NEWSLETTER

August 2010

erma engineering ag

PESMEL automation • intelligence

Lanex You can be sure

The trends and effects of globalization could be noticed in all parts of the world and in all areas of the business. Industrial development and relaxing of strict national boundaries forces suppliers of products to meet higher standards and provide complex services. The proper way how to stay competitive on market is to be open for technical development, building new contacts and improvement of communication infrastructure.

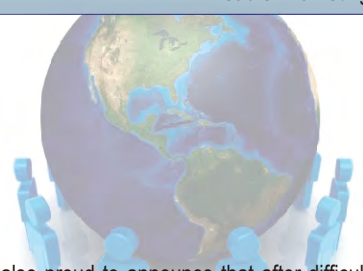
Taking that into consideration, PAPCEL, a.s. have established good relations with some top class suppliers. Erma Engineering ag, Lanex and Pesmel Oy are proud examples. Several well known, successfully completed projects are testament that we are, working with our partners, fully capable of meeting all our customer's requirements. That is also why we have invited named companies to be presented in this Newsletter.

Tomáš Otáhal
Head of Marketing

PAPCEL®

HISTORY•STRENGTH•EXPERIENCE

Completion of a Successful Strategic Plan



Dear business partners,

We are your preferred supplier of solutions in the paper industry.

Your growth is our responsibility.

This is the vision, which was set in our strategic plan for 2010. And I am pleased to report that we are successful in bringing the vision into real life and that it is becoming integral part of our business practice.

Let me remind you our key focus areas by means of which we are successfully bringing increased value to you in 2010:

- Improvements in technical level by robust R&D strategy.
- Improvement in price competitivness due to modern production and controling systems and methods and global sourcing.
- Improvemnts in customer service and customer support thanks to creating local servise centers on target markets.
- Offering wider portfolio of services due to cooperation with other OEMs.

I am also proud to announce that after difficult time related to global economical crisis we managed to reach highest levels of order backlog in our history and already successfully working on large turnkey projects. The difficult time did not find us unprepared but helped us to look on our bussiness from different angle, very much using your, customers's eyes.

Declaring responsibility for your growth is serious obligation, but we mean it seriously. And results speak for ourselves.

Dear business partners, thank you for your trust in our abilities and for your loyalty.

Filip Wrnata
General Manager

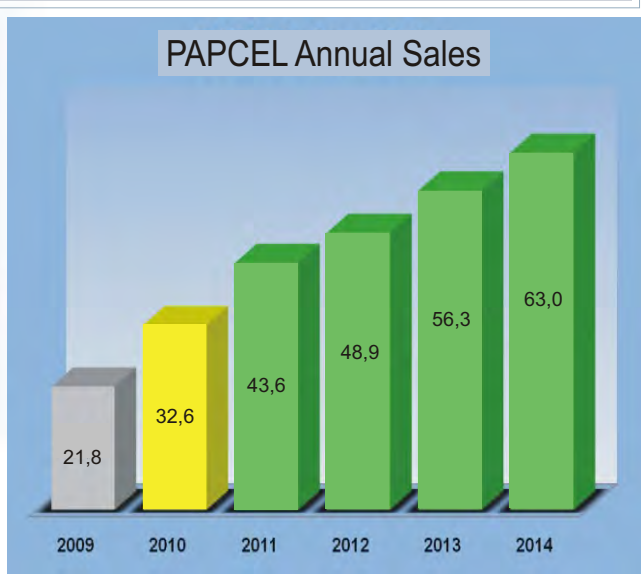
PAPCEL increased the registered capital

Due to merger between PAPCEL and its former holding company PBO, which took place during 2009, PAPCEL registered capital increased **from 100 to 303 mio. CZK**. This fact created new, greater opportunities and environment for further dynamic growth of the company.

PAPCEL increases the sales in 2010 !

Present contracting report shows essential increase of expected turnover in the year 2010 in comparison with previous years. While the turnover in the year 2009 was 21,8 mio. EUR the sales can reach 32,6 mio. EUR this year, which is 23% more than planed target for 2010. To this amazing result contributed mainly division East Europe with projects Sukhonsky Pulp and Paper Mill, Karton i Upakovka, Uchaly and Krasnaja Zvezda Chashniki. The outlook of sales for next years is also promising: according upcoming and potential projects we expect turnover 43,6 mio. EUR in 2011 and further annual increase by 12 - 15 % in period 2012-2014. Present order backlog is 46,7 mio. EUR. The reason of our ambitious goals are planned acquisitions on potential new markets as southeast Asia and south America as well as extension of technical portfolio and product range in near future.

Radim Řeha
Head of Sales Department



Proposed sales plan for period 2011 - 2014

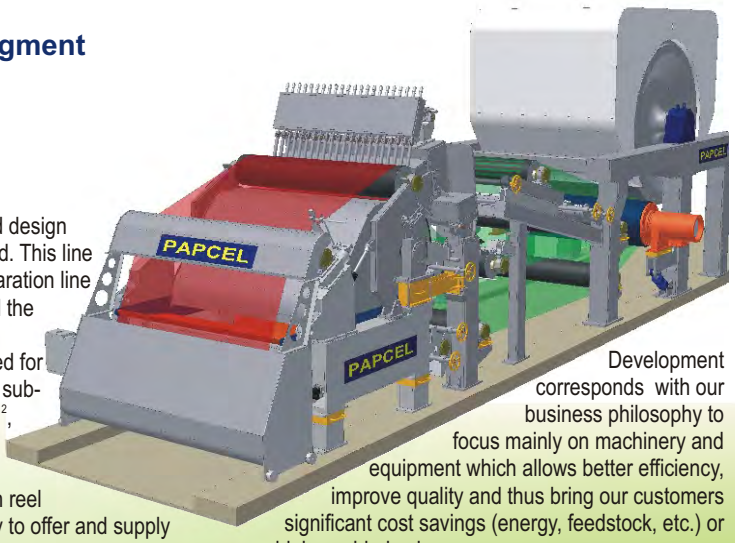
PAPCEL, a.s., Uničovská 132, CZ-784 10 Litovel, Czech Republic; phone: +420 585 152 175; fax: +420 585 343 001; e-mail: papcel@papcel.cz; **www.papcel.cz**
MARKETING: marketing@papcel.cz; phone: +420 585 152 107

PAPCEL®
HISTORY•STRENGTH•EXPERIENCE

PAPCEL extends product portfolio in segment of Tissue Machines - Crescent Former

In case of: inquire till 12/2010
order till 3/2011,
discount for complete
Tissue paper machine 500.000 €.

The tissue paper market has a positive long-term growing trend. This was also confirmed during the economic downturn in last two years when other segments of the paper production stagnated or even decreased but the tissue segment continued to grow.
That is why our company decided two years ago to start more intensive development in this area. Nowadays we can state that we have finished a complete technology.



Only minor technical and design details are being finalized. This line comprises of stock preparation line based on virgin pulp and the „Crescent former" paper machine. Line is designed for production of paper with substance weight 13-35 g/m^2, output 95 t/day, at average speed 1.500 m/min And paper web width on reel 2.700 mm. We are ready to offer and supply first line of this kind. Also further technical

Development corresponds with our business philosophy to focus mainly on machinery and equipment which allows better efficiency, improve quality and thus bring our customers significant cost savings (energy, feedstock, etc.) or higher added value.

DEVELOPMENT

Efficient dewatering Top Former

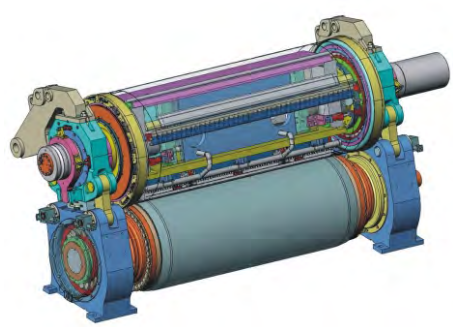
In case of: inquire till 12/2010
order till 3/2011,
discount for the complete
Top former 100.000 €.

The first equipment we talk about is the Top Former which is used for bothsidness elimination and also allows high capacity dewatering on the wire table and is low space demanding.
Advantage is also the possibility of installation in existing machines without major construction and mechanical adjustments. Device is developed for maximum operating speed of 1.000 m/min at working width 5.000 mm.

Long NIP pressing means cost savings

In case of: inquire till 12/2010
order till 3/2011,
discount for the complete
Press with long nip zone 200.000 €.

Another equipment is meant for press part and has commercial name Modu Press. It is a special press, which design allow extension of the pressing zone. Using this machine customers can obtaine dryness of 45-52 %, at the output of the press part depending on configuration and type of paper machine. The facility is being developed for the maximum operating speed of 1.000 m/min at a working width of 5.000 mm and a maximum load of 1.250 kN/m^2.

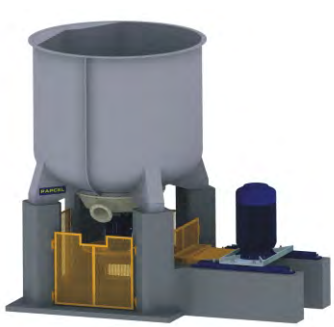


High speed sizing

In case of: inquire till 12/2010
order till 3/2011,
discount for the complete
Film press 100.000 €.

Development in the field of paper mechanical properties have focused on new type of sizing press (so called film press). Max. working parameters of this press are - working width 5.000 mm, max. linear pressure 80 kN/m, max. Operating speed 1.000 m/min, amount of sizing agent applied on one side is 4 g/m^2. The main advantages of this machine include the possibility using the press with speed above 700 m/min, reduction of the sizing agent consumption and subsequent reduction of energy in after drying part.
Other activity is targeted to the intensification of dewatering in the paper machine wet parts, where the dryness increase means a significant saving in the drying section. Two important devices, so far missing in our portfolio, were launched.

Wet strength papers processing



In the field of stock preparation lines we focused on processïng of the wet strength waste materials where we started designing of middle consistency vertical (MCV) pulpers. The design of MCV was invoked by need of efficient installation Tetrapack processing lines. This pulper will be of course used for processing of conventional materials at consistency of 8 - 14 % as well. Finished pulper MCV-14 represents the smallest size of this product line which will be completed soon with MCV-20 and MCV-30. Installation of these pulpers significantly improve the processing of Tetrapack materials but also shorten the time for procesing and increases capacity. Among new installations we can find also a slot fine screening at the middle consistency (around 3 %), which leads to savings in installation costs, energy costs and reduce also the fiber loss. The reference line with good results is installed in the Russian Federation and another one will be installed soon in Lithuania.

Ladislav Řehák
Technical Manager

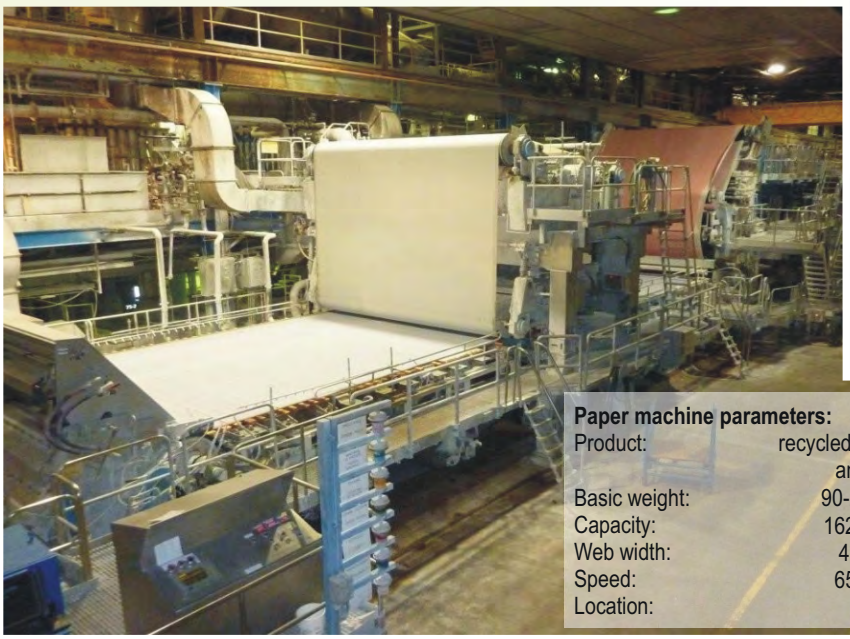
PAPCEL, a.s., Uničovská 132, CZ-784 10 Litovel, Czech Republic; phone: +420 585 152 175; fax: +420 585 343 001; e-mail: papcel@papcel.cz; **www.papcel.cz**
MARKETING: marketing@papcel.cz; phone: +420 585 152 107

REFERENCES

The Largest Order in History of PAPCEL

PAPCEL strengths its position among machinery suppliers in recycled containerboard market in Russia by signing the largest order.
Early this year we finally defined the all technical and financing details of the project and signed an agreement with Sukhonsky CBK. The 30 millions EUR project includes delivery of second hand paper machine, the new SPL and rebuild of the paper machine due to change of production program.
PAPCEL is responsible also for dismantling, transport, detail engineering and financing of project. The start up of the machine is scheduled in 2012. PAPCEL received this order due to long term cooperation with the customer and because its offer respected the bestspecific inquiries of the customer.

David Dostál
Chairman of Board



Paper machine parameters:

Product:	recycled testliner and fluting
Basic weight:	90-200 g/m^2
Capacity:	162.000 tpy
Web width:	4.550 mm
Speed:	650 m/min
Location:	Vologda

Ambitious start on Turkey market

New contract for reconstruction of paper machine was signed in Istanbul on the first week of August. The value of the contract reach amount of 2,92 mio. EUR and it will be realized in the second half of this year and beginning of year 2011. Start up of reconstructed machine is planned for April 2011.
Company AKASAN, placed in town Adana in southeast Turkey, is a customer in this project. The owner of paper mill Mr. Mithat Topal found this mill as a green field project in industrial zone Haci Sabanci in year 1995. Paper machine produce double layer fluting and liner base on the waste paper. The aim of the reconstruction, which press part, is to double nowadays comprises mostly reconstruction of the capacity of paper machine up to the 60.000 tpy at average speed of 350 mpm. Nowadays the final negotiations with bank and insurance company take place and project and designing works can start. We believe that this project is first just first sign of our entrance into the quickly developing and promising market of Turkey.

Hanuš Majer
Director of International Business Department

Exclusive offers

SECOND - HAND

Interested in decreasing investment costs by purchasing second-hand equipment? PAPCEL is set up to offer all necessary services for these types of projects. That includes a flexible range of products and services, from very beginning, until a machine's start-up, as well as delivery combinations of new and second-hand machinery. We have experience from many turn key projects based on complete second-hand paper machine removed from one state to another, rebuilt and supplemented with stock preparation lines.

Our activities regarding includes:

- finding suitable used equipment (according to the customer's precise requirements)
- finding suitable used equipment (according to the customer's precise requirements)
- inspection and assistance during technical verification
- disassembly of used equipment
- machine replacement
- engineering services
- packaging and transport
- overhaul
- machine completion on-site
- start-up
- attendance training
- ensuring of financing of the project
- presentation of redundant machinery to interested customers and website publication on www.papcel.cz
- disassembly, transport, storage of unnecessary machines

Repurchasing of second-hand equipment is preferentially offered to customers of new equipment from PAPCEL's production program. A selection of our second-hand equipment can be found listed on next page, but a comprehensive inventory is displayed on our website.
Go to:
www.papcel.cz >
products and services >
second-hand
And for more information about our second-hand projects go to:
www.papcel.cz >
references

PAPCEL, a.s., Uničovská 132, CZ-784 10 Litovel, Czech Republic; phone: +420 585 152 175; fax: +420 585 343 001; e-mail: papcel@papcel.cz; **www.papcel.cz**
MARKETING: marketing@papcel.cz; phone: +420 585 152 107

SECOND - HAND EQUIPMENT ON STOCK

SOFT NIP CALENDER

Manufactured year:	1995
Make:	VOITH Sulzer
Paper grade:	Writing and printing
Final basis weight:	60 - 90 g/m^2
Speed max:	1.000 m/min
Paper width:	4.600 mm
Distance rail:	5.930 mm
Temperature:	180°C
Linear pressure:	300 kN/m
Number nips:	2
Drive side:	Calender has a left hand drive when looking in the direction of paper flow.

Equipment specification:
- Soft Nip Calander
  (Frame, Soft Nipco rolls, Flexitherm rolls, guiding rolls, bowed rolls)
- Control desk
- Drives ABB (Variable frequency AC electric)
- Hydraulic unit for Nipco rolls
- Heating and hydraulic unit for Flexitherm rolls

Spare rolls

HYDRAULIC GUILLOTINE

With the belt conveyor
Role dimensions:
- Diameter up to 1,5 m
- Width up to 2,15 m

Basic units:
- Hydraulic guillotine
- Belt conveyor before guillotine (2,2 x 4,5 m)
- Belt conveyor after guillotine (2,2 x 3 m)
- Hydraulic unit
- Control panel

WRAPPING MACHINE

Includes a complete line of packing paper rolls for transport

Max. paper roll diameter:	1.250 mm
Max. paper roll width:	2.100 mm

SLITTER REWINDER 2,25 m

Max. operating speed:	1.100 m/min
Max. unwound width:	2.250 mm
Max. unwound roll diameter:	1.250 mm
Make:	BELOIT
Unwinding:	Core spool
Diameter of winding:	1.200 mm

Two drums winding
Paper guide roll
Cutting roll
Set of knices with holders
Press roll
Drive
(electric motor 100 HP, 460 V, 1.050 1/min)
Hydraulic unit
Control desk

KITCHEN GAW

Includes facilities for the storage, preparation and distribution of chemical additives and coatings.

Schedule of basic units:
- The tank clay 75.000 USG (284 m³) with a top agitator and pump
- 2 pcs tank clay 55.000 USG (208 m³) with a top agitator and pump
- Latex Tank "1" 43.000 USG (162 m³) with pump tank for bags
- Latex Tank "2" 16.000 USG (60 m³) with pump
- Solvent tank for the brine with accessories
- The hopper, auger and makedown
- The hopper, auger, the dispersion device and dosing station for 17 components
- Hopper for cationic starch from the bags, the auger and the makedown tank
- GAW cooker 3 pcs with accessories (GAW COOCER JET)
- Mixer (Converter)
- Bentonite mixing tank
- Vibrating screens
- Batteries 12 pcs stainless steel storage tanks 400GAL with pumps and accessories
- Batteries 5 pcs stainless steel mixing tank 2500GAL with pumps and accessories
- Stainless steel mixing tank 1250GAL with pumps and accessories
- 2 pcs stainless steel mixing tank 1800GAL with pumps and accessories
- 2 pcs stainless steel mixing tank 2500GAL with pumps and accessories
- Stainless steel mixing tank 4000GAL with pumps and accessories
- Recovery for the whole kitchen GAW
- Crane for handling 2.000 kg bags
- Piping throughout kitchen area GAW
- M + R, Hand armatury
- Control system for kitchen GAW
- Complete drawing and operational documentation

PAPCEL exclusively offers equipment listed below, currently available in storage (from its own production program):

- Refiners (D31-KF-1, D31-KF-1, 2D32-UF-1, 2D32-SF-1, D20-D-3, 2DH31-SF-2)
- Refinig elements - whole sets (D20-D-3, D31-KF-1, 2D32-UF-1, 2D32-SF-1, 2DH31-SF-2)
- Centrifugal cleaners (SVS-20-M)
- Mixing chests PC (50, 120, 250)

PAPCEL, a.s., Uničovská 132, CZ-784 10 Litovel, Czech Republic; phone: +420 585 152 175; fax: +420 585 343 001; e-mail: papcel@papcel.cz; **www.papcel.cz**
MARKETING: marketing@papcel.cz; phone: +420 585 152 107

WHY CHOOSE LANEX FOR PAPER CARRIER ROPES?

Paper carrier rope Safegrip – new generation

Lanex is currently engaged in development of a new paper carrier rope preliminarily named Safegrip. The objective of development of this rope is improved threading of paper pulp into the paper machine. This requirement is met thanks to a special surface of the rope which offers an improved threading ability. The rope is of UNO construction but its circular shape is guaranteed even without the rope core. Absence of the rope core improves splicing as well. The rope is protected against the aggressive environment in the paper machine by a double impregnation which guarantees a longer life of the fibres and much better chemical resistance and linear stability at high temperatures in drying sections. The rope will be placed on the market very soon. This rope is recommended to be used wherever emphasis is laid on excellent paper grip and circular stability of the rope shape. Also, we recommend to use this rope as an adequate substitute for twisted ropes that are still in use to a considerable extent.

High quality raw material
The LANEX paper carrier ropes are only made of multifilament high quality polyamide (nylon) fibers with low elongation and high tenacity. The fibres are subjected to a demanding receiving inspection which guarantees that only top-quality fibres are used in the subsequent production.

Modern production equipment and continuous inspection
Paper carrier ropes are manufactured by means of most advanced machinery from renowned world manufacturers. The quality of production is continuously monitored in each production step, which guarantees the best possible quality of the final product.

Unique manufacturing technology
The manufacturing technology utilized contains many special production steps and technological operations that make a unique product of our ropes. Let us mention, for instance, the technology of total impregnation of fibres or the form and length stabilization of ropes by their exposure to high temperatures under special conditions. Those and many other technologies lend a higher performance and longer life to our ropes in comparison with the best ropes produced by other manufacturers. In addition, the new generation of ropes has a unique, patent-protected construction which lends hitherto unattainable parameters and qualities to our ropes.

www.lanex.cz

LANEX a.s., Hlučínská 1/96, 747 23
Bolatice, Czech Republic, Europe
TEL.: + 420 553 751 111
FAX: + 420 553 654 125
E-MAIL: pcr@lanex.cz

Lanex
You can be sure

erma engineering ag

ENGINEERING PARTNER OF PAPCEL, a.s.

erma in a nutshell

erma engineering ag has been in business for the past 28 years. The employees for the most part have worked together as a team for more than a decade.

erma group has the main office in **Greifensee-Zurich**, Switzerland. Sister companies are located in **Frankfurt**, Germany, erma GmbH and in **Prague**, Czech Republic, erma elan engineering.

erma group is independent engineering company, which is specialised in the pulp and paper industry.

erma - Companies for the Paper Industry

erma engineering ag
CH-8606 Greifensee
tel: +41 44 905 20 50
info@erma-ch.com
www.erma-ch.com

Consulting & Engineering

Management Consultant
Process Technology
Project Management
Design Engineering
Detail Engineering
Erection Supervision

erma engineering gmbh
D-65428 Rüsselsheim
Bensheimer-Str. 35
tel: +49 6142 798 801
erma-hchm@t-online.de

System Delivery, Consulting & Engineering
Complete Heating Systems:
Steam and Condensate
HVAC
Aeration and Dearation Systems
PM Hoods

erma elan engineering s.r.o.
CZ-160 00 Prag 6
Bubenec
Mlynska 6 (papirna)
tel: +420 2 24 31 15 34
info@ermaelan.com
www.ermaelan.com

Consulting and Engineering For Eastern Europe
Process Technology
Project Management
Design Engineering
Detail Engineering
Erection Supervision
Civil Engineering
Electrical Engineering

erma elan economy s.r.o.
CZ-160 00 Prag 6
Bubenec
Mlynska 6 (papirna)
tel: +420 2 24 31 15 34

Trading Company for CZ-Products
Machines
Tanks
Steel Construction

erma - ppm Alliance

In 1998 erma completed another step to increase the spectrum of services offered to the pulp and paper industry.
The idea of a ppm Alliance was realised.
The individual member companies of the ppm Alliance are specialised and independent.
The companies are connected throught a co-operation contract. In the past years several projects have been sucessfully completed using special expertise from the ppm Alliance member companies.

ppm Alliance
paper packaging media - Consulting Network

erma engineering ag
CH-Greifensee
Consulting and Engineering
- Management Consultant
- Process Technology
- Project Management
- Design Engineering
- Detail Engineering
- Erection Supervision

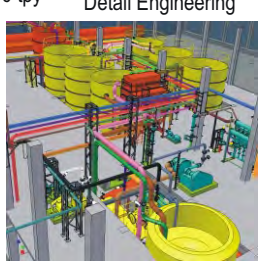
PTC Paper Technology Consulting AG
D-Bietigheim-Bissingen
Technology and Know-how
- Waste Paper Treatment
- Process and Quality Optimisation
- Product Development
- Laboratory Analysis
- Water Management
- Water Circuit Treatment

PEP
Paper Expert Pool AG
CH-Greifensee
Temporary Expert Service
- Project Management
- Plant Optimisation
- Production Optimisation
- Know-how Transfer
- Temporary Management

Bogner Gottschalk und Heine
D-Starnberg
Management Recruiting Direct Search
- Personel Requirements
- Personel Acquisition
- Personel Development
- Outplacement
- Business Transformation

Kartongroup Italy
Leuna-Germany
Greenfield Tissue Line 60.000 tpy incl. Converting
Services of erma
Engineering studies
Permitting
Basic engineering
Purchasing assistance
Civil engineeering
Erection supervision

Karton & Upakovka
Uchaly, Russia
Testliner and Fluting
in cooperation with PAPCEL
Services of erma
Basic Engineering
Detail Engineering



Mayak Technocell
Penza, Russia
Decorative Paper
in cooperation with PAPCEL
Services of erma
Basic Engineering
Detail Engineering

Perlen Papier Switzerland
Perlen
200.000 tpy LWC-Paperline
Services of erma
Feasibility study
Basic engineering
Purchasing Assistance
Detail Engineering
Erection and Start-up Assistance

Principles and Objectives:

- Independent of paper producers and equipment suppliers.
- Total communication with custo-mers and complete discretion during all phases of the project.
- Project implementation stressing technical competence, on-time scheduling and on-budget cost control, with the most modern planning and engineering methods.
- Spirit of dedication aimed at giving our customers the best.

Range of Services Include:

- Investigative Studies
- Conceptual Studies
- Basic Engineering
- Detail Design Engineering
- On-site Co-ordination
- Complete Erection Supervision Services
- Personnel Contracted Out on a Time Basis

Success:
The basis for the sucess of the erma group over the past 28 years of existance can be attributed to the following elements:

Fundamental Expertise
In the network ppm Alliance there are 15 paper process engineers that are permanently employed. The engineers were educated at the leading Universities in Germany, Austria and USA.

Flexibility
In addition to the numerous clients in the paper industry, it is also all major equipment suppliers that have sought out the technical competence of erma.

The ppm Alliance and erma are also internationally positioned with engineers coming from: Germany, Czech Republic, USA, Italy and Russia.

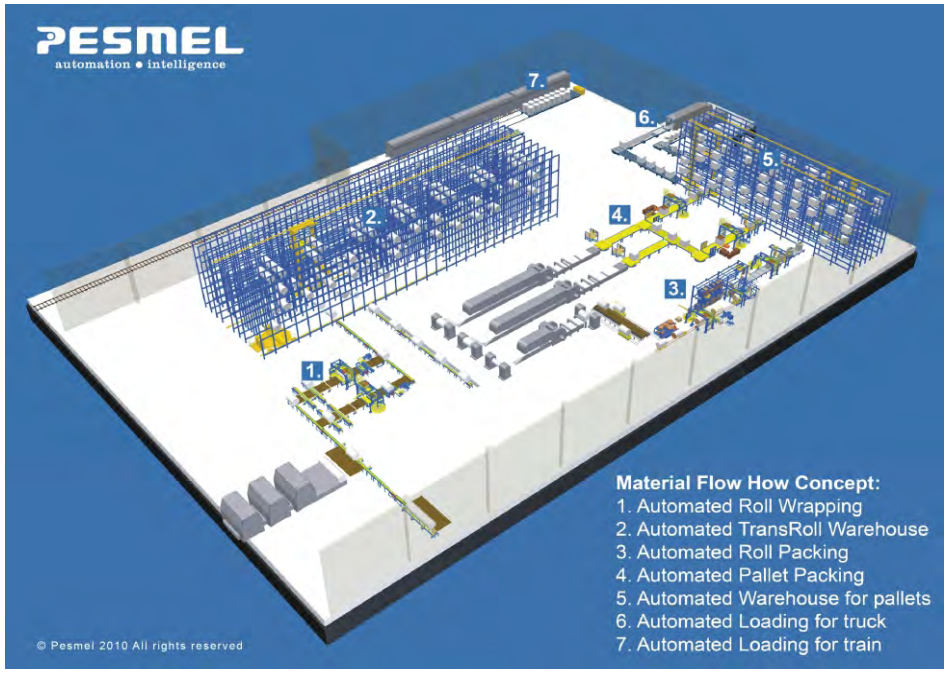
Competitiveness and Continuity
Through a combination of the process know-how in Zurich, Switzerland and the main detail engineering team in Prague, Czech Republic, it is possible for erma group to offer the complete spectrum of engineering services at competitive conditions. This has been well documented with many varied references. Additionally the leading employees in erma have been with the company for more than 10 years, which speaks for the continuity.

Controlling the production value with AS/RS systems in paper mills

One special characteristic in gaining competitive advantages in today's paper and converting industry seem to be how to adjust the supply/delivery chain structure and logistical processes to be more and more effective in a nutshell. However, let's focus only on the stages of production in which the direct economical value for customers is created but not realized yet.

One excellent way to improve profit margins is to improve the processes inside the four walls of paper mills, printing houses and converting plants. If the continuous improvement of core processes such as paper making and converting processes are left outside, the remaining part would basically consist of material handling and temporary storing.

Concentrate on the internal logistics in paper industry. At the most efficient paper and converting mills the products are handled manually first time when they are loaded into transportation vehicles; however, this could be automated as well. Handling products manually costs especially in so called high labor cost countries about 5 EUR/ton handled added with such costs as unnecessary manual sorting and outsourced warehousing. It is easy to calculate the total amount by just adding the total tonnages going through a processing line annually. Biggest part of this number is dedicated only for trying to maintain the product value created at core processes before reaching customers.



Less value destructive processes

For example, when paper is sheeted or converted in certain ways, products remain in manufacturer's balance sheet exceptionally long period not to mention the times products are handled and moved before reaching customers. Usually this is 7 - 8 times before even loading a transportation vehicle.

By automating most of the possibilities to damage products by manually handling them, the value created at production and converting processes could remain the same all the way to customers' hands. Depending on the source, the overall damages of manual handling could be worth of 0,05 - 2,0 % of the products' monetary value, which is even 5 EUR/reel. Even though almost all damaged non-converted papers can be re-pulped, the value created pulping is rarely as much as the sales prices would be. Automated handling and warehousing systems should be extremely reliable and gentle for products, and preferably designed for horizontal handling all the way from paper machine as well.

Controlling the value created at core processes

Nevertheless, for efficient material flow, products have to be sorted according to certain order such as delivery locations or product qualities and dimensions. By today's automated equipment customer specified sorting could be done, for example, immediately after winder by roll inspection, sorting and packing systems. If the specified order is composed of multiple winder sets, the sorting could be beneficial to do after packing with an (AS/RS) automated storage and retrieval system, which can be considered even as an "Automatic sorting and dispatch system" (AS/DS).

Using today's efficient sorting and dispatching methods in supporting processes, it is helpfull for both operation and final customers to consider further stages of automation. When the production speed reaches even 140 - 180 reels/h which is an everyday phenomenon in today's paper and converting industry the role of previously mentioned systems increases tremendously.

The same issue applies in converting mills as well; the need for better service level for customers leads to vast number of different requirements for product qualities and finishing styles. Therefore, is the manageability of not productivity, but production lead times as well worth of discretion?

It is now obvious that using technologically advanced in-house sorting and dispatching methods at least at the recognized most crucial points in the value chain, material handling gets easily 20 - 50% more economical and faster than in conventional methods.

Better service level and faster deliveries

More manual handling, uncontrolled packing and storing of products in uncertain methods cause tremendous increases in tracking for correct reels to fulfill particular orders from internal and external customers. Nobody should waste valuable work time for just trying to seek products. What would happen to customer service level if the right reel is not in the right place at the right time?

Progressive automatic handling and AS/DS systems easily stores, memorizes and dispatches products differentiated by variable parameters manufacturing batches, dimensions and qualities - whenever needed, preferably anticipated well ahead a certain delivery. Improvement of service level includes the unbounded filling of incomplete deliveries, mixing orders and economical way of reserve stocking buffering products.

More focus to the core business

Eventually automated supporting process modules helps to focus on critical production processes. It is unnecessary to concentrate on the processes which do not have a positive effect on product vale, but it is necessary to keep mind on product quality.

To conclude this paper, the concepts of automated packing, handling and AS/DS systems have to be considered as a part of full delivery chain.

Pesmel Oy, Päntäneentie 3, 61 801 Kauhajoki, Finland; phone: +358 207 009 600; fax: +358 207 009 601;
e-mail: pesmel@pesmel.com; **www.pesmel.com**

PESMEL automation • intelligence

International paper

Efficiency and quality by Pesmel roll handling and packing

REFERENCE

International Paper (IP) is one of the leading paper manufacturing companies in the world. Pesmel has supplied a new roll handling and packing line to IP´s Riegelwood, NC fluff pulp mill in the United States. The new Pesmel line is one key element of the production process, as it is capable to handle, sort and pack rolls with high capacity enabling the production to run continuously without stoppages. In modern mills, the production capacity has reached such heights that it is impossible to continue working in the finishing areas without automated systems. Currently the general scenario is that there is a new set of rolls entering from the winder into the finishing in every two and half minutes. Thus the quality control, sorting, packaging and labeling has to be completed in a certain time. This sets requirements also to the automated system, not to mention to manual working phases.
From mechanical perspective, Pesmel line looks like a typical handling line with packing equipment, but it contains applications of the very latest industrial automation. For example, sorting and packaging functions are fully automated. The handling and packing line is fully integrated into IP's IT system. The operator's main task is to monitor the system as the handling and packing line effectively acts as a decision maker. After the winder has made the slits, Pesmel's system communicates with the mill computer and readswhat kind of packages are ordered as well as their quantity (the packet may include 1 to 4 rolls). From there, the handling and packaging line will generate the relevant processes accordingly.

Sorting

After the winder, the rolls enter to Pesmel system and roll sets are formed according to customer orders. As the sorting function with highly effective software architecture is a part of Pesmel's system, no modifications will be required to the existing winder.

Packaging

The packaging functions include two axial and radial stretch film wrapping stations. Combined axial and radial wrapping ensures a moisture and dust proof package. The extended corner protection is confirmed with unique film folding function, which folds the stretch film at the roll ends during radial wrapping.
The packaging lines include the automated change of a stretch film roll as the film runs out. This function changes the empty film roll for a new one automatically without presence of an operator. The maximum pre-loading capacity is 8 pcs of 80 kg film rolls. The film roll storage magazine can be loaded while wrapping function is running.

Quality control

Pesmel system incorporates machine vision equipment that can be applied to multiple tasks, for example to detect second-rate products and thus avoid customer reclamations. The machine vision can also detect core hang out and scoped rolls. The second rate rolls will be rejected automatically.

Maintenance

Pesmel system is designed with a maintenance log. This log is able to collect all the possible errors within the system and report them to the high level IT system of IP. This function enables the maintenance specialists to review matters accordingly and schedule the maintenance tasks.

PESMEL OY, FINLAND

Globally operated supplier of fully automated packing, handling, sorting, warehousing and dispatching systems for paper and converting industries.

Pesmel Oy, Päntäneentie 3, 61 801 Kauhajoki, Finland; phone: +358 207 009 600; fax: +358 207 009 601;
e-mail: pesmel@pesmel.com; **www.pesmel.com**