of TransRoll

This automated warehouse in Imatra operates both as an intermediate buffer for rolls going to PE extrusion coating, and also as a shipping roll buffer for finished customer rolls. The volume was defined to be around 30,000 tonnes, with a wide range of roll dimensions and weights.

The storage facility has one central aisle with two stacker cranes, giving the system redundancy. One stacker crane can be moved to the servicing area, while the other one continues to serve the production. Two pre-sorter cars were added to the new PE plant to handle the intake and sorting of finished PE-coated rolls, and to do the automated truck trailer loading. These four units for moving rolls are the only powered elements in this system, besides the connecting conveyors. The rack itself is a static structure that supports the cladding (walls and roof).



Tony Leikas,
President and CEO,
Psmel



Stora Enso Imatra mills, near the Russian Border, with new warehouse

The rolls lie cradled on their sides in V-shaped channels. They are not pushed or dragged; they are lifted and lowered directly from the channels or the conveyors by the stacker crane's satellite pick-up cradle, which can handle mixed sets of rolls, of different dimensions, and wrapped, unwrapped or partially wrapped, all at the same time.

Total cost of ownership defines the selected concept

When comparing different type of automated warehouse concepts, it is very important to analyze the total cost of ownership of each alternative. This means the CapEx and OpEx costs related to the warehouse concept itself, but also the costs of the systems and structures

needed to integrate it into the mill operations. This means the ability to integrate the automated warehouse into the center of the production process with a minimal number of conveyors, and the civil engineering to feed the roll flow in and then to distribute it for converting and shipping.

Here, system suppliers like Psmel, who can offer the full scope, including conveyor system and all warehouse concepts, have the upper hand over part suppliers who concentrate only on their own core area. This advantage was obvious in the Stora Enso Imatra case, where the automated warehouse was integrated with the production operations around it by eight automated connections at different floor levels, in a very limited amount of space.

collaborate



MEMBERSHIP BENEFITS

- **IFPTA JOURNAL**
Quarterly publication covering all the latest forest products logistics news.
- **REGISTRATION DISCOUNTS**
Enjoy reduced registration fees to attend IFPTA seminars and conferences.
- **MEMBERS ONLY SECTION**
Exclusive access to Member Directory and other content on the IFPTA website.
- **UNPARALLELED NETWORKING**
Connect with industry leaders around the world and make lasting connections.

CONNECTIONS THAT MATTER

The International Forest Products Transport Association was founded on the core principal of connecting forest products logistics professionals in meaningful ways.

That remains our focus to this day.

No other industry association connects with the leaders in your market. The people involved in the transport, handling, warehousing, and distribution of forest products.

Join today and add your name to the list of industry leaders that proudly call themselves IFPTA Members.

Visit www.ifpta.org today for information on how to join.



CONTINUOUS PERFORMANCE FOR MAINTAINING PRODUCTIVITY

AN IFPTA SPECIAL REPORT

Kimberly-Clark is a world leader in hygienic papers. The company's plant in Niederbipp, Switzerland, runs a 24-hour a day operation with the hot, humid, dusty conditions placing high demands on the materials handling equipment.

The Kimberly-Clark fleet consists of 23 Yale trucks, supported by local Yale dealer Avesco. The suppliers were able to tailor the equipment to Kimberly-Clark's specific requirements, with the client singing the praises of the Yale equipment.

Heat, humidity, dust, abrasion: Producing soft, hygienic paper is tough business and having equipment that can perform continuously in this environment is crucial to maintaining productivity.

From heavy duty forklifts to platform pallet trucks, the Yale equipment onsite operates round-the-clock and continues to impress with its ergonomics and reliability. Andreas Nussbaum is not easily impressed. The facility manager at the Kimberly-Clark Group operation in Niederbipp has seen many different materials handling providers come and go. Almost every brand has attempted at some time to prove their worth in the Swiss paper factory. For six years, this producer of Kleenex and Hagle hygiene products has used only Yale trucks. In Andreas' opinion, that's how it should stay, because he and the other 47 drivers appreciate the equipment's durability. "The trucks are robust and there is very little damage - that's great for our operations here," says Andreas.

Its 42,000 employees, 175 countries and brands like Huggies and Kleenex make Kimberly-Clark the world leader in hygienic papers. At its plant in Niederbipp, in the Swiss canton of Bern, 320 staff produce products primarily for the local market. Paper production is not child's play: it's hot, it's humid, there's dust everywhere and production is a 24-hour a day operation. "Our work



Yale equipment operates round-the-clock

All pictures: Yale



Celebrating a milestone in their partnership

China leads, the world's pulp markets follow

Developments in the China Pulp Market: A Comprehensive Analysis and Outlook

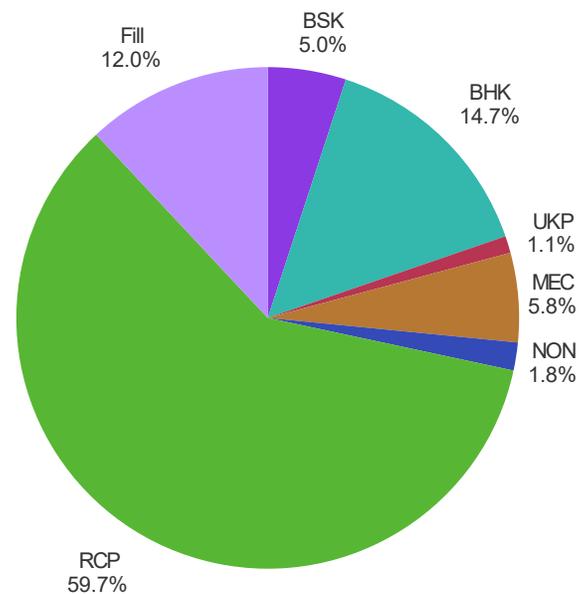
Special Study Market Analysis

China is the world's largest producer of paper products, and its largest consumer of woodfiber. Now that recovered paper imports are severely limited, China's chronic woodfiber deficit is more challenging than ever before.

See how China's quest for fiber supplies will affect markets worldwide with *Developments in the China Pulp Market*.

Combining the efforts of China-based researchers and Fastmarkets RISI analysts worldwide, this study provides 10-year forecasts of China's pulp demand, production, consumption and imports – and much more.

Learn more
risi.com/chinapulp



Furnish shares for China's paper and board sector, 2017

Limits on RCP imports are forcing China to increase domestic recycling – as well as importing more pulp. This comprehensive study shows you the companies and countries that are supplying Chinese demand, and how this demand will evolve over the next decade.

environment places very high demands on the vehicles in our factory,” says Nussbaum. At the same time, it is necessary to move large quantities: the paper machines have an almost insatiable appetite for waste paper and pulp - the two key raw materials in paper making.

The fleet of 23 Yale trucks work accordingly hard: six diesel engine forklifts, from the GDP35VX to the GDP60VX, operate in the outside yard keeping the raw materials flowing and five electric forklifts focus on logistics in the warehouses. They have impressively long service lives, with the ERP16/18 VF series trucks clocking up over 8,000 hours in five years onsite and one GDP35VX registering 14,750 hours in just 65 months. “The trucks are used intensively, also in terms of operating hours,” says Nussbaum.

In 2012, Kimberly-Clark switched to Yale from a German truck manufacturer. Avesco was already a known quantity because it has previously provided wheel loaders for the raw material supply chain. Nussbaum recalls how the company put together the right overall package: in addition to reliable and ergonomic trucks from Yale, the deal also included a long-term five-year rental contract with the option of replacement vehicles after that period. Furthermore, it gave Kimberly-Clark a service level commitment which, according to Nussbaum, the dealer has honored to the letter. Service technicians are available at short notice and replacement trucks are usually provided the same day.

Senior management at Kimberly-Clark appreciated how the suppliers were able to tailor the equipment to their specific requirements. For example, the exhaust after-treatment systems on the diesel trucks have been fitted with a heat protection foil to avert fire hazards and hydraulics and water cooling systems have extra coolers to cope with the heavy-duty operation. Two electric forklifts are fitted with bale clamps and one heavy-duty forklift even has shears to cut the wire on waste paper bales. “‘Not possible’ is not part of the dealer’s vocabulary, which we think is very good,” states Nussbaum.

He also appreciates being able to speak honestly and openly with his suppliers. “You can state your opinion and don’t need to beat about the bush,” he says. That applies on the



one hand to Kimberly-Clark, which can raise any maintenance requirements but it is also true for Avesco, which can alert Kimberly-Clark to schedule the next driver training course. The supplier and the client sit down together twice a year and talk about hours worked, damage, terms and conditions.

Another positive for Kimberly-Clark is the single point of contact provided: someone who started their career as a mechanic and knows the business inside out. The operators at Kimberly-Clark also sing the Yale equipment’s praises. René Känzig has been driving trucks at Kimberly-Clark since 1989. One thing he likes in particular is that he can control all of the truck’s functions using just his right hand with the Yale

AccuTouch mini-lever. The air-sprung seat enhances his comfort, especially over long working hours, and air conditioning means he can shut the windows of the cab. Last but not least, having a radio makes work for him and his colleagues that little bit easier.

Last year, Kimberly-Clark and Avesco celebrated a milestone in their partnership. After five and a half years of the ongoing rental agreement, 13 new trucks were delivered. To mark the occasion, the supplier presented Kimberly-Clark with a symbolic key, artfully woven by a local baker.

Admittedly, this edible key is one delivery which - unlike all other supplies - didn’t last long onsite.



SÖDRA INVESTS SEK 20 MILLION FOR SUSTAINABLE TRANSPORTATION SOLUTIONS

A transition of the transport sector will require new solutions and a changed market.

As part of the process to achieve its fossil-free targets by 2030, Södra is now earmarking an investment of SEK 20 million for the additional costs arising from the choice of new and sustainable transport solutions.

“As one of Sweden’s largest transport purchasers, we have a major responsibility. We want to show the way to a sustainable transport future and this investment will show that we are very serious about achieving change, and inspiring others to follow our lead,” said Lars Idermark, president and CEO.

The funds will increase opportunities for working long-term without affecting the day-to-day operations. Södra has previously communicated its investments in liquid biofuel production through its two joint ventures, SunPine and Silva Green Fuel, and its own production of biomethanol.

“We are following our roadmap for ‘A Fossil-Free Södra’ alongside our efforts to promote the supply, demand and policy instruments that will enable a profitable transition, and to become a role model for others to follow. With this investment of SEK 20 million, we can help to drive demand for new technical solutions,” said Henrik Brodin, project manager for “A Fossil-Free Södra”.

ALTRI CELBI IN PORTUGAL ACHIEVES NEW PRODUCTION WORLD RECORD

Following successful modernization of the bleached eucalyptus kraft pulp drying line by Andritz, Portuguese pulp producer Celbi set an outstanding production world record of 2,456 admt/d at its Leirosa mill, Portugal, on March 23, 2019.

In terms of specific drying capacity, Celbi achieved 503.3 t/d with a working width on the upgraded drying plant of 4.88 m. Based on this result, it would be possible to produce more than 5,000 admt/d on a single line with a 10-m working width. This would mean an annual drying plant capacity of more than 1.5 million tonnes on one line.

Celbi successfully started up after an extensive reconstruction in 2015 and has achieved several production records since then. The company is one of the most efficient global producers of eucalyptus pulp, with an installed production capacity of 790,000 admt/y and is recognized worldwide for its high-quality products and excellent customer service.

KALMAR TO ASSUME RESPONSIBILITY FOR LOG HANDLING OPERATIONS AT IGGESUND PAPERBOARD

Kalmar, part of Cargotec, has signed a comprehensive three year cooperation agreement with Iggesund Paperboard, part of the Holmen Group.

The contract includes the provision of equipment, operators, maintenance services as well as the Kalmar Insight performance management software. The agreement came into effect at the beginning of April.

One of the most advanced fully integrated pulp and paperboard mills in the world, the Iggesund mill on Sweden’s east coast produces Invercote, one of the world’s leading paperboard brands. Under the tailored partnership agreement, Kalmar will assume full responsibility for the customer’s log handling operations with optimal amount of equipment, tools and professional resources. High operational performance will be reached by using Kalmar’s capabilities to tailor flexible and highly reliable solutions ensuring effectiveness of customer’s operations.

Pelle Olsson, head of board production at Iggesund Bruk: „Kalmar’s solution will allow us to focus on our core business and add value for our end customers. As a producer of some of the world’s best-performing paperboard, we want to work with reliable partners who are true leaders in their own areas, and in this respect Kalmar fits the bill perfectly. This contract provides us with peace of mind as we get premium equipment for log handling, their maintenance, operators as well as the latest software to optimize our logistics processes.“

PLYWOOD DELIVERIES FROM UPM CHUDOVO’S NEW PRODUCTION LINE STARTED

The UPM Chudovo plywood mill expansion investment, which started in late 2017, is proceeding on schedule to the production trial run phase.

The first deliveries from the new production line are currently on the way to customers in Europe and Africa. The official inauguration will be in early September.

The investment will expand the product portfolio of the UPM Chudovo mill. One new product in Chudovo, the WISA-Birch LG, has already been made on the new line. LG, or long grained, refers to the direction of the surface grain, which is positioned parallel to the long edge of the plywood panel. In traditional WISA-Birch plywood, the grain runs in the cross-panel direction. Both are used either as structural plywood in building or as visual interior elements such as walls, floors, ceilings or cabinets.

“The applications for both cross- and long-grained plywood are very often the same. However, there are markets such as Benelux, the UK or South Korea where more long-grained plywood is used, and now UPM Chudovo’s investment will enable us to seek growth in these markets,” explained Jouni Töyräs, vice president, sales, UPM Plywood.

In addition to these WISA-Birch plywood products, the UPM Chudovo mill also produces coated WISA plywood for the transport industry and concrete forming, as well as uncoated birch plywood for insulating elements of LNG tankers.

The total value of the UPM Chudovo mill expansion investment is



about EUR 50 million. The project consists of new plywood production lines, including all machinery needed for veneer and plywood manufacturing. A new bio heat boiler has also been built at the site. The mill's annual production capacity will increase by 45,000 up to 155,000 m² per year and it is estimated that around 100 new jobs will be created, both directly at the mill and indirectly, in wood procurement and logistics, for example.

SCA ACQUIRES 10,000 HECTARES OF FOREST LAND IN LATVIA

SCA has acquired Latvian Forest Company's forest and land assets in Latvia, in total 10,000 hectares. The price is SEK 260 million (€26.2 million).

Latvian Forest Company owns and runs a number of forest holdings in Latvia. The assets comprise 7,600 hectares of productive forest land, 2,000 hectares of farmland and 800 hectares of other land. The standing timber volume amounts to one million cubic metres. Some of the other land assets are also suitable for conversion to forestry.

"We have been in the Baltic states for a long time as a buyer of timber," says Jonas Mårtensson, president forest at SCA. "The Baltic states are a natural part of the base for our raw material supply and our operations there are strengthened by a forest asset of our own. We may well consider more acquisitions of forest land in the Baltics."

FINNISH OPEN FOREST DATA SYSTEM ENORMOUSLY POPULAR

The Finnish open forest data system, launched in March 2018, has become enormously popular.

Anyone can view data on forest site conditions and timber stock from 60% of Finnish forests, with no passwords required. The Finnish system contains two types of open forest data: data on timber stock and growth conditions arranged on the basis of what is called a grid, and data on forest compartments. The imaginary grid is formed of 16 x 16 m squares in the forest. A forest compartment is an area in the forest with homogeneous vegetation and soil conditions.

The grid data covers 60% of Finnish forests, including protected areas. „Within two years, the coverage will reach 70% and later, after the next inventory, even more," says Jorma Jyrkilä, in charge of forest data services at the Finnish Forest Centre.

The data on forest compartments covers only private, family-owned forests, which, however, form the major part of forests in Finland. Of these forests, 92% is covered by the data, related to harvesting, state aid to forestry and forest sites under statutory protection. What you cannot find in the open forest data is who owns the forest. This can be accessed through another service, but only if allowed by the forest owner in question. The open forest data is gathered by means of laser scanning and aerial photography. A guide to interpreting it is

based on measurements on sample plots. The data can be viewed in three ways. First, data on individual sheets of the topographic map or on maps covering individual municipalities or regions can be downloaded. One can also simply browse the data or use it directly through a special interface.

„It's been really popular. We have seen over three million map downloads in just one year," says Jyrkilä. One of the purposes of the open forest data system is to provide a basis for developing new tools for forestry and other forest-related activities.

A.P. MOLLER-MAERSK LAUNCHES CUSTOMS CLEARANCE ONLINE SHIPPING MANAGEMENT PLATFORM

Maersk has launched its Customs Clearance online shipping management platform in seven European countries - Germany, France, Denmark, The Netherlands, Poland, United Kingdom and Spain - with the goal of expanding this offering across the world by the end of 2019.

International trade is subjected to diverse and wide controls and customs regulations that need to be met to ensure that traded goods are entering and exiting legally. If a delay occurs, the entire plan gets affected. A delay causes increased expenses such as storage costs, fines, and penalties, resulting in additional problems for importers and exporters.

"This new one-stop-shop allows us to timely and efficiently handle export and import declarations for our customers. The solution provides downstream benefits of full governance and compliance, eliminates the need to provide a quote as pricing is displayed online, saving three to five minutes per quote", explains Vincent Clerc, Chief Commercial Officer of A.P. Moller-Maersk. "In other words, it saves our customers time, money and headaches reducing the number of intermediaries they deal with from three or four to just one as well as paperwork which subsequently reduce the time spent on transactional procedures."

A good example of this is Germany where Maersk has piloted this Ocean and Customs Clearance shipping management platform for almost two years. "It is perfect to book our service request only with one online platform without contacting further operational departments. We prefer local language and we appreciate collaboration between the responsible departments within Maersk. We welcome the possibility to have all Customs House Brokerage documents uploaded on the internet platform. Would be good to have one invoice handling in the future, but okay for now. The Customs House Broker service provided by the relevant departments is excellent", states Robert Weber from Speditionsabteilung at Neenah Gessner GmbH.

This new functionality will cover all types of cargo for all Maersk brands.

In a world hungry for wood, Russia's forests are the future

Russian Timber: A Growing Force in World Trade

Special Study Market Analysis

Russia contains far more forest area than any other country. Spurred on by demand from China, Russia's once-minor role in world timber trade has boomed – and its importance will keep growing for the next decade and beyond.

Understand the conflicting forces that both drive and constrain Russia's industry, and get forecasts from 2017 (actual) to 2023 and 2028 in 13 key forest products categories, encompassing:

- Lumber
- Wood panels
- Logs
- Pulp and paper

Learn more

risi.com/russiatimber



20%

Russian share of global forest area, far exceeding Brazil, Canada, the US, or China

+32%

Increase in Russian lumber exports, 2006-2011

+53%

Increase, 2012-2017

INTERNATIONAL FOREST PRODUCTS TRANSPORT ASSOCIATION SPRING 2019 BOARD OF DIRECTORS MEETING

Vancouver, British Columbia, Canada, Tuesday, May 7, 2019



IN ATTENDANCE *Officers - Alan Bog (President), Einar Didriksen (Vice President), Tom Mutz (Secretary & Treasurer)*
Directors - Horst Kaupke, Annette Thuen-Hansen, Ana Paula Trilho, Rhoda Voth, Anna Ward, Laurie Kravski
Association Managers - Ashley Westbrook (TAPPI), Hannah Peterson (TAPPI)

ABSENT *Directors – Targe Bock*

Mr. Bog called the meeting to order at 9:00 AM local time.

Fall 2018 Board Meeting Minutes

The minutes from the Fall 2018 Board Meeting were circulated to the IFPTA Board of Directors and published in the Q4 2018 issue of the IFPTA Journal. Without further discussion, a motion was approved unanimously and the minutes entered into the record.

Vancouver Reception Event

The IFPTA on the Road event held the night before the Board Meeting was another success. There were nearly 50 people that attended the event with a few new member prospects and three new 3-year memberships. The presentation delivered by Mr. Bill Craig, General Manager of West Fraser Pulp Sales, was well received as he addressed views on the Pulp Market.

Financial Report

Updated financial documents were distributed to the Officers & Directors prior to the Board Meeting. Mrs. Westbrook reviewed the overall financial position of the Association, we need to continue the efforts to maintain expenses and grow membership revenue.

Mr. Bog expressed concern about late membership renewals which affects our overall margin due to the symposium being every two years. IFPTA will increase their efforts on ways to ensure we keep current members along with recruiting new members.

The Association continues to control expenses but must find a way to increase revenue.

Membership Update

Updating the activities and efforts to promote the IFPTA membership, Ms. Westbrook reviewed the lapsed and current members of the association. There have been more renewals in 2019 so far than there have been in years past.

The Directors and Officers discussed ways to ensure that lapsed individuals are receiving their invoices, so they can renew their dues. It was decided that Ms. Ana Paula Trilho will be the new membership committee chair. The committee will be meeting every month moving forward to ensure we are providing the best services to our members.

2019 Election Update

Mr. Bog was asked to report on the status of the Nominating committee for the upcoming directors' elections.

He reported that Ms. Ana Paula Trilho and Mr. Horst Kaupke were standing for re-election to serve their second term. Alan also reported that the nominating committee had three (3) additional candidates who were in the running as of now and we are awaiting confirmation from a fourth. TAPPI will be responsible for collecting the bios and photos for the ballots and building the election ballots. The election process will begin in June.

PPI Transport Symposium 23 - Tarragona

Mr. Bog provided the Board with an update on the conference session planning progress on behalf of the Conference Co-Chairmen which includes himself and Mr. Einar Didriksen.

The outline of conference sessions was reviewed with the Officers and Directors. The program addresses a variety of topics covering various links in the forest products logistics supply chain.

The Board's feedback will be reviewed by Mr. Bog and Mr. Didriksen at their next meeting and further development will be made in the conference schedule.

PPI Transport Symposium 23 – Fastmarkets RISI Update

Mr. Bog discussed that Fastmarkets RISI is in the process of selling sponsorships for the event. The sponsorship sales are going well and are expecting to progress towards our overall target. The bookings are steady at the start of registration and are planning to see an increase in a few weeks once there is a complete speaker line up.

IFPTA on the Road - London

Mr. Einar Didriksen was asked to update the Directors on the next IFPTA on the Road event planned for November 11, 2019 during International Pulp Week in London.

Einar informed the Directors that a venue has been secured and the event will be held at the Marquess of Anglesey on 39 Bow Street. Everything is in good order for another successful gathering.

Closing

The meeting was adjourned at 11:30 AM with thanks to Ms. Laurie Kravski and West Fraser for allowing the IFPTA to use their conference room.

HAVE YOU SEEN THE IFPTA WEBSITE?

This new website will help us keep our members connected. With social networking support, simple tools for staying in touch, sharing documents and photos and resources to support committees, we can use it to help market our association and highlight all the great work being done.

In addition, the IFPTA website (ifpta.org) is the workhorse that will collect membership dues, support event registrations, and receive payments.

We invite you to come see what we've started. If you have any questions or issues logging in, please contact Ashley Westbrook (awestbrook@ifpta.org).

ONLINE ACCESS TO MEMBER DIRECTORY

All IFPTA members have access to the online member directory and other assets within the Members Only section of the website.

Simply log into your account on from the IFPTA home page to access all of the exclusive member only content, including:

- Current and past issues of the IFPTA Journal
- Online member directory
- Ability to update your member profile and contact information
- Renew your membership dues online

If you have any questions about how to access, please contact Ashley Westbrook (awestbrook@ifpta.org).

REGISTRATION OPEN: PPI TRANSPORT SYMPOSIUM 23 - TARRAGONA, SPAIN

PPI Transport Symposium is the longest running conference and exhibition dedicated to the global forest products logistics industry. Organized by Fastmarkets RISI, in association with the International Forest Products Transport Association (IFPTA), the event focuses on the issues surrounding the worldwide transport, materials handling, and distribution of forest products.

In 2019, the IFPTA and Fastmarkets RISI will be delighted to welcome you to Tarragona, Spain, for the Transport Symposium 23 in cooperation with Euroports and the Port of Tarragona.

Based at the Port of Tarragona, one of the biggest paper and pulp ports in Europe, and with over 500 attendees, TS23 will witness one of the biggest gatherings of supply chain professionals and buyers over the next two years.

Catch up with clients, meet industry peers, renew acquaintances

and ensure you are part of the conversation as you shore up your short and long term pipeline.

REGISTER NOW!

<https://events.risiinfo.com/transport-symposium/registration>

IFPTA GETS SOCIAL

Follow the IFPTA on LinkedIn and Twitter to get even more updates and information about the forest products logistics industry.



Our Twitter feed is full of the latest news from around the industry.

@IFPTA



Our LinkedIn group is a great place for news updates and having conversations with other forest products logistics professionals around the world.

<https://www.linkedin.com/groups/108004>

UPCOMING INDUSTRY EVENTS

2019

June 25-27

Zellcheming Expo
Frankfurt, Germany

http://www.mesago.de/en/ZEX/For_visitors/Welcome/index.htm

July 8-10

127th Annual Damage Prevention & Freight Claim Conference
Omaha, Nebraska

<https://dpfc.configio.com/pd/336/2019-aar-damage-prevention-and-freight-claim-conference>

September 16-18

PPI Transport Symposium 23
Tarragona, Spain

<https://events.risiinfo.com/transport-symposium/>

October 28-30

RISI North American Conference
Boston, USA

<https://events.risiinfo.com/north-american-conference/>



November 11

IFPTA on the Road – London
 London, England
www.ifpta.org

NEW IFPTA MEMBERS

Please join the IFPTA Officers & Directors and welcome the newest members of the Association.

United States

Joseph Hoffman
 Cellmark
 80 Washington Street
 Norwalk, Connecticut
 United States
joe.hoffman@cellmark.com

Aliyya Mattos
 PaperSeed Foundation
 88 Rowland Way, Suite 300
 Novato, California
 United States
aliyya@paperseed.org

Canada

Alex Pattison
 China Navigation
 1111 West Hastings St.
 Vancouver, British Columbia
 Canada
alex.pattison@swirecnco.com

Austria

Fancy Gu
 Cellulose Eldorado Austria GmbH
 Schwertgasse 2, Top 18
 Vienna, Austria
Fancy.gu@eldoradobrasil.com.br

Reginaldo Gomes
 Cellulose Eldorado Austria GmbH
 Schwertgasse 2
 Vienna, Austria
Reginaldo.Gomes@eldoradobrasil.com.br

Parsan Chand Mahaveer
 Lenzing
 Werkstrasse 2
 Lenzing, Austria
m.parsan@lenzing.com

Sweden

Hanna Öhman
 Smurfit Kappa
 Kolugnsvägen 30
 Piteå, Sweden
hanna.ohman@smurfitkappa.se

Italy

Davide Laurino
 Merterneri
 Via Salvatore Orlando 18/20
 Livorno, Italy
d.laurino@marterneri.it

United Kingdom

Jens Nielsen
 Jenkins Group
 13 West Bank Road
 Belfast, United Kingdom
jsnielsen@jenkinsgroup

Germany

Matti Tamminen
 UPM Pulp Business
 Pfaffengrunder Terrasse 3, P.O. Box 33
 Heidelberg, Germany
matti.j.tamminen@upm.com

AN ANALYSIS OF RECENT MARKET MOVES: BY THE RISI ECONOMISTS

GLOBAL MARKETS

CHINA

RISI has just published the third edition of its in-depth outlook for the China pulp market, entitled *Developments in the China Pulp Market: A Comprehensive Analysis and Outlook*. There have been many changes to the China pulp market since the last edition was published in 2015. Here are some of the interesting developments.

Mergers and acquisitions (M&A) activity increased substantially. We have seen plenty of M&A deals announced in the past three years, many of which involve market pulp mills. On March 16, 2018, Suzano and Fibria, the two leading market pulp suppliers, announced they would be combining their assets; the merger was completed in January 2019. In September 2018, APRIL's parent company, RGE, acquired Lwarcel Celulose from Lwart Group. And in December 2018, Mercer completed its acquisition of Daishowa-Marubeni International, which owns a bleached kraft pulp mill in Peace River, Alberta, and has a 50% interest in the Cariboo Pulp and Paper Company, a joint venture which operates a bleached kraft pulp mill in Quesnel, British Columbia.

Chinese paper producers are seeking to reduce their dependence on pulp suppliers and control costs and availability through backward integration into pulp. Sun Paper added two semi-chemical pulp lines in 2018 to feed containerboard machines at the mill site in Zoucheng. In November, Chenming started up a swing line at the greenfield mill in Huanggang City. Currently, its pulp output is being shipped to the company's paper mill in Wuhan City. It is more profitable for paper mills to use integrated pulp in their fiber furnish, especially when market pulp prices are high. But most of the Chinese BHK and BSK mills are heavily dependent on imported wood chips, which adds substantial costs compared to other pulp producing regions. In 2018, the high prices for wood chips into China were sustainable as the high market pulp prices remained above Chinese pulp mill production costs. However, will that be the case going forward?

RISI's analysis sees China remaining at the high end of the cost curve over the next 10 years. Any paper producers that intend to install BHK or BSK pulp line will face high fiber costs, which are the most significant cost item and put any new capacity in China at a disadvantage. To ensure a steady supply of wood pulp at a lower cost, some paper producers have turned their eyes toward overseas investment. In April 2018, Heng'an entered into an agreement to take a stake of 36.46% in Finnpulp. Shanying has also become the majority owner of Boreal Bioref, a Finnish company planning to build a 500,000-tonne/yr pulp and bioproducts mill in Kemijärvi.

Another supply-side development that bears watching is the wave of non-wood pulp mill closures. The shuttering of non-wood pulp capacity in China has continued into the 13th Five-Year Plan period, but at a much slower pace than during the 12th five-year period.

Chinese wood pulp consumption moved upward at a solid pace during 2016-2017, with the rise attributed to continuous growth in paper production and changes in fiber furnish shares. One of the changes in shares has been the swing away from non-wood pulp to wood pulp. Another important change that is affecting the demand side of the China pulp market is the draconian RCP import policies. The stringent RCP regulations have lowered Chinese RCP imports sharply and prompted paper mills to use more wood pulp. The impact of the shift has been felt since 2017.

The main end-uses of wood pulp in China are printing & writing paper (P&W), tissue and boxboard, with P&W being the largest sector. P&W paper production in China is now expected to have entered a state of slow decline. Boxboard production growth will decelerate sharply in the next ten years, while production of tissue paper will continue to grow substantially in the coming decade. How will the end-use market and furnish share trends drive future pulp demand? What challenges and implications do these developments pose to the Chinese pulp market? A full discussion along with analysis and a comprehensive outlook of supply, demand and trade is included in the updated *Developments in the China Pulp Market: A Comprehensive Analysis and Outlook*. The new edition, released in February 2019, analyzes current market conditions of fiber supply; contains an overview of pulp producing companies in China including their existing operations and expansion plans; provides an update of in-depth information about pulp buyers, sellers and traders; projects the impact of China's RCP regulations on wood pulp demand; and offers a 10-year forecast and breakdowns of demand, production, imports and capacity by pulp grade.

GLOBAL MARKETS

From the perspective of global economic growth there are three key driving forces: the USA, the eurozone and China (listed in no particular order). At the moment, all of these economies are getting a boost from stimulus. Previously, this measure was generally reserved for times of recession or very slow growth to help the economy to get into growth again, analogous to the choke valve you open when cold-starting an older combustion engine with carburetor. The enriched mixture of fuel and air would help to keep the engine running, although it would consume much more fuel. In the case of economic stimulus, the higher fuel consumption is of course higher public spending and money being printed. This time, though, the stimulus has been given to growing economies, although the growth has been historically rather slow.

The US economy has gotten its dose of stimulus from the Trump administration's tax reform. Until the end of 2018, this stimulus was



balanced by the Federal Reserve with interest rate hikes and quantitative tightening (QT), contracting the central bank's balance sheet, after the economy started accelerating in early 2018 when the tax reform went into effect. Additional deceleration for the global economy came from similar QT efforts by central banks such as the Bank of Japan (BoJ) and the Peoples Bank of China (PBoC), which had both ended their tightening but then started to buy assets again to support their stalling economies. The increasing interest rates in the USA along with QT, however, slowed the economy significantly, ran the stock markets into decline and kept the Fed from additional (already provisionally scheduled) interest rate hikes. The Fed has also discussed the possibility of returning from QT to quantitative easing (QE). As the Fed would have otherwise been continuing with rate hikes, this can definitely be seen as providing stimulus to the market.

The eurozone economy has had a similar story. The European Central Bank was aiming to end its QE program last fall and also raise its policy rate from the prevailing zero during the second half of 2019. With the slowing growth, however, the ECB has also changed its mind. It will maintain monetary support for the European economy and wait to raise rates; at the moment, it looks likely that the ECB will not be able to increase rates at all before the end of this business cycle. In a similar manner, the PBoC and Chinese government have been engaged in huge efforts to provide stimulus to the Chinese economy with infrastructure investment programs and support for lending by relaxing regulation for banks, e.g., raising the limit for non-performing loans.

So what is wrong with stimulus? Doesn't it help the economy? Indeed, it does. But there are still dangers related to the fact that the key global economic growth drivers are running on stimulus. First of all, excess money and debt availability tend to inflate asset bubbles. This is certainly the case in the current environment with extremely (eurozone) or relatively (US) low interest rates. When money is cheap and easily available, it will not only be invested in the stock market, but also in businesses that might not be that profitable. Another danger lies in the approaching economic downturn or possible recession, which based on historical evidence since 1968, have started following 6-17 months of yield curve inversion. As stimulus and low interest rates have traditionally been reserved for times when the economy is doing badly, rather than for when growth is just slow, there has been a way out from recession: by lowering interest rates and fiscal and monetary easing. With interest rates either at or close to zero, the room to maneuver is very small, unless one opted for negative rates, which is by no measure a good option.

GRAPHIC PAPER

EUROPE

With demand slowing much faster than previously anticipated, the European production base is entering another period of meaningful capacity changes during the next two years. The exit of Scheufelen and Feldmuehle from coated graphics has marked the start of about

1.8 million tonnes of capacity leaving the market between now and the end of 2021 in coated woodfree alone. Arctic Paper, Lecta, Arjowiggins and Stora Enso will all contribute to the removal of capacity during this period. On the mechanical side, conversions are responsible for most of the reductions. The conversion at Burgo's Verzuolo mill in Italy to containerboard and Sappi's Lanaken to coated woodfree will be the largest. More recently, UPM announced its decision to close the 155,000 tonne PM10 at its Plattling mill in Germany.

Altogether, already announced conversions amount to more than 2.5 million tonnes of capacity reductions in European coated graphics. Between 2014 and 2015 a similar, albeit smaller, amount was removed, allowing operating rates to increase from an estimated 86% in 2014 to more than 91% by the end of 2015. Despite capacity removals having a direct effect on operating rates, European demand was declining at a slower pace than the average since the Great Recession.

The tightening in publication papers and higher paper prices in Europe since 2017 together with higher exports due to the removal of capacity in the United States all contributed to fewer changes in European capacity and relatively flat operating rates during the last two years. Since then, not only is demand in Europe disappearing faster, but European exports are also suffering the consequences of higher paper prices accelerating demand losses in other areas of the world, particularly North America and Asia. Consequently, the current wave of capacity closures and conversions will not result in a tightening of the market like before, but instead a continuation of rather flat operating rates, especially for coated woodfree.

The only upside risk to RISI's forecast is the possibility of stronger exports. Significant capacity closures resulted in the tightening of the North American market since 2017. Furthermore, the strengthening of the US dollar versus the euro has increased the pricing gap between the two regions to one of its highest historical values, which makes European exports to the United States very profitable. However, higher paper prices and digitization of paper products will keep US demand declining rapidly, which in the end will reduce the need of imports from abroad.

Small, non-integrated assets will have the highest risk of closure going forward. However, strategic shifts will be responsible for most of the changes in the coming years. Stora Enso, currently the fourth largest producer of coated woodfree, is a great example, as the company might completely exit the coated woodfree market between now and the end of 2020. Stora Enso is currently evaluating the possibility of ceasing coated woodfree production on PM 6 at the Oulu mill and converting PM 7 to kraftliner between this year and next. These changes will result in the removal of more than 1.1 million tonnes of coated woodfree by the end of 2020 at the latest. Oulu is one of the largest coated woodfree mills in the region, accounting for as much as 16% of the total.

Oulu is not a high-cost mill, so the decision to close PM 6 and convert PM 7 is purely strategy driven. Under the current market conditions, Stora Enso probably sees more value in repositioning PM 7 to kraftliner.



| Advertiser | Page N° | Website |
|---------------------------------------|------------|-----------------------------|
| Alabama State Port Authority | 12 | www.asdd.com |
| Alexander Global Logistics | 2 | www.alexander-logistics.com |
| BalTerm | 4 | www.balterm.com |
| Cooper/T. Smith | OBC | www.coopertsmith.com |
| Durwen | 10 | www.durwen.de |
| Fr. Meyer's Sohn | 8 | www.fms-logistics.com |
| IFPTA | 5, 20 | www.ifpta.org |
| PENN Warehousing & Distribution, Inc. | IFC | www.pennwarehousing.com |
| Port of Tarragona | IBC | www.porttarragona.cat |
| Fastmarkets RISI | 14, 22, 26 | www.risi.com |
| SCA Logistics | 6 | www.scalogistics.se |

Stay in touch with IFPTA

IFPTA

International Forest Products Transport Association (IFPTA) is registered in the USA as a non-profit mutual benefit corporation, 1982.

For membership changes and general queries, contact the IFPTA management company:

IFPTA Association Management
Ashley Westbrook
TAPPI

15 Technology Parkway S., Suite 115
Peachtree Corners, GA 30092
Tel: +1 770-209-7265
Fax: +1 770-446-6947
info@ifpta.org

IFPTA Journal

The IFPTA Journal is published quarterly in March, June, September and December by Fastmarkets RISI. The Journal publishes articles and other information of general interest to the association's membership. The Journal reserves the right to edit all submitted material. Opinions or views expressed in articles are not necessarily those of the association. Reproduction of material from the Journal can only be made with written permission from Fastmarkets RISI. The Journal is distributed for free to IFPTA members as part of their membership package.

The Journal welcomes articles of between 1,000-2,000 words on any aspect of the forest products transportation sector.

For IFPTA Journal editorial team, contact:

Susanne Haase - Email: susanne.haase@fastmarkets.com

IFPTA website

www.ifpta.org

Advertising

The IFPTA Journal accepts full page and half page advertisements provided that they serve the interests of the association. The word "advertisement" may be added to the page when an advertisement resembles editorial content. Advertising opportunities are also available in the IFPTA Membership Directory and on the IFPTA website.

Journal advertising rates

| | One-time | 4 times/year | One-time | 4 times/year |
|--------------------|----------|--------------|----------|--------------|
| 4-Color | | | | |
| 1 page | \$1,945 | \$1,785 | € 1,555 | € 1,430 |
| Spread | \$3,380 | \$3,090 | € 2,700 | € 2,470 |
| Half page | \$1,535 | \$1,360 | € 1,225 | € 1,100 |
| Black/White | | | | |
| 1 page | \$1,370 | \$1,230 | € 1,230 | € 970 |
| Half page | \$1,070 | \$965 | € 965 | € 765 |
| Cover | | | | |
| 2nd | \$2,150 | \$1,965 | € 1,715 | € 1,570 |
| 3rd | \$2,150 | \$1,965 | € 1,715 | € 1,570 |
| 4th | \$2,250 | \$2,060 | € 1,785 | € 1,650 |
| <i>Net Rates</i> | | | | |

For IFPTA Journal, website and directory advertising sales, contact:

International: Remy Poos
+32.497.050.735 - remy.poos@fastmarkets.com

North America: Greg Porcaro
+1.781.734.8906 - greg.porcaro@fastmarkets.com

Vincent Monahan
+1.781.734.8931 - vincent.monahan@fastmarkets.com

The Gulf Coast's Forestry Experts



Forest Products
Stevedores