



Paper Technology

Volume 46 number 8
October 2005

The official journal of the Paper Industry Technical Association



PAPER TIMES

Compozil takes wood- containing grades beyond the limits

THE BEST NEWS TO HIT NEWSPRINT SINCE THE FUNNY PAGES

The world's leading retention system, the Compozil® Select System, can help you deliver higher yields and better quality. Mills using it today are seeing impressive results. This high-performance system and its components, originally developed for fine paper, have been reformulated to bring the same benefits to newsprint production.

Our powerful silica nanoparticles, polymers and Anionic Trash Catchers work together in select amounts to help mills producing wood-containing grades realize significant gains.

Find out how you can increase filler and pigment retention for brighter sheets and better opacity, fixate and retain stickies and pitch to reduce hole defects, reduce deposits, increase machine speed, boost productivity and more.

Visit our web site for more good news about your business.

www.compozil.com

COMPOZIL®

Your license to make money.

eka

an Akzo Nobel company

Eka Chemicals Ltd, 304 Worle Parkway
Weston-Super-Mare, BS22 6WA North Somerset, UK
Telephone +44 1934 529400, Fax 1934 522577


AKZO NOBEL

Paper Technology

The official journal of the Paper Industry Technical Association

Volume 46
Number 8
October 2005

features

- 2 *Comment*
- 5 *News*
- 10 *PITA Affairs*
- 43 *Industry Update*
- 46 *Products & Services Directory*
- 50 *Installations*
- 52 *Coming Events*
- 54 *Recruitment*
- 54 *Calendar of PITA Events*
- 55 *Calendar of World Events*
- 12 *Pigment performance and binder flexibility*
Kimmo Huhtala and Amy Dimmick
The glossing potential of PCC can be utilised to enable mills to reduce costs with minor, or no, compromises in paper quality, according to a study. The aim of the study was to provide a range of pigment and binder combinations which would enable mills to reduce production costs.
- 17 *Novel Kaolin Pigment for High Solids Ink Jet Coating*
Prakash B. Malla and Siva Devisetti
A kaolin pigment has been developed for matte grade ink jet coating . It can be easily dispersed at high solids (~60%) which enables high coating solids with different levels of silica. The novel pigment and its blends have much lower binder demand than 100% silica gel. This preserves much of the coating porosity of the blend coatings and allows rapid drying of ink jet inks.
- 28 *Towards high speed cast coating*
A. E. Ranger and J. E. Heap
Production speeds in excess of 100 mpm have been achieved by new method of cast coating. The pilot plant was limited to this speed but all the calculations predict production speeds well in excess of this figure, particularly for paper grades. The new method can be used for double coating - by installing a second coater ahead of the main coating station in order to produce speciality grades.
- 31 *The impact of technology on wet end retention*
Juntai Liu
China is a technological leader with big, fast machines and the latest Gap forming technology. In addition, there is a move to ever lower grammages. The author describes how Chinese papermakers are addressing the problems which these developments create for wet end retention.
- 37 *On-line pH control on Workington BMI*
Matthew Taylor, Graham Toft, Hong Wang and Martin Brown
A cost effective method for online pH control for multiply board has been developed at Workington and is running within +/-0.3 of a pH unit. The aim is to extend the philosophy to each of the 3 furnish types on BM1 and BM2 within the next year. pH control can improve both quality and efficiency.



FRONT COVER PICTURE



This month's front cover sees John Clewley, PITA Chief Executive presenting the PITA Silver Jubilee Medal to Derek Page flanked by Steve l'Anson, FRC Chairman (left) and Richard Kerekes (right) who gave the citation. Full story pages 10 and 11.

Comment

China – the new land of opportunity

By Jeremy Bazley, General Manager, Purico Group (China)

Whilst recently visiting the UK I couldn't but help to notice that there is a lot of media coverage regarding China, especially in respect of textiles and the so called 'Bra Wars'. What has surprised me about recent articles about China published in 'the West' is that it has taken the rest of the world so long to really deduce what is actually going on in China.

I first went to work in China in early 2002, based in the city of Jiaxing in Zhejiang Province, just west of Shanghai in eastern China. I was immediately struck by how developed China was, far ahead of my expectations at that time, although I also quickly discovered that there was also quite a gap between the 'developed' and 'under developed' regions of the country and indeed even within cities and counties, with 'culture changes' usually taking longer to impact than just material investments.

Since that time I have personally witnessed massive growth at near double digit levels within the country, not just in the dynamic economy of Zhejiang, set in the hinterland of the impressive Shanghai which has grown at much faster rates, but virtually everywhere within most of the 33 Provinces, Special Economic Regions, Autonomous Regions and City Administrative Sectors that I have had an opportunity to travel to around this vast country. This obviously creates huge opportunities for both domestic and for overseas investment, which the Chinese Government has actively sought to encourage, seeking to attract technology, financial funding and the necessary skills to assist and drive forward the process of opening up the country.

With this backdrop and having previously worked in the UK paper industry for 25 years before coming to China, I found myself astounded by the general perceived or visible lack of British interest in the country, in terms of profile, of manufacturing investment, in engineering services, materials supply, consultancy and even employment. Whilst there may indeed be some notable exceptions, I find that the main engineering suppliers, consultants and contractors are primarily German or French, as is the technical support, but rarely British. Given the reportedly 'difficult' manufacturing and trading circumstances of the

UK economy and industry, a very competitive European commercial environment, the downturn in the US industrial sector, as well as the very apparent opportunities within the Chinese paper industry, this is indeed perhaps a little surprising. Apart from established British suppliers from the start of our joint venture, our company have only received a handful of visits from British Companies, which may of course say something about the relative size of our business, or the fact that there are bigger fish to trawl elsewhere in the country, but I suspect is more likely that there isn't a significant presence here or one that doesn't recognise the opportunities around.

Perhaps companies are deterred by a lack of understanding of the traditional culture, coping with the over-riding presence of cronyism, fears about political stability and freedom, rumours of the difficulties of finding the 'right and honourable partners' in China or indeed how to deal with the very real and high degree of bureaucracy involved in setting up and running businesses there. It is true, these are some genuine issues and there are some mild business horror stories around including a general lack of 'marketing understanding' that has resulted in significant over capacity in some sectors or a miserable misunderstanding as to how to go about business, but these aspects are not insurmountable and those who have taken the risk, gained the right support and have sought to understand the culture, have often benefited from their investments or market involvement. The entry in 2002 into the WTO has also resulted in a demonstrable change in China's approach to trading with the rest of the world as it has worked towards WTO rules compliance and making business more practical for overseas interests.

Traditionally 'quality' in every respect in China has been of a low quality, something that the Chinese themselves recognise and now have a true passion for rectifying as quickly as possible. In relation to paper machines and equipment this has promoted the thought process that "new is best", conversely 'old is no good', albeit sometimes mistakenly. This has created the opportunity for overseas paper machinery and technology suppliers to sell machinery and equipment into China

continued p4 >

Published by PITA

5 Frecheville Court,
Bury, Lancs BL9 0UF
Tel: 0161 764 5858
Fax: 0161 764 5353
email: info@pita.co.uk
website: www.pita.co.uk

Editor

Margaret E. Marley
2 St Philip Street,
London SW8 3SP
Tel: 020 7622 9269
Fax: 020 7652 1632
email: mmrley@dial.pipex.com

Publishing Director

John Clewley

Advertisement Manager

David R. Cole

European Representative

Nicolas Pelletier
ENP 16 Rue
Bannier - F-45000
Orleans, France
Tel: +33 2 38 42 29 00
Fax: +33 2 38 42 29 10
email: enp@wanadoo.fr

Produced and typeset by

Zebra Publishing, Failsworth,
Manchester

Printed by

Stephens & George Magazines,
Merthyr Tydfil, Wales

Paper

Supplied courtesy of M-real
Text pages on Nimrod Silk 115 g/m²
Cover pages on Nimrod Silk 170 g/m²

Subscription Rates (2005)

10 issues pa
£100 pa + postage
(£10 for single copy)

© PITA reserves all copyrights for the contents of this Journal. Technical papers may also carry first-authors' copyrights jointly with the Association. None of the contents may be extracted, circulated, or re-published without permission.

Registered Number*2928961
England Limited Liability.
ISSN 0 306-252X

A **Passion** for Chemistry
A **Philosophy** of Innovation
A **Reputation** for Success



Complete Solutions for Pulp and Paper[®]

At Hercules we look at innovation from a different perspective . . . yours!

As a proven technology innovator, we respond to the challenges that you face by delivering unique solutions that provide results.

A commitment to research and development—coupled with the expertise of our global application specialists, engineers, and scientists—delivers industry leading products and capabilities designed to enable you to develop new grades, new benchmarks, and new industry standards.

Whether you choose us for all your specialty chemical needs or just one of our best-in-class treatments, you will be able to measure the results through increased productivity and improved profitability.

Learn how Hercules innovation can address your needs. Contact your local representative or visit us online today.

www.ppd.herc.com

HERCULES

Our Complete Solutions approach combines innovative technologies across our range of functional, process, and water treatment chemicals.

- Sizing and Printability Technology • Strength Technology • Starch Technology
- Tissue Technology • Foam Control Technology • Microbiological Control Technology • Pulp Mill Technology
- Contaminant Control Technology • Retention, Drainage, and Clarification Technology • Water Management Technology

and over recent years there has been huge investment in new paper machines in most sectors of the paper industry, an investment programme that has only slowed moderately with new government legislation relating to restricting land sales and more tightly regulating the issuing by banks of new loans on a more commercial basis. Most of the new paper machines being sold globally in recent years seem to have been sold into China. Inevitably though, this also creates opportunities for upgrading some existing equipment that is not 'so old', but again from personal experiences this part of the market is often supported by Continental European suppliers. Similarly, the pursuance of product quality improvements is moving at an incredible rate as China seeks new technology and management control techniques to achieve its ambitions of world leadership reflecting the view of a very proud country and a passionate nation.

Overlay on this situation the need to maximise process efficiency, not a recent or natural national trait in China, improve environmental performance in support of the government's very real and public commitments, improve energy efficiency in a country where there is huge demand for oil and a shortage of electricity in some parts, optimise product development in a very competitive and demanding market, professionalise and develop modern sales and marketing techniques and of course the basic and fundamental need to radically improve safety behavioural performance in a country where safety issues aren't readily recognised, then there is a clearly defined need for overseas support across the board.

Conversely to the ongoing rigours of the highly competitive cost cutting markets in Europe and the USA, the Chinese markets are highly dynamic and expansive, benefiting from newly emerging market opportunities both domestically and abroad on the back of the country's fast growth combined with the benefits of lower personnel and other associated costs. Increasingly, overseas companies are also setting up manufacturing or distribution agencies and arrangements within China to capitalise on servicing the growth in demand.

All this of course provides more technical and management opportunities for British and European paper industry employees. China recognises that it needs improved management skills in order to improve efficiency, quality and commercial performances, including marketing know how and long term strategic direction. Whilst this is a fundamental requirement, it isn't always understood on the ground which can result in frustrations at times, but there are significantly improved living conditions there these days, a hugely progressive modernisation programme combined with strong and proactive government support to "Foreign Experts" through formalised encouragement and support schemes that welcome 'new friends' with a genuine warmth. It is no longer a question of experienced personnel spending a year or so in China before retirement as a cultural curiosity, China now has genuine medium to long term employment opportunities for ambitious career minded individuals, not surprising perhaps in what will soon become the second biggest economy in the world within a few years and is forecasted to become the biggest market in the world not so long afterwards.

The average person in the street in China generally has strong views against Japanese investment in the

country despite its rapidly growing presence and certainly has reservations about the USA's global position and perceived attitude to China, but seems generally welcoming to European involvement, with the British perceived as being honourable and "Gentlemen". Hopefully the British position will strengthen further with increased visibility through visits by senior government officials and Tony Blair's recent visit can only assist this process, although the frequency of high profile visits from other countries still seem to be more frequent and dominates the Press, particularly from Germany, who have such a large industrial and commercial presence there.

China truly is the new land of opportunity for British and European companies and individuals who seek to understand these opportunities and approach them with their eyes open. At a time where the paper industry in many established parts of the world are either in recession or consolidating, China is making huge investments in new plant and machinery to support its rapidly developing internal markets and there is more to come! Trading with China on a manufacturing basis is becoming more of a mandatory situation for global paper companies and associated industries, given its size, not the optional extra that it once was. The British challenge is how to capitalise on the business opportunities within our industry in China centuries after they pioneered trading there, albeit in different substances and materials. With a population of 1.3 billion people and a rapidly growing under developed economy where more than half the population is in rural under developed areas, there has to be a need for more paper in the future in virtually every warp of life - capitalising upon this opportunity is the challenge ahead of us!

The Purico Group (China) has increased its interests in China between 2002 and 2005, from one paper joint venture manufacturing cigarette papers (Zhejiang Minfeng Robert Paper Co. Ltd), to three speciality paper businesses adding the manufacture of automotive filtration papers (Binzhou Puri Filter Paper Co. Ltd), a world class investment in tea and coffee bag papers and high porosity plug wrap papers for cigarettes (Zhejiang Purico Minfeng Paper Co. Ltd), as well as a support business and various other investments.

Jeremy Bazley first took up employment in China in early 2002. He was formerly Managing Director of Mead Speciality Paper Europe, Managing Director of Barlow Paper Ltd, Council Member of the Paper Federation of Great Britain, Chairman of the Paper Safety Council and Chairman of the Paper Education and Training Council based in the UK. In China he was awarded the South Lake Gold Medal by Jiaying City in early 2003, the Zhejiang Provincial "West Lake" Gold Medal later that year and has recently been awarded the Chinese National Friendship Gold Medal for "Outstanding Contribution by a Foreign Expert to the development of Chinese Culture, Economy, Technology, Science and Education" by Wen Jia Bao, Premier, at a special government ceremony at the Great Hall of the People in Beijing.

These views expressed are wholly personal views and do not necessarily reflect the opinions of the Company and/or PITA.

News

Private equity

Both JSG and Kappa are owned by private equity companies.

Madison Dearborn acquired JSG in 2002, while Kappa was acquired by Cinven and CVC Capital in 1998.

The Smurfit Kappa merger: prelude to capacity shake out

By M. E. Marley

Jefferson Smurfit and Kappa Packaging have agreed to merge into the Smurfit Kappa Group, in which they will have respective stakeholdings of 58.3% and 41.7%.

The deal, which would create Europe's largest containerboard producer, is subject to official clearance.

The new SKG would have a combined capacity of

- 6.1 m tonnes of containerboard
- 5.1 million tonnes of corrugated

These operations span 23 European and 9 Latin American countries and they complement each other. JSG is a market leader in Latin America and strong in Western and Southern Europe; Kappa is strong in Northern and Eastern Europe.

The merged company would have almost twice the containerboard capacity of SCA which will remain the No 2 in the European CCM league with a market share of 12%. Smurfit has a 13% share to Kappa's 9% share.

The merger is likely to be the prelude to a major shakeout of high cost European capacity - on the model set by the Smurfit - Stone merger in North America, when consolidation was used to cut out surplus capacity to improve pricing conditions.

The Merger Proposals: JSG and Kappa

- An issue of shares by JSG
- The payment to Kappa's shareholders of:
A cash consideration of Euro 300 million and
A €75 million subordinated promissory note, subject to closing adjustments

The new Smurfit Kappa Group will:

- Finance the cash consideration, and
- Establish a new senior credit facility to:
Re-finance the entire Kappa debt
Refinance the JSG senior credit facility

Kapp's debt stands at some €3 bn while that of the JPG is €2.5 bn - down 19% from the end of 1H 2004.

Smurfit Kappa Group

Chairman	M. Smurfit
Dep Chairman	F. Beurskens
CEO	G. McGann
Pres & COO	T. Smurfit
CFO	I. Curley

Madn Dearborn	5 Directors
Cinven Ltd	2 Directors
CVC Capital	2 Directors

1 million tonnes of overcapacity

In Europe today, there is more than 1 million tonnes of overcapacity in testliner, a surplus which is keeping prices down, despite the pick up in demand at the end of the 2Q.

The current price of €300 a tonne is only €40 above the trough of 1996, and a far cry from the 1995 peak when testliner commanded €485 a tonne.

Last year, producers attempted two price hikes with little success. The downward momentum proved to be too strong and the price continues to decline from the 2002 peak of €400 a tonne.

A structural problem in Europe

The pricing problem arises from overcapacity, itself a consequence of the structure of the European CCM sector, in which there are more than 100 players.

In 2004, the top five accounted for just 44% of West Europe's total containerboard capacity, compared with 67% in North America, according to RISI. In the recycled sector, the top five accounted for 43% of the total European capacity.

'We identified the need for structural change within the European paper-based packaging industry', says Gary McGann, CEO of the Jefferson Smurfit Group. 'This proposal is an exciting first step in that process and would, we believe, benefit all stakeholder groups of the combined company in a challenging operating environment.'

SCA has made a start in tackling the overcapacity problem, pages 6 and 7.

Figure 1: West European capacity is outstripping demand and prices are depressed.

SURGING CCM CAPACITY IN WEST EUROPE

2005-06: Some 2 million tpy of new capacity

This is largely recycled tonnage. The new PMs are:

2006: SAICA in Spain: A 400,000 tpy PM will start-up at El Burgo de Ebro in early 2006.

In France, capacity at the Rouen Mill may be increased by 150,000 tonnes.

In Portugal, Gescarto plans to build a 250,000 tpy PM.

2005: SCA adds 100,000 tpy of recycled testliner and fluting capacity via a rebuild at Aschaffenburg in Germany. Start-up in October.

Emin Leydier started up a 300,000 tpy PM in April at the greenfield Nogent-dur Seine Mill in France.

W. Hamburger, a 260,000 tpy PM at the greenfield mill in East Germany. Commercial output started in 2Q 2005.

Adolf Jass started up a 400,000 ccm machine in February in East Germany.

Papierfabrik Varel a new 250,000 tpy recycling PM. Commercial production started in January 2005.

2004: 50,000 tonnes of additional capacity after closures

Cartiera del Polesine, a new 130,000 tpy PM in Italy, Commercial production started in Dec.

2003: 400,000 tonnes of additional capacity after closures

Papierfabrik Palm: The 600,000 tpy PM starts commercial production in Germany. No other major additions to capacity

CCM: MILL AND MACHINE CLOSURES

2005-06: SCA to close down 350,000 tonnes of capacity including the 200,000 tpy Djursland Mill in Denmark in 1Q 2006 and the 100,000 tpy Oftringen Mill in Switzerland (4Q 2005). In the UK, Smith Anderson is to close down PM1.

2004: The closure of 215,000 tonnes

In the UK: the 50,000 tpy Burnley Mill of Papermarc and the 65,000 tpy Creams Mill of Mondi.

In Switzerland, Mondi's 50,000 tpy Moudon Mill.

In France, the 50,000 tpy La Ferrandiniere Mill of Emin Leydier.

2003: The closure of 430,000 tonnes

Operating rates fell to 89% from 91% in 2002 and there was a spate of closures including:

The BPB Purfleet Mill in the UK

Kappa's Mennecey Mill in France

One PM at Cartonnerie de Gondardennes, France

Papierfabrik Harzer in Germany

EASTERN EUROPE NEW CAPACITY

Stora Intercell is to replace a PM at its Polish Mill. The net capacity gain will be 160 000 tonnes **Klaipedos Kartonas** is to increase capacity by 65 000 tonnes at it Lithuanian Mill

SCA to close down

SCA is to shut down 350,000 tonnes of CCM capacity to reduce overcapacity in Europe and counteract the continuing decline in the price for containerboard.

The closures, which include the 200,000 tpy Djursland mill in Denmark, will also have a significant impact in the UK, Germany, Sweden and the Netherlands.

They will take place in 4Q 2005 and 1H 2006, and will also involve 7% of SCA's tissue capacity.

The testliner sector is suffering from an oversupply of around 1 to 1.5 million tonnes, which is 'feeding the momentum to lower prices and putting pressure on the profitability of the entire packaging chain, says Jan Astrom, president and 'CEO of SCA.

Despite a surge in demand at the end of the 2nd Quarter – following weak deliveries in the January to May period – the prices for containerboard and corrugated board continued to decline.

'The higher volumes of deliveries did not offset lower prices in the corrugated board segment. Paper prices were influenced strongly by new capacity added during the first half of the year'

The creation of a profitable sector, 'will come from our own hands', says Mr Astrom.

'Capacity reductions must be made, and old and narrow board machines should be taken out of production as soon as possible to balance the market and ease the downward pressure on prices'.

"We have taken out our share, others need to do their homework now - not only Kappa and Smurfit but the smaller players in the CCM sector.

Efficiency enhancement

SCA's efficiency enhancement programme involves 3,600 job cuts and capacity reductions in

- testliner (360,000 tpy)
- tissue (100,000 tonnes)

A major restructuring is planned

Figure 2: A major shake out of capacity is imminent. The creation of a profitable sector 'will come from our own hands', says Jan Astrom, CEO of SCA.

Figure 3: The main export markets are CEE and Asia. Demand is growing by 9% pa in CEE. Asian demand is also growing, but so is capacity.

350,000 tonnes of testliner capacity by mid 2006

for the packaging division, where SCA hopes to save an annual Sk869 million (\$111m) from 2008, through:

- the reduction of jobs by 2,000
- the closure of uncompetitive mills which will take out 17% of SCAs total testliner capacity, ie 350,000 tonnes
- the closure of 15 corrugating plants, taking 200 million m²/yr out of the market, ie, 5% of SCA capacity.
- targeted investments will increase capacity and quality, in order to retain the market share of the closed converting units.

The timetable for these measures - in both packaging and tissue - is for implementation by 2Q 2007. Together, they are expected to realize:

- savings of Sk 50 m in 2005
- savings of slightly more than Sk 600 million in 2006
- savings of Sk 1,350 m in 2007
- from 2008, the full annual effect will be some Sk1,550 million.

These savings are in addition to the cost-saving programme which was launched in late 2004, which is expected to result in annual savings of Sk1,200 m, as of 2006.

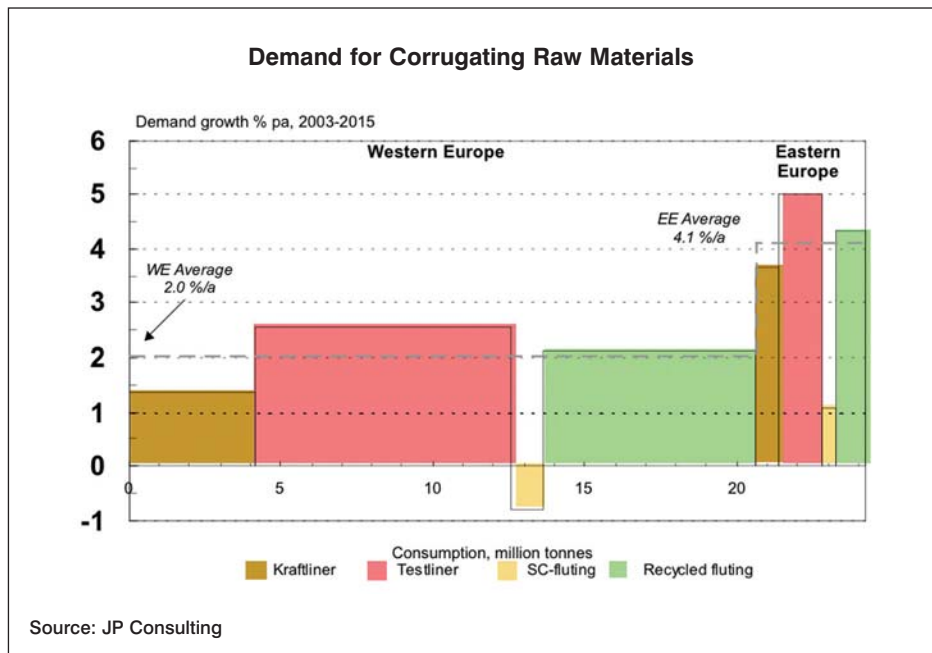
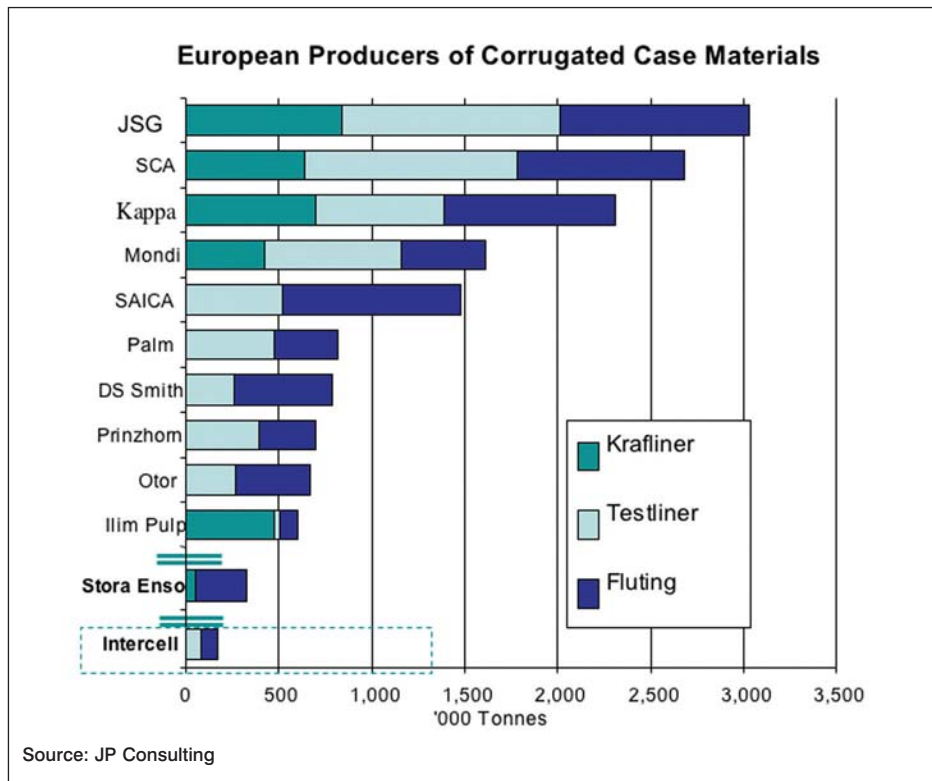
Plunge in 1H earnings

SCA'S earnings for the first half of 2005 fell to Sk1668m, after tax - down from Sk2776 million in 1H 2004.

However the 2Q 2005 showed a decided improvement on 1Q with a surge to Sk1006 million from Sk662 million - the result of improved trading conditions at the end of the 2Q and the impact of efficiency programmes.

'In Europe, continued weak economic growth characterized our operations, with low growth values, tough competition and price pressure, with particular emphasis on tissue and corrugated board operations, says Jan Astrom.

'The stronger North American economy has led to improved demand with rising prices'.



East Europe and Asia: the growth markets for CCM

Stora Enso is targeting the developing markets of Central and Eastern Europe as a growth area for corrugated, and with the acquisition of Intercell of Poland has established a stronghold in the area. Intercell has a 240,000 CCM mill at Ostro, NE of Warsaw and there are plans to increase capacity by 160,000 tpy. Intercell is Poland's largest collector of recovered paper and a major producer of corrugated board. Demand for CCM is growing by 9% a year in CEE. Demand is also growing fast in Asia, the other major export market; but Asian capacity is soaring. In 2005 and 2006, 2.4 million tonnes of new capacity will come on stream – following a 2.1 million tonne surge in 2003-2004.

Barrow-in-Furness mill plans for expansion

The 115,000 tpy Barrow-in-Furness mill of Kimberly-Clark has applied for planning permission for a 9,000 m³ expansion which will create more production and office space.

The Cumbrian mill has already secured a grant from the Regional Development Agency for the removal of electricity pylons which restrict the development of the site.

The project will make the mill ready for the possible relocation of production - arising from the global restructuring programme that will reduce by 17% K-C's global capacity by the end of 2008.

Some 20 facilities will be shut down and their production relocated to 7 plants which are earmarked for expansion.

While K-C has not commented on the prospects of its two UK mills - Barrow in Furness and Northfleet in Kent - the climate is positive since:

- i) UK is a net importer of tissue, of which there is significant overcapacity in Europe and
- ii) the two mills produce the strong *Andrex* and *Kleenex* brands.

Kimberly-Clark reduce global capacity by 17%

Kimberly-Clark has launched a restructuring programme which will reduce global tissue capacity by 17% and increase competitiveness, at a time of soaring cost inflation.

In the Second Quarter of 2005, costs increased by \$95 million while cost reductions of \$55 million were yielded by a previous efficiency drive.

The new programme, which will have a particular focus on Europe, will:

- i) consolidate and streamline manufacturing plant;
- ii) improve operating efficiencies; and
- iii) reduce administrative expenses.

By the end of 2008, the programme will have achieved:

- The closure of 20 manufacturing facilities, ie some 17% of K-C's global capacity
- The streamlining of another 4 facilities
- The reduction of the workforce by 10% or 6000 employees
- The relocation of production and equipment to 7 plants which are earmarked for expansion.

The European operation will be heavily affected by the programme since there is significant overcapacity in the tissue sector.

For example, the Forchheim Mill in Bavaria is to be closed by mid 2006. It produces feminine hygiene products and employs 350. K-C is also mulling over the future of the Villanovetta tissue plant in Italy.

There will also be overseas closures, including three adult hygiene products plants in the US, Canada and Australia.

The restructuring plan will cost \$900 million to \$1.1 billion over a 3 1/2 year period, beginning in the 3Q of 2005. But, annual pre-tax savings are expected to increase to \$300-\$350 million by 2009.

This will help to counteract the significant cost inflation of recent years, which added \$95 million to K-C's bill in 2Q 2005, via:

- \$50 million arising from oil-based, raw material costs. Higher resin costs, which peaked during the second quarter, were responsible for most of this increase.
- \$10 million in fibre costs.
- \$15 million in energy costs.
- \$20 million in distribution costs.

These inflationary costs have more than offset the \$55 million in gross cost savings which was generated by the company for the quarter.

50% increase in the R&D spend

The restructuring programme builds on K-C's Global Business Plan which was launched in 2003 to impose a financially disciplined approach to investment and innovation.

The strategy is to target investment on growth areas and on businesses with strong market positions, in particular, on the high growth BRICIT markets of Brazil, Russia, India, China, Indonesia and Turkey.

In addition, the business plan calls for a significant boost in R&D spending - to more than \$400 million by 2009. This represents a 50% increase on 2004 levels.

The aim is to better identify trends and customer insights and then more quickly transform this knowledge into proprietary technologies and innovative solutions which will drive both growth and profitability.

K-C's operating profit rose by 2% to \$1274 million in the 1st Half of 2005, from \$1248 million in 2004. Sales of \$7.9 billion were up about 7% from \$7.4 billion, driven by:

- a 4% increase in sales volumes and
- favourable currency effects of 3%.

An RFID-enabled demand chain

Kimberly Clark is developing an RFID enabled demand chain with the help of TrueDemand Software, a pioneer in RFID applications which monitor stock levels across the supply chain - from mill to retail warehouse and supermarket shelf.

RFID is a more powerful tool than the point-of-sale (POS) data has been harnessed to show how much product has sold through the retailer chain.

RFID provides a real time picture of stock movements and enables mills to be more precise in predicting future demand for their goods. Improved short-term forecasting capability enables mills to maximize by revenue by:

- Reducing costs related to excess inventory
- Improving operational efficiency
- Improving service via continuous replenishment

COST INFLATION ADDS \$95m to 2Q BILL

\$50 million	Arising from oil-based, raw material costs. Resin costs, which peaked during the second quarter, accounted for most of this increase
\$10 million	In fibre costs
\$15 million	In energy costs
\$20 million	In distribution costs

In recent years, cost inflation has been a significant factor for paper-makers. In 2Q 2005, they added \$95 to the cost of Kimberly-Clark, more than offsetting the \$55 m which the company had generated in gross cost savings.

Energy costs undermine St Regis

DS Smith is bracing itself for soaring energy costs which are still rising after a 30% increase last year. 'Results for the year to April 2006 will be worse than previously forecast' says the company.

In 2004/05, the Group's total costs for gas, electricity and diesel increased by £9 m to £73 m, largely the result of a 30% year-on-year rise in the UK average price of gas. Gas accounted for around 50% of total energy and fuel expenditure.

The St Regis papermaking operation, which accounts for 75% of the Group's energy and fuel costs, is bearing the brunt of the increases, and is also struggling against

- the low selling prices of the European CCM market and
- the relatively high cost of recovered paper.

The impact of these external factors is being partially mitigated by increased productivity and efficiency and a favourable sales mix. The latter is the result of:

- the acquisition of Linpac Containers
- an agreement to supply BPB with 100,000 tpy of plasterboard liner - a higher value added grade.

To fulfil this supply agreement, St Regis will invest £30 m in the upgrade of machines at Kemsley and Wansbrough over the next two years. This programme will also enhance the quality of CCM and coreboard.

Sevenside, the recovered paper operation of St Regis, was integrated with the former BPB Recycling business during the summer.

In 2004/05, DS Smith achieved operating profit of €83.9 m (£75.4) Linpac contributed £21.0 m.

Smith Anderson plans to mothball its CCM machine

To secure the future of papermaking at Fettykil mill in Fife, Smith Anderson plans to mothball one of the mill's three PMs, with the loss of around 70 jobs.

PM1 produces CCM grades, a market in which Europe has more than 1 million tonnes of overcapacity. Prices have declined from \$485 a tonne in 1995 to \$300 in 2005, and there is no expectation of better market conditions in the near terms, *see pages 3 and 4*.

In addition the company has been hit by huge rises in fuel costs and high effluent charges. As a result, PM1 has been running at a heavy loss for some time.

With the closure of PM1, production will be concentrated on PM2 and PM4 which produce a range of qualities for the specialist MG market including: paper bags, packaging and envelopes - an area where the company has a significant market share.

"The proposed changes are necessary if we are to remain competitive in the European and UK MG paper market", says commercial director Stephen Hutt. "They are the first step of a longer-term recovery plan that will involve negotiations on a number of issues with the remaining workforce."

"We will also be seeking meetings with Scottish Executive Fife Council and Scottish Water to discuss with them ways in which they can assist us."

The restructuring will affect only the papermaking division of Smith Anderson.

Sodra pulls out of South African pulp mill project

Sodra Cell of Sweden is pulling out of Pulp United, the project to build a eucalyptus pulp mill in South Africa in partnership with the NCT Forestry Co-operative of South Africa.

Sodra Cell has offered all its shares in Pulp United, to NCT, in accordance with the shareholders' agreement. The Board of Directors of NCT has decided to continue with the feasibility study on the BCTMP mill.

The initial findings of the feasibility study showed that some of the fundamentals for a

UPM plans to shut down two PMs at Kymi Mill

UPM plans to shut down PM1 and PM2 at the Kymi paper mill in Finland, at the end of this year.

The two PM's, which were built in 1935 and 1936, produce bleached machine-glazed kraft papers and have a total capacity of 20,000 tpy. The paper is used to make products such as bags, labels, and laminates for the packaging industry. Output will be transferred for production at UPM Tervasaari in Finland.

There will be no impact on the subsidiary companies:

- Eagle Envelopes based in Bathgate
- Trimfold which operates in the Republic of Ireland.

Nor will Smith Anderson Packaging be adversely affected. It has sites in Leslie and Falkland.

Securecycle, the company's recovered paper operation will continue as normal at the mill site. Fettykil is the last mill in Scotland using waste paper as raw material and it makes a major contribution to the Government's national waste strategy.

Securecycle provides a waste collection and management service in a growing market, working in partnership with a number of Local Authorities,

It focuses on the collection and recycling of a wide range of paper including factory waste, paper shavings, office and mixed papers, newspapers, pamphlets and cardboard grades.

In addition, Securecycle provides a confidential waste destruction service for the banking, legal and financial services sectors. This business is also expected to grow and expand.

Smith Anderson is one of Scotland's oldest manufacturing companies and has been producing paper from the site in Leslie for 145 years. The group currently has a total workforce of around 800 employees, 240 of whom are working in the papermaking division at Fettykil.

competitive mill where 'worse than initially anticipated', ie

- electricity and other administered costs
- capital investments per ton of capacity

The combination of factors with the strength of the ZAR vis a vis the US dollar, makes the project unattractive to Södra Cell's board of directors who are therefore reluctant to continue to support the project.

The NCT feasibility study will investigate the prohibitive costs and investments and see if they can be substantially reduced.

Production on these old machines is unprofitable, and their maintenance would require investments that cannot be financially or technically justified.

Kymi Mill employs 1,250 people and produces 940,000 tpy of coated and uncoated fine papers on three machines. The end products are: high-quality printing papers, advertising materials, books, magazines, envelopes, business forms, and printing and copying papers.

PITA Affairs



CONTENTS >

- 10 The Director's Diary
- 11 Silver Jubilee Medal presentation to Derek Page

The Director's Diary

The past few weeks have been almost totally dominated by the final preparations for the 13th FRC Symposium at Robinson College, Cambridge as on this occasion the event has been organized by the PITA conference team under a separate contract with the FRC. All of this activity culminated with the event itself starting on Sunday 11th September and running through to Friday 16th September 2005. Just before the event we managed to squeeze in one Working Group meeting.

FRC Symposium

Around 160 of the world's leading pulp and paper researchers gathered in Cambridge for the 13th FRC Symposium in the Oxford and Cambridge series which was started way back in 1957. 42 papers were presented throughout the week including seven Review Papers by recognised leaders in their respective fields. With delegates from 16 different nations this was a truly international event and in addition to the recognized pulp and paper countries in Europe and North America it was good to see delegates from as far afield as Australia, Brazil, Indonesia, Japan and South Korea. All of the papers were well received and provoked intense discussion and debate as evidenced by the "buzz" at meal

times and in the bar during the evening. There was some respite from the heavy technical sessions with the delegates enjoying a brisk walk into Cambridge on the Wednesday afternoon including a visit to Trinity College and Kings College plus a leisurely hour of the traditional occupation in Cambridge, punting on the River Cam.

The culmination of the week for many was the traditional Symposium Banquet on the Thursday evening when in addition to enjoying the singing of "Collegium Regale", seven of the Choral Scholars from Kings College, the delegates were witness to the presentation of the PITA Silver Jubilee Medal for 2004 to Derek Page (*see opposite page*). Richard Kerekes, Director of the Pulp and Paper Centre at the University of British Columbia gave a very eloquent citation as to why PAPTAC had proposed Derek for this Award, detailing Derek's many achievements as well as revealing some more amusing episodes from Derek's career. It was then my immense pleasure to present the Silver Medal to Derek accompanied by a standing ovation from the delegates, a sure indication of the esteem in which this great man is held by his peers in the research world.

Working Groups

The Papermaking Group met at The Last Drop immediately following the Metso seminar at the same venue and despite a rather small attendance made further progress on the Fact Sheets project in addition to finalizing the programme for the 2006 Papermaking Conference.

Julius Grant Essay Prize

I am delighted to see that we already have one entry for this year's Julius Grant Essay prize despite having not officially announced the competition. This is a very prestigious prize, never mind the £1000 tax free cash! *The Guidelines for the competition can be found in the PITA Year Book on page 15.*

Reminder

As advised in September, Paper Technology will not be published in November. The next issue will therefore appear in early December.

John Clewley



John Clewley, PITA Chief Executive presents the PITA Silver Jubilee Medal to Derek Page flanked by Steve l'Anson, FRC Chairman (left) and Richard Kerekes (right) who gave the citation.

DR DEREK H PAGE



PITA Silver Jubilee Medal 2004



Derek Page received his Ph.D in Physics from Cambridge University and it was therefore fitting that he returned to the city in 2005 to receive this award.

This year Derek Page completed fifty years of research on the structure and properties of pulp fibres and paper, starting with ten years at Pira, thirty years at PAPRICAN and ten years at IPST. He has authored over 120 papers, many of which are widely cited today. He is currently Scientific Editor of the Journal of Pulp and Paper Science.

Throughout the years Dr. Page has received many awards for his contributions to the science of the industry, but recently he has been recognised with the highest honours that the industry can bestow. He has been elected to the Paper Industry International Hall of Fame, he received the PAPTAC John S Bates Gold Medal and the TAPPI Gunnar Nicholson Gold Medal Award. In 2004 he was awarded the PITA Silver Jubilee Medal, the highest award given by our Association to recognize outstanding contribution to the technology of the industry.

The PITA Silver Jubilee Medal was presented at the end of the recent FRC Symposium Banquet on Thursday 15th September 2005 in the presence of his peers from the worldwide pulp and paper research community, by John Clewley, Chief Executive of PITA following a citation by Dr Richard Kerekes of the University of British Columbia.

Kimmo Huhtala
Specialty Minerals, Finland
Amy Dimmick
Specialty Minerals, USA

Taking advantage of pigment performance through binder flexibility

The excellent glossing potential of PCC can be utilised to enable mills to reduce costs with minor or no compromises in paper quality, according to a study on the performance of coating colour pigment and binder.

The aim of the study was to provide papermakers with a range of pigment and binder combinations which could provide options for reducing production costs. These options include:

- *improving paper quality and reducing cost, or*
- *maintaining quality at even greater cost reductions.*

The study focused on optical performance and glossability. The cost impacts were expressed as potential savings per paper ton produced - based on cost estimates of coating colour raw materials.

The starting point of the study was to run two trial points on a metered size press with two different calcium carbonate pigments blended with clay. One of the calcium carbonate pigments was chosen for further evaluations based on the sheet gloss performance.

The lower specific drying energy demand of a coating layer consisting of narrow PSD calcium carbonates has been demonstrated, as has the effect of starch on paper properties and costs.

The goal of this study was to provide the paper manufacturer with a range of pigment and binder combinations that could provide options for reducing production costs. These options include either improving paper quality and reducing cost, or having equal quality at even further reduced cost compared to the current standard.

As the price of coating raw materials varies from one geographical area to another, a formulation that might provide an attractive quality and cost combination in one region does not necessarily do that in another. For example the relative price of clay and calcium carbonates varies worldwide.

Therefore the focus in this study is on performance, although the cost impact should be clearly evident. For example, in a formulation where the total binder amount is reduced, cost would be reduced regardless of production location. The cost effects from the choice of pigment can be just as significant. Estimates of the impact on cost will be expressed as potential savings (a range) per paper ton produced, and based on coating colour raw material cost estimates.

In order to reach high optical performance and glossability^(1,2) the starting point in this study was to run two trial points on a metered size press (MSP) with two different narrow particle size distribution (PSD) calcium carbonate pigments in a blend together with clay. One of the calcium carbonate pigments was chosen for further evaluations based on the sheet gloss performance, which was deemed to provide broader freedom for blending pigments and binder concept.

From a cost point of view, the lower specific drying energy demand of a coating layer consisting of narrow PSD calcium carbonates vs. those with broader distribution has been demonstrated⁽³⁾. Bayer and Kalb⁽⁴⁾, as well as Glittenberg *et al*⁽⁵⁾, have discussed in general terms the quality and cost impact of different coating colour raw materials.

The use of starch and its effect on paper properties, and also on cost, has been examined and discussed with a broad 'holistic

approach' like Brouwer *et al*⁽⁵⁾. Or in more focused studies like Glittenberg *et al*⁽⁶⁾ and Papier *et al*⁽⁷⁾, who have covered the impact on paper quality of starch in precoats in greater detail. Summarizing their findings, it could be said that the use of starch in the pre- or mid-coats can be beneficial from a cost point of view, and that paper quality considerations do not limit its use.

The improvement of properties like paper stiffness with starch use have been mentioned in several articles, such as those already mentioned above. Building on those findings, what would the impact of starch together with high performance pigments mean from quality point of view in single coated grades like light weight coated (LWC) paper, or in the top-coat of double coated woodfree grades?

The focus of this study was purely on coating colour pigment and binder performance. An MSP approach was used for the LWC part of the study. However, it was decided that one of the pigment blends with a few binder concepts on a blade coater would be run as additional references.

The starting point for the coated woodfree (CWF) part was slightly different. In this case the chosen coating colours were prepared at the maximum solids content that the raw materials allowed. This would advance the feasibility of total binder reduction in the coating colour and follow the thought process from earlier precoat studies with starch⁽⁶⁾. The idea of significantly reducing the total specific surface area (SSA) of the used pigments was also evaluated.

The technical evaluation will be limited to unprinted paper quality within this report. These results will be reviewed together with estimates of what the raw material cost impact could be for each tested concept. The papers will be printed and the results presented in the near future.

Experimental

The pilot trial was conducted at Centre International de Couchage in Trois-Rivierés, Canada.

To View this article you must be a
member/subscriber of PITA

Call +44 161 764 5858

Or

info@pita.co.uk

To receive your reference number or
application form.

Novel Kaolin Pigment for High Solids Ink Jet Coating

An aggregated high surface area kaolin pigment for matte grade ink jet coating has been developed. This pigment can be easily dispersed either cationically or anionically at high solids (~60%) with good viscosity.

The high pigment solids permit high coating solids with different levels of silica pigment in the coating. The novel pigment and its blends with silica have much lower binder demand than 100% silica gel. The lower binder demand (higher pigment volume concentration) preserves much of the coating porosity of the blend coatings and allows rapid drying of ink jet inks.

An intermediate to high quality coated ink jet paper can be produced using the new kaolin based pigment depending upon the level of silica gel in the formulation. The new kaolin pigment offers both economic and operational benefits through lower pigment and drying costs, higher coating solids, better coat weight control, compatibility with both anionic and cationic dispersants, ease of handling, and lower degree of ozone fading compared to 100% silica coatings.

Ink jet is a non-impact digital printing method. In recent years, there has been a massive increase in the use of ink jet printers for both home and office. The low cost of the printers along with colour printing are primary factors contributing to this accelerated growth - digital photography is one of the most important driving forces behind colour printing in homes.

Because of lightweight and compact heads, the ink jet method also has potential for integration in-line with other printing methods. It is expected that ink jet will continue to develop into an increasingly versatile colour printing method in future⁽¹⁾.

Ink jet printing requires special paper for achieving high quality images due to the nature of the inks used and the design of the print head. Most of these inks are anionic and consist of over 90% water and water soluble solvent⁽²⁾. Inks are jetted from a series of very small orifices, each approximately 10-70 μ m in diameter, to specified positions on a media to create an image.

Multipurpose plain paper is unsuitable for good quality ink jet printing since it causes numerous quality issues such as feathering, wicking, colour bleeding, low colour density, strike-through, cockle/curl, etc. Consequently, ink jet papers are commonly coated with special ink receptive layers formulated to provide good print quality and adequate ink drying/absorption.

Paper for ink jet printing can be classified into several categories:

- (a) standard bond-uncoated,
- (b) surface sized plain paper,
- (c) silica coated matte paper, and
- (d) coated photo quality (glossy and matte) paper.

Print quality improves and the cost per sheet increases rapidly as we move from (a) to (d). There is a large gap in paper grade between (b) and (c). With the new pigment mills can produce a grade that would have a quality level improved over the multipurpose grade and approaching that of the silica

coated grade yet can be manufactured at much lower cost⁽³⁾.

Amorphous silica such as silica gel is the most commonly used pigment for the matte grade ink jet coating applications. The high surface area, porous silica pigment provides high porosity coatings for quick absorption of ink solvent and rapid ink drying time.

However, silica gel is expensive and can only be made down at very low solids. For example, most silica gels can be made down at only 15-18% solids which will invariably result in low coating solids. Recently, high surface area and fine particle pigments such as alumina, aluminum hydroxides, fumed silica, and colloidal silica are also being used, especially for glossy paper applications.

Most of the conventional inorganic pigments such as kaolin clays and carbonates have a relatively low surface area and yield low porosity coatings. These coatings are unsatisfactory because they absorb ink very slowly and cause ink spattering and smearing.

In this paper we report on a new pigment, which is radically modified from a fine particle kaolin clay. This new pigment has an ability to replace a significant amount of silica (50 to 75%) in coating formulations while offering several improved benefits such as higher coating solids, coat weight control, lower ozone fading, ease of handling, and most importantly lower pigment and drying cost.

Experimental: pigment characteristics and dispersion

Characteristics: Pigment samples were characterized for particle size, surface area, and particle morphology. Particle size was measured using sedimentation (Sedigraph 5100, Micromeritics) and laser diffraction (Horiba LA-910) methods. Surface area was measured using nitrogen adsorption (Tri-Star surface area analyzer, Micromeritics). The particle morphology was studied using scanning electron microscopy (Amray 1820).

Novel kaolin dispersion: The novel kaolin based ink jet pigment was dispersed at

To View this article you must be a
member/subscriber of PITA

Call +44 161 764 5858

Or

info@pita.co.uk

To receive your reference number or
application form.

The authors describe a new method of producing cast coated paper and board which has been shown to be capable of production speeds in excess of 100m/min.

Although the pilot plant used to substantiate the principle was limited to this maximum speed, all the calculations that were carried out predict maximum production speeds well in excess of this figure, particularly for the coating of paper grades. They also predict that some machine modifications would give rise to even greater speeds, in contrast to the situation appropriate to current machine designs.

Finally, the pilot plant was used to confirm the prediction that double coating could be carried out on such a machine by installing a second coater ahead of the main coating station in order to produce speciality grades such as metallic surfaced papers and boards.

Of all the paper and board coating processes developed so far, cast coating occupies a unique position.

Because it is formed in contact with a highly polished, mirror like metal surface it possesses a smoothness that is unlikely to be matched by any other method.

Similarly, the gloss resulting from such a method of production is second to none.

These are highly desirable features of a coated sheet so that the question - why is the process not much more widely used - inevitably arises.

There is little doubt that the major reason by far is that the process is severely speed limited. Although there is a certain amount of secrecy surrounding commercial operations, figures in the region of 60 metres/minute are often mentioned.

The objective of modifying the process in some way, such as to allow a significant increase in operating speed, is therefore one of great attraction.

It was this kind of thinking that led to a preliminary project being initiated within the R and D department of Thames Board in the early eighties.

Early Considerations

It was reasoned that the most likely cause of speed limitation in the process was the premature separation of the coated sheet from the casting surface. Such a separation would most likely be caused by the vapour pressure at the casting interface. In a cast coating process as described, all the vapour arising from the drying of the coating must pass through the sheet to escape and to do this the vapour pressure at the casting interface must rise in step with the operating speed since it is this pressure that drives the vapour through the sheet.

It is reasonable to suggest that this tendency could be opposed by simply squeezing the casting surface and the sheet together by the use of a vapour permeable band. However the use of pressure alone in this way introduces a complicating factor.

Raising the pressure at the coating surface necessarily raises the boiling point of the water and hence the temperature at that point because, in order to achieve the rate of drying required, the temperature must be very close to boiling point.

The danger in this situation is that as the coated sheet leaves the pressure zone and the pressure reverts to atmospheric, any remaining water in the sheet and coating film will be superheated and will tend to be evaporated explosively.

Since the rate of vapour passage through the sheet is determined by the pressure difference between the two sides of the sheet rather than simply the pressure at the coating surface, it was next suggested that the application of a partial vacuum might be employed to supply part of the required forcing together of the two surfaces and at the same time avoiding the potential problem of superheating.

Possible Methods of Applying a Partial Vacuum

Perhaps the most obvious method is illustrated in *figure 1* (next page).

However on further consideration it seemed that this arrangement could present severe engineering design problems. The edges of the vacuum box must, of course, be made to a very precise fit to the surface of the permeable band but perhaps the major problem would be the very high frictional force between box and band.

Since the vacuum level can be an appreciable fraction of an atmosphere, the net force between the two components would be very great indeed bearing in mind the fact that it would be transmitted via a comparatively small area of contact. The fact that this force would be encountered by the coated sheet at the start of its passage through the vacuum area (i.e. underneath the first box edge) when the coating is at its maximum fluidity is a worrying consideration.

These and other factors led to further thinking on the subject of the design of a suitable machine.

To View this article you must be a
member/subscriber of PITA

Call +44 161 764 5858

Or

info@pita.co.uk

To receive your reference number or
application form.

Juntai Liu

Ciba Specialty Chemicals
(China)

Papermaking Technology Evolution: Its impact on wet-end retention

China is a technological leader in the paper industry, with big, fast machines and the latest gap forming technology. In addition, there is a move to ever lower grammages. The author describes how Chinese papermakers are addressing the problems which these developments create for wet end retention.

Pulping: Developments at the pulping stage, at creating downstream retention problems on newsprint, LWC and P&W lines. i) The alkaline de-inking systems of the large newsprint lines are producing residual interfering substance which reduce the efficiency of retention aids. ii) The alkaline peroxide mechanical pulp process is creating a similar problem on the LWC lines of Hunan Yueyang Paper and Shandong Chenming Paper.

Papermaking: For example, first pass retention can be impaired by the gap formers which are widely used for newsprint and finer grades. The retention problem is compounded by the shear forces on high speed lines, whereby fragile flocs are degraded and wet end retention reduced.

In addition, the FWAs used to achieve high whiteness raise the anionicity of the furnish and this affects the performance of the retention aids.

Solutions: Multi-component retention systems are being used to 'decouple' retention, drainage and for-

Retention is critical for good papermaking. Retention programmes are widely used on modern paper machines to enhance the retention of fines and fillers and to improve dewatering of papermaking furnishes.

Retention aids perform on coagulation and flocculation mechanisms. They introduce interactions between fibres and fines, which are a fundamental base of papermaking. As a result, the retention chemicals represent an important influence on the paper machine operation after their addition. At the same time, the performance of a retention system is most sensitive to the variation of wet-end chemistry, compared to other wet-end additives.

China has seen a rapid growth of its paper industry over the past 10 years. A substantial amount of the state-of-the-art papermaking machinery and technology has been imported and adopted, making China the technological leader in the paper industry:

- The world first three ultramodern Metso OptiConcept paper machines started up at Fujian Nanping Paper, Yanbian Shixian Bailu Paper and Qiqihar Paper.
- PM10 of Shandong Huatai Paper was the first One-Platform Concept production line in Asia, supplied by Voith Paper.
- In July 2002, a new world speed record in the production of woodfree fine paper was set up by PM1 at Goldeast Paper, Zhenjiang, Jiangsu and another new world speed record for tissue was set up by PM2 at Gold Hong Ye Paper, Suzhou, Jiangsu in January 2004.

These vigorous technology advances help to boost the industry growth and facilitate the productivity and competitiveness of Chinese paper producers. However, the papermaking technology evolution has a significant impact on the wet-end retention.

This paper presents a brief description of major technology developments experienced in China. Their impact on the wet-end retention is discussed in the field of pulp, paper grades, chemical additives and machinery.

Deinked pulp and mechanical pulps

The tendency has gradually been to use deinked pulp (DIP) in newsprint production - wherein traditionally, heavily contaminated pulp was used. At the same time, mechanical pulp is used in fine paper which was previously produced exclusively with bleached chemical pulp.

Deinked pulp for newsprint: Newsprint was made mainly from mechanical pulps (SGW, PGW, and TMP) in the past. The furnish is now shifting over to deinked pulp. Many recent newsprint machines use 100% DIP. All the large newsprint mills in China installed deinking lines which are listed in *Table 1 (next page)*.

Mechanical pulp retains most of the wood materials due to its high yield. In contrast to this, the deinking process removes a certain amount of dissolved and colloidal wood materials through flotation and washing. For this reason, DIP is favourable for good retention.

However, the most widely used deinking technology is still alkaline deinking. Chemicals including caustic soda, hydrogen peroxide, chelating agents, sodium silicate, surfactant and calcium chloride are applied at the various stages of the deinking process. Residuals of the deinking chemicals in DIP are interfering substances. As *Figure 1 (next page)* shows, the efficiency of the retention aid is significantly reduced in the presence of sodium silicate residuals.

APMP: Andritz introduced a new pulping technology in 1989, which is called as "alkaline peroxide mechanical pulp (APMP)". Several Chinese paper manufacturers such as Hunan Yueyang Paper and Shandong Chenming Paper imported this technology from Andritz for their newsprint and wood-containing LWC paper machines.

The production of APMP also uses NaOH, H₂O₂, EDTA, MgSO₄ and Na₂SiO₃ to treat wood chips and refine them to pulp. Like deinked pulp, residual chemicals affect the performance of the retention aid. The effect is significant when the chemicals are overdosed or if the pulp washing is inadequate.

To View this article you must be a
member/subscriber of PITA

Call +44 161 764 5858

Or

info@pita.co.uk

To receive your reference number or
application form.

**Matthew Taylor and
Graham Toft**

*Iggesund Paperboard
(Workington)*

**Hong Wang and
Martin Brown**

*The University of
Manchester*

A novel approach to online pH control on Workington BM1

This paper describes a novel approach to online predictive control methods for pH optimisation in multiply paperboard. pH process control is of great importance in papermaking since it can not only improve the quality of the paper, but also the efficiency of paper production.

It is well known that the multivariable and dynamic nature of the wet-end makes control complicated, since the general physical and chemistry based modelling techniques are difficult to apply due to the strong interactions between each variable. Many chemical measurements, analysers and controllers are available for the control of the wet end, but they are more or less based on the SISO (single input/single output) control method. This cannot provide a successful optimal performance of paper manufacturing.

The University of Manchester and Iggesund Paperboard (Workington) have been working in partnership to develop a cost effective method for pH control. The model has been running online successfully within +/-0.3 of a pH unit since September 2004 on BM1 at Iggesund Paperboard (Workington). The intention is to extend the philosophy to each of the 3 furnish types on BM1 and BM2 within the next year.

Introduction: In general, on the 3 plies of the machine, liner, middles and backs, the pH is an important parameter both as regards its absolute value and the range in which it is controlled.

Importance of online pH control: General features which pH has an effect on are:-

1. sizing
2. retention and dewatering
3. deposit tendency
4. microbiological activity
5. refining energy and strength development

The above outlines why it is necessary to have pH running at a stable level. The pH should run between 6.4-7.0 on all 3 plies. However, even though the mill has online pH meters on each of the plies and even though the coating and chemicals technicians attempt to control pH, the situation is far from ideal. Measurements are taken manually a few times per shift and there is not a great deal of faith placed in the readings from the online meters. Adjustments are made by increasing the addition level of alkali, if the pH falls outside certain limits. [Scott, 1996]

There are several things that affect pH reading. Temperature will affect the chemistry and equilibrium and therefore the pH of a sample. In a paper mill water system there is not a great change in pH as temperature changes, at most about 0.2 pH for a 25°C change, typically with the pH reading being higher at the higher temperature. [Virta, 2002]

The model of pH helps the operators, because by having an accurate real-time model of the pH behaviour, they can trust the online meters, or at least have a fair idea of when they are reading erroneously. It also helps to devise an effective control strategy if we can have 2 independent estimates of the pH.

Comparison of Neural Network and Statistical modelling

A novel neural network method has been developed for pH prediction for online process monitoring and control. The method

is based on statistical nonlinear models. To verify the accuracy of the ANN model, the model was compared with a standard MLR (Multi Linear Regression) model. This enabled a comparison to be drawn between a linear and non-linear model.

A feed forward ANN that uses a few key variables: alum, calcium carbonate, broke was used. The ANN calculates the next pH value. The key advantages are:-

- 1: The online display has a built in alarm that warns the operators that the pH or input variables have changed more than 10% and the system may be unstable.
- 2: Because the pH plus input variables are being constantly monitored they can be optimised, thus having a cost saving benefit for the mill.
- 3: Because the pH is predicted, it can be compared to the value from the online meters. This provides an implicit check on the calibration.

The models have been developed in a mathematical modelling package in which simulations have been carried out before deploying them in the mill. National Instruments LabVIEW has been used to deploy the models and provide the GUI (Graphical User Interface) for the operators.

2.0 pH modelling

The first stage of the project was to find the primary contributing chemicals that drive the pH. These are chosen by experience and looking at the effects of the different chemicals using multi linear regression (MLR). The software used for this analysis is the SAS JMP statistical software and MATLAB.

Exploratory data analysis: The data was initially collected via winAPI, a macro design in MS Excel. winAPI enables the user to download data directly from Iggesund winMOPS programme into an Excel spreadsheet.

Because winAPI is a historical database where data can be stored for up to five years, there is a large amount of time based filtering

To View this article you must be a
member/subscriber of PITA

Call +44 161 764 5858

Or

info@pita.co.uk

To receive your reference number or
application form.

Industry Update

Stora Enso

Hannu Kasurinen, 42, has been appointed Senior VP, Speciality Papers, as of 1 October 2005. He succeeds John F Bergin, who will retire on 1 January 2006. Mr Kasurinen, joined the Company in 1993.

Jouni Seppälä, 42, currently Senior VP Finance & IT at Stora Enso Timber, will take on responsibility for the Profit 2007 profit improvement programme. He has been with the Company since 1989.

John F Bergin will act as Senior Adviser, Speciality Papers, until his retirement. Both Hannu Kasurinen and John F Bergin will report to Kai Korhonen, Senior Executive VP Stora Enso Packaging Boards.

Iggesund to raise European FBB prices

Iggesund Paperboard plans to raise the European price of its folding boxboard (FBB) by €85 a tonne, as of 17 October. The hike is needed to compensate for a significant rise in costs and to provide reasonable profit margins, says Iggesund.

The prospects seem good since there is a "tremendous" order backlog in the FBB sector.

There are no plans to increase the price of solid bleached board prices for the time being.

Norske Skog to become the sole owner of PanAsia

Norske Skog is to become the sole owner of PanAsia, Asia's biggest newsprint producer, by acquiring the 50% stakeholding of Abitibi-Consolidated for \$ 875 million, ie \$1008 per tonne of capacity.

The deal, which is expected to go through before year end, will make Norske Skog the world's largest newsprint producer. Some 30% of the Norwegian company's newsprint capacity will be located in Asia. When magazine grades are taken into account, 25% of Norske Skog's total capacity will be in Asia.

PanAsia produces 1.8 million tpy of newsprint in five mills: two wholly owned mills in Korea and another two mills in China and one in Thailand in which it has majority shareholdings. The Asian market is growing rapidly. Already, it consumes more newsprint than either Europe or North America, and growth is expected to remain substantial in the coming years, especially in China.

"Sole ownership of PanAsia will give us full access to the largest and fastest-growing market for newsprint in the world," says Jan Oksum, chief executive of Norske Skog. "We have gradually increased our holding in PanAsia over the last seven years, and we will be taking over a modern and competitive company."

Some 70% of PanAsia's 1.8 million tonnes of newsprint capacity is produced on machines which have been built since 1990. The Hebei mill in China started up at the end of the second quarter, ahead of schedule and approximately 10% below budget. PanAsia now has a production capacity of some 470,000 tonnes of newsprint in China.

The deal is subject to official clearances and to the assent of North Skog's shareholders who will vote on a \$615 million rights

Abitibi to reduce debt and sharpen NA focus

Abitibi-Consolidated will reduce its debt by C\$1 billion and its newsprint capacity by 705,000 tonnes with the divestment of its 50% stake in PanAsia Paper.

When added to the 350,000 tonnes of capacity closure announced in Q2, Abitibi's total newsprint capacity will fall to 4 million tpy. Although no longer the World No 1 in

issue at an extraordinary general meeting on 22 September.

The issue, which will be used to finance the acquisition, will be fully underwritten by Deutsche Bank and Nordea. The purchase price includes:

- \$600 million for Abitibi's shares
- the consolidation of PanAsia's net interest-bearing debt, which totalled \$275 million at 30 June.
- An adjusted purchase price - up to \$30 million - if PanAsia's EBITDA for 2006 exceeds \$175 million. The excess will be split between Norske Skog and Abitibi.

After the take-over, PanAsia will change its name to Norske Skog PanAsia. Dag Tørsvold, currently head of PanAsia in Korea, will become executive vice president for Norske Skog's Asian operations.

A new PM for Follum Mill?

Norske Skog is studying the feasibility of developing its Follum mill into a highly competitive unit - on a par with the other two Norwegian mills at Skogn and Saugbrugs.

The project could involve the installation of a new PM at Follum and the closure of less competitive machines in European mills. The study will focus on profitability, general business conditions, and market and capacity aspects.

Meanwhile, the project for a new PM at Pisa Mill in Brazil has been put on hold until 2006 at the earliest. The postponement follows a feasibility study which concluded that while a new PM at Pisa would be a positive project, there are issues surrounding the general operating conditions which need to be resolved.

newsprint, Abitibi will 'remain a market leader in North America' says John Weaver, President and CEO. 'That provides several advantages and economies of scale. Going forward, our much strengthened balance sheet will give us the flexibility to ensure our core businesses remain best-in-class.'

In 1999, Abitibi-Consolidated invested

Korsnas appoints CEO

Peter Sandberg has been appointed the new CEO of Korsnäs by the Board of Kinnevik and Korsnäs. He will take office on 1 December, 2005, until which point, Vigo Carlund, the CEO and President of Kinnevik, will remain acting CEO of Korsnäs.

Peter Sandberg has been an Executive VP in M-real, responsible for the Office Paper Division which has a total turnover of €800 million, four production units and 2,350 employees. He has worked in various positions within Modo Paper and M-real since 1994.

Sappi group head of Technology

Rudolf Thummer of Sappi Fine Paper Europe, has been appointed Group Head Technology of Sappi in Johannesburg, with effect from 1 January 2006. He will assume responsibility for the Technology, Risk Management and Sustainable Development.

Mr Thummer joined Sappi in 1979 as Head of Manufacturing of Hannover Papier. Since 1998, he has been in charge of Manufacturing and R&D at Sappi Fine Paper Europe based in Brussels.

Mat Quaadvlieg, Mill Director of Sappi Nijmegen in The Netherlands has been appointed Director Manufacturing SFPE as of 1 January 2006. He will be based in Brussels.

He joined Sappi Nijmegen in 1975, has held various management functions -- Maintenance Manager and Operations Manager -- at the mill prior to his promotion as Mill Director in 2001.

\$200 million in the three-way partnership which formed PanAsia. When Hansol of South Korea withdrew in 2001, Abitibi invested another \$175 million.

The sale price represents 'a total enterprise value of \$1.85 billion for PanAsia' when the following elements are taken into account:

- A cash payment of \$600 million plus up to \$30 million depending on EBITA in 2006
- Debt consolidation of \$300 million
- the presence of minority partners in three of PanAsian's mills.

A sharpened focus on North America

Strategically, Abitibi will sharpen its focus on the North American asset base. "We will focus on our core geography and rebalance our portfolio of assets to generate maximum cash flows."

In June, Abitibi reported a 2Q loss of \$43 million - down from \$79 million for 2Q 2004. The total operating profit was \$69 million (\$51 million) with each of its three business segments making positive contributions. The major difference year-over-year was improved paper pricing, which was, however, offset by a stronger Canadian dol-

lar, higher manufacturing and distribution costs.

"The strategic review begun at the end of last year is now complete," said John Weaver, President and CEO. "Concrete actions are being taken as we cannot let our timetable be extended or our plans side-tracked."

These actions include:

- The closure of the Stephenville Mill in Newfoundland in October 2005 with a loss of 194,000 tonnes of newsprint output.
- The closure of a 60,000 tonne machine at Grand Falls, Newfoundland.
- The closure of a 90,000 tpy machine at Kenora Mill, Ontario in October 2005 and the idling of the mill's 150,000 tpy newsprint machine. Abitibi hopes to restructure the mill around one PM.
- The sale of the 150,000 tonnes Fort William Mill along with 500,000 acres of timberland in northwest Ontario by year end.
- The relaunch of Lufkin Mill in Texas, possibly as a coated groundwood producer. Talks are ongoing with potential paper and energy partners.

Mercer announces two new executive positions

Mercer International has appointed two Vice Presidents. Werner Stueber, the Co-MD of Rosenthal Mill becomes the new VP for Technical Support and Pulp Operations. He is responsible for continuous improvement in all the Mercer mills.

Mr Stueber has over 30 years of direct industry experience including the brown field modernization and optimization

projects at Rosenthal.

Wolfram Ridder, Co-MD of Stendal Mill becomes VP of Business Development. With the Stendal project complete, Mr Ridder will focus on the development of opportunities, government relations, subsidies, carbon credits and derivative matters. It also includes EPC contract finalisation with respect to Stendal.

Kemira management changes

Lauri Junnila has been appointed President, of the Kemira Pulp and Paper Chemicals business area as of 1 October 2005. He will report to CEO Lasse Kurkilahti and will also be an Executive VP and a member of Kemira's management board.

Mr Junnila joins Kemira from Metsä-Botnia where he was Senior VP Strategy & Finance. He has also worked for M-real and has extensive international experience in the pulp and paper industry.

Juhani Lindholm, the former President, of Pulp and Paper Chemicals, has moved to Kemira Group Management where he is a Senior VP on the M&A team, reporting to deputy CEO, Esa Tirkkonen. The team is responsible for the preparation and execution of mergers and acquisitions.

Jukka Hakkila has been appointed Group General Counsel and a member of the man-

agement board. He will act as secretary to the Board of Directors and to the Supervisory and Management boards. He has moved from Elcoteq where he was Senior Vice President.

Sami Koski, will continue his work with Group legal affairs as deputy to the Group General Counsel and as VP of Kemira Group Legal Affairs.

Lennart Albertsson has been appointed deputy president of Kemwater which he will run until the successor to Lennart Johansson has been appointed. Mr Johansson is moving to the Trelleborg Group on 1 November 2005.

Ingvar Pettersson, succeeds Lennart Johansson as MD of Kemira Kemi. He was manager of the Helsingborg site and has held executive jobs with Kemira in Sweden and the Netherlands.

Finnish Federation president

The Executive Board of the Finnish Forest Industries Federation is proposing the appointment of Anne Brunila (48) as the next President of the Federation as of 1 January 2006.

The current president, Timo Poranen (62), is to retire at the end of 2005.

Ms Brunila is Director General at the Economics Department of the Ministry of Finance in Finland. She was previously Adviser to the Board at the Bank of Finland and has senior economist positions in the Ministry of Finance in Finland, the Bank of Finland and the European Commission.

UPM appointments in Europe and NA

Heikki Malinen, (43) M.Sc has been appointed Executive Vice President, Strategy and member of UPM's Executive Team as of 1 January 2006. He succeeds Heikki Sara who will retire on 31 January.

Mr Malinen is currently President of UPM's North America operation.

He has also been responsible for Jaakko Poyry's North American practice and, before that, was a manager in the Atlanta office of McKinsey & Company, a management consulting firm

Bernd Eikens (40) is the new President of UPM Kymmene North America, as of 1 October 2005. He is Managing Director of Nordland Papier in Germany and has two years experience in the US paper industry. Mr Eikens will report to Mr Jyrki Ovaska, President, Magazine Papers Division.

ArjoWiggins to close Corpach Mill in Scotland

ArjoWiggins is to close the 75,000 tpy Corpach mill near Fort William, at the end of the 90 - day consultation period which started in late June, according to the Deputy First Minister of the Scottish Executive, in a written response to a parliamentary question.

"ArjoWiggins has now made it clear that it intends to close the Corpach mill at the end of September", wrote the Minister, Nicol Stephen, in early September. "The workforce has been informed of this, but no redundancy notices have been served yet."

Corpach, which employs 126 people, produces woodfree carbonless base on one machine, an operation which has been undermined by declining demand for carbonless copier - a consequence of the spread of chip and pin technology.

The UK trade union Amicus drew up a rescue plan following a meeting on 22 June when ArjoWiggins presented information on the mill's financial performance. However no agreement was reached.

Corpach started up in 1964 and at one point employed 1000. In May 2003, around 60 jobs were axed but the mill remained one of the biggest employer's in the area.

ArjoWiggins launches restructuring programme

Over the last few years, there were various plans to diversify production at Corpach and make the mill independent of the car-

bonless market. But ArjoWiggins itself has been struggling in difficult markets and last year a new management team was installed to turn the company around, and restore it to "a satisfactory level of profitability".

They launched a radical cost cutting and restructuring programme, the full benefits of which will not be seen until 2006 and beyond. In the meantime, despite a 3.5% reduction in fixed costs, the restructuring exercise is having a negative impact on Group profits.

In the first half of this year, to 30 June, ArjoWiggins was the only operating subsidiary of Sequana Capital which did not improve its income base. The others - Antalis, Permal and SGS - achieved a 10.9% year on year growth in income and contributed €97 million to net profits.

In contrast, ArjoWiggins saw a decline in income which is attributed to

- a market place dominated by persistent over capacity
- rising raw material and energy costs - the latter rose by 19% - which could not be passed on to selling prices.

No significant upturn is expected in the paper market of the 2H and Sequana therefore expects that its consolidated net profit for 2005 could be negatively impacted by ArjoWiggins.

Chairman of ArjoWiggins to be appointed in October

Charles Dehelly will become Chairman of the Arjo Wiggins board in October, having been appointed vice-chairman in late August.

Gérard Bougniart, the current Chairman,

Primary Schools join the paper recycling project

Primary schools have joined the paper recycling project which was launched in Herefordshire's secondary schools by The Apsley Paper Trail - with the support of a £500,000 grant from WRAP, the government's Waste & Resources Action Programme.

Initially designed to collect 10,000 tpy of A4 waste copier from 550 secondary schools, the project now covers 400 primary schools as well. It "will help bring recycling to life for young people and show how they can make a difference to the environment", says project director John Watson.

The recovered paper is recycled into the Paper Magic brand at Frogmore Mill which is owned by The Apsley Paper Trail, a charitable trust located in Hemel Hempstead.

The paper can then be returned to schools as art paper and board or as part finished sta-

tionery goods for them to make up and sell on through their enterprise schemes.

Mr Dehelly joins ArjoWiggins from Equant, a telecoms company, where he was CEO. Before that, he was CEO of Thomson.

Paper Magic is supported by partners from education, local government and industry. These include:

- M-real, a buyer of recovered paper
- Sappi Graphics Nash Mills, a buyer of deinked pulp
- Robert Horne, a buyer and distributor of recycled paper;
- Pearce Recycling, as collector of waste paper
- Crowley Esmonde, a developer of stationery for national retailers;
- PPL Research who carry out paper market research
- Dacorum Borough Council, support on waste and recycling
- Waste Aware Hertfordshire Partnership, project promotion

Products & Services Directory

For a more extensive and fully searchable listing, visit www.pita.co.uk

COMPANY	LOCATION	CONTACT	TELEPHONE	E.MAIL
ABSORBENCY AIDS				
Blackburn Chemicals	Lancashire	Amanda Lamb	01254 52222	alamb@bbchem.co.uk
AIR SHAFTS EXPANDING				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
AUTOMATED HANDLING & WRAPPING REELS AND PALLETS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com
AUTOMATED SPRAYING AND CONTROL				
Spraying Systems Ltd	Farnham, Surrey	Rowland Bailey	01252 727200	info@spray-uk.co.uk
BARRIER COATINGS				
GBC (Speciality Chemicals)	Oxford	Adrian Iley	01608 813088	gbcspecs@enablis.co.uk
BIOCIDES				
Kolb Distribution	Lancashire	Malcolm Austin	07720 287460	malcolm.austin@kolb.ch
BLADE HOLDERS, COATING & CREPING				
BTG	North Harrow	John Grensinger	020 8515 6050	uksales@btg.com
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
BLADES, COATING, CREPING AND PRINTING				
BTG	North Harrow	John Grensinger	020 8515 6050	uksales@btg.com
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
BROKE ROLL HANDLING				
Core Link AB	Falkenberg, Sweden	Thomas Nilsson	+46 346 56824	t.nilsson@corelink.se
BROKE ROLL SPLITTERS				
Core Link AB	Falkenberg, Sweden	Thomas Nilsson	+46 346 56824	t.nilsson@corelink.se
CHARGE MONITORING CONTROL WET END				
BTG	North Harrow	John Munday	020 8515 6050	uksales@btg.com
CHUCKS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
COATING CONSULTANTS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
COATING EQUIPMENT & MATERIALS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
COATING SYSTEMS				
BTG	North Harrow	John Grensinger	020 8515 6050	uksales@btg.com
CONDITION MONITORING				
Monitran Ltd	Buckinghamshire	Suzanne Pearl	01494 816569	suzanne.pearl@monitran.co.uk
CONSULTANCY SERVICES				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
The PITA Register	Bury	John Clewley	0161 764 5858	info@pita.co.uk
CONTRACT RESEARCH				
BC Paper	North Wales	Dr. Richard Quinney	01248 370588	r.f.quinney@bangor.ac.uk
University of Manchester	Manchester	Bob Wilde	0161 306 3904	r.wilde@umist.ac.uk
CORE CUTTER & CORE HANDLING				
Core Link AB	Falkenberg, Sweden	Thomas Nilsson	+46 346 56824	t.nilsson@corelink.se
COUPLINGS				
John Crane UK Ltd	Manchester	Gary Webb	07711 650660	gary.webb@johncranemcr.co.uk
CRANES				
Konecranes	Lanarkshire	Gordon Adie	01355 220591	gordon.adie@konecranes.com
DEFOAMERS				
Blackburn Chemicals	Lancashire	Amanda Lamb	01254 52222	alamb@bbchem.co.uk
Kolb Distribution	Lancashire	Malcolm Austin	07720 287460	malcolm.austin@kolb.ch
DE-INKING CHEMICALS				
Kolb Distribution	Lancashire	Malcolm Austin	07720 287460	malcolm.austin@kolb.ch
Stephenson Recycling Chemicals	Bradford	Ramesh Patel	01274 723811	src@stephensongroup.co.uk
DOCTOR BLADES				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
DRYING CYLINDER SERVICES				
Bender Machine Services	Rosendale	Steven Withers	01706 225521	swithers@bendermachine.com
DRYING CYLINDERS				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
Sandusky Walmsley	Bolton	Mike Valentine	01204 396060	mavalentine@sanwal.co.uk

Products & Services Directory

For a more extensive and fully searchable listing, visit www.pita.co.uk

COMPANY	LOCATION	CONTACT	TELEPHONE	E.MAIL
DRYING CYLINDERS MAINTENANCE				
Intertechnics-Cumel-ReDoc	Oxford	Anthony Shepherd	01993 810080	info@intertechnics.co.uk
DRYING HOODS & VENTILATION				
Greenbank Engineering	Blackburn	David Wilkinson	01254 690555	info@greenbanktechnology.co.uk
DRYING ROLLERS				
Sandusky Walmsley	Bolton	Mike Valentine	01204 396060	mavalentine@sanwal.co.uk
DRYING SYSTEMS				
Greenbank Engineering	Blackburn	David Wilkinson	01254 690555	info@greenbanktechnology.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
DYESTUFFS				
Albion Colours	Halifax	David McCarthy	01422 358431	David.McCarthy@albionchemicals.co.uk
EFFLUENT TREATMENT				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
KWI (UK) Ltd	Flintshire	Phil Woollen	01352 700224	info.uk@kwi-intl.com
END OF LINE PACKAGING SYSTEMS				
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com
ENGINEERING, MAINTENANCE AND INSTALLATION				
Smithtech Engineering	Chorley	JD Smith	07775 732857	jd@trubody.freeseerve.co.uk
ENGINEERING SERVICES				
Bender Machine Services	Rosendale	Steven Withers	01706 225521	swithers@bendermachine.com
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
FIBRE RECOVERY EQUIPMENT				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
KWI (UK) Ltd	Flintshire	Phil Woollen	01352 700224	info.uk@kwi-intl.com
FILTRATION				
Premier Filtration	High Wycombe	Chris Smith	01628 527704	premier@filt.fsnet.co.uk
FILTRATION SYSTEMS WATER				
John Crane UK Ltd	Manchester	Gary Webb	07711 650660	gary.webb@johncranemcr.co.uk
FLAME RETARDANTS				
Mare Paper Chemicals Group	Luton	Mitch Cook	01582 811900	Mitch.Cook@maregroup.co.uk
INFRARED DRYERS				
Compact Engineering	Thirsk	Tim Klemz	01845 525356	apollo@compact.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
INSTALLATION & ALIGNMENT SERVICES				
Bender Forrest Ltd	Rosendale	Stefan Wilds	01706 225521	swilds@bendermachine.com
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
LUBRICATION MANAGEMENT				
ChevronTexaco Global Lubricants	Staffordshire	Mick Doxford	020 7719 2227	mickdoxford@chevrontexaco.com
LUBRICATION SYSTEMS (CENTRALISED). DESIGN & INSTALL				
Harrison Lubrication	Bolton	Phil Vause	01204 691352	sales@hle.co.uk
John Crane UK Ltd	Manchester	Gary Webb	07711 650660	gary.webb@johncranemcr.co.uk
MACHINERY AND SYSTEMS FROM FINLAND				
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com
MACHINERY SAFETY & INSPECTIONS				
Laidler Associates	Teesside	Derek Coulson	08700 111375	enquire@laidler.co.uk
MILLWIDE SYSTEMS				
Applied Software Control (A.S.C.)	Aberdeen	David Capel	01224 643792	d.capel@ascman.co.uk
PACKAGING MATERIALS, MACHINES AND SYSTEMS				
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com
PAPER, TISSUE & BOARD MACHINES				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
Sandusky Walmsley	Bolton	Tony Pope	01204 396060	tpope@sanwal.co.uk
Voith Paper	Manchester	Keith Millington	0161 655 2912	keith.millington@voith.com
PEARL LUSTRE PIGMENTS				
Merck Chemicals Ltd	Poole	Stephen Harpham	01202 785313	stephen.harpham@mercksc ltd.co.uk
PIGMENTS				
Clariant	Leeds	Louise Barker	0113 239 8265	louise.barker@clariant.com
Sun Chemical	Milton Keynes	Ian Knowles	0161 443 1174	ian.knowles@eu.sunchem.com

Products & Services Directory

For a more extensive and fully searchable listing, visit www.pita.co.uk

COMPANY	LOCATION	CONTACT	TELEPHONE	E.MAIL
PILOT PLANT FACILITIES				
BC Paper	North Wales	Dr. Richard Quinney	01248 370588	r.f.quinney@bangor.ac.uk
University of Manchester	Manchester	Bob Wilde	0161 306 3904	r.wilde@umist.ac.uk
PIPEWORK & VESSEL FABRICATIONS				
Bender Forrest Ltd	Rossendale	Stefan Wilds	01706 225521	swilds@bendermachine.com
PROCESS CONTROL				
BTG	North Harrow	John Munday	020 8515 6050	uksales@btg.com
PROJECT ENGINEERING/CONSULTANCY				
Bender Forrest Ltd	Rossendale	Stefan Wilds	01706 225521	swilds@bendermachine.com
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
PULP AND PAPER MILL DESIGNERS & ENGINEERS				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
QUALITY CONTROL INSTRUMENTS				
Tendring Pacific	Saffron Walden	Anton Hutson	0870 240 1886	anton@tendringpacific.com
QUALITY INFORMATION SYSTEMS				
QISoft Limited	Leyland	Tim Perris	01772 641133	info@qisoft.com
RAW WATER TREATMENT				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
KWI (UK) Ltd	Flintshire	Phil Woollen	01352 700224	info.uk@kwi-intl.com
REBUILDS, MAJOR				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
Sandusky Walmsley	Bolton	Tony Pope	01204 396060	tpope@sanwal.co.uk
Voith Paper	Manchester	Keith Millington	0161 655 2912	keith.millington@voith.com
REBUILDS, RECONDITIONED PLANT/PARTS				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
REEL & PALLET WRAPPING SYSTEMS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
REEL STANDS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
REFINING AND DEFLAKING				
JOCRO Technology	Bolton	Joe Crook	01204 840937	bryants-house@supanet.com
Pilao International Ltd	Darwen	Mel Hadfield	01254 873871	info@pilao.co.uk
REPLACEMENT PARTS				
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
Sandusky Walmsley	Bolton	Derek Lees	01204 396060	dlees@sanwal.co.uk
RF/AIR DRYING				
Greenbank Engineering	Blackburn	David Wilkinson	01254 690555	info@greenbanktechnology.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
ROLL GRINDING, REFURBISHMENT & SERVICING				
Bender Machine Services	Rossendale	Steven Withers	01706 225521	swithers@bendermachine.com
Sandusky Walmsley	Bolton	Tony Treloare	01204 396060	tatreloare@sanwal.co.uk
Voith Paper (Service Centre)	Manchester	Robert O'Shaughnessy	0161 655 2933	robert.o'shaughnessy@voith.com
ROLLERS				
Sandusky Walmsley	Bolton	Mike Valentine	01204 396060	mavalentine@sanwal.co.uk
ROTARY JOINTS AND SYPHONS				
Deublin Ltd	Hampshire	Denzil Ralph	01264 333355	dralph@deublin.co.uk
Kadant Johnson Systems International	West Yorkshire	David Moss	01943 607550	david.moss@kadantjohnson.co.uk
SEALS				
Advanced Sealing Solutions Ltd	Northampton	Paul Marchant	01604 830183	paul82@netlineuk.net
John Crane UK Ltd	Manchester	Gary Webb	07711 650660	gary.webb@johncranemcr.co.uk
SHOWER SYSTEMS/SPRAY NOZZLES				
Spraying Systems Ltd	Farnham, Surrey	Rowland Bailey	01252 727200	info@spray-uk.co.uk
SITE SERVICES				
Bender Forrest Ltd	Rossendale	Stefan Wilds	01706 225521	swilds@bendermachine.com
Clearwater Poole	Bury	John Poole	0161 797 3437	jpoole@clearwaterpoole.co.uk
SIZING				
Mare Paper Chemicals Group	Luton	Mitch Cook	01582 811900	mitch.cook@maregroup.co.uk
SLITTING & CUTTING EQUIPMENT				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk

Products & Services Directory

For a more extensive and fully searchable listing, visit www.pita.co.uk

COMPANY	LOCATION	CONTACT	TELEPHONE	E.MAIL
SLUDGE DEWATERING				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
SLUDGE PROCESSING AND UTILISATION				
EnviroSystems (UK) Ltd	Preston	Liz Russell	01772 860085	liz@envirosystems.co.uk
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
STEAM AND CONDENSATE SYSTEMS				
Deublin Ltd	Hampshire	Denzil Ralph	01264 333355	dralph@deublin.co.uk
Kadant Johnson Systems International	West Yorkshire	David Moss	01943 607550	david.moss@kadantjohnson.co.uk
STICKIES CONTROL				
Kolb Distribution	Lancashire	Malcolm Austin	07720 287460	malcolm.austin@kolb.ch
STOCK CHEST CLEANING				
Spraying Systems Ltd	Farnham, Surrey	Rowland Bailey	01252 727200	info@spray-uk.co.uk
STOCK PREPARATION				
Sandusky Walmsley	Bolton	Alan Morley	01204 396060	amorley@sanwal.co.uk
Voith Paper Fibre Systems	Manchester	Darryl Holt	0161 655 2907	darryl.holt@voith.com
John Wilkie - Hett GmbH	Perthshire	John Wilkie	01764 685267	WilkieMaryfield@aol.com
STRETCH FILMS AND WRAPPING MACHINES				
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com
STROBOSCOPES				
Euroto Ltd	Bolton	Tony Aspinall	01204 665050	sales@euroto.co.uk
SYPHON SYSTEMS				
Deublin Ltd	Hampshire	Denzil Ralph	01264 333355	dralph@deublin.co.uk
TESTING AND ANALYTICAL SERVICES				
BC Paper	North Wales	Rebecca Snell	01248 370588	r.snell@bangor.ac.uk
University of Manchester	Manchester	Bob Wilde	0161 306 3904	r.wilde@umist.ac.uk
THERMAL SPRAY/METAL SPRAY COATING SERVICES				
Bender Machine Services	Rossendale	Steven Withers	01706 225521	swithers@bendermachine.com
TRAINING				
Bury College	Bury	Jean McLaughlin	0161 797 4325	jeannie.mclaughlin@burycollege.ac.uk
Paper Classroom	Bolton	Steve Mann	07780 614148	steve@paperclassroom.com
PITA Trainers	Bury	John Clewley	0161 764 5858	info@pita.co.uk
University of Manchester	Manchester	Bob Wilde	0161 306 3904	r.wilde@umist.ac.uk
USED RECONDITIONED MACHINERY				
John Wilkie Papermill Services Ltd	Perthshire	John Wilkie	01764 685267	WilkieMaryfield@aol.com
VACUUM PUMPS & SYSTEMS				
Flowtech Pumps	Manchester	Ian Pendleton	0161 794 8038	ipendleton@pumpgroup.co.uk
Gardner Denver Nash UK Ltd	Winsford	Alan Birchall	01606 542421	alan.birchall@gb.gardnerdenver.com
VALUATION SERVICES				
John Wilkie Papermill Services Ltd	Perthshire	John Wilkie	01764 685267	WilkieMaryfield@aol.com
VALVES				
Lohse GmbH	Croydon	Kevin Bracken	020 8667 3013	kevin.bracken@voith.com
VIBRATION EQUIPMENT				
Monitran Ltd	Buckinghamshire	Suzanne Pearl	01494 816569	suzanne.pearl@monitran.co.uk
WASTE TRIM REMOVAL SYSTEMS				
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
WATER CLARIFICATION				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
Jarshire Ltd	Slough	Bob Longbottom	01753 825122	sales@jarshire.co.uk
John Wilkie Papermill Services Ltd	Perthshire	John Wilkie	01764 685267	WilkieMaryfield@aol.com
KWI (UK) Ltd	Flintshire	Phil Woollen	01352 700224	info.uk@kwi-intl.com
WATER RECOVERY				
Huber Technology	Chippenham	Nick Hunt	01249 765000	nh@huber.co.uk
KWI (UK) Ltd	Flintshire	Phil Woollen	01352 700224	info.uk@kwi-intl.com
WET/DRY STRENGTH RESINS				
Mare Paper Chemicals Group	Luton	Mitch Cook	01582 811900	mitch.cook@maregroup.co.uk
WIRE AND FELT CLEANERS				
Kolb Distribution	Lancashire	Malcolm Austin	07720 287460	malcolm.austin@kolb.ch
WRAPPING EQUIPMENT				
Machinery and Systems from Finland	West Yorkshire	Jukka Tamminen-Jackson	07766 462783	jtamminen@aol.com

Installations

Mill	Supplier	Equipment review
Botnias S.A. Uruguay	Jaakko Pöyry JP-Engineering JP-Kakko	A €15 million contract for the new 1 million tpy pulp mill which is scheduled to start-up in 3Q 2007. Includes: engineering services for project implementation, construction engineering, engineering of the interconnections between main mill departments and detail engineering for the main process equipment which is to be supplied by Andritz.
Daio Paper Mishima Mill Japan	Metso Paper	A ZeTrac high-consistency ozone bleaching system for the mill which produces 1,600 tpd of ECF bleached pulp from hardwood for integrated PMs. After the modernization, the bleaching sequence will be O-A-Ze-D-D, or alternatively O-A-Ze-P-D. The order also includes TwinRoll wash presses plus engineering and site services. The new technology enables a considerable reduction in effluent volumes and in fresh water consumption. Startup is slated for April 2006.
Drewsen Spezialpapiere Lachendorf Mill Germany	Metso Paper	The rebuild of PM 2 which has increased capacity from 180 tpd to 195 tpd. The machine produces speciality and fine papers. Includes the upgrade of the press section, tail threading and mechanical drives and the optimisation of the pre-dryer section.
Fujian Qingshan Paper Qingzhou Mill Fujian Province China	Shanghai Chenming Paper Machinery	A new 250,000 tpy PM which will produce recycled fluting and sack kraft paper. Start-up is scheduled for August next year. The 5.5 m wide machine will have a design speed of 900 mpm and an operating speed of 800 mpm. It will also use unbleached softwood kraft pulp from the mill's 150,000 tpy line. The mill houses a 150,000 tpy containerboard machine and a 100,000 tpy sack kraft machine.
	Vaahito, Finland	Stock preparation equipment for the recycled fluting and sack draft lines.
	Kadant Black Clawson, USA	An 800 tpd old corrugated container line which will be installed early next year. The system will process a mixture of AOCC, EOCC and LOCC to produce corrugating medium.
	Andritz, Austria	The upgrade of the pulp line to increase capacity by 50,000 tonnes to 200,000 tpy. A Chinese supplier will also be involved in the rebuild of the pulp line which is to be completed next January .
Hangzhou Yongli Paper Zhejiang China	Kadant Black Clawson	A complete 120 bd tpd treatment system for mixed office waste . Start-up in early 2006. The mill, which produces 200,000 tpy of coated whiteboard, aims to reduce the costs associated with virgin pulp.
Iguacu Celulose e Papel Campos Novos Mill Santa Catarina State Southern Brazil	Voith Paper	A new headbox and related kit for PM 2 which produces 65 tpd of standard and extensible sack kraft paper of 70-120 gsm. The project, which will take place in November, will increase output to 83 tpd. PM1 manufactures 40 tpd of sack kraft paper. Output is converted on site into multiwall sacks.
Klabir Brazil Correia Pinto Mill Brazil	Metso Automation	A suite of recovery line optimization controls including: DNAreco, which regulates the combustion of black liquor; DNAsoot, which optimises the transfer of heat from the flue gas. It monitors the fouling of boiler tube sections and schedules sootblowing without wasting steam; DNAeva, which controls solids in the gas-fired black liquor and contributes to energy savings.
Papierfabrik Schoellershammer Duren, North Rhine Westphalia Germany	Metso Paper	The rebuild of PM5, a 180,000 tpy testliner and fluting machine. Which produces grades of 90 to 170 g/m ² . Speed increased from 870 m/min to 1,000 m/min and the PM can increase the output of lighter grades while improving strength. The rebuild included a new compact press, a size press for pond sizing and a 1200 mpm reel. Also included: the upgrade of the dryer section and a new tail threading system.
Powerflute Savon Sellu Mill Finland	Metso Automation	A €500k delivery of the latest Kajaani Pulp Expert automated pulp laboratory. It allows fast and reliable pulp measurements from multiple sources in the plant , provides fast feedback of analysis of pulp quality and refining results. Previously the mill had to wait for lab results and only a few tests were managed each day. Now up to 5,000 accurate test results can be produced daily. The mill produces 250,000 tpy of of semi-chemical fluting from birch fibre.
Procter & Gamble North American Mill USA	PMPoland S.A. PMP Group	A contract for the modification to the wire and press section for a North American mill. The project is scheduled for next Spring. This contract is a significant step forward in the PMPs strategy for worldwide expansion

Mill	Supplier	Equipment review
San Jose dos Pinhais Mill Parana State Southern Brazil	Voith Paper	A new headbox for installation on the 16,000 tpy PM 2 which produces 16-40 g/m ² kraft and specialty papers, such as base paper for carbonless. The new headbox will enable a 25% increase in output. Installation in February 2006. Both mills are supplied with unbleached eucalyptus and pine pulp by Iguacu's 300 tpd mill at Pirai do Sul, in Parana state.
Sirpur Paper Mills Sirpur-Kaghaznagar Andhra Pradesh State India	Andritz Oy, Finland	A €10 million order for the major equipment, pumps, agitators, and field instruments for a new fiberline. Also includes basic engineering and site services. Start-up is scheduled for 4Q 2006. The new line will replace a hardwood fiberline and increase pulping capacity from 220 to 355 adt/d. The pulp mill is integrated with 7 PMs which produce P&W and packaging grades. The delivery includes systems for brownstock washing, two-stage oxygen delignification, deknottng/screening and a 3-stage ECF bleach plant.
Sofidel Arneburg Mill Saxony-Anhalt Germany	Recard, Italy	A 5.4 m wide slitter/rewinder for the 60,000 tpy machine which is due to start-up at the end of 2006. The €100 million mill will be operated by Sofidel's subsidiary, Delipapier. It will process 100% virgin pulp, some of which will be supplied by the nearby Stendal pulp mill. Output will be converted on-site into toilet paper, handkerchiefs, napkins and kitchen rolls.
Sofidel Intertissue Mill Baglan Energy Park Port Talbot, UK	Metso Paper	A new 5.4 m wide PM with a capacity of 60,000 tpy. It is scheduled to start-up next year. There is enough space on site for another machine. The Welsh Assembly is contributing £8 million toward the £70 million project.
	Recard	A 5.4 m wide slitter/rewinder for the new tissue line. Installation early next year.
	Fabio Perini	Three converting lines for the new tissue mill which will house five converting lines. They will produce some 600 million rolls of kitchen towels, toilet paper, handkerchiefs and serviettes.
Sofidel Intertissue Brunuel Mill Spain	Recard, Italy	A slitter/rewinder with a width of 2.85 m for the €85 million greenfield mill which is being constructed in north east Spain. The converting line is scheduled to start up in May 2006 ahead of the new PM - it will process parent rolls from other Sofidel mills. The facility will be run by Sofidel's subsidiary Ibertissue.
Stora Enso Port Hawkesbury Mill Nova Scotia USA	Stowe Woodward Xerium Technologies	A Mount Hope Flybow bowed roll which will be a first in North America. The body of the Flybow has a one-piece, epoxy fibre composite construction which reduces rotating weight and improves performance and energy efficiency. It is rubber covered for a specific position. The single spool and true arc design eliminates the tangents created by standard spool designs. The flyblow supports extended PM run times and is expected to replace standard bowed rolls in Stora Enso NA's web/sheet applications. It will also be evaluated for use in new applications.
Tonic Emballage Bou-Ismaïl Mill Algeria	Metso Paper	A new 25,000 tpy tissue machine which is due to start-up at year end. The 2.7 m wide PM will produce recycled tissue. Metso is also rebuilding a 300 tpd containerboard PM which will enable the mill to produce 400 tpd of recycled fluting, testliner and white-top testliner in the 105-180 g/m ² range. The project is likely to take off after the start-up of the TM.
	Fabio Perini, Italy	Converting lines which will produce facial tissues, napkins, toilet paper, towels.
UPM-Kymmene Kaipola Mill Finland	Metso Paper	The rebuild of the 7.6m PM 4 a 7.6m wide machine which produces catalogue grades at 1450.mpm. The aim is to improve quality and efficiency. Includes the upgrade of the headbox and wire section, as well as changes to the press section. Recommissioning in May 2006. The SymFlo headbox will be equipped with dilution profile control which will help to improve quality. The SymFormer wire section will be rebuilt using hybrid former technology which will improve quality and increase speed PM 4 came on stream in 1961, the last rebuild took place in 1996.

Coming Events

The European Paper Recycling Conference

Europe's leading paper companies will be represented at the first annual European Paper Recycling Conference which will take place in Brussels from 3 - 5 October 2005. They include:

Herbert Noichl
Mayr-Meinhof Karton,
Austria,
Wade Schuetzeberg
ACN Europe, Netherlands,
Maarten Kleiweg
European Recovered Paper
Association, Belgium,
R.S. Baxi
J & H Sales (International),
UK,
David Barrio Alvarez
ASPAPPEL, Spain
Andreas Otto
Melosch Export

The conference is designed to bring the paper making and recovery industries together to address the many pressing issues affecting recovered paper and recycling.

With substantial new manufacturing capacity coming on-line in Europe as well as a continued growth in global RP demand, the paper recycling industry is going through a period of rapid change.

The conference website is www.PaperRecyclingEurope.com

Pira to hold Wet End Chemistry conference in Boston

The 6th International Wet End Chemistry conference will be held at The Radisson Hotel, Boston, Massachusetts, from 19 to 20 October 2005

Technological leaps in surface modification, retention, pitch and sticky control, plus advances in nano chemistry are allowing papermakers to radically improve performance. These developments will be covered by a line-up of global scientists, technology developers and academics.

New methods of wet end optimisation will be explored along with techniques which are designed to simplify the process and reduce costs. The highlights of the programme include:

- The impact of wet end chemistry on paper properties
- Improving process and measurement control of charge and pitch
- Retention systems
- Closed loop water systems: cost benefit analysis and side effect limitation

Case studies from progressive mills

There will be several presentations from progressive paper companies including:

Portucel: Technical Director, José Ataíde, will present a paper on new product development using colour management analytical techniques. He will cover: the management of dyes and the dosage of optical brightening agents (OBA); End use applications and paper requirement trends; Data based modelling and multivariate simulation.

Domtar Canada: The latest developments in the wet end process will be covered by Richard Gratton of Domtar and Dr. Przem Pruszynski of Nalco, US. They will discuss: The rising efficiency and quality expectations which increase the complexity of chemical applications; Water system closure: dealing with increased concentrations; Chemical incompatibilities, such as Precipitation, Colloidal interactions, Reduction-oxidation reactions, Optical properties and Surface activity.

Weyerhaeuser, US: Andy Campbell, Senior Scientist, will discuss: The effects of

fillers on wet end chemistry, He will cover: The interaction of PCC with wet end chemistry and the impact of increasing filler levels on performance.

Domtar, Canada: Technical Director Richard Gratton, will join Dr. Louise Raymond of General Chemical in a presentation on: The effective use of alum in alkaline fine papermaking. They will cover: Alum: friend or foe?; Simplifying the hydrolysis curve!; Water and waste treatment.

Presentations from the chemical supply industry

The bulk of the programme will be provided by the chemical suppliers who will cover the following topics:

- Hard sized board using wet end polyethylene terephthalate chemistry by John Kokoszka, Evco Research, US
- Novel cationic strength resin delivers high levels of strength and retention / drainage by Robert Yule, Hercules, US
- Novel dual-microparticle retention system allowing for separate control of retention, drainage and formation by Benoit Doiron, Nafta, Ciba Specialty Chemicals, US
- Dual polymer retention systems by Dr. Bernd Hauschel of Lanxess, Germany
- Nanoparticles on colloidal retention by Duncan Carr, Eka Chemicals PPNA, US
- New organic opacification additives by Dr. Scott Rosencrance, Kemira, US
- Exploring the critical elements of modern day deposit control philosophy Gerald M. Dykstra, Pulp and Paper Technology

The latest R& D findings

Reports on the latest findings from the academic world will be presented by speakers from North America and Europe. They include:

PTS Munich, a joint presentation with BTG Mutek on *A new laboratory method for measuring retention*. The speakers are Juer-gen Belle, Roland Berger and Wolfgang Falkenberg.

Empire State Paper Research Institute, US, a joint presentation with Minerals Tech-

Research conference on coating and printing

A Technical Research Conference on coating and printing will be held at the School of Engineering, Swansea University on 7 and 8 November 2005.

It is organised by The Welsh Centre for Printing and Coating, a research centre dedicated to printing and coating. Its aims to advance the understanding of the printing and coating processes and apply its findings to its global industrial partners.

The conference features new research in printing and coating technology and will include sessions dedicated to the main industrial processes as well as fundamental scientific investigations.

There will, for example, be presentations on:

- Plate to substrate ink transfer and
- The effect of substrate and blanket roughness on ink transfer
- Future Flexography research

Each presentation will be a technical paper based on latest results and analysis derived from controlled laboratory experiments, industry based trials and numerical models.

All attendees will receive printed copies of all the PowerPoint slides, extended abstracts of each of the papers and a CD containing both in PDF format.

For registration information please contact c.a.hammett@swan.ac.uk or visit www.swan.ac.uk/printing/conference/index.htm

Monitoring air quality

MCERTS 2005, a two day conference on Air Quality, will be held the Bretby Conference Centre near Burton-on-Trent on the 12 and 13 October. The main theme of the presentations will be the new standard BS EN 14181 which applies to automated air quality monitoring systems. www.mcerts.uk.com

nologies on the *Permeability of pulps and fillers and their relationship to wet pressing*.

The authors are Prof. Bandaru Ramarow, Sergei Lavrykov, and Dr. Bruce Evans, North Carolina State University, US.

Dr. Orlando J. Rojas, will speak on: *Fitting polymers to the demands of the wet end: a subtle balance of interactions*.

University Of British Columbia, Canada, Professor Peter Englezos will present a paper on *Filler content and filler topography in paper: how can the papermaker manipulate the sheet structure?*

University Of Maine, US Technology, US Professor Hemant P. Pendse will speak on: *Improving papermaking stability through wet*

end process control.

Georgia Institute Of Technology, US a joint presentation with Imerys, US on: *Modified fillers for enhanced paper performance*. The speakers are Dr. David E. White and Dr. Philip Jones.

PAPRICAN, Canada Dr. Larry Allen will give a presentation on *Performance of retention aids for deposit control in TMP newsprint manufacture*.

New sensors and control strategies to optimise wet end performance is the theme of Dr. Dave Lang of Metso Automation, Canada.

Contact Pira International at www.piranet.com

International Pulp, Paper & Tissue Forum 2006

The International Pulp, Paper and Tissue Forum will be held in St. Petersburg from 10 to 13 October 2006 by Adforum and RESTEC Exhibition Company.

IPPTF 2006 will feature an international exhibition which will be held in conjunction with the 8th International Forestry Forum. Alongside the exhibition there will be an international technical conference.

Rapid economic progress has made exhibitions one of the most dynamic businesses influencing Russia's economy today and RESTEC is one of the the leaders in the exhibition industry.

When it comes to pulp and paper, Russia's potential is significant. It has a population of around 146 million and a per capita P&B consumption of only 30 kg, compared to the EU average of over 200 kg.

Domestic demand is growing at twice the rate of Western Europe and there is clearly huge room for further growth. The

Russian tissue market is growing by some 7.8% with both toilet tissue and high-quality grades forecast to be in more demand in the future.

But perhaps the most important factor for the international pulp and paper industry is Russia's huge fibre base, ie the largest softwood reserves in the Northern Hemisphere, of which less than 20% is being harvested.

The cash costs of Russian BSKP and BHKP are second only to South America.

IPPTF 2006 and the 8th International Forestry Forum will be organised along with Russian authorities, federal and local.

Adforum is based in Stockholm, and is the organizer of SPCI in Stockholm, and PulPaper in Helsinki, Finland, Contact: www.IPPTF.com, www.adforum.se, www.restec.ru and email: jan.johansson@adforum.se, or trofimov@restec.ru

Paper In Contact With Foodstuffs: Dec 2005

An international three day conference on Food Contact will be held from 12 to 15 December at the Prague Hotel Diplomat, in the Czech Republic.

The programme on Paper will take place on the third day of the event, 15 December, following a one-day introductory course on Food Contact Legislation on the 12th and a two-day conference on Plastics and Polymers on the 13th and 14th.

Organised by Pira International, Food Contact 2005 is part of an ongoing series of conference which regularly attract close to 200 delegates.

Food Contact 2005 will provide an update on the legal, technical and marketing developments and will cover: the latest legislative changes, impending directives and industry initiatives as well as new testing and scientific developments. The programme will include presentations on:

- The Super-Regulation
- Differences between the EC and US and impact of the ascendancy of new EU member states
- Estimating exposure for plastics, coatings and papers
- Improvements in the areas of modeling, functional barriers and reduction factors
- What brand owners want from the rest of the supply chain

These topics will be discussed by industry experts, legislators, enforcers, scientists and technologists from Europe and the US.

Dr. Luigi Rossi, the principal administrator for the entire sector of food contact materials at the European Commission will be speaking again at both conferences. His lively presentation and question and answer sessions are a unique opportunity to pose your questions directly to the key legislator.

For more information, visit www.piranet.com



Calendar of PITA Events

Date	Event	Venue	Organiser
OCT 2005			
13	Bio Kat VIAGA for Bugs in Effluent Systems Nation Resource Protection Ltd	The Fernhurst Hotel, Bolton Rd Blackburn (opp. Ewood Park)	North West Discussion Group J.D. Smith, Tel/Fax: 01254 830986
18	Calendering on PM A4 Speakers from Voith and Tullis Russell	Tullis Russell Glenrothes	Scottish District Ewen Jardine, Tel: 01337 857682
27	The Potential for Ultrasonic Flow and Level Monitoring in the Paper Industry Ted Farnon of Micronics Ltd	The Red Hall Hotel and Restaurant, Bury	Northern District Sharon Hoole Tel: 01254 55101. Fax: 01254 672236
27	Energy	Aylesford Newsprint	Southern District Dennis Jewitt, 01732 883727
NOV 2005			
10	Suction Rolls – Modification, Updates and Overhauls Bender Machine Services Ltd	The Fernhurst Hotel, Bolton Rd Blackburn (opp. Ewood Park)	North West Discussion Group J.D. Smith, Tel/Fax: 01254 830986
12	Dinner Dance	Airport Thistle Hotel, Dyce (6.00 for 6.30 pm)	Scottish District Ewen Jardine, Tel: 01337 857682
22	Coating Methods to Minimise Print Mottle Janet Preston, Imerys and Thomas Steinmacher, BASF	Carrongrove Mill Denny	Scottish District Ewen Jardine, Tel: 01337 857682
24	Hydrodynamic Cavitation – Chemical Free Water Treatment Robert Kelsey & Dr Wiley Wang (VRTX Technologies)	The Red Hall Hotel and Restaurant, Bury	Northern District Sharon Hoole Tel: 01254 55101. Fax: 01254 672236
JAN 2006			
12	A presentation by Igggesund Paperboard (Workington)	The Red Hall Hotel and Restaurant, Bury	Northern District Sharon Hoole Tel: 01254 55101. Fax: 01254 672236
13	Local Speakers + Burns Supper	Dean Park Hotel, Kirkcaldy	Scottish District Ewen Jardine, Tel: 01337 857682
26	PITA – the future: Working Groups – What they can do for YOU	The Fernhurst Hotel, Bolton Rd Blackburn (opp. Ewood Park)	North West Discussion Group J.D. Smith, Tel/Fax: 01254 830986

Recruitment

To advertise in this section
ring
David Cole
Advertisement Manager
on **0161 764 5858**

ADVERTISERS

BENDER MACHINE SERVICES	27
BLACKBURN CHEMICALS	36
BUCKMAN LABORATORIES	Cover iv
EKA CHEMICALS	Cover ii
HERCULES	3
HUYCK (<i>bound-in insert</i>)	32/33
M-REAL	Cover iii
PURICO (<i>Recruitment</i>)	54
PRODUCTS & SERVICES DIRECTORY	46-49

index



Zhejiang Purico Minfeng Paper Co. Ltd.

Sales & Technical Sales Managers and Representatives

Following a major investment in a world leading technology inclined wire paper machine to make specialty papers, the Company is now seeking a number of sales and technical representatives to service its tea and coffee bag paper sales in international markets and to support this modern manufacturing operation in China, located close to Shanghai. Purico is the majority shareholder in this joint venture with a local specialty paper producer and has a long and successful history manufacturing specialty papers in China.

The company is now seeking candidates for a range of sales and technical managerial and representative roles that have been identified within this exciting new business opportunity to cover Europe, Asia and the USA. Candidates should ideally have experience with tea or coffee bag papers or other similar specialty paper products.

Employment terms are negotiable as appropriate to the various positions and individual experience. Physical location will depend upon the individual roles, but there is appropriate flexibility in this respect.

Interested candidates please apply by providing a comprehensive CV to:

Jeremy Bazley
General Manager

Zhejiang Purico Minfeng Paper Co. Ltd
E Mail: jb@minfengrobert.com
Fax: 00 86 2820700

Also look at our Purico China website: www.purico.cn



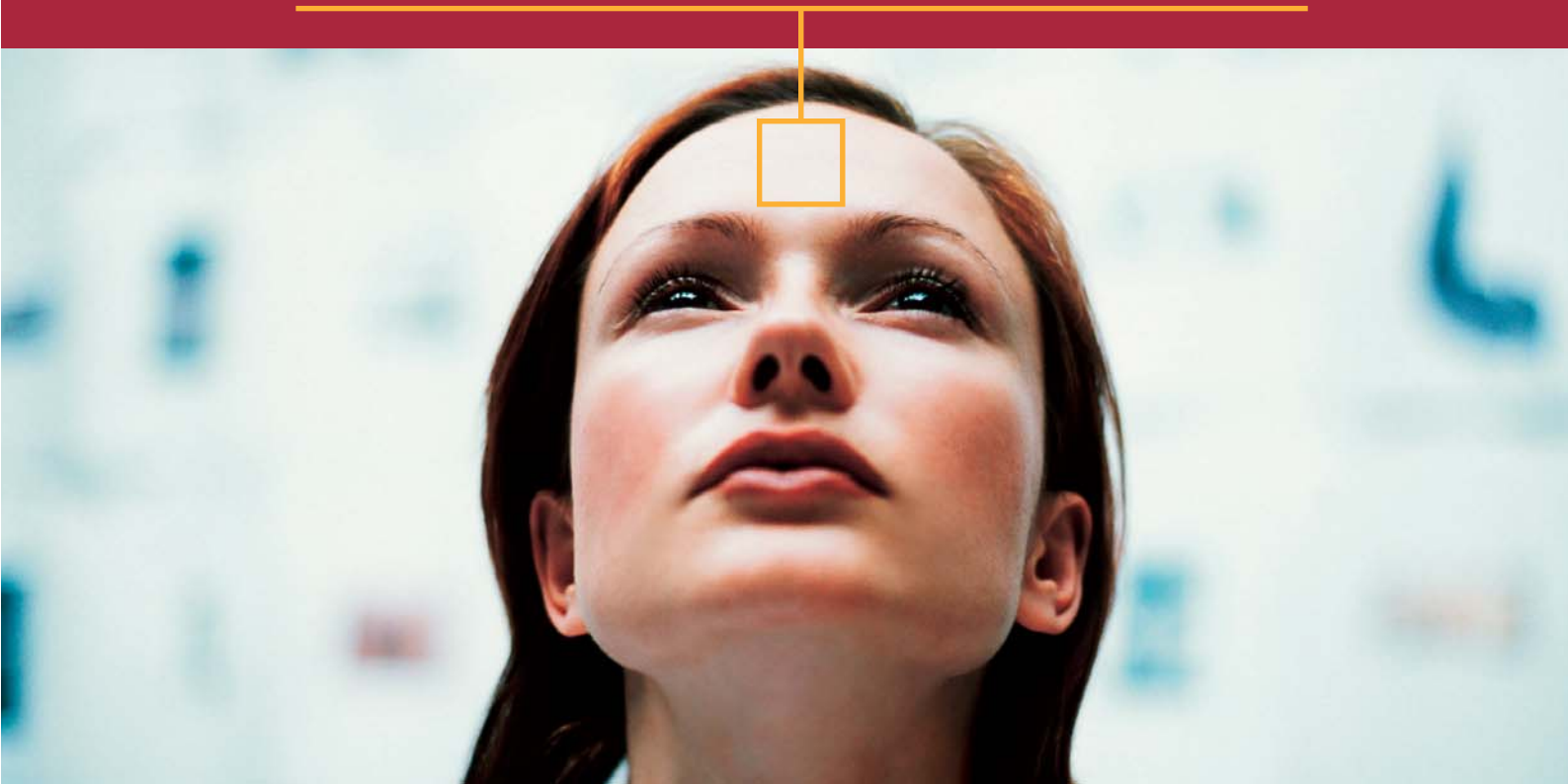
Calendar of World Events

Date	Event	Venue	Organiser
OCT 2005			
3-5	European Paper Recycling Conference	Brussels Hilton Belgium	The Recycling Today Media Group Jeff Fenner Tel: +1 216 961 4130 ext 215; email: jfenner@giemedia.com
12-14	MIAC 2005 (International Exhibition of Paper Industry)	Lucca Exhibition Centre Lucca, Italy	Edinova Tel: +39 02 215 8021; Fax: +39 02 215 8023 email: miac@miac.info; www.miac.info
13-14	Pulp and Paper Foundation Annual Meeting	Sheraton Imperial Hotel Raleigh, N.C., USA	Pulp and Paper Foundation Tel: +1 919 515 5661 email: mike_ellis@ncsu.edu; www.pff.ncsu.edu
16-18	RISI North American Forest Products Conference	Omni San Diego Hotel San Diego, California	RISI/Paperloop Tel: +1 781 734 8936 thompson@resourceinfo.com www.resourceinfo.com/events_risi.html
17-21	Mechanical Pulping	Toronto, Ont., Canada	PAPTAC, Canada: Tel: +1 514 392 6969 email: clato@paptac.ca; www.paptac.ca
17-20	ABTCP-PI 2005 International Pulp and Paper Congress & Exhibition	Transamérica Expo Center São Paulo, Brazil	ABTCP Tel: +55 11 3874 2720 email: fernanda@abtcp.org.br www.abtcp.org.br
20-21	Energy Management	Melbourne, Australia	APPI / Appita Tel: +61 3 9347 2377; Fax: +61 3 9348 1206 email: info@appita.com.au www.appita.com.au
23-26	Web Handling Applications Seminar	Wes Watkins Centre Stillwater, Oklahoma	Oklahoma State University Tel: +1 405 744 9217 rogerlm@okstate.edu www.engext.okstate.edu
24-25	BIR Convention	Marriott Milan, Italy	Bureau of International Recycling Tel: +32 2 627 5770 bir@bir.org www.bir.org
24-26	Energy Efficiency	Thunder Bay, Ont., Canada	PAPTAC Tel: +1 514 392 6969; Fax: +1 514 392 0369 email: clato@paptac.ca; www.paptac.ca
24-26	Pulp Technology Symposium	PTS, Dresden, Germany	PTS Germany Tel: +49 89 1214 623; Fax: +49 89 1214 636 email: pta@ptspaper.de; www.ptspaper.de
24-28	Management Development for Enhanced Performance	Georgia Tech Conference Centre Atlanta, Ga., USA	CPBIS and PIMA Tel: +1 404 894 1488; Fax: +1 404 385 2414 email: charley.burney@cpbis.gatech.edu www.cpbis.gatech.edu/mgtdev
26-27	Seminar Improving PM Efficiency & Productivity		PAPTAC Tel: +1 514 392 6969; email: ghay@paptac.ca; www.paptac.ca
NOV 2005			
1-3	Ink on Paper	Hilton London Olympia	Pira Tel: 01372 802046; email: sarahs@pira.co.uk; www.pira.co.uk
8-9	International SAP Paper Forum	Arabella Sheraton Grand Hotel Munich, Germany	SAP Deutschland Tel: +49 62 27/ 7-6 28 34; email: sabine.kulhanek@sap.com www.sap.com/mill
8-9	PTS Water and Environment Symposium	PTS Munich, Germany	PTS Munich Tel: +49 89 1214 623 pta@ptspaper.de www.ptspaper.de
9-11	Paperworld USA	Sands Convention Center, Las Vegas	Messe Frankfurt / Shopa Tel: +1 770 984 8016 email: info@usa.messefrankfurt.com; www.paperworld.messefrankfurt.com
10	PTS Energy Management Symposium	PTS Munich, Germany	PTS Munich Tel: +49 89 1214 623 pta@ptspaper.de www.ptspaper.de
15-17	Paperworld China	Shanghai New International Expo Centre Shanghai, China	Messe Frankfurt (HK) / China Chamber of Commerce Tel: +86 21 5292 9222; Fax: +86 21 5292 8777 email: Estelle.ni@china.messefrankfurt.com www.paperworld.messefrankfurt.com
17	The 5th Biennial Johan Gullichsen Colloquium – Raw materials and processes	Hilton Helsinki Kalastajatorppa Helsinki	Finnish Paper Engineers Association: Tel: +358 9 132 6688; Fax: +358 9 630 365; email: irmeli.hannula@papereng.fi www.papereng.fi

Date	Event	Venue	Organiser
21-22	PTS Tissue Symposium	PTS Munich, Germany	PTS Munich Tel: +49 89 1214 623 pta@ptspaper.de www.ptspaper.de
22-24	International Converting Exhibition	MOC Exhibition Centre Munich, Germany	Nimble Shows & Media Tel: +49 8033 91231; Fax: +49 8033 91288 email: info@ice-x.com www.ice-x.com
22-25	PAPEXPO 2005	CED Sokolniki Moscow Russia	MVK/Russian Association of O+E of Pulp and Paper Industry Tel: ++7416 925 3666 eshatrova@mvkexpo.com www.papexpo.ru/defaulteng.stm
28-29	Pulp & Paper in Russia & the CIS	Vienna Marriott, Austria	Adam Smith Conferences Tel: 020 7490 3774 email: Stephen@adamsmithconferences.com www.asi-conferences.com
DEC 2005			
	CEPI Annual Meeting & European Paper Week 2005	Brussels, Belgium	CEPI Brussels Tel: +32 2 627 4911 www.cepi.org
7-9	FSC General Assembly	Manaus, Brazil	Forest Stewardship Council Tel: +49 228 367 66 0 fsc@fsc.org www.fscus.org
JAN 2006			
17-21	Global Forests in Ethical Discourse	University of KwaZulu-Natal, Pietermaritzburg, South Africa	University of Joensuu/ University of KwaZulu-Natal Tel: (358) 13 251 3628; email: antti.erkkila@joensuu.fi www.forest.joensuu.fi/silva/
25-29	Paperworld Frankfurt	Messe Frankfurt Frankfurt, Germany	Messe Frankfurt Tel: +49 69 75 75 68 21 paperworld@messefrankfurt.com www.paperworld.messefrankfurt.com
FEB 2006			
6-9	Paper Week International PAPTAC Conference & EXFOR 2006	Palais des Congrès Montreal, Canada	PAPTAC Tel+1 514 392 0265; Fax: +1 514 392 0369 email: rwood@paptac.ca; www.paptac.ca
MARCH 2006			
5-8	Paper Arabia	Dubai International Exhibition Centre, United Arab Emirates	Al Fajer Information and Services: Tel: +971 4 337 77 www.alfajer.net/paperarabia
9-11	NZ Forest Industries International Exhibition	Rotorua Racecourse, New Zealand	FI Events Tel: +64 7 362 7865; Fax: +64 7 362 7875 email: bal@wave.co.nz www.forestevents.co.nz
13-15	PITA Papermaking Conference 2006	The Cedar Court Hotel, Bradford	PITA, John Clewley Tel: 0161 764 5858; Fax: 0161 764 5353
14-17	Tissue World Americas 2006	Miami Beach Convention Centre Florida, USA	CMP Asia www.tissueworld.com
APRIL 2006			
3-5	Appita Annual Conference	Carlton Crest Hotel, Melbourne, Australia	Appita: Tel: +61 3 9347 2377; email: admin@appita.com.au www.appita.com.au
9-12	International Conference on Pulp and Paper Mill Effluents	Vitória Convention Centre Espírito Santo, Brazil	ABTCP: Tel: +55 11 3874 2733 email: anapaula@abtcp.org.br; www.abtcp.org.br
9-12	Paper Week	Waldorf Astoria Hotel New York	AF&PA: Tel: +1 800 878 8878 email: info@afandpa.org; www.afandpa.org
25-27	TissueMEC 2006	Budapest, Hungary	email: Edinova: edinova@edinova.com www.tissuemec.com
MAY 2006			
7-10	International Pulp Week	Fairmont Hotel Vancouver, B.C., Canada	PPPC / Market Pulp Association Tel: +1 514: -861 8828 Fax: +1 514 866 4863 email: general@pppc.org; www.pppc.org Corrugated 2006
15-20	Corrugated 2006	Paris Nord Villepinte, France	Reed Exhibitions Tel: 020 8910 7817; Fax: 020 8910 7848 email: corrugatedteam@reedexpo.co.uk www.corrugatedexpo.co.uk
29-31	BIR Convention	China World Hotel Beijing, China	Bureau of International Recycling Tel: +32 2 627 5770; Fax: +32 2 627 5773 email: bir@bir.org; www.bir.org
10-13	International Pulp, Paper and Tissue Forum	St. Petersburg, Russia	Adforum, Sweden and RESTEC email: jan.johansson@adforum.se; or trofimov@restec.ru www.IPPTF.com

REALISE YOUR AMBITION

Guarantee your publication looks as amazing on paper
as it did in your head.



If you want to stand out from the crowd, you need a paper that does your aspirations justice. To meet your needs, the Galerie range of graphic papers have been specially developed to bring even the most challenging images and editorial to life. So no matter how high you're aiming, M-real's Galerie papers can help you achieve the impact your ambition demands.

Galerie Papers

www.m-real.com

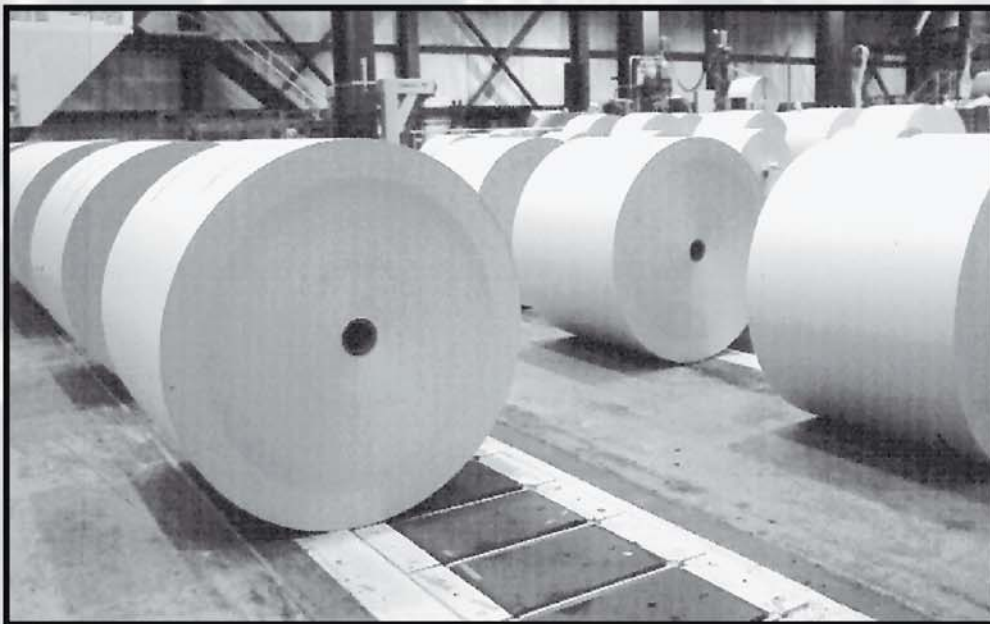
m·real

M-real UK Ltd: Tel. 01628 411611

ALL YOU NEED IS BUCKMAN.

Not only does Buckman Laboratories have quality products and programs, but we also offer a flexible problem-solving methodology to help you increase your bottom line. Our expert representatives are focused on solving your problems and getting you a better return on your investment. Choose Buckman for all of your pulp and paper program needs, including:

- Biocides and Preservatives
- Deposit Control
- Enzymes/Biodispersants
- All Dispersants
- Boilout/Felt Cleaning Chemicals
- Scale Corrosion Chemicals
- Polymers for Retention, Drainage, and Formation
- Sizing Chemicals
- Dry and Wet Strength
- Dye Fixatives
- Defoamers
- Pulp Mill Chemicals
- Pulping Aids
- Metals Management
- Pitch and Stickies Control
- Deinking Chemicals
- Repulping Aids
- Tissue Softeners/Debonders
- Yankee Adhesion and Release Agents
- Wetting Agents
- Coating Chemicals
- Antiskid Silica
- Boiler and Cooling Water Chemicals
- Effluent Treatment



ALL YOU NEED IS BUCKMAN.

Buckman
LABORATORIES



Buckman Laboratories will excel in providing measurable, cost-effective improvements in output and quality for our customers by delivering customer-specific services and products, and the creative application of knowledge. European Headquarters at Wondelgemkaai 159, 9000 Ghent, Belgium
Tel 0032 (0) 9 257 92 11 / Fax 0032 (0) 9 253 62 95 / email: belgium@buckman.com www.buckman.com

© 2001, Buckman Laboratories International, Inc.