



# PROMOTIONAL

## MAGAZINE

32/2017

Paper | Tissue | Subcontracting | Services | Specialty Products



**SAVE YOUR ENERGY, SAVE YOUR MONEY, EMPOWER YOUR FUTURE**

**A RECOVERY STEAM GENERATOR SYSTEM FROM PMP FOR WEP (FRANCE)**

**CAN A NEWSPRINT PM RISE FROM THE ASHES LIKE A PHOENIX?**

**A GREEN FIELD TISSUE MILL FOR UNIVERSAL PAPER MANUFACTURERS (SOUTH AFRICA)**

**A SUCCESSFUL PROJECT EXECUTION IN P&P**

**TISSUE TREND OVERVIEW**  
INTERVIEW WITH MAJA MEJSNER



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## Dear Readers,

Have you been thinking about the Pulp and Paper industry – our industry? I bet lots of our readers have dedicated their heart to start up new machines, improve existing lines and show the external world that we actively support our communities.

I believe each P&P employee can play an important role in creating strength in our industry. Our actions, ideas, and pro-active attitude generate new energy every day.

At PMP we believe in what we are doing. That is why each customer is treated with respect. A team spirit is an unbeatable base to face challenges and to bring machines on stream easily. It is so important to pay attention to details, create solutions that are effective and environmentally-friendly. Solutions of tomorrow.

It is going to be a very exciting year for PMP, filled with start-ups in new markets for us such as Mexico and Columbia and projects in Russia, the USA, China and many more. We will also have a full slate of industry events including our well-esteemed PMP Open House entitled Save Your Energy, Save Your Money, Empower Your Future which will be held in May. That is because you, our partners, appreciate our solutions and working style.

In the meantime, feel free to get familiar with recent news from PMP, our new products such as the Intelli-Tissue® EcoEc Premium and Intelli-Shaker® and many more. I believe you may also be interested to learn more about a very existing project called “Gold Eagle” for our partner from South Africa – UPM. If you want to understand how we approach capital project execution, go directly to our summary prepared for Paper-Con 2017, “A successful Project Execution in Pulp and Paper”. As PM conversion projects are gaining more and more interest worldwide, it might be of value for you to take a closer look at our Phoenix Concept™ rebuilds.

Taking this opportunity, we would like to thank you for your trust and loyalty. True feedback always helps us to become a better partner, so as always, we are open to listen to your needs and suggestions.

Do not hesitate to interact with us this year.

Together we will make this industry a better place!





## ASIA



July 2016

### PMP Intelli-Tissue® 3D Model in a Chinese Papermaking Museum

Take a look at an Intelli-Tissue® EcoEc 1200 3D machine model (scale: 1:16) as a tribute for Hebei Jinboshi Group Co. Ltd from PMP. It is placed in the impressive Museum of Papermaking located next to the Hebei Jinboshi mill in Baoding, Hebei province, China. This unique place can't be missed! Soon there will be a chance to compare the model with (2) originals.



July 2016

### Dongguan Shunyu Paper (China), PM6 Start-Up

It is a pleasure to announce that on July 2016, PM6 for Dongguan Shunyu Paper (China) has started-up. An Intelli-Jet V® Hydraulic Headbox with a Consistency Profiling System as well as another Intelli-Nip® Shoe Press have been launched successfully. Congratulations to the team. Well done guys!



August 2016

### YFY Ching Shui Mill, Taiwan, TM7 Start-Up

On August 2016, TM7 located at YFY Ching Shui, Taiwan was put on stream again after a successful rebuild provided by PMP. This time the scope of supply included a 12' steel YD Intelli-YD® and an hood Intelli-Hood®. As a result, the machine's capacity has been increased and the energy balance has been optimized. Congratulations to all involved!




August 2016

### PMP to Supply Key Technological Units for Zhe Jiang Huachuan's PM8

In 2017 we are going to deliver key technological units for our new Chinese customer Zhe Jiang Huachuan's PM8! The delivery will include our 1st Intelli-Shaker® ever! The scope of delivery also includes a state-of-the-art, 3 channel Intelli-Jet V® Hydraulic Headbox, Intelli-Top® Former and Intelli-Sizer® Metering Size Press. The delivery, erection and start-up are scheduled for the second half of 2017.



 January 2017

### Wang Paper (Thailand), Intelli-Tissue® EcoEc 1200 Machine Start-Up

Congratulations to the PMP Team, that has been involved in the Intelli-Tissue® EcoEc 1200 machine start-up for Wang Paper (Thailand). The PMP tissue line has started-up smoothly and easily and as a result the first paper on the reel appeared on the 28<sup>th</sup> of January on the 5.30 p.m. local time. Thanks both to the PMP team and the Wang Paper team for the great results and partnership!


 March 2017

### Intelli-YD® is on the way to Hebei Jinboshi Group (China)!

Another PMP Intelli-YD® yankee dryer is on the way to our Chinese customer - Hebei Jinboshi Group. Taking this opportunity, we would like to thank the amazing PMP team for their involvement!



## AFRICA

 February 2017

### Universal Paper Manufacturers (South Africa), TM5 Start-Up

Universal Paper Manufacturers Green Field Tissue Mill in South Africa, with a PMP Intelli-Tissue® Advanced 1600, is Up and Running - The "Gold Eagle" Spread Its Wings on the Sunday 19<sup>th</sup> of February, 2017 at 11:20 a.m. local time. Learn more on page 55.



## EUROPE

 July 2016

### PMP's Recovery Steam Generator at Wepa Lille S.A.S. (France) is Up & Running!

In February 2016, WEPA signed a contract with PMPower for a TM11 recovery steam generator delivery. Thus, it is our pleasure to announce that on July 7<sup>th</sup>, 2016 TM11 was successfully brought on stream at the Lille mill in France. Learn more on page 51.



## NORTH AMERICA

 August 2016

### Intelli Tri-Nip® Shoe Press for Smurfit Kappa Los Reyes in Mexico, FAT Stage

The Factory Acceptance Test of the Intelli-TriNip® Shoe Press for Smurfit Kappa Los Reyes (Mexico) was held on August 2016, at PMP Headquarters (Jelenia Góra, Poland). Implementation of the project for Smurfit Kappa Los Reyes is another important step in building our presence in the America's market. The start-up is scheduled for the 2<sup>nd</sup> quarter of 2017.


 December 2016

### PMP to supply Intelli-Jet V® to Sappi North America's PM12 in Minnesota, USA

In December 2016, PMP (Paper Machinery Producer) signed a contract with Sappi North America for delivery of an Intelli-Jet V® Hydraulic Headbox for their paper machine 12 (PM12), located in Cloquet, Minnesota, USA.

The delivery, erection, and start-up are scheduled for October 2017.



**Location:**

Jelenia Góra, Poland  
PMP Group Headquarters

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### PMPoland S.A.



**Main responsibilities:**

- Technology development
- P&P capital project execution
- Marketing
- Application/Sales
- Designing
- Engineering
- Erection services
- Field Services
- Service Center for Europe



**Location:**

Świecie, Poland

**Contact:**

Phone: +48 52 562 92 00  
E-mail: [handlowy.pmpfs@pmpgroup.com](mailto:handlowy.pmpfs@pmpgroup.com)

### PMP Rolls & Service Sp. z o.o.



**Main responsibilities:**

- Rolls manufacturing
- Rolls services
- Refurbishment services
- Maintenance services



**Location:**

Jelenia Góra, Poland

**Contact:**

Phone: +48 75 755 20 60  
E-mail: [konmet@pmpkonmet.pl](mailto:konmet@pmpkonmet.pl)

### PMPKonmet Sp. z o.o.



**Main responsibilities:**

- Subcontracting projects
- Mild steel structures



**Location:**

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Service Center – North America

**Contact:**

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E-mail: rmatuska@pmpamericas.com

## PMP Americas Inc.



**Main responsibilities:**

- Liaison for PMP P&P business
- Gauging & Fixturing
- Subcontract Manufacturing
- Service Center for North America



**Location:**

Changzhou, China  
Service Center – Asia

**Contact:**

Phone: +86 519 86225356  
E-mail: marketing@pmpgroup.cn

## PMP IB (Changzhou) Machinery & Technology Co. Ltd.



**Main responsibilities:**

- Center of Excellence for EcoEc Tissue Machines
- Engineering & manufacturing support for capital projects
- Service center for Asia



**Location:**

Lucca, Italy

**Contact:**

Phone: +39 340 3924454  
E-mail: info@pmpower.it

## PMPower S.r.l.



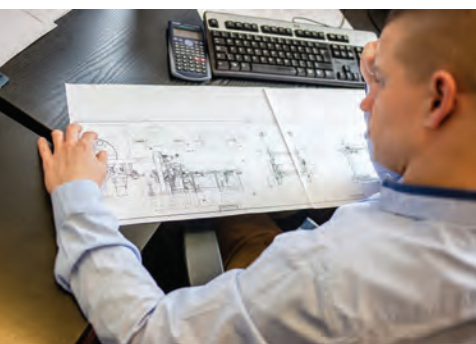
**Main responsibilities:**

- Energy solutions for TMs and PMs
- Hoods/steam & condensate
- Ventilation & air system
- Transfer & stabilizing boxes
- Runnability systems
- Plant surveys & upgrades





## PMP – PAPER MACHINERY PRODUCER



Industry:	Industrial Machinery & Services (Especially for Pulp, Paper and Tissue Industries)
Founded:	1854 – over 160 years of experience
Headquarters:	PMPoland S.A., Jelenia Góra, Poland
No. of locations:	6
Area served:	Worldwide
Key people:	Mr. Zbigniew Manugiewicz (CEO) Mr. Aaron Braaten (Chairman)
Products:	Paper making lines Tissue making lines Subcontracting Specialty Products
Services:	Services for the paper industry Engineering services
Revenue:	49,5 mln EUR (2016)
No. of employees:	600



Honoring  
our **Past** and  
Empowering  
our **Future**

[www.pmggroup.com](http://www.pmggroup.com)



# pmp

# HEADQUARTERS

## INSIGHT

## PMPOLAND S.A.

### **PMPOLAND S.A.**

**Location:** Jelenia Góra, Poland

#### **Main responsibilities:**

- **Capital project execution**
- **Designing**
- **Technology development**
- **Key technological section manufacturing**
- **PMP Service Center of Europe**

#### **Leadership:**

**Mr. Zbigniew Manugiewicz**  
**(President & CEO PMP Group)**

### **SHORT HISTORY OVERVIEW**

In 2014 it was the 160<sup>th</sup> anniversary of Heinrich Füllner establishing a workshop for paper devices in Cieplice (a district of Jelenia Góra), which at the end of the 19<sup>th</sup> century became a well-known paper machinery producer in Europe. Customers from Europe as well as from Asia and South America bought complete paper technological lines from Cieplice due to their high quality. The machines designed by companies H. Füllner, then Fampa and Beloit Poland S.A., significantly influenced the paper industry development in the Jelenia Góra region, as well as in Silesia, Germany, Poland and in many more countries all over the world. This honourable role is continued to this day by PMPoland S.A. as a successor of over 160 years of paper machinery building tradition.

### **PMPOLAND S.A. MAIN RESPONSIBILITIES**

Today PMPoland S.A. is the headquarters of the entire corporation, which is connecting all divisions under one sign of the PMP Group. The main responsibility of PMPoland S.A. is execution of capital projects for the paper industry.

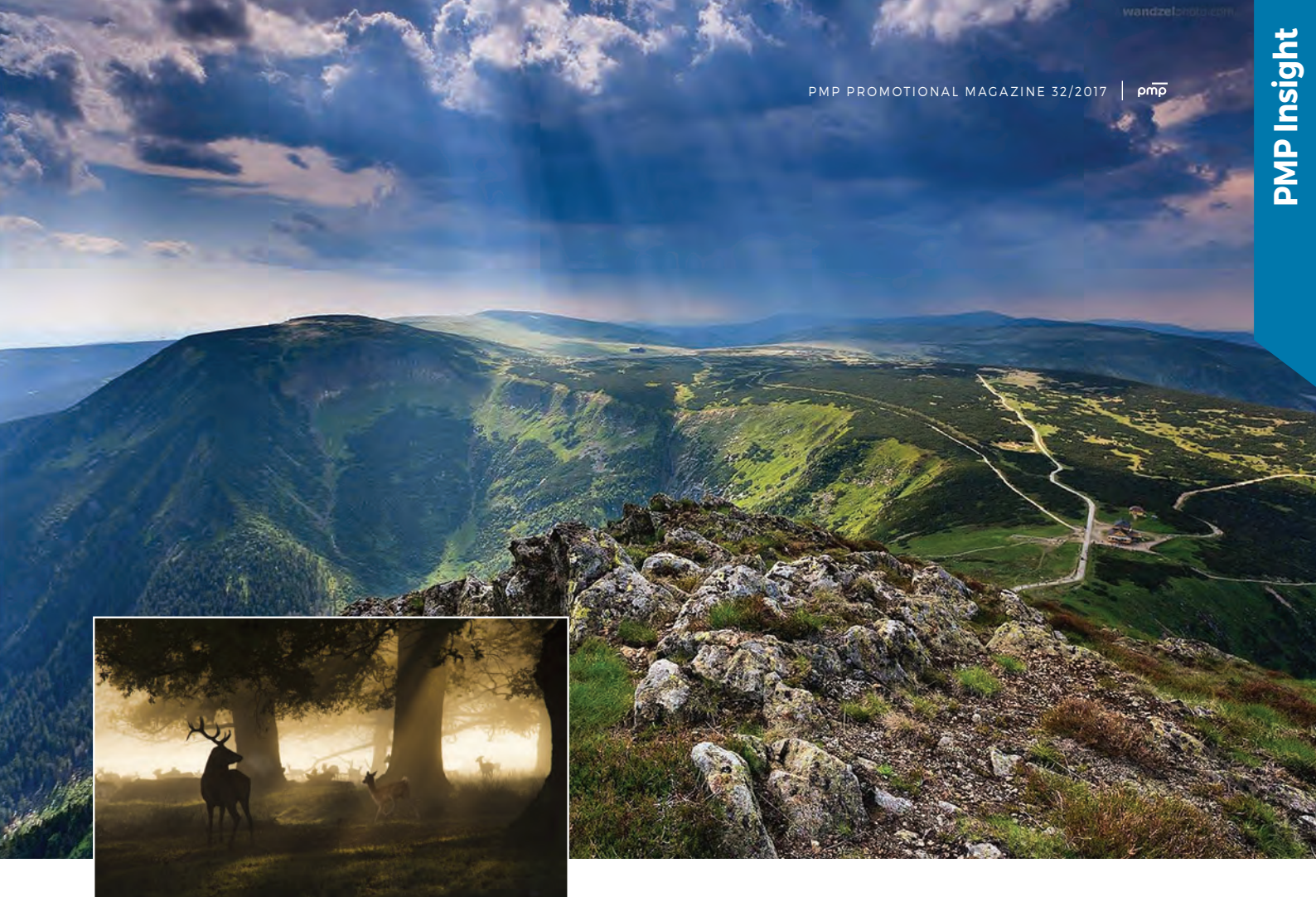
PMPoland offers complete paper machines for special papers (like MG) and packaging units, described by the Intelli-Paper® platform, as well as complete technological tissue making lines, under the brand Intelli-Tissue®. The product portfolio in this area also covers stock preparation, stock approach and all new sections of machines. Due to the high demand on the market in regards to leading complex added-value projects, PMPoland S.A. is also executing a so called Phoenix Concept™ rebuilds.

PMPoland S.A. also provides variety of engineering services (for both, tissue and paper industry), that are based on experience and modern tools such as 3D Solid Works, CosmosWorks, CADSIM Plus, E-plan and DB Works. What is more, PMPoland's service portfolio covers anything from erection supervision groups, safety audits, periodical surveys and repairs of rolls, small repairs of existing equipment (like pumps, blowers or corroded constructions) and many more.

Another responsibility of PMP Group's headquarters is the Subcontracting Business, where PMPoland S.A. offers precision machining, fabrication







and assembly of complex and large machinery, based on documentation provided by the customer.

PMPoland's product and reference portfolio is vast and diverse. This diversity allows us to assure a stable position on the market, which eventually results in the company's reliability.

## PMP'S HEADQUARTERS LOCATION

PMPoland S.A. is located in Jelenia Góra, in southwestern Poland, along the border with the Czech Republic. The name of the city means "Deer Mountain".



Jelenia Góra is a city with over 900 years old history and tradition, as well as monuments and tourist attractions. It's also a perfect starting point for hiking in the mountains. The Jelenia Góra is one of the most interesting and oldest cultural landscape of our region. In the city and it's nearby area you can encounter magnificent churches, penitential crosses, old cabins, medieval fortresses and palaces surrounded by romantic parks.

By the tourist trails there are many mountain shelters where a weary tourists can rest while experiencing the history of the region. Jelenia Góra is a perfect place to start a trip to the surrounding mountain ranges: Karkonosze, Rudawy Janowickie, Kaczawskie Mountain and Izerskie Mountain.

There is no doubt, it is an exceptionally unique place with a thousand years of history and a multitude of cultures. From the windows in PMPoland you can see the view on the Śnieżka Mountain, which is the highest peak in the Karkonosze Mountains (1602 meters mamsl).

...feel invited to visit PMP's Headquarters and to discover the beauty of our region!



**ROCKY MATUSKA**  
GENERAL MANAGER  
- PMP AMERICAS

### **PMP AMERICAS INC.**

**Location:** Machesney Park, IL, USA

#### **Main Responsibilities:**

- **Outsourcing Solutions**
- **Reverse Engineering**
- **Gauging & Fixturing**
- **Subcontracting**
- **Sales & engineering liaison for PMP (North America)**

**Leadership:**  
**Mr. Rocky Matuska**  
(General Manager)

# **PMP AMERICAS**

MEET OUR EXPERTS FROM THE USA



## **PMP AMERICAS BUSINESS PROFILE OVERVIEW**

PMP Americas is one of PMP's divisions, located in Machesney Park, Illinois (near Chicago). The facility has been manufacturing parts for the Subcontracting Business, especially in the aerospace and automotive industries. Their modern equipment, including 5-Axis machining capabilities, precision grinding and turning, is a perfect fit for the high tolerance requirements of the aerospace industry. PMP Americas is also the link between PMPoland S.A. and the US market and provides corporate support in the area of the paper industry. PMP Americas is the PMP's main branch responsible for manufacturing Specialty Products.

In the area of paper industry, PMP Americas is responsible for the North American market and supports in implementation of projects in this area. With the US team, the company is able to provide better communication (in the native language of customers) and a rapid response to the needs of buyers in this part of the world. Representatives of the PMP Americas are supporting PMP's Headquarters at every stage of the project - from signing the contract through start-up and optimization.



PMP Americas is also expanding in the Paper Industry and has designers on staff to provide local design and fabrication support for smaller rebuilds. They can offer service of all rolls and headboxes for North America as well.

## LOCATION

PMP Americas is located in Machesney Park, Illinois, United States. The area surrounding Machesney Park is well known for its attractive residential setting nearby the Rock River. The Village is well positioned for convenient access to Chicago, Madison and Milwaukee. Machesney Park is known for its friendly expanding business community, reputable schools and access to recreation. While the Machesney Park area is rooted in history, the Village is relatively young only having incorporated into a Village in 1981.

The area has world class parks and recreational facilities for all ages and interests. From hiking, picnicking, golfing and active sports to water sports and off-leash dog runs, the Machesney Park area has something to offer for everyone.







## REEL



Design speed:	Up to 5000 fpm	Up to 1500 mpm
Paper width:	Up to 400 in	Up to 10 m

Hydraulic or pneumatic operated



## METERING SIZE PRESS



Paper width:	Up to 400 in	Up to 10 m
Design speed:	Up to 4920 fpm	Up to 1500 mpm
Sizing agent:	Starch, PVA, pigment	Starch, PVA, pigment
Solids content:	Up to 18% (starch)	Up to 18% (starch)
Surface sizing weight:	Up to 1.2 lbs/3000ft <sup>2</sup>	Up to 6 gsm

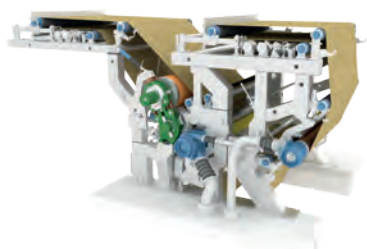
High quality rods and holders

Quick change rolls



## MICROCREPE

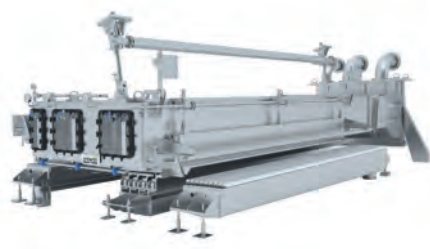
Design speed:	Up to 990-4000 fpm
Paper width:	130-280 in
Paper grades:	Sack paper



## PRESS SECTION



Paper width:	Up to 400 in	Up to 10 m
Shoe Press module dia:	51 in, 60 in	1300 mm, 1500 mm
Counter rolls:	Plain, Intelli-DCR®	Plain, Intelli-DCR®
Configuration:	Up - right, inverted	Up - right, inverted
Nip range:	Up to 8000 PLI	Up to 1400 kN/m



## FORMER

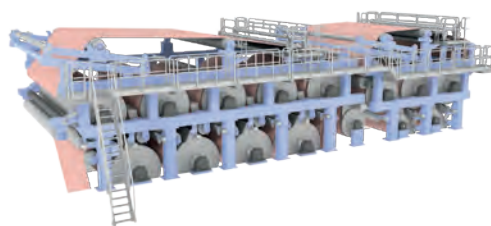


Paper width:	Up to 400 in	Up to 7.5 m
Design speed:	1000-4000 fpm	300 - 1200 mpm
Basis weight:	6-40 lbs/3000ft <sup>2</sup>	30 - 200 gsm
Type:	4 or 5 wire roll type	4 or 5 wire roll type



**intelli**  
MICRO-CREPE

Up to 900 mpm  
3.4 - 7.0 m  
Sack paper



## DRYING SECTION

**intelli**  
DRYER

Paper width:	Up to 400 in	Up to 10 m
Design speed:	Up to 4920 fpm	Up to 1500 mpm
Drying cylinders:	60 in or 72 in	1524 mm or 1830 mm
Pressure ratings:	10 bar	10 bar
Arrangement:	Single-tier or double-tier	Single-tier or double-tier
Drive:	By felt rolls (silent drive)	By felt rolls (silent drive)

Ropeless threading for higher speeds



## HYDRAULIC HEADBOX

**intelli**  
JET-V

Pondside:	Up to 400 in	Up to 10 m
Design speed:	Up to 4920 fpm	Up to 1500 mpm
Basis weight:	12-250 lbs/3000ft <sup>2</sup>	20 - 400 gsm
Type:	Hydraulic (with or without CP)	Hydraulic (with or without CP)
No. of channels:	2-12	2-12
No. of layers:	Single or multilayer	Single or multilayer

## PMP Platform Concept for Papermakers

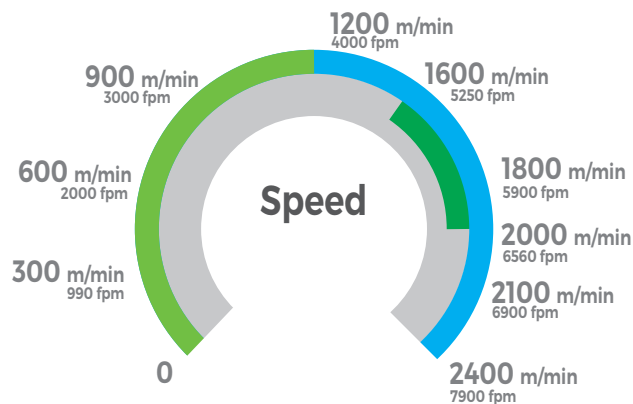
- Complete MG & Containerboard Lines (reel trim: up to 7 m; 280")
- PM Conversions - Phoenix Concept™ Rebuilds
- Stock Approach System
- New sections of PMs (up to 10 m; 395"):
  - ✓ Intelli-Jet V® Hydraulic Headbox
  - ✓ Intelli-Shaker®
  - ✓ Intelli-Top® Former
  - ✓ Intelli-Nip® Shoe Press
  - ✓ Intelli-DCR®
  - ✓ Intelli-TriNip® Press
  - ✓ Intelli-Sizer® Metering Size Press
  - ✓ Intelli-MicroCrepe® Extensible Unit
  - ✓ Intelli-Dryer®
  - ✓ Intelli-Reel®
- Auxiliary Systems
- Energy Saving Solutions
- Engineering Consulting Services



**intelli**<sup>®</sup>  
TISSUE EcoEc 1200

## Intelli-Tissue<sup>®</sup> EcoEc 1200

<b>Speed:</b>	1000-1200 m/min (3300-4000 fpm)
<b>Capacity:</b>	50-60 tpd
<b>Reel trim:</b>	2400-2800 mm (95-110 in)
<b>Target market segment:</b>	for beginners / an essential segment
<b>Key technologies:</b>	<ul style="list-style-type: none"> <li>- Crescent Former Technology</li> <li>- single layer Intelli-Jet V<sup>®</sup></li> <li>- 12 foot steel Intelli-YD<sup>®</sup></li> <li>- steam heated Intelli-Hood<sup>®</sup> standard</li> </ul>







## PMP Platform Concept for Tissuemakers

- Complete Crescent Former Tissue Making Lines (capacity: up to 200 tpd, reel trim: up to 5,6 m; 220")
- Stock Preparation & Stock Approach Systems
- New sections of TMs:
  - ✓ Intelli-Jet V® Hydraulic Headbox
  - ✓ Intelli-Former® Crescent Former
  - ✓ Intelli-Press®
  - ✓ Steel Intelli-YD®
  - ✓ Intelli-Hood®
  - ✓ Intelli-Reel®
- Auxiliary Systems
- Energy Saving Solutions
- Engineering Consulting Services



### Intelli-Tissue® EcoEc Premium

<b>Speed:</b>	1600-2000 m/min (5250-6560 fpm)
<b>Capacity:</b>	up to 220 tpd
<b>Reel trim:</b>	2800-5600 mm (110-220 in)
<b>Target market segment:</b>	for ambitious players/a premium segment
<b>Key technologies:</b>	<ul style="list-style-type: none"> <li>- Crescent Former Technology</li> <li>- single layer Intelli-Jet® V Premium</li> <li>- 16-20 foot steel Intelli-YD®</li> <li>- large SPR dia 1400 mm</li> <li>- steam heated Intelli-Hood® essential</li> </ul>



### Intelli-Tissue® Advanced 1600

Intelli-Tissue® Advanced 1800, Intelli-Tissue® Advanced 2100

<b>Speed:</b>	1560-2100 m/min (5000-6900 fpm)
<b>Capacity:</b>	up to 220 tpd
<b>Reel trim:</b>	2800-5600 mm (110-220 in)
<b>Target market segment:</b>	for mature players/an advanced segment
<b>Key technologies:</b>	<ul style="list-style-type: none"> <li>- Crescent Former Technology</li> <li>- multilayer Intelli-Jet V® Premium</li> <li>- 16-20 foot steel Intelli-YD®</li> <li>- large SPR dia 1400 mm</li> <li>- gas heated Intelli-Hood® standard</li> </ul>



Sample References:

Customer:	Scope of supply:
Confidential, United Kingdom	PM transfer & rebuild (including a new Intelli-Nip® Shoe Press), supply, refurbishment, erection and commissioning services
Smurfit Cartón y Papel de México, S.A. de C.V. Molino, Los Reyes, Mexico	Intelli Jet V® hydraulic headbox with CP, wire modification, IBS dewatering elements, press rebuild (Intelli Tri-Nip®), dryer and pre-dryer section rebuild, size-press rebuild, tail threading upgrade, mechanical drives
SFT, Aleksinskaya Paper and Board, Russia	Second-hand PM refurbishment, wet-end rebuild, Intelli-Jet V® Hydraulic Headbox, Intelli-Nip® Shoe Press, Intelli-Sizer® Metering Size Press, dryer section modernization
Papierfabrik Niederauer Muhle GmbH, Germany	PM transfer & rebuild (Press section rebuild, mini-fourdrinier + Intelli-Jet V® top headbox, bottom wire extension, two new dryer groups, new Intelli-Reel®)



# FOR EXISTING MACHINERY



## MAIN FEATURES:

- Precise calculation
- On site measurement
- Scheduling
- Design of the new equipment (tailor made solutions)
- Manufacturing of new core technological units
- Pre-Assembly at PMP facility
- All necessary tests
- Transportation to the mill site
- Adjustment
- Optical alignment and erection at site
- Engineering commissioning
- Technological start-up and post start-up assist
- PM/TM relocation
- PM/TM profile change

## Project goals:

Grade or product change for an existing paper machine (based on a relocated machine), reduction of investment costs, combining new technological elements with refurbished parts

Increasing capacity to 170,000 t/a, widening of product portfolio (fluting/liner)

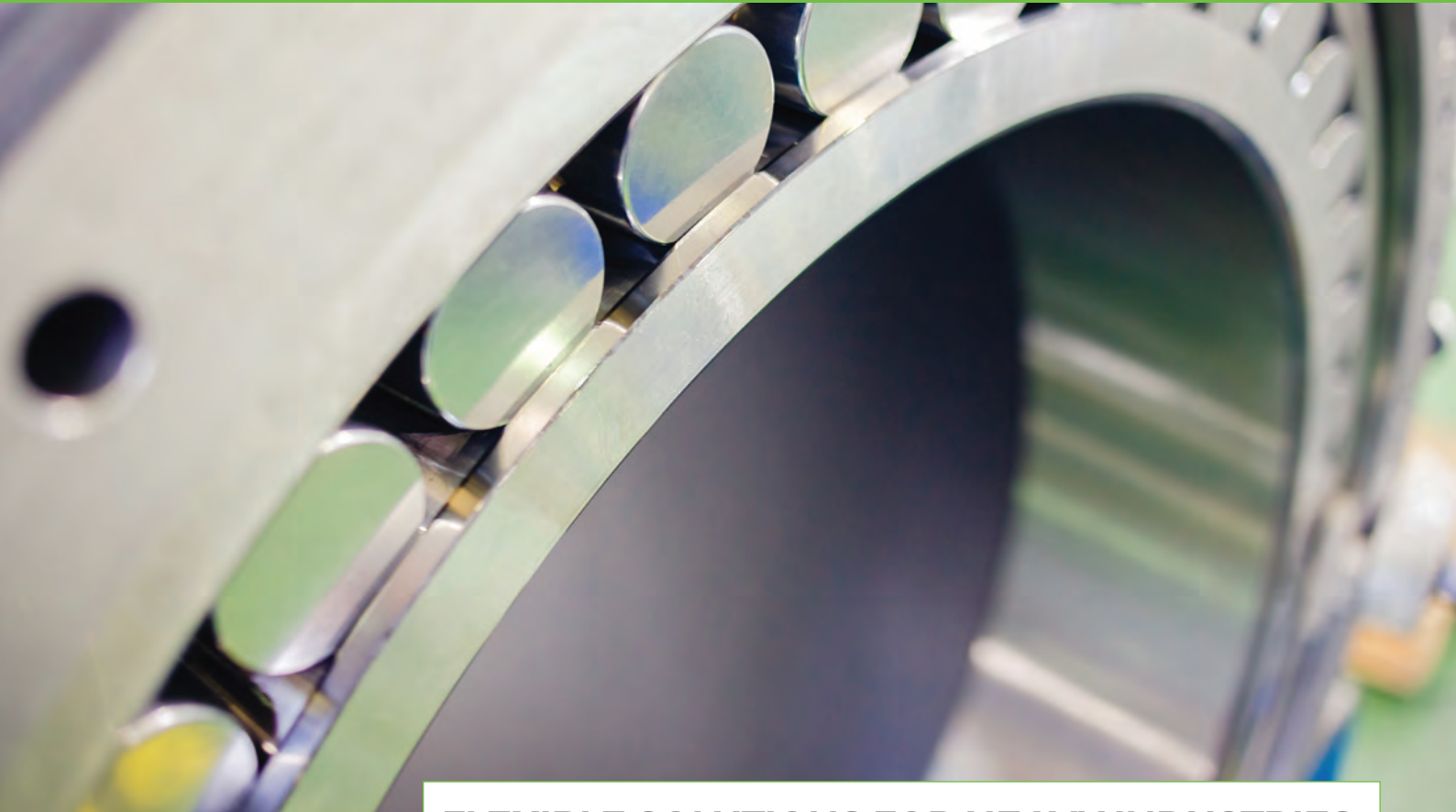
Grade or product change for an existing paper machine (based on a relocated machine), reduction of investment costs, combining new technological elements with refurbished parts

Grade or product change, reduction of investment cost, combining new technological elements with refurbished parts

## BENEFITS:

- **PM CONVERSIONS OPPORTUNITIES**  
(newsprint into containerboard / tissue or heavy into lighter containerboard grades)
- **CAPACITY INCREASE** up to **25%**
- **PAPER PROPERTY** improvement
- **UP TO 50%** investment cost savings
- Production line **RELOCATION**  
**POSSIBILITIES**

# SUBCONTRACTING



## FLEXIBLE SOLUTIONS FOR HEAVY INDUSTRIES

Supporting chemical, food, shipbuilding, mining, brewing, automotive and many other industries.

Subcontracting is a part of PMP's business area that offers precise machining, fabrication and assembly of complex and large machinery based on documentation provided by the customer.

### BENEFITS:

- **OVERSIZE** items manufacturing
- **HIGH QUALITY MATERIALS**  
(Stainless steel, mild steel, aluminium, tungsten carbide, delrin)
- **ON TIME** delivery
- **METRIC & IMPERIAL** designs
- CNC machinery in house - **PRECISE EXECUTION**

### SCOPE OF SUPPLY:

- Wide scope of manufacturing services applied to execute customers' products (based on provided design)
- Single units as well as complex line concepts
- Manufacturing based on CNC controlled tools
- Sample projects include tanks, silos, chests, bridges and building constructions, fan housings, air transmission installations, machine constructions, footwalks, ladders and stairs
- Manufacturing centers located in Poland, China and USA



# SPECIALTY PRODUCTS



## PRECISION COMES FIRST

PMP will design and build specialty products that meet your needs.

PMP designs and builds custom gauges and fixtures for production and assembly lines for the automotive, aerospace and also for General Production facilities.

### BENEFITS:

- **ERGONOMIC DESIGNS** – improves safety - reduces strain on your employees
- **ON TIME** delivery
- **CONFIDENTIAL** agreements
- CNC machinery in house - **PRECISE EXECUTION**

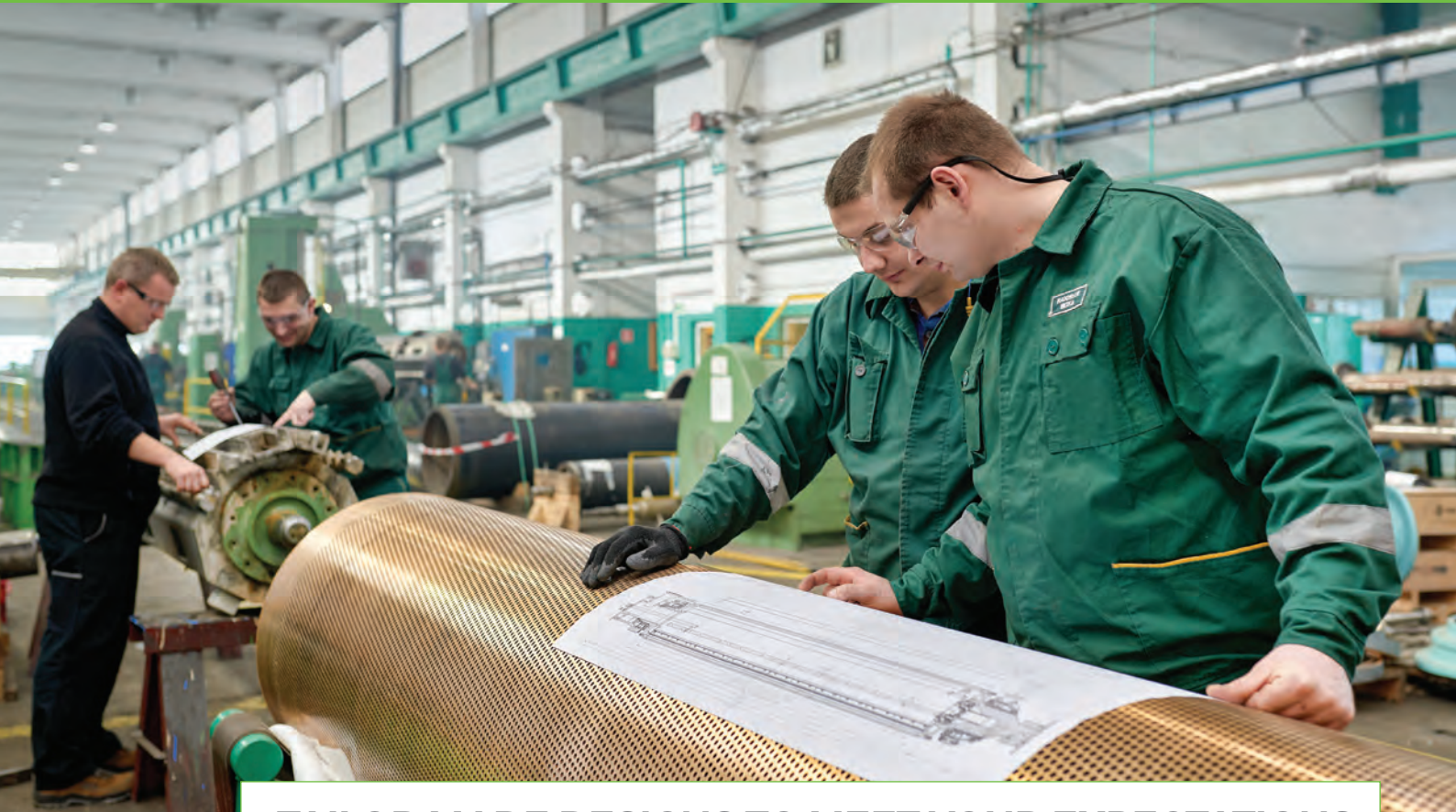
### SCOPE OF SUPPLY:

#### Gauging & Fixturing

- Production & Assembly for automotive, aerospace and general production facilities
- Gauges to check incoming part tolerances and final assembly tolerances
- For work-holding & assembly to decrease manufacturing and assembly times



# REPLACEMENT PARTS



**TAILOR MADE DESIGNS TO MEET YOUR EXPECTATIONS**

PMP provides a wide range of replacement parts for our own PM/TM as well as for other existing lines.

## BENEFITS:

- **MODERN DESIGNS** meeting demanding expectations
- **USER-FRIENDLY** solutions
- **HIGH QUALITY** certified materials application
- Meeting worldwide **SAFETY REQUIREMENTS & REGULATIONS**
- Properly **PACKED & INSURED**

## SCOPE OF SUPPLY:

- Components for all possible areas of PMs/TMs
- Metric & imperial designs
- Standard or custom-made designing (reverse engineering)



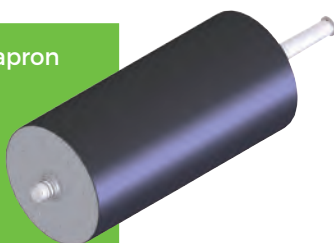
## STOCK PREPARATION & STOCK APPROACH

- Low pulsation screen
- Hydropulper rotor



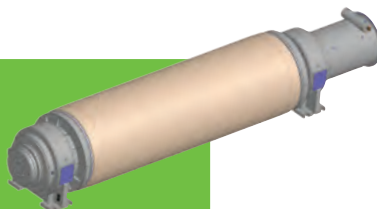
## WET-END

- Headbox replacement parts: apron lips, apron tables, slice lips
- Wire rolls
- Forming rolls
- Suction couch rolls
- Guides & stretchers
- Suction boxes
- Doctors
- Footwalks (stainless & aluminium)



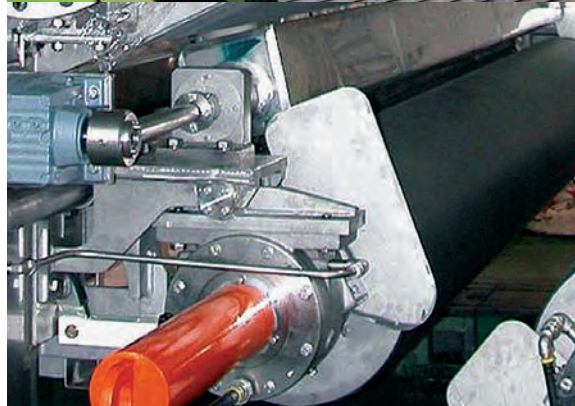
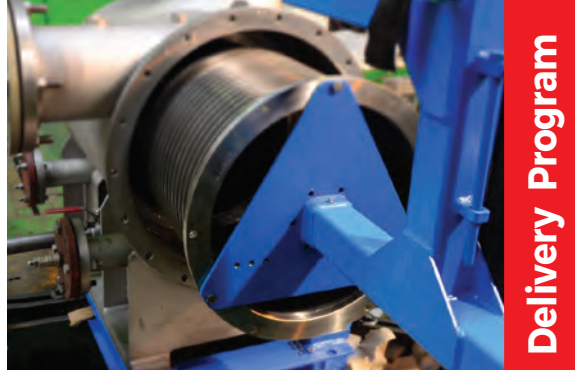
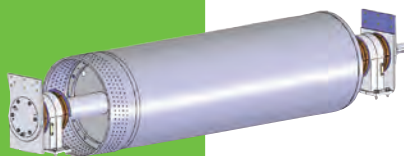
## PRESS

- Press rolls
- Suction rolls
- Suction boxes
- Guides & stretchers
- Doctors
- Footwalks (stainless & aluminium)



## DRY-END

- Dryer felt rolls
- Size press rolls
- Dryer cans
- Tail cutters
- Doctors
- Reel drums
- Reel spools
- Footwalks (stainless & aluminium)





# MILL SERVICES



**KEEPING YOUR MACHINES IN A GREAT SHAPE!**

Routine maintenance or emergency repairs needed? Contact us!

Interested to keep your PM running smoothly? Feel free to choose our experienced service team.



## BENEFITS:

- **COMPLEX** approach
- Wide scope of **ACTIVITIES FROM A TO Z**
- Incorporation of refurbished machinery into **EXISTING PAPERMAKING LINES**
- **HIGHLY SKILLED SPECIALISTS** with vast experience collected worldwide
- Paper mills can be reached by a PMP specialist within **24 HOURS IN EUROPE, ASIA & NORTH AMERICA**
- Being in line with **EU REGULATIONS & RECOMMENDATIONS (CE)**



## SCOPE OF SUPPLY:

- PM/TM pre-erection & erection at site
- PM units routine check-outs
- Emergency repairs
- Optical measurements
- Refurbishment services
- Disassembly & relocation of existing PMs





# ENGINEERING SERVICES



**A GREAT PERFORMANCE IS OUR GOAL**

## BENEFITS:

- Wide process knowledge for **EFFICIENT PROJECT EXECUTION**
- **EXPERIENCED** & dedicated team
- **FLEXIBILITY** in action
- Total annual engineering capacity up to **100,000 HOURS**
- **MODERN ENGINEERING SOFTWARE** (SolidWorks, CosmosWorks, CADSIM Plus, E-plan, DBWokrs) – shorter execution cycles
- Cooperation with industry **EXPERTS/ADVISORS**
- **METRIC & IMPERIAL** designs
- English as a **COMMON LANGUAGE** of communication

PMP, within the engineering services, co-operates with the paper industry, as well as with other industry partners.

PMP as a technological company offers a wide range of engineering services starting from application to advisory services.

## SCOPE OF SUPPLY:

- Application/ Designing/ Detailing
- Product development
- Terminal points definition
- Approval meetings support
- In-house manufacturing with continuous supervision
- Technological Services (commisioning, start-up, PM/TM optimization)
- Existing lines troubleshooting (dynamic stability / vibration analysis and more)
- Safety analysis

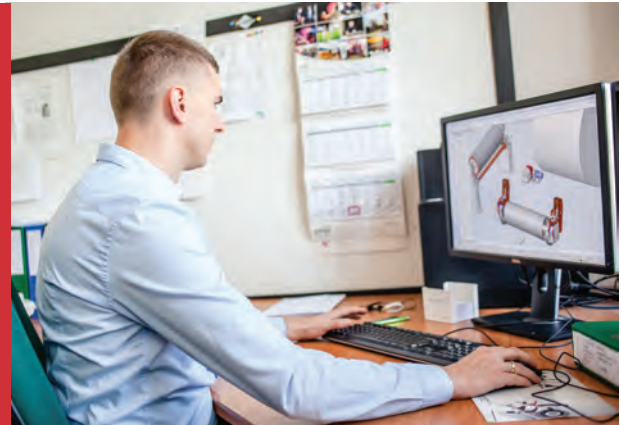
## PRE-SALES STAGE



- Papermaking process & PM audits
- R&D product development (designs, tests, data collection, product books)
- Creating technical standards
- Application (layouts, calculations, technical support for proposals)
- Engineering cycles optimization
- Reverse engineering
- Short & longterm mill development & improvement plans

## PROJECT EXECUTION STAGE

- Designing (terminal points definition, risk analysis, calculations, FEM analysis, PM & auxiliary systems)
- Component definition (purchasing, calculations etc.)
- Auxiliary System incorporation
- Detailing (Production drawings)
- Kick-off / design approval meetings support
- In-house manufacturing supervision (manufacturing support, internal tests)
- Factory Acceptance Test with customer participation



## AT SITE PROJECT STAGE

- Commissioning at site
- Personnel trainings
- PM/TM start-up supervision

## AFTER START-UP STAGE

- Post start-up assistance (extended presence at site)
- PM/TM parameters optimization (performance tests)
- Troubleshooting (dynamic stability / vibration analysis & more)
- Technical advisory / audits





# HYDRAULIC HEADBOX

## AN ICONIC SOLUTION FOR YOUR ULTIMATE SUCCESS



### BENEFITS:

- **IMPROVED PAPER QUALITY** - basis weight profile improvement up to 80%, formation & fiber orientation - (+-) 5 degrees
- **IMPROVED PM UPTIME** (high internal - surface quality - less cleaning operation & better runnability)
- **FLEXIBILITY OF PRODUCTION** (a wide range of adjustment)
- Link to **ANY QCS/DCS SOLUTION**

### MAIN FEATURES:

- **PONDSIDE:** Up to 10 m / 400 in
- **DESIGN SPEED:** Up to 1500 mpm / 4920 fpm
- **BASIS WEIGHT:** 20 - 400 gsm / 12-250 lbs/3000ft<sup>2</sup>
- **TYPE:** Hydraulic (with or without CP)
- **NO. OF CHANNELS:** 2-12
- **NO. OF LAYERS:** Single or multilayer



# SAMPLE REFERENCES:

Customer:	Smurfit Kappa Saillat, France		
<b>Grades:</b>	Two Ply Liner	<b>Capacity:</b>	620 t/d
<b>Reel trim:</b>	2700 mm / 354 in	<b>Pondside width:</b>	2950 mm / 116 in
<b>Design speed:</b>	1200 mpm / 3937 fpm	<b>Number of channels:</b>	4
<b>Operating speed:</b>	950 mpm / 3117 fpm	<b>Number of layers:</b>	Single
<b>Basis weight:</b>	120-220 gsm	<b>Type:</b>	Hydraulic

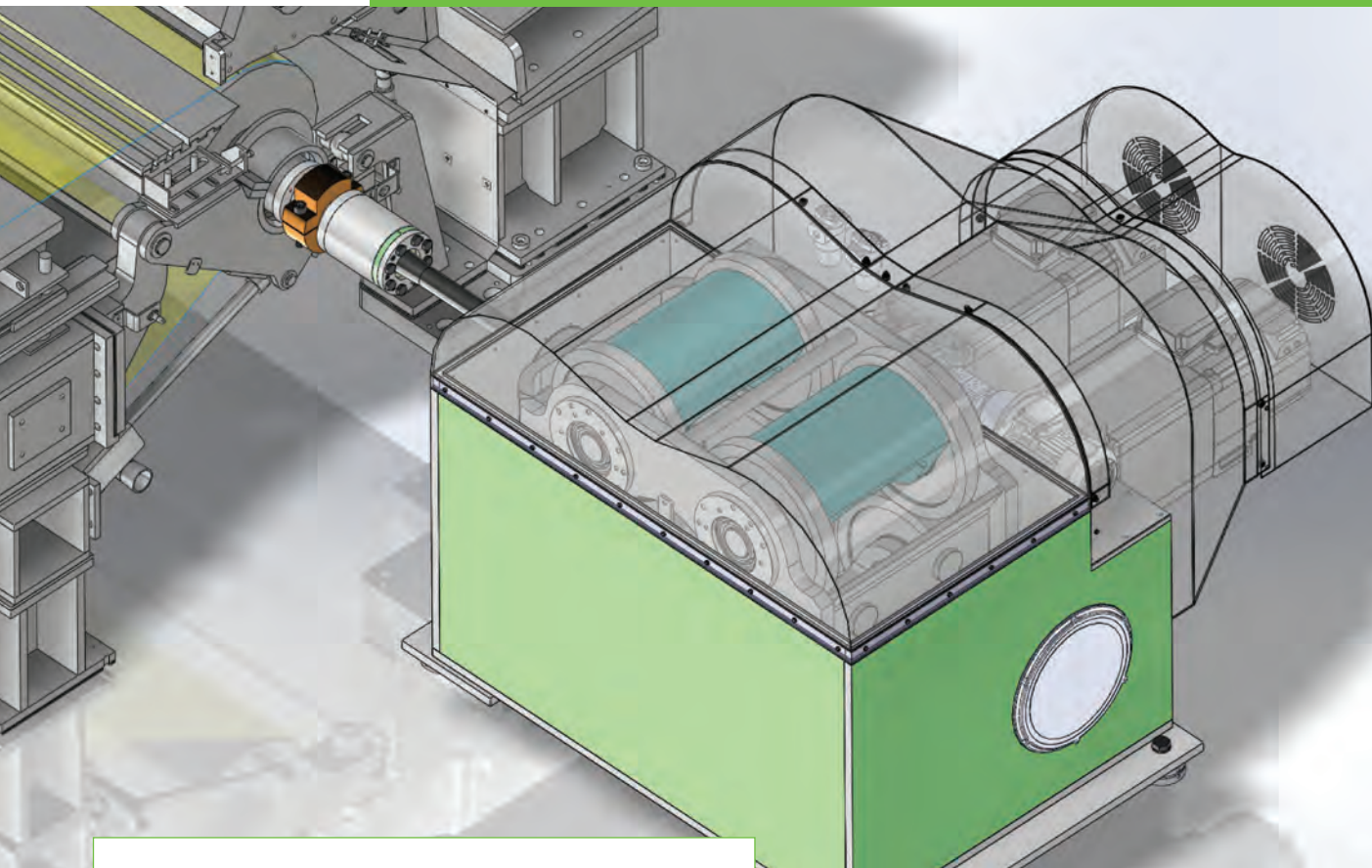
Customer:	Confidential, USA		
<b>Grades:</b>	Saturating Kraft	<b>Pondside width:</b>	5842 mm / 230 in
<b>Reel trim:</b>	5626 mm / 221 i	<b>Number of channels:</b>	6
<b>Design speed:</b>	610 mpm / 2001 fpm	<b>Number of layers:</b>	Single
<b>Operating speed:</b>	486 mpm / 1594 fpm	<b>Type:</b>	Hydraulic
<b>Basis weight:</b>	150-300 gsm	<b>Slice width:</b>	5832 mm / 230 in
<b>Capacity:</b>	88 t/d		

Customer:	Confidential, USA		
<b>Grades:</b>	Tissue	<b>Capacity:</b>	45 000 t/a
<b>Reel trim:</b>	5156 mm / 203 in	<b>Pondside width:</b>	5334 mm
<b>Design speed:</b>	1219 mpm / 3999 fpm	<b>Number of channels:</b>	8
<b>Operating speed:</b>	1200 mpm / 3937 inch	<b>Type:</b>	Hydraulic
<b>Basis weight:</b>	11-26 gsm	<b>Number of layers:</b>	4

Customer:	Confidential, USA		
<b>Grades:</b>	Linerboard	<b>Number of channels:</b>	base - 8
<b>Reel trim:</b>	8989 mm / 354 in		top - 2
<b>Design speed:</b>	660 mpm / 2165 fpm	<b>Number of layers:</b>	Single
<b>Operating speed:</b>	660 mpm / 2165 fpm	<b>Type:</b>	Hydraulic
<b>Basis weight:</b>	205-468 gsm	<b>Slice width:</b>	base - 9358 mm / 368 in
<b>Capacity:</b>	410 t/d		top - 9417 mm / 371 in
<b>Pondside width:</b>	base - 9347 mm / 368 in		
	top - 9398 mm / 370 in		

Customer:	Confidential, USA		
<b>Grades:</b>	Linerboard & Corrugated Medium	<b>Number of channels:</b>	base - 7
<b>Reel trim:</b>	8763 mm / 345 in		top - 2
<b>Design speed:</b>	1000 mpm / 3281 fpm	<b>Number of layers:</b>	Single
<b>Operating speed:</b>	825 mpm / 2707 fpm	<b>Type:</b>	Hydraulic
<b>Basis weight:</b>	118-203 gsm	<b>Slice width:</b>	base - 9347 mm / 368 in
<b>Capacity:</b>	130 t/d		top - 9398 mm / 370 in
<b>Pondside width:</b>	base - 9347 mm 368 inch		
	top - 9398 mm 370 inch		





## KEEP CALM & SHAKE WELL

It improves paper quality through better formation and at the same time does not transmit any undesirable forces on the foundation, headbox or any other machine sections improving PM performance.

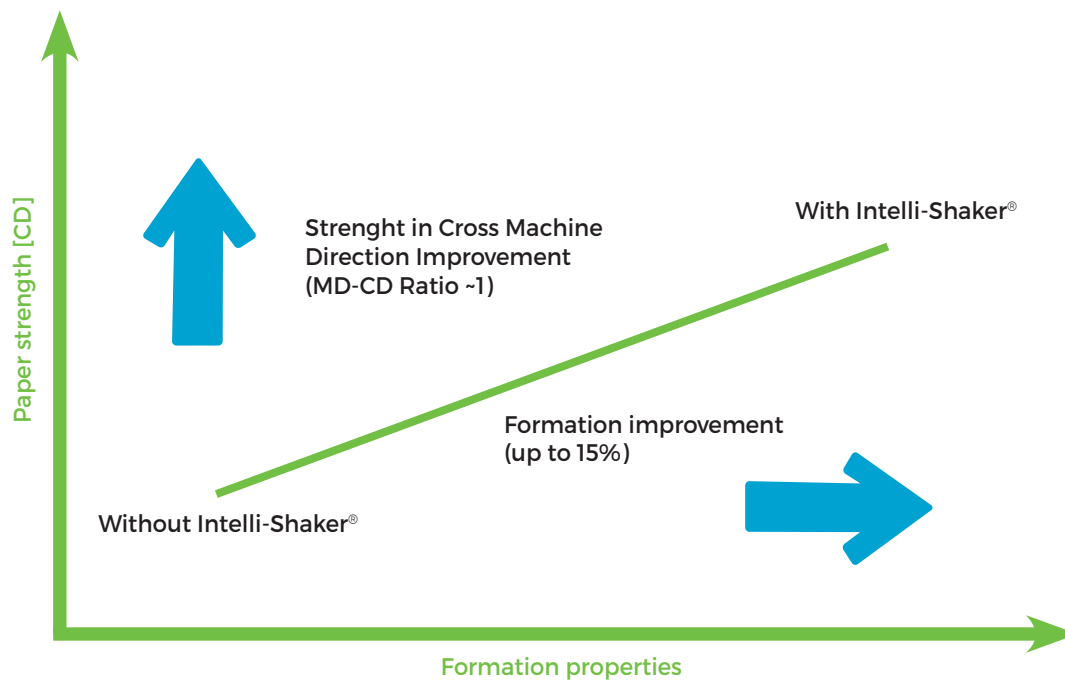
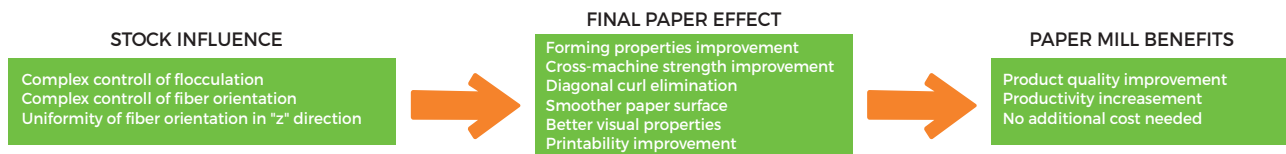
A wire shake unit is a proven technology having superior impact on the web formation and final paper strength properties.

### BENEFITS:

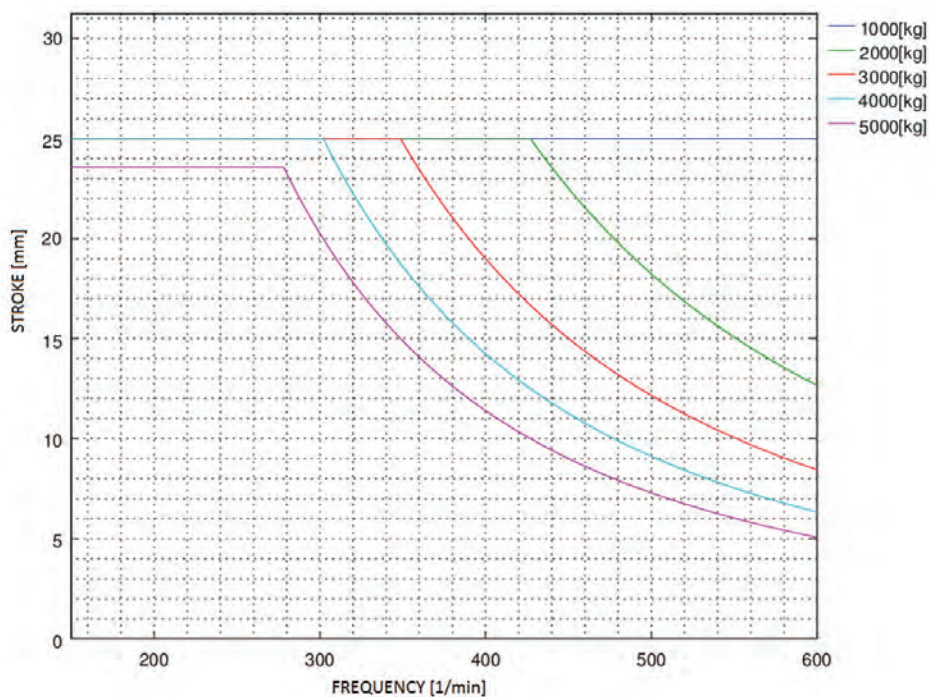
- **IMPROVES FORMATION UP TO 15%** - increased paper quality (MD/CD, SCT – for fluting)
- Enables PM **CAPACITY INCREASE** due to higher consistency in the headbox
- **HELPS TO IMPROVE PRODUCTION** - updating outdated headboxes
- Proper for **ANY PAPER GRADES**

### PRODUCT CHARACTERISTICS:

- **WORKING PRINCIPLE:** By the use of four rotating imbalanced masses, the Intelli-Shaker® imposes the horizontal repeatable motion in the cross machine direction on the breast roll, while all vertical forces are being eliminated. The stroke and frequency is fully adjustable in the range of 0-25 mm and 1-10 Hz respectively.
- **LOCATION:** Attached to the Breast Roll on the Drive Side of PM
- **APPLICATION OPTIONS:** Fourdriniers & Hybrid Formers
- **WORKING CONDITIONS:**
  - 0-25 mm (0-1in)
  - 1-10 Hz (60-600 strokes/min)



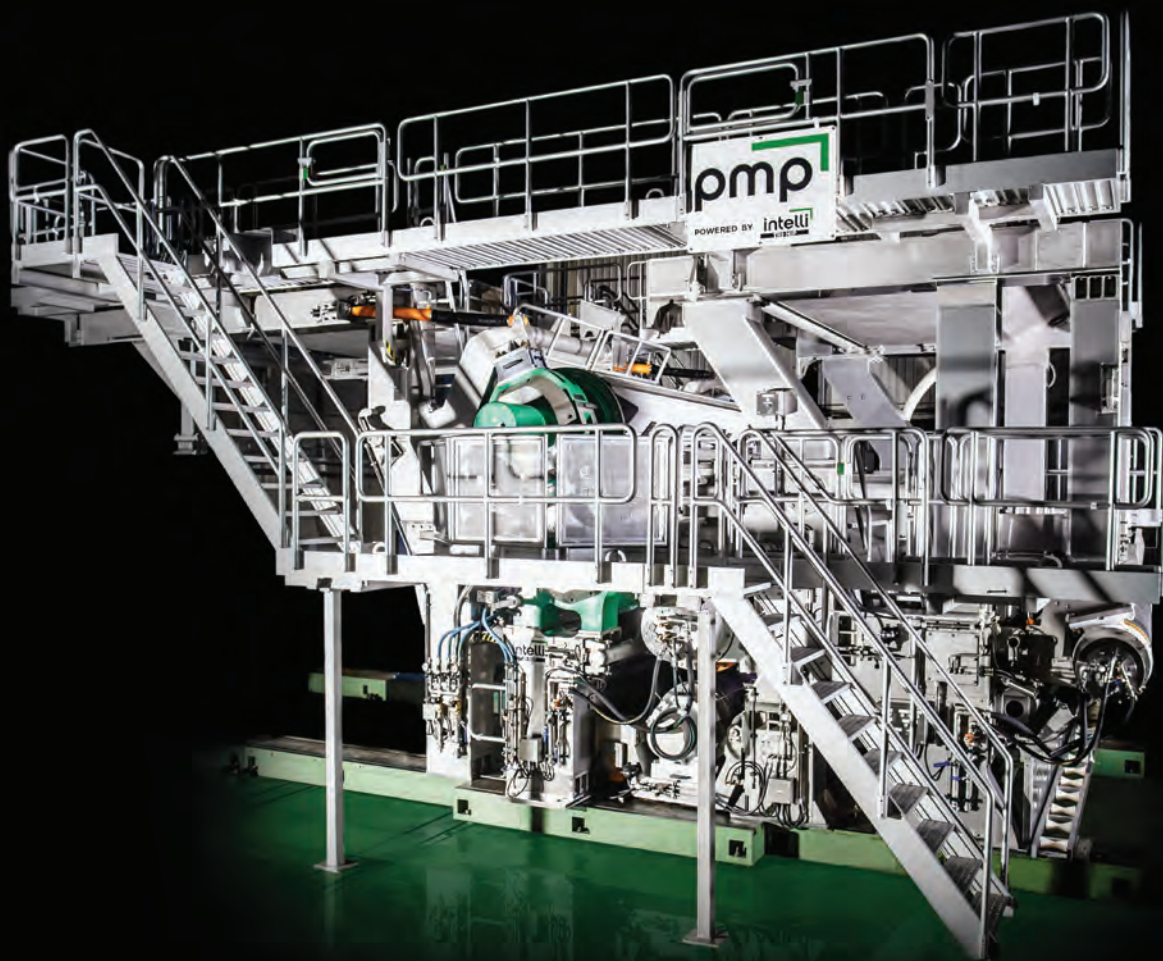
Every Shake unit is individually designed depending on machine construction, breast roll mass and production type.





# SHOE PRESS

GENTLE TOUCH WITH EXTENSIVE IMPACT



## BENEFITS:

- **LOWERING THE COST OF PRODUCTION**  
– 4-10% higher dryness – compared to previous technologies - lower steam consumption
- **IMPROVED PAPER QUALITY** (increased stiffness & higher bulk) – brighter & stronger paper
- ECO friendly Concept (**LOWER STEAM CONSUMPTION**)
- Better PM runnability (**STRONGER SHEET** - less breaks & higher felt lifetime)
- **LONGER PRESS** felt life

## MAIN FEATURES:

- **PAPER WIDTH:** up to 10 m / 394 in
- **SHOE PRESS MODULE DIA:**
  - 1300 mm / 51 in
  - 1500 mm / 59 in
- **COUNTER ROLLS:** Plain, Intelli-DCR<sup>®</sup>
- **CONFIGURATION:** Up-right, converted
- **NIP RANGE:** up to 1400 kN/m
- Compact design

## SAMPLE REFERENCES:

Customer:	Smurfit Kappa, Papeles Cartones S.A		
<b>Grades:</b>	Liner and Corrugating Medium	<b>Width of sheet:</b>	3300 mm
<b>Reel trim:</b>	3500 mm / 138 in	<b>Module size:</b>	1300 mm
<b>Max operating speed:</b>	600 mpm / 1963 fpm	<b>Mating roll:</b>	1200 mm
<b>Basis weight:</b>	90-200 gsm	<b>Nip load:</b>	1 <sup>st</sup> : 105 kN/m
<b>Capacity:</b>	120 000 t/a		2 <sup>nd</sup> : 140 kN/m
			3 <sup>rd</sup> : 1400 kN/m

Customer:	Confidential, North America		
<b>Grades:</b>	Multiwall Sack Kraft	<b>Nip load:</b>	1 <sup>st</sup> : 70 kN/m
<b>Max operating speed:</b>	1007 mpm / 3300 fpm		2 <sup>nd</sup> : 90 kN/m
<b>Basis weight:</b>	40-60 gsm		3 <sup>rd</sup> : 1050 kN/m
<b>Width of sheet:</b>	4140 mm / 160 in		

Customer:	Jiangsu Changfeng Paper, China		
<b>Grades:</b>	Testliner	<b>Module size:</b>	1300 mm / 51 in
<b>Reel trim:</b>	4860 mm / 191 in	<b>Mating roll:</b>	Plain
<b>Max operating speed:</b>	850 mpm / 2789 fpm	<b>Nip range:</b>	1050 kN/m
<b>Basis weight:</b>	90-220 gsm	<b>Nip load:</b>	1050 kN/m
<b>Width of sheet:</b>	5000 mm / 197 in		

Customer:	Smurfit Cartón y Papel de México, S.A. de C.V. Molino, Los Reyes, México		
<b>Grades:</b>	Liner and Corrugating Medium	<b>Width of sheet:</b>	2550 mm / 99 in
<b>Reel trim:</b>	2410 mm / 95 in	<b>Nip range:</b>	1400 kN/m
<b>Max operating speed:</b>	800 mpm / 2625 fpm	<b>Nip load:</b>	1 <sup>st</sup> : 100 kN/m
<b>Basis weight:</b>	100-240 gsm		2 <sup>nd</sup> : 140 kN/m
<b>Capacity:</b>	170 000 t/a		3 <sup>rd</sup> : 1000 kN/m

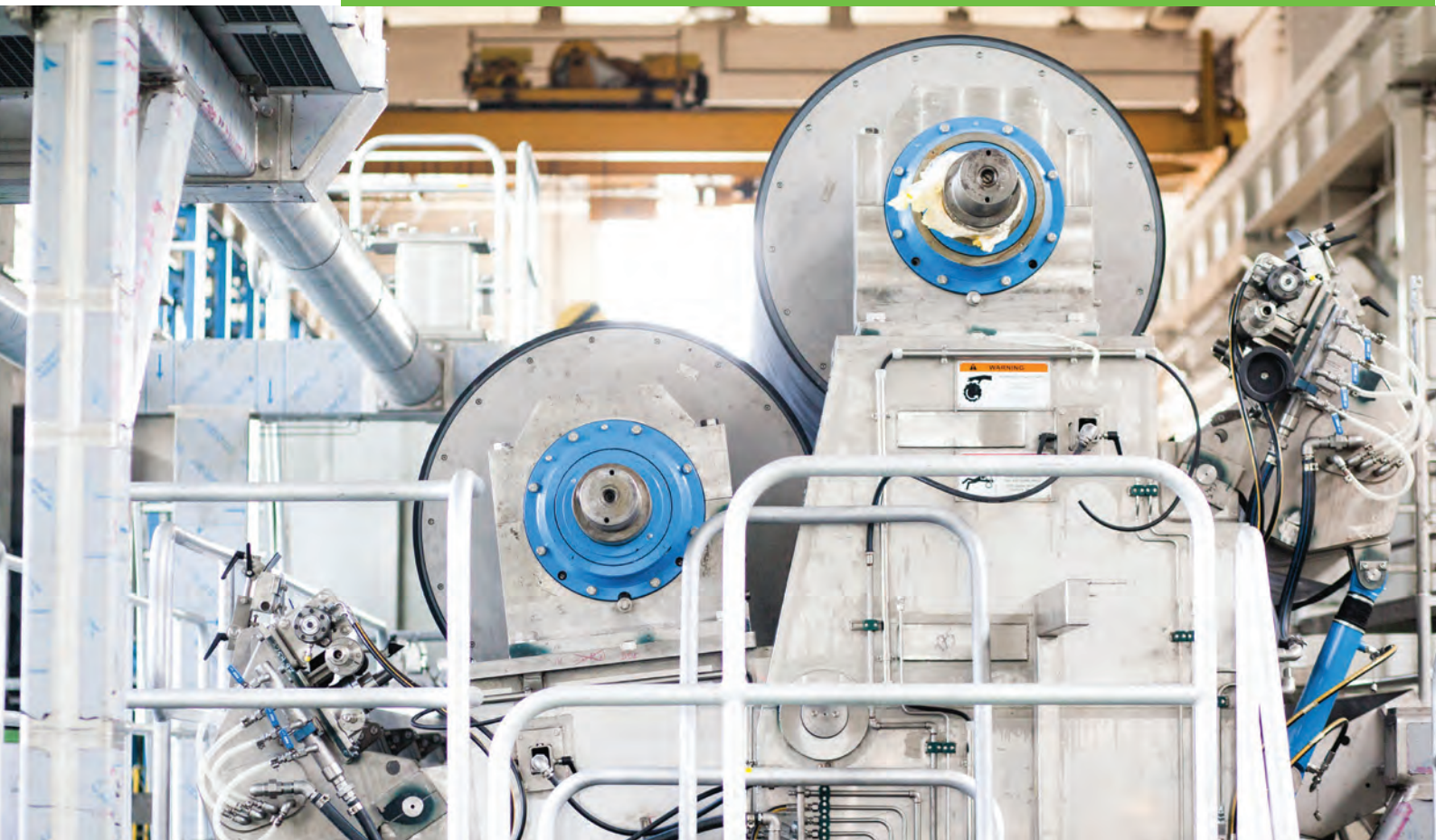
Customer:	Confidential, United Kingdom, Europe		
<b>Grades:</b>	Fluting, Testliner	<b>Width of sheet:</b>	5260 mm / 99 in
<b>Reel trim:</b>	5070 mm / 200 in	<b>Module size:</b>	1500 mm / 59 in
<b>Max operating speed:</b>	1200 mpm / 3937 fpm	<b>Mating roll:</b>	Intelli-DCR®
<b>Basis weight:</b>	80-120 gsm	<b>Nip load:</b>	1 <sup>st</sup> : 80 kN/m
<b>Capacity:</b>	250 000 t/a		2 <sup>nd</sup> : 140 kN/m
			3 <sup>rd</sup> : 1400 kN/m







# METERING SIZE PRESS STRONGER PAPER WEB & PERFECT PRINTABILITY



## BENEFITS:

- **IMPROVED SHEET QUALITY** - uniform starch application - higher sheet smoothness - better printability
- Increased in **WEB TENSILE STRENGTH**
- Easy maintenance - **HIGHER UPTIME** (a full cantilever design/efficient cleaning)
- **USER-FRIENDLY DESIGN** - easy to operate (automatic mode)
- The after Size Press - **DRYERS CAN BE REDUCED**
- **HIGH QUALITY** rods and holders
- **QUICK CHANGE ROLLS**

## MAIN FEATURES:

- **PAPER WIDTH:** up to 10 m / 400 in
- **DESIGN SPEED:** Up to 1500 mpm / 4920 fpm
- **SIZING AGENT:** Starch, PVA, pigment
- **SOLIDS CONTENT:** Up to 18% (starch)
- **SURFACE SIZING WEIGHT:**  
Up to 6 gsm / 1.2 lbs/3000ft<sup>2</sup>





## SAMPLE REFERENCES:

Customer:	Smurfit Cartón y Papel de México, S.A. de C.V. Molino, Los Reyes, Mexico		
<b>Grades:</b>	Liner and Corrugating Medium	<b>Rolls OD:</b>	1100 mm
<b>Reel trim:</b>	2410 mm / 95 in	<b>Starch Weight Range:</b>	5 – 8 g/m <sup>2</sup>
<b>Max operating speed:</b>	800 mpm / 2625 fpm	<b>Starch Solids:</b>	12.00%
<b>Basis weight:</b>	100-240 gsm	<b>Starch temperature:</b>	55-65°C (conventionally 60°C)
<b>Capacity:</b>	170 000 t/a	<b>Design Nip:</b>	60 kN/m

Customer:	SFT Aleksinskaya Paper and Board, Russia		
<b>Grades:</b>	Fluting, Testliner	<b>Starch Weight Range:</b>	3.5 g/m <sup>2</sup>
<b>Reel trim:</b>	4300 mm / 169 in	<b>Starch Solids:</b>	5-8%
<b>Max operating speed:</b>	865 mpm / 2838 fpm	<b>Starch temperature:</b>	70°C
<b>Basis weight:</b>	112-175 gsm	<b>Design Nip:</b>	50 kN/m
<b>Capacity:</b>	770 t/d	<b>Operating Nip:</b>	45 kN/m
<b>Sheet Trim:</b>	4300 mm / 169 in		

Customer:	Confidential, United Kingdom		
<b>Grades:</b>	Fluting, Testliner	<b>Starch Weight Range:</b>	3.5 – 7 g/m <sup>2</sup> (total)
<b>Reel trim:</b>	5070 mm / 200 in	<b>Starch Solids:</b>	12-16%
<b>Max operating speed:</b>	1200 mpm / 3937 fpm	<b>Starch temperature:</b>	80°C (conventionally 60°C)
<b>Basis weight:</b>	80-120 gsm	<b>Design Nip:</b>	80 kN/m
<b>Capacity:</b>	250 000 t/a	<b>Operating Nip:</b>	60 kN/m

Customer:	Danyang Changfeng Paper, China		
<b>Grades:</b>	Testliner	<b>Starch Weight Range:</b>	3.5 – 7 g/m <sup>2</sup> (total)
<b>Reel trim:</b>	4800 mm / 189 in	<b>Starch Solids:</b>	10-15%
<b>Max operating speed:</b>	850 mpm / 2789 fpm	<b>Starch temperature:</b>	80°C (conventionally 60°C)
<b>Basis weight:</b>	110-220 gsm	<b>Design Nip:</b>	50 kN/m
<b>Capacity:</b>	340 000 t/a	<b>Operating Nip:</b>	40-50 kN/m
<b>Sheet Trim:</b>	4800 mm / 189 in		



**Phoenix Concept™**  
Rebuilds - A **New Value**  
for Existing **Machinery**

[www.pmggroup.com](http://www.pmggroup.com)

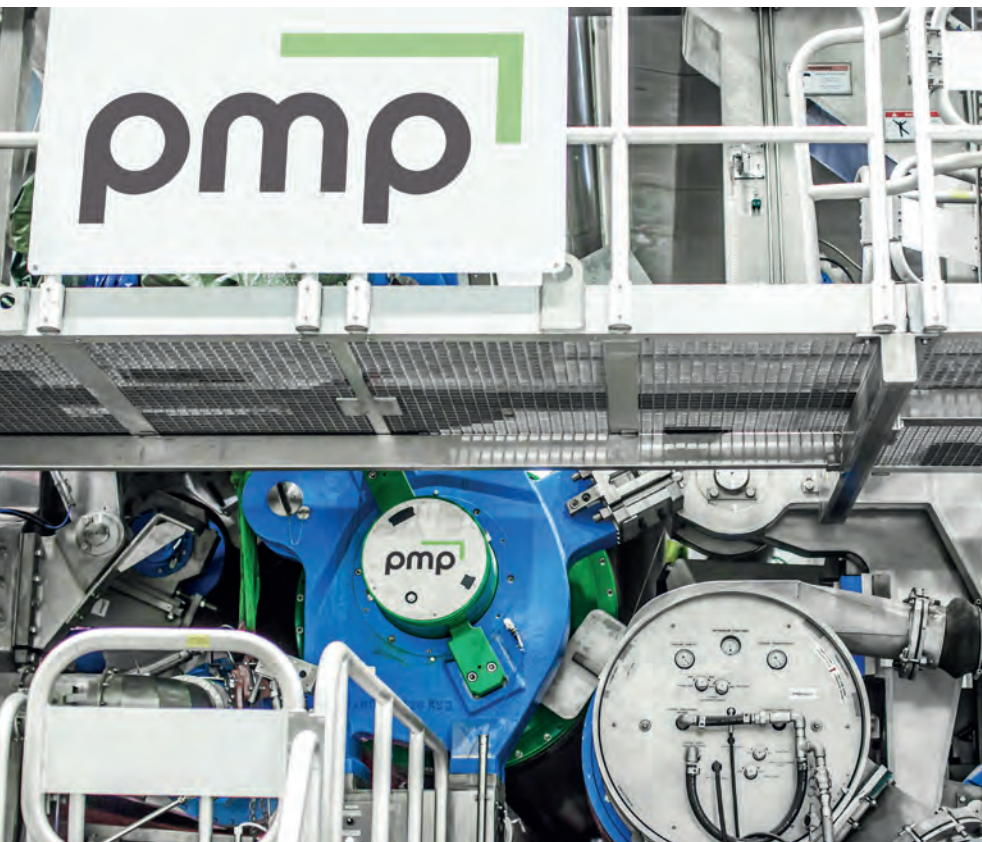
# CAN A NEWSPRINT PM RISE FROM THE ASHES LIKE A PHOENIX? - FORWARD-THINKING IDEAS ON HOW TO BUILD A PM FOR THE FUTURE

PHOENIX CONCEPT™

The new value for existing machinery

## IN BRIEF

The global paper industry today looks much different than a decade ago. The constantly growing prices of media, salaries and raw materials are the main blocking factors for new investments. We need to adapt to daily challenges and simply act smarter than before to grow business. As Thomas Edison, a great inventor, once said "If there is a way to do it better... find it". The main idea is to share PMP's experience from the saturated European market regarding alternative PM rebuilds (the re-purposing of assets that are no longer attractive – such as newsprint and fine paper machines or heavy containerboard grades). This article will share an alternative investment strategy in papermaking machinery that is becoming more common in Europe and share hard facts and figures that will be useful to attendees when considering where to spend their capital dollars. In this business climate, there are many untapped resources available from the shutting down of PMs that can be relocated, refurbished and reconfigured to produce different paper grades that have growth potential. This article will give examples of how other companies have navigated this strategy and have proven results. The PMP Phoenix Concept™ approach is one more step towards sustainability.





**“IF THERE IS  
A WAY TO DO IT  
BETTER...  
FIND IT”  
THOMAS EDISON**

## INTRODUCTION

Before we start talking about the idea of how to build a PM for the future, close your eyes and go back for a moment to 1980s/1990s. Consumption of paper in all sectors (printing & writing, packaging and tissue) was very strong globally. This demand created many large new machine projects. PMs were getting bigger, faster and more technically advanced. All suppliers and paper producers were busy and happy. Lots of talented people were ready to support the P&P industry development. Global changes fueled the growth of P&P (more fast foods that needed boxes, more companies that needed paper to print documents and more conscious consumers who wanted to have better and better products – not grey but colorful). Ah! The good old days!

But as I believe everybody is aware nothing lasts forever. Global economy and political changes have resulted in a serious depression at the beginning of 21<sup>st</sup> century, which included our industry as well. We could immediately observe less demand for paper and consequently

new capital investments. Less projects available, resulted in a couple of paper machinery builder's going bankrupt, including the great Beloit Corporation. The impact of the internet and social media totally changed the shape of the printing & writing sector. Lots of assets have been closed. At the same time, globalization and more efficient transportation have changed the way paper products are used and distributed. So are we really standing over the edge of a precipice? Well, surprisingly a depression is nothing new. Only looking at the 20<sup>th</sup> century we could record at least 10 significant moments that, I believe made people think it was the end and they need to jump off the cliff, and, what happened? Even though everything looked dark, gray and pessimistic – but yet the PMP Group have survived out of the ashes of Beloit. The industry got sick but then got better, died and then rose like a phoenix – stronger, smarter and different. Everything cooled down and stabilized. So I do believe we should expect a similar scenario. We will come out different, we will be forced to adapt to a new situation. However there is hope for our industry for sure.



In China people say crisis is also an opportunity. Today, the tissue sector globally is relatively healthy and its increase corresponds with GDP growth. Containerboard producers fight with a trend to minimize grammage, while at the same time maintaining product strength and production costs. Energy consumption is becoming crucial. So application of highly advanced technological solutions such as multi-layer hydraulic headboxes, shoe presses or film sizers, are getting more and more popular. The paper industry responded to the challenges by taking the opportunity to be more efficient. In the case of newsprint & fine paper we have observed a drastic fall in demand, one of the consequences of e-technology. There is an open question – what to do with the assets, in many cases, relatively in good condition? There is a new trend of reconfiguration/re-profiling of former newsprint PMs, especially observed in Europe, even including their relocation from one country to another. The investment strategy of paper companies has rapidly changed. Now, paper corporations as well as individual players are looking to spend as minimum as possible. As recent as 5 years ago there was still significant interest to buy huge new paper machines, which is not the case anymore. Today people are ready to accept higher risk and follow alternative investment paths – simply finding new business opportunities and focusing on PM rebuilds in different scenarios.

## PHOENIX CONCEPT™ REBUILD DEFINITION

A decade ago, PM rebuilds were focused to change old, inefficient sections of PM/TM and apply brand-new technological units to reach higher capacity or better quality of the final product. Today this philosophy is not sufficient. We need to grab the hand of the change and move forward. Based on our experience, we have extended the definition of PM rebuilds under the name Phoenix Concept™ to three levels: basic, advanced and premium. The basic level of the rebuild concept corresponds with the idea of the classical scenario from the past: exchanging an old section for a new one on an existing PM. The advanced level of the concept, is logistically

sophisticated, including PM/TM relocation – sometimes even from one country to another, and a production profile change i.e. newsprint into containerboard or heavy into lighter fluting/liner grades) and finally premium, which includes both basic/advance levels of the rebuilds, plus products exclusively designed for a particular customer.

“Rising from the ashes like a Phoenix” - PM re-profiling ideas – a blend of core technological items and refurbished parts.

Imagine that you have a newsprint machine in hands which is an asset but not profitable any longer. Basically it has become a ball and chain, a problem that should be solved as fast as possible. So what options do you have? Let's think. Number one – close it and scrap it. Number two – sell it. Finally – number three – rebuild/re-profile it. I have been in this industry for 15 years and I have learned that papermakers are ambitious and proactive people. Based on this fact I believe we can focus now on option number three – a newsprint machine re-profiling.

A smart manager should, at that stage, ask further questions: what type of machine do I want to have? What are the market trends? How to design it using old newsprint assets and at the end – is it worth doing?

To better answer those questions let's use an example. I want to share our experience gained in Europe during a similar project execution for a German customer in 2011, first of that type for PMP Group.

Our customer carefully analyzed the market's expectations and defined an increased demand for paper products made of white top testliners (expected capacity: **300,000 t/a**). As a result, the decision was made to launch a new project. Goals were ambitious: reach production numbers and sophisticated paper quality parameters at the same time reducing investment cost significantly. The idea was to buy a newsprint machine and re-use it as the base of a reborn line. Due to the complexity of the project (disassembly, transfer of the machine, refurbishment of parts, engineering design and the construction of new sections, integration, installation, technological start-up and optimization) it was decided to look for

**“EACH JOURNEY STARTS WITH A SINGLE STEP”**

**“WHAT TYPE OF MACHINE I WANT TO HAVE? WHAT ARE THE MARKET TRENDS? HOW TO DESIGN IT USING OLD NEWS-PRINT ASSET AND AT THE END - IS IT WORTH DOING?”**





recycled fiber with a basis weight range of 74-110 lbs / 3000 ft<sup>2</sup> (120-180 gsm ) and an operating speed of 2,460-2,625 fpm (750-800 m/min), with a 210 inch (5350 mm) trim at the reel. This transformation included redesigning, disassembly, incorporating of core technological items, and full integration at the German mill.

Looking carefully at the entire process, the project was executed successively: on the one hand all work connected with an existing newsprint machine in Switzerland, on the other, designing and manufacturing of a new equipment in our headquarters in Poland and finally, full integration in the German mill. Disassembly of the PM and elements transportation from Switzerland to Poland took almost two months. During this time over **2,300 tons** of steel constructions was disassembled, packed on 170 trucks and sent to our facility in Jelenia Gora, Poland. It was important to assess the condition of all elements and classify them based on three categories: approved, needs to be refurbished or needs to be scrapped. Simultaneously, new core technological units were designed using modern tools. Models were created in 3D (solid-works). The 3D models improved complete understanding of the final solutions and allowed improvements to be

a supplier with comprehensive project management skills. A fast production start-up was also a significant factor, thus keeping the deadlines and commitments were extremely important (13 months paper at reel).

The newsprint machine they targeted was found in Switzerland. The 212 inch (5400 mm) reel trim machine produced 128,000 t/a of 18 lbs / 3000 ft<sup>2</sup> (30-55 gsm) paper at operating speeds of 3,940 fpm (1200 m/min) before it was idled. After transforming the machine to the new configuration the PM today produces **195,000 t/a** of white top testliner from

introduced during the planning phase. This resulted in better user friendliness for the machine staff.

Scope of supply covered the design and delivery of new key elements- such as an Intelli-Jet V<sup>®</sup> hydraulic headbox, top wire, 4<sup>th</sup> and 5<sup>th</sup> dryer groups, Intelli-Reel<sup>®</sup> and mechanical drives. It was also necessary to extend the existing bottom wire and the rebuild of the press section. For the factory acceptance test, all elements (new and refurbished) were put together. This resulted in better user friendliness for the machine staff. The last stage - assembly and integration

of all elements in the mill was executed by us in cooperation with the customer's project management team as well as external companies. Thanks to a just-in-time philosophy and precise planning of storage capacity, the project was executed efficiently and on time.

The intention of this kind of projects is the optimum cost of an investment that gives you a chance to obtain high effectiveness. Reborn machines are smart solutions, where technology is tailored made – key elements are new, less important parts – refurbished. Skills, team experience and technology allow the change of the production profile of the machines.

When we move back to our questions: what type of machine do I want to have? What are the market demands? How to design it using an old newsprint asset and at the end – is it worth doing?

First of all – it is relatively easy to re-profile a newsprint machine into fluting/liner one. There are basically three areas to pay attention to. Firstly – a wet end – as it is necessary at least to add one more layer of paper (so a hydraulic headbox and a top wire are essential). This allows a higher grammage range than in case of newsprint machines as well as to improve paper profile. Secondly – checking the expected dryness after press (as the web is thicker) – shoe press technology helps to significantly increase the dryness (4-10% more compared to previous technologies) resulting in steam consumption reduction as well as better paper properties (bulk and stiffness). Finally, it might be reasonable to apply a size press (especially for lighter containerboard grades) to increase paper properties. During the re-designing process it is very important to make the machine more energy efficient, more environmentally friendly and easier to operate and maintain. Flexibility, efficiency and adaptation to dynamic market trends become crucial.

Why the containerboard sector? Based on market analysis this sector is ranked the second (after tissue) regarding its increase. The growth for packaging will continue smoothly with less consumption per capita through gsm decrease but more volume of products sold. E-commerce

companies like Amazon or Alibaba will help to keep that trend. At the same time consumption will increase due to consumer sensitivity to sustainability issues and recognition of the renewable paper based products like bags and cups. It will be a great alternative to plastic.

The PM configuration has already been explained. Another alternative is to re-use heavy grades containerboard PMs and modify their profiles. Our recent experience in this field includes projects in the UK (based on a PM relocated from Italy), Poland, Russia (based on a PM relocated from Scotland), China or Indonesia and so on. No doubt – the demand grows every year.

## CONCLUSIONS

Now, we are coming to a fundamental question: how much money might be saved by choosing to reprofile a newsprint machine re-profiling into a fluting/liner machine? Let me first explain some industry standards. Based on know-how from experts, to get additional capacity after a standard rebuild (including only new equipment) you need to invest around \$700-800 USD per each ton of paper produced annually (including all possible work on the machine, auxiliary systems, civil works etc.). The investment per ton depends on the concept – it can be less it can be more. In the case discussed in this article, 300,000 t/a multiplied by \$700 USD, results in a theoretical investment should reach at the level of \$240 mln USD. The new philosophy of a Phoenix Rebuild project helped to save almost 50% of the investment which is a great achievement keeping in mind that we are talking about the mature, Western European market.

Is it possible to execute a similar project in America in the nearest future? For sure – yes. There are assets that can be used. There are experts that can take care of execution. The concept is proven so I personally believe it is a matter to dare and act a little bit different than before. Well, it is fun, bringing lots of vivid energy. Let Confucius's words become a great inspiration for future projects "Each journey starts with a single step".





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# A SUCCESSFUL PROJECT EXECUTION IN P&P

– BEHIND THE SCENES,  
DISCOVER THE DARK SIDE OF THE MOON



Are you interested to learn how papermakers all over the globe understand successful investment projects' execution? The main idea of this article is to share PMP's global experience collected during the implementation of new tissue/paper machines and rebuilds/conversions of existing papermaking lines worldwide. This article will share the best practices in project management. The biggest challenge nowadays is the complexity of projects, risk management and the number of people involved.

Projects are tailored made. It is always a value to look back at previous experience to create a successful strategy. It is important to focus on two main areas: hard elements (an execution strategy, schedules, budgets, project milestones,





eteria, with a great view at a peaceful sea, accompanied by a young, ambitious persona who's dream is to become the world's greatest project manager in the P&P industry. What would be your advice?

## WHAT DOES A TYPICAL PROJECT IN THE PULP & PAPER INDUSTRY LOOKS LIKE?

When I look at PMP's global activity, I would say that a typical \$2-3 million US dollar rebuild project in our industry lasts about 12-15 months (including the pre-sales stage). It is pretty complex and requires incorporation of both new and refurbished or existing parts. There are 10-15 people directly involved in a project execution and also many others who provide direct or indirect work. In most cases, international teams are created and English is the main communication language. Lots of details are described by technical drawings (2d and 3d). Pressure of a deadline is pretty high, understanding that days without paper production create direct losses. The

guarantees, business goals, risk and change management, reporting) and soft ones (cultural differences, team building, communication, multitasking, and different perception of generations). Soft elements have recently become crucial. In the final sales stage, get a closer look at a project manager's personality before you pick a person for a potential project. A true leader is needed.

This article will also cover a brief introduction of useful strategies & tools like: Prince 2 methodology, webex teleconferences, creative ways of a punch list collection, trainings based on multimedia, finding guidelines through QR codes on machine sections, kick off/design approval meetings best scenarios etc.

Have you ever considered what a new project manager, faced with the challenge of his or her first project, thinks about? Those of you who have been in our industry for a couple of years typically navigate towards a final destination pretty easily. You would be a great information source and an inspiration source for a newcomer. So imagine, you are sitting in a cozy caf-



## PM Rebuild Challenges



task is defined clearly: to deliver a solution that helps to improve the current situation in a paper mill on an existing papermaking line, for instance: a capacity increase, paper quality improvement (widening of the product portfolio), lowering production costs or improving machine runnability. It might be a combination of all of them. All requirements and expectations are precisely described in a contract. It is very possible, that the existing paper or tissue machine you are dealing with have been rebuilt in the past, sometimes more than once, so each of them is different compared to their original design. It means the typical project is a tailored made solution, so, application of best practices and a standard approach from previous projects is possible, however some aspects need to be modified in a flexible way.

It is always a value to look back at our experience and look for similar projects to create a successful strategy. From a technological stand point projects are demanding. In addition, taking their pretty high cost into account – a business risk should be described as medium or high. The biggest challenges are typically: a complexity of projects, risk management and the number of people involved.

## WHAT ARE KEY HARD ELEMENTS OF AN INVESTMENT PROJECT?

There are several hard elements connected with a project: an execution strategy, schedules, budgets, project milestones, guarantees, business goals, risk management and the number of people involved.





and change management and reporting. However as a good base of all activities, it is essential to understand our customer's as well as our own business goals and communicate them well within our team responsible for the project. It is pretty common that different people are involved in sales than later on in the execution phase. So, it is a good idea to engage a project manager in the final sales stage (so he/she is aware what is going on and meets the customer in person). It is also important to understand what type of methodology is applied in an organization you work for. From my observation, one of the most popular ones in our industry is the Prince 2 method (also applied within my organization). It is rather a project management framework with a process approach, principles driven. The scope of delivery, deadlines, budgets, and preliminary schedules are actually defined during the sales stage so a project manager as a first step, needs to analyze all available data and confirm it or implement necessary changes. We pay a strong attention to risk analysis. In the case of complex projects, there are several factors like: a financial risk (a project cash flow, currency variations, bank guarantees), a technological risk (what solutions are going to be applied and how will they influence the change), a lack of resources risk (current company load, other projects in the company, human resources engagement) and a customer risk/challenges (customer's experience, a mill location etc.). My colleagues - project managers - say that they manage projects by managing their risk. Finally, it is very important to keep people informed - both internally and externally. There is a good sentence that summarizes the starting point of a project: by the time the battle begins, the manager's real work is already done. However, it is important to understand that later on a project manager needs to face many changes. It is necessary to manage them well. Change is essential to all success in a project work. Making decisions as soon as possible helps to be successful at the end. Remember that a day lost at the beginning of a project hurts as much as a day lost at the end.

## WHAT ARE THE KEY SOFT ELEMENTS OF A PROJECT?

In my opinion, the key soft elements of a project's execution include: cultural differences, a team building, a communication, a multitasking and the different perception of generations. As our industry is an engineering minded - focused on details, it is essential to understand that soft elements have recently become crucial. One of biggest chal-

lenges is the communication. It does not only refer to a language itself, but communication styles. People are different and they need time to understand what we, as project leaders, expect and need from them. You have to adjust your message to a manager, an engineer and a worker. What is more - what we really need is their true engage-



ment. If they do not respect a leader, it is hard to expect great project results. So the advice would be to listen carefully and act smart. Additionally, when there are several parties from different sides of the world involved, sometimes cultural differences create turbulences. Chinese papermakers are different than Polish or American, however, all of them have the same goal - to succeed at the end. Ways to reach the final destination might be slightly different. The point is to find a common platform of understanding. I believe the best way is to meet face to face more than once, also on an informal basis so people can meet one other and find similarities between themselves. That is why we should not look for savings at kick off, design approval meetings and factory acceptance tests. When project teams meet in person, first of all, they solve problems together, they get involved easily and share collective experience. I believe, it is also smart to involve different personalities into projects even if it sounds scary. By this I mean people from different generations, genders and specialty fields. The reason is, this way we create an added value and discover new potentials. Having only optimists involved in your project can ruin it as you would miss risks. Having only pessimists would prevent progress in the project. People similar to you will think in a similar way. So a blend of various perspectives (male, female, young, mature,

baby boomers, millennials, gen Z and so on) will help a project leader to collect lots of information and make the best decisions for a project. Make sure people respect one another including yourself and then you may sleep well, as your project is going to be successful.

## PROJECT MANAGER - A GENERAL OR A FRIEND?

In the final sales stage, it is critical to get a closer look at a project manager's personality before we pick a person for a potential project (taking into account the customer and their preferences, location, scope of supply and preferred communication language). The task is to create the best match. A great project manager needs to be a true leader not only in maintaining a relationship with the customers, keeping them informed, but also staying vigilant to clarify misunderstandings, define terminal points and provide risk analysis and so on. He/she also needs to be an ambassador of the project inside his/her own organization. There is always internal competition – other projects, current load and priorities. He/she needs to engage his/her colleagues, get the right people and match them to the right jobs, making sure goals are achieved on time and within a frame of a defined budget. A project



manager should be, on the one hand, a general on a battlefield – strong, confident, determined, filled with an unbelievable personal power and on the other hand, a friend – patient, empathetic and supporting. You need to remember that this job is not for everyone and it is stressful. You are always under a microscope. Mistakes are painful however at the end the taste of victory is great.

## WHAT ARE THE ESSENTIALS OF GOOD PROJECT MANAGEMENT?

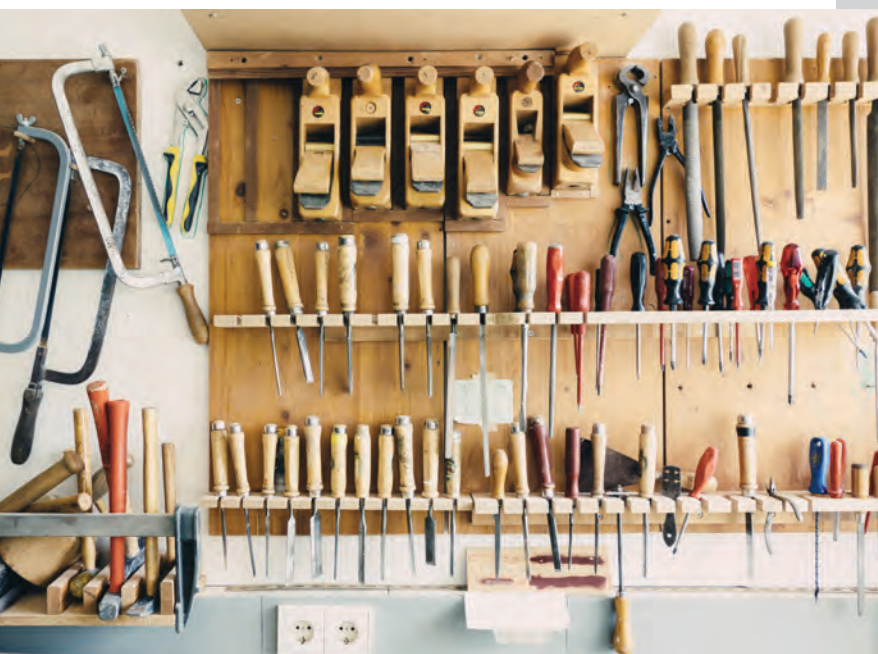
There are plenty of books where you can find a definition of a good project management. My favorite is that management involves heart, gut, soul and nose. So always lead with the heart, trust your hunches/intuition, build soul into the organization and develop a nose for troubles. A can do attitude is crucial. Looking at my organization there is one thing that never changes – the final deadline of paper on the reel. Our general manager says it is somehow sacred. Whatever the challenges are, projects managers are expected to solve them by looking for other, alternative scenarios and solutions to achieve success at the end. Without passion from a project manager, team members would never follow them. We need to admit – there is no chance to execute projects on your own. You need a team.







**“WE NEED TO  
ADMIT - THERE IS NO  
CHANCE TO EXECUTE  
PROJECTS ON YOUR  
OWN. YOU NEED  
A TEAM.”**



## TEAM SPIRIT

The real engine for success is people who drive projects forward. In my opinion there are four essentials of good project management that correspond with people: getting the right people, matching them to the right jobs, keeping them motivated and finally helping your team to jell and stay jelled. My advice is to keep people informed, explain to them why you need their help and follow up on their tasks. There are several solutions as always. One of my favorites is the rule: 33%, 66%, 99%. Firstly explain what you need and make sure they understand, then check progress step by step. It is better to modify something at 33% progress than almost at the end as you may save lots of time. Celebrate your success with the team. Fun is also an important part of our lives. One of a smart tip is to pick a name for a project and even create a logo for it.

## HELPING TOOLS - DO I REALLY NEED THEM?

At present there are many useful tools that help project managers to execute projects smoothly. You need to adjust them to your working style. Over the years at PMP, we have tested a couple of them, in different cultural environments, so based on our experience I will recommend some proven solutions.

First of all we always define when we need to meet face to face with our customer's team. The following meetings are key to success: project kick off, design approval meeting, the factory acceptance test, meetings at site during erection, engineering commissioning and start up. A kick off meeting is typically executed at a paper mill. It is a great opportunity to verify the content of a technical specification, and to once again audit the machine and meet each team member. A design approval meeting is typically executed at our facility. The reason is simple – we have an access to all possible resources to be able to make as much progress as possible during the short visit. It is also an opportunity to learn more about a local culture and flavors. The factory acceptance test is good for both parties as on the one hand all movement tests can be provided to verify the design in reality. It is also a unique opportunity for training of operators and maintenance personnel. You may want to consider including construction managers in the FAT as well to get a first hand look at the equipment, discuss break points for shipment and erection strategies prior to the shutdown. We have recently launched an idea to record factory acceptance tests so our customers can use it to either refresh their memory or for training purposes for other team members who could not participate in the trip. One of the keys is creating a well organized punch list – a list of things that require rework. A more traditional way is use yellow sticky notes with a number, take a picture and then make a description. A more modern



way might be to use software like Plan Grid and tablets to take pictures, and add descriptions directly on the screen and then create a central data base of all notes.

During the project there should be periodical teleconferences. we find programs such as webex and skype pretty useful. Webex helps you share desktops which is the next best thing to face to face meetings. It allows you to work together on the same drawing and indicate areas of concern. The entire team can see your changes as if sitting in the same conference room. Skype or skype for business helps you connect multiple people at the same time from different locations and time zones for little or no cost. It also allows you to use a web camera if you want to see your colleagues.

Project managers need to frequently update customers on the progress of the project. Usually a written report that includes a project timeline including current status, pictures, and movies is released once a month. the data is generated directly from our ERP system. When a project is well controlled, discovering unexpected situations is faster and allows you to react earlier to eliminate risks or minimize losses.

Understanding that there are lots of new comers in our industry who are smart phone fans, we have decided to use some trainings based on multimedia. It is possible to stick QR codes on machine sections and then a person can scan it to see instructions on their phones.

## TAKE AWAY - SUMMARY

Executing a project is a journey – sometimes smooth and sometimes filled with challenges. The harder the project, the smarter you are going to be in the future. I personally believe there are still universal ideas that help to reach the highest peaks: understand the project goals, build a reasonable plan, create a great team, make decisions without hesitation and never give up. The final confirmation of success is the happy face of your customer and a feeling of satisfaction.

**Maja Mejsner**  
Director Business Development & Marketing



THE REAL ENGINE FOR SUCCESS IS PEOPLE WHO DRIVE PROJECTS FORWARD





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# A RECOVERY STEAM GENERATOR SYSTEM

FROM PMP AS A KEY  
TO SPECTACULAR  
ENERGY SAVINGS

– TM1 WEPA (LILLE, FRANCE) REBUILD CASE STUDY



## Wepa France (Lille) PM11 Machine Data:

<b>Daily production:</b>	105 tpd
<b>Production:</b>	Bathroom paper, Kitchen towel
<b>Basis weight:</b>	16-22 gsm
<b>Design speed</b>	1900 m/min
<b>Machine type:</b>	Tissue Crescent Former
<b>Press type configuration:</b>	Suction & blind
<b>YD information:</b>	Dia 15' Cast Iron
<b>Hood Max temp:</b>	500°C
<b>Sheet width:</b>	2800 mm

## Project Goals:

- Replacement of outdated equipment
  - Application **of modern technology**
  - **User-friendliness** of equipment
- Production **cost reduction**
  - **Ultra-low** media **consumption**
  - **Economical solution** – ROI less than 2 years
- Improvement of machine **efficiency**

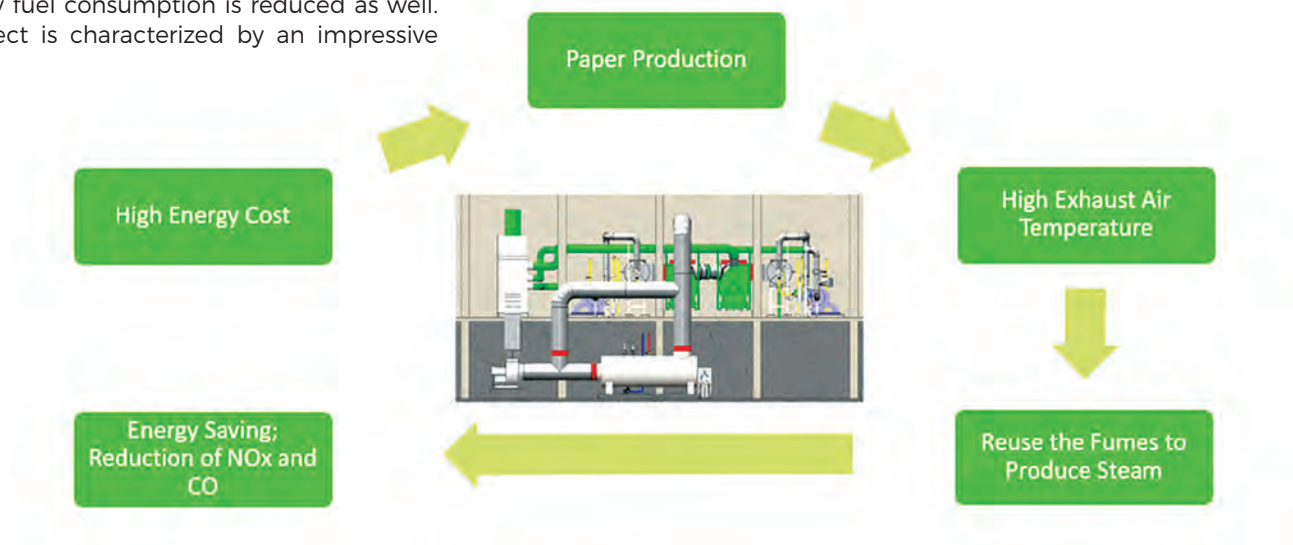


In February 2016, WEPA Group made a decision to launch a significant energy cost reduction program. As a result a contract with PMPower for a recovery steam generator system delivery for WEPA Lille (France) was signed. The project was successfully brought on stream 5 months later. The project's driving force was modern technology that ensured energy savings solutions following global trends. WEPA's TM11 was supplied with state-of-the-art new technological items provided by PMPower including the delivery, installation and commissioning of a new recovery steam generator system from the hood exhaust fumes (as a prototype, tailored-made solution). The new system allows steam generation of 1.2 t/h and guarantees a high level of flexibility. The above recovery energy system allows to save more than 25% of a steam flow from the main steam generator to the machine and consequently fuel consumption is reduced as well. The project is characterized by an impressive ROI.

PMPower is one of PMP's (Paper Machinery Producer) divisions, responsible for energy solutions for both tissue and paper mills. PMPower supports PMP's business partners globally offering its own, new products including:

- dryer hoods & steam & condensate systems,
- energy recovery systems,
- mist removal systems,
- wet dust removal systems,
- building ventilation systems.

To sum up: a blend of state-of-the-art technology and flexible execution has brought expected results. This solution might become a "must-have" for all leading tissue makers, in market areas with high energy costs.



## RECOVERY BOILER PROJECT AT WEPA LILLE

February 2016 – Contract signing

June 2016 – Delivery and erection

July 2016 – Start-up and performance test

Total time: **5 months**



	BEFORE MODERNIZATION	AFTER MODERNIZATION
STEAM FLOW PRODUCED WITH PMP RECOVERY STEAM GENERATOR RSG1		1.200 KG/HR
MAIN BOILER GAS CONSUMPTION (STEAM PRESSURE 16,5 BAR)	271 NMC/HR	190 NMC/HR
HOOD BURNERS CONSUMPTION (ESTIMATED)	400 NMC/H	421 NMC/H
TOTAL GAS CONSUMPTION: (MAIN BOILER + HOOD BURNERS)	671 NMC/H	611NMC/H
POWER RECOVERED WITH AIR-AIR HEAT EXCHANGER	375.000 KCAL /HR	321.000 KCAL/HR
POWER RECOVERED WITH PMP RECOVERY STEAM GENERATOR RSG1		643.000 KCAL/HR
TOTAL POWER RECOVERED	375.000 KCAL/HR	964.000 KCAL/HR
EXHAUST AIR TEMPERATURE	258 °C	180 °C

**AVERAGE STEAM CONSUMPTION  
BEFORE RECOVERY BOILER  
1.290 KG/KG OF PAPER  
AT 7.3 BAR AS PRESSURE**



**AVERAGE STEAM FLOW  
CONSUMPTION  
WITH RECOVERY BOILER  
1.050 KG/KG OF PAPER  
AT 7.3 BAR AS PRESSURE**

**STEAM CONSUMPTION SAVING  
FROM MAIN BOILER AFTER  
RECOVERY SYSTEM INSTALLATION  
> 9,000 TON/YEAR**



**BEFORE MODERNIZATION**



**AFTER MODERNIZATION**





# Premium Quality at Ultra Low Cost

up to  
**5.6m**

**22'**  
SYD

up to  
**2000**  
m/min

up to  
**42**  
g/m<sup>2</sup>

State-of-the-art-solutions  
**220t/d**  
Premium Quality

**intelli**  
-REEL  
& Tail Threading  
Provides perfect  
parent roll structure  
and user  
friendly design

**intelli**  
-YD  
Intelli-YD®  
-Steel Yankee Dryer  
Steel Yankee Dryer  
combines high  
drying efficiency  
with ultra-low  
media consumption

**intelli**  
-SPP  
Intelli-SPP®  
- Suction Press Roll  
Ø1400 mm  
SPP maximize the amount  
of water removed  
from the sheet  
(high dryness up to  
46 % after press)

**intelli**  
-JET  
Intelli-Jet V™  
Hydraulic Headbox  
Single or double layer  
headbox guarantee  
premium tissue  
quality

**intelli**  
-FORMER  
Intelli-Former®  
- Crescent Former  
Compact solution  
for perfect  
web formation

**TM Efficiency 95 %**  
higher than

**Media Consumption**  
Steam as low as 1.9t/T  
Electricity 345 kWh/T average



# PMP SUCCESSFULLY STARTS A GREEN FIELD TISSUE MILL FOR UNIVERSAL PAPER MANUFACTURERS, SOUTH AFRICA

- THE GOLD EAGLE HAS  
SPREAD ITS WINGS!



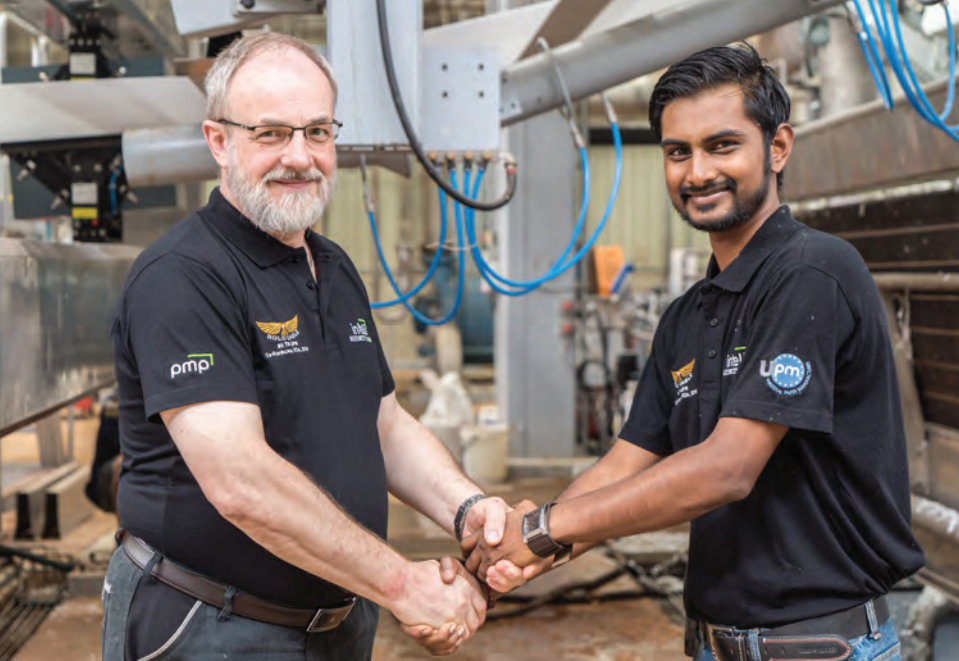
## Project Information:

<b>Customer:</b>	UPM
<b>Location:</b>	South Africa
<b>Machine:</b>	TM5
<b>Project:</b>	Green Field Tissue Mill
<b>Scope of supply:</b>	Intelli-Tissue® Advanced 1600 tissue making line
<b>Capacity:</b>	28 000 tpa
<b>Operating speed:</b>	1600 m/min
<b>Reel trim:</b>	2670 mm
<b>Tissue grade:</b>	13-40 gsm



In December 2014, PMP (Paper Machinery Producer) signed a contract with Universal Paper Manufacturers (UPM), part of the Universal Paper group, for a turn-key green field tissue mill based on the Intelli-Tissue® Advanced 1600 tissue making line. Thus it is our pleasure to announce that on the 19th of February 2017, 11:20 a.m. local time, TM5 successfully started-up at UPM's Ga-Rankuwa mill in South Africa!





In 2014 UPM made a decision regarding a significant expansion plan to shift its family-owned business to the next level by creating a green field tissue mill. Universal Paper's biggest goal has been to become the preferred tissue supplier in the Southern Africa region, offering a wide span of ultra-premium, 100% virgin fibre tissue paper products. Its mission is to develop innovative products for the most demanding consumers adding flavors of creativity and education. Universal Paper branded products (FSC-certified) have already gained a significant number of enthusiasts who are fascinated with their uniqueness on a worldwide scale. Universal Paper is the proud manufacturer of Dinu, one of South Africa's leading household tissue brands.

The project was named "Gold Eagle". Its goals were to double the annual capacity of UPM and to widen its product portfolio adding ultra-premium tissue products. PMP's Intelli-Tissue® Advanced 1600 Crescent Former tissue making line was the best response for UPM's defined needs.

PMP's scope of delivery covered: collaboration with the building design engineers, a tissue making line (starting from stock preparation, a broke line, stock approach, baseplates, a tissue machine itself including shaft puller), all auxiliary systems (a lubrication system, a steam & condensate system, a dust removal system, DCS, QCS, mechanical drives), field installations (pre-piping and pre-conduit) as well as a rich scope of engineering services (pre-erection, erection and start-up supervision). UPM's Intelli-Tissue® Advanced 1600 has a total capacity of 28 000 tpa (operating speed 1600 m/min, reel trim 2670 mm), depending on the tissue grade (basis weight at the reel from 13 to 40 gsm). An applied technology (PMP Intelli-Jet V® single layer hydraulic headbox, a Crescent Former Intelli-Former®, Intelli-Press® with a single press configuration, equipped with a 16' steel Yankee Dryer - Intelli-YD® a steam heated hood and PMP Intelli-Reel® is focused to ensure the best quality of the final product - softness at a premium level and excellent hand feel to open the door to new market niches. In addition, PMP applied



state-of-the art PMP Intelli-Tissue technology to ensure ultra-low media consumption. Thanks to a unique partnership, TM5 today has a bright future, ensuring high flexibility and world-class performance.

It is worth mentioning that the "Gold Eagle" project was implemented based on a philosophy of Premium Quality & Reliability. The investment has been the biggest in UPM's entire history taking its value and scope into account. Also it is the 1<sup>st</sup> new high speed tissue line installed in South Africa within the last 20 years.

After a successful and smooth start-up, both companies are ready to say that "Gold Eagle" has spread its wings empowering the future of UPM and bringing all involved pride and satisfaction.

#### ABOUT UPM:

Universal Paper Manufacturers (UPM) – is one of Universal Paper business units and is the sister company to Universal Paper & Plastics (UPP). Both companies are still family owned. UPP was established by the Sher family in 1950 and has operated successfully for over 67 years. The company started as a manufacturer of various paper and plastic products, and has grown significantly since inception. However, during this time, its direction has changed – with the discontinuation of product lines in the plastics industry, while continuing to supply the tissue paper industry. The company has vertically integrated, by manufacturing raw materials within the inks and paper industry. Today, the focus is on high quality printed serviettes and napkins, bathroom tissue, household towels and hankies. (learn more: [www.upap.co.za](http://www.upap.co.za))







Project Gold Eagle assisted us in improving the quality of our premium tissue products.



We supply premium tissue products for your home and business.  
Visit [www.upap.co.za](http://www.upap.co.za) to learn more.





# TISSUE TRENDS OVERVIEW

INTERVIEW  
WITH  
MAJA MEJSNER  
- DIRECTOR BUSINESS  
DEVELOPMENT & MARKETING

## What is your opinion of PMP's activity last year as the only tissue machines manufacturer in Poland?

Last year has been very busy for us in both tissue and paper areas. We have been involved in projects on 6 continents. Taking only the tissue area into account, we have started up 5 tissue lines: (2) for YFY corporation in China, (1) for Hebei Xuesong in China, (1) for Wang Paper in Thailand and just recently (1) for UPM in South Africa (a turn-key delivery). In addition, we have executed several sophisticated rebuild projects for customers in the USA, France, Russia, Ukraine, Australia and Taiwan.

In the tissue area, we have extended our Intelli-Tissue® EcoEc line, adding an Intelli-Tissue® EcoEc Premium Line. This line offers ultra-low steam consumption level (1.9 T/T), while at the same time offers more advanced technological solutions including the Intelli-Jet V® Premium hydraulic headbox (for an excellent formation), a 16 foot steel Yankee Dryer Intelli-YD®, a steam heated Intelli-Hood® and a large dia 1400 mm suction roll (for an extra bulk & a high dryness after the press - up to 46%). It is an answer to more demanding consumers in emerging markets and allows higher capacity numbers and sophisticated tissue quality. At present we are in the middle of the execution phase of (3) lines for one of the leading Chinese corporation.

In addition, we have been very active in the area of energy saving solutions provided by our Italian division - PMPower Srl. One of the most interesting is a recovery steam genera-





tor system for a hood exhaust fumes as a key for spectacular energy savings. The first reference was installed in France in the Wepa mill and allowed steam generation of 1.2 t/h and guarantees a high level of flexibility. The recovery system also allows savings of more than 25% of a steam flow from the main generator to the machine and as a consequence fuel consumption is reduced as well.

### What technical and technological solutions will dominate in 2017?

PMP is a global player so we need to adjust our solutions to customers from both mature and emerging markets. However, for both market segments of the tissue industry our activities are engaged in the area of energy savings and final product quality improvement.

We are extending our Intelli-YD® steel Yankee Dryer offer adding 16 and 18 foot dryers to the standard sizes of 12', 15' already being produced. together with solutions already offered by PMPower (high-efficient hoods, S&C systems etc) tissue makers are receiving great tools to save money every day. For our customers from emerging markets we propose an Optimum Cost Concept – an Integrated tissue Mill (twin tissue lines, a common control room, no basement) that ensures production flexibility and a significant reduction in investment cost. Intelli-Tissue® EcoEc Premium is also gaining more and more interest in this market.

For mature markets we are planning to extend our offer by adding a tissue making like with a shoe press technology called Intelli-Tissue® Ultra. There are two reasons behind it. First of all as PMP we are one of key players in shoe press

technology in the paper sector (at present our solution the Intelli-Nip® has been already appreciated by customers from 4 continents). In addition, this line is going to be equipped with an Intelli-Jet V® Premium hydraulic headbox with an alternative diffusor shape to ensure a perfect formation and at the same time a decrease in fiber utilization). As PMP we are a market leader in headbox technology worldwide, however we are constantly looking for smart concepts in this field to stay ahead of our competitors. Secondly, we cannot ignore the needs of experienced tissue makers who are interested in producing structured tissue as a smart alternative to the more expensive TAD products.

### How do the global trends influence your research and development activity? Which regions are the most interesting and why?

As PMP we are consequently following our strategy which is strengthening our position in the market where we are well established (Asia, North America, Europe, Australia). We are also increasing our marketing efforts in promising new areas like Latin America. Our philosophy is to keep a reasonable balance between markets. Each day we listen to our customers carefully. Emerging markets are more and more agile. They are ready to invest more and think long term. That is the reason why we have decided to extend our Intelli-Tissue® EcoEc line: there are two options now – a standard configuration EcoEc (essential solutions) and more advanced concept EcoEc Premium as mentioned above. At the same time, mature markets need to focus more on cost



optimization and alternative solutions. Our answer is the Intelli-Tissue® Ultra tissue making line mentioned above with a shoe press as the key for success, both for energy savings and better bulk. Moreover, we constantly provide sophisticated engineering projects for our long term corporate partners (details are confidential). These are focused on creating an added value to allow our partners to enter undiscovered market niches.

### What are the main technical challenges and opportunities facing your clients and how are you helping them?

The tissue sector is stronger than ever and, at the same time compared to previous years, it is getting more mature, more conscious. Hygiene is an important element of life of every person all over the world. Of course there are different stages of development, preferences and drivers for consumers. Taking all those elements into account, I would indicate three main challenges: maintain expected tissue quality, optimization & control of production costs and, especially recently, flexibility. The last one has become a key for success. Smart tissue makers are forced to look for solutions that bring flexibility of production (a wide range of products) and quality diversification depends on end users preferences.

Our scope of solutions for tissue makers is getting wider and wider based on the Intelli-Tissue® platform concept which also includes double width machines (5.5/5.6 m @ reel). A Crescent Former technology supported by sophisticated added-value solutions like multilayer type hydraulic headboxes, large steel YDs, modern energy saving solutions (including a shoe press technology) are tools to stay flexible and achieve repeatable tissue quality.

### Which solutions in paper machines will dominate in the future?

The tissue sector is the strongest one in the Pulp and Paper industry. Forecasts are optimistic – a dynamic growth is a fact. If there is no unexpected crisis, a development should continue smoothly. Innovation starts to play a more important role as people have started to think long term estimating their business opportunities.

In my opinion three areas will drive this growth: energy savings solutions, tissue quality improvement and safety projects.

Energy savings solutions will be directly connected with application of large steel Yankee Dryers (even 18 and 20 foot), efficient auxiliary systems (Steam & Condensate systems, Vacuum systems, hoods etc) as well as a shoe press technology.

Tissue quality improvement will directly correlate with high tech hydraulic headboxes (multilayer type), large diameter suction press rolls and/or shoe press technology.

Safety projects will be connected with more demanding regulations and more focus on employee health and wellness.

### Service is an important part of your activity. What are the main problems of your customers and how do you help them?

We believe in preventing emergency situations – that is the way to save time & money. We encourage and inspire our customers to implement that type of philosophy. Understanding that life brings surprises, our experts are ready to bring help in challenging moments. Our team from PMP Rolls & Services, Świecie is ready for both routine and emergency repairs, 24 hours a day. In case of technological optimization issues our customers are supported by PMPoland's staff. In North America, our service partners, Paper Machine Services Inc. and Rollmeister Inc. are ready to help with our customers needs.





# MEET PMP DURING THE FOLLOWING INDUSTRY EVENTS IN 2017:

22<sup>nd</sup>-24<sup>th</sup> FEBRUARY 2017  
**ASPI SPRING MEETING, USA**



22<sup>nd</sup>-24<sup>th</sup> MARCH 2017  
**CIDPEX, CHINA**



5<sup>th</sup>-7<sup>th</sup> APRIL 2017  
**TECHNICAL SEMINAR ORGANIZED BY UNITSERVICE, RUSSIA**



10<sup>th</sup>-12<sup>th</sup> APRIL 2017  
**TISSUE WORLD MILAN, ITALY**



24<sup>th</sup>-27<sup>th</sup> APRIL 2017  
**PAPERCON, USA**



21<sup>st</sup>-23<sup>rd</sup> MAY 2017  
**PMP OPEN HOUSE CONFERENCE, POLAND**



18<sup>th</sup>-20<sup>th</sup> SEPTEMBER 2017  
**PROGRESS, POLAND**



27<sup>th</sup>-29<sup>th</sup> SEPTEMBER 2017  
**ASPI FALL MEETING, USA**



3<sup>rd</sup>-6<sup>th</sup> OCTOBER 2017  
**TISSUE 2017, USA**



11<sup>th</sup>-13<sup>th</sup> OCTOBER 2017  
**MIAC, ITALY**



28<sup>th</sup>-30<sup>th</sup> NOVEMBER 2017  
**CEPI EUROPEAN PAPER WEEK, BELGIUM**



**PMP**  
**OPEN HOUSE**  
POLAND 2017

**21<sup>st</sup>-23<sup>rd</sup> May 2017**

Karpacz, Poland

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# 2017

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