



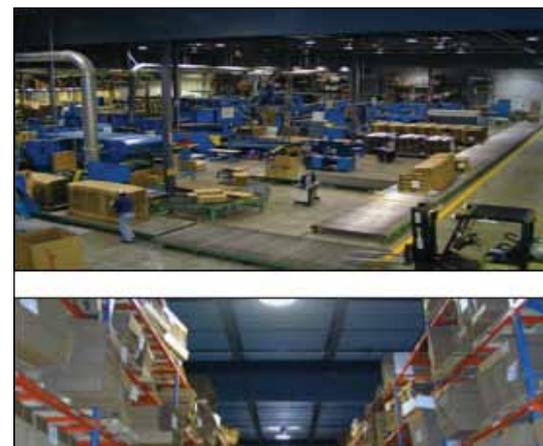
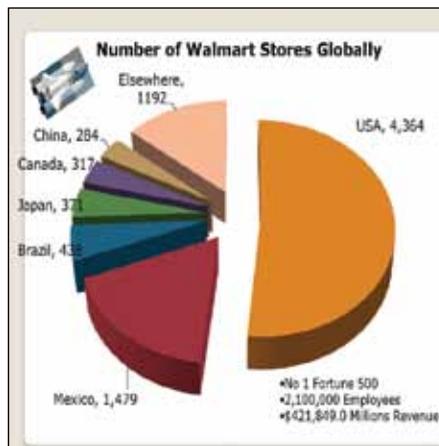
The Corrugator

OFFICIAL MAGAZINE OF FEDERATION OF CORRUGATED BOX MANUFACTURERS OF INDIA

Oct - Dec, 2011



40th Conference - Highlights



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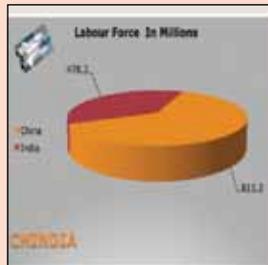
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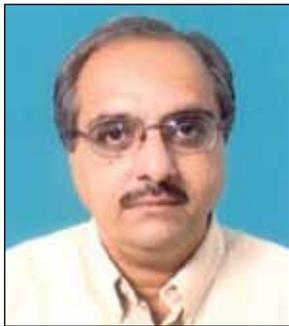
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From the EDITORS



R. Suresh



Ram Arora

The Year 2011 has become history and we have ushered in to the New Year 2012. The New Year certainly calls for some new thinking and fresh perspective for the coming days. As every one knows, New Year brings new hopes and fresh beginning in our lives. It is the time for making new resolutions. Making new resolutions are easy but it is quite difficult, for most of the people, to follow them strictly. Such resolutions are easily forgotten as soon as the celebrations are over. People should try to maintain their resolutions for the entire year and try to achieve what they resolved. We take this opportunity to wish each and every Corrugator in the country a very bright and prosperous New Year.

Now, the time has come to bid farewell as the Joint Editors of the "Corrugator". We are thankful to Shri M. R.Gopalchary, IPP, who gave us the opportunity to serve the corrugated industry through the Corrugator magazine. We are also thankful to all the Regional Associations and the Managing Committee members for their valuable support and co-operation in making our task easier and successful.

As you all know, 40th Annual conference of the Federation was held at New Delhi in a befitting manner. The Chairman of the Conference Committee and the NICMA deserves special appreciation.

We also take this occasion to congratulate Mr. Sunil Sethi on his election as the new President of the Federation. No doubt, under his dynamic and enthusiastic leadership, Federation would march ahead to newer heights implementing new ideas for the betterment of the corrugated industry in India. We wish the new President and his team all success.

It is a known fact that the health of the packaging industry is linked with the world economy as a whole. However, reliant upon various industries for their raw materials, packaging converters have to cope up with fluctuations in raw material prices and changing levels of supply and demand.

The growth of packaging demand is influenced by a wide range of factors, from year to year. While the economy plays a central role in influencing the size and growth of the market, there are a number of other factors which can be seen as having a direct or at least indirect influence on packaging demand irrespective of the performance of the economy.

These include increasing awareness of environmental issues, adoption of new regulatory requirements on packaging recycling, new packaging material development, increasing requirement for convenience among consumers and the trend towards smaller households etc. It is difficult to ignore lifestyle trends that are today impacting upon consumer purchasing decisions. For the packaging industry, these trends are positive and encouraging. Consumers are becoming increasingly demanding for convenience in food solutions which represent more traditional processed foods.

The expectations on food quality are rising and growing awareness of health and other issues present new challenges to retailers, packers and packaging suppliers alike. Social change is indirectly leading to modifications in packaging design. Better designs, better graphic printing and better raw materials are the need of the hour for the Packaging Industry for its development.

Thank you all, once again



Meet the President



Mr. Sunil Sethi

Mr. Sunil Sethi was born in Amritsar, did his schooling from Kanpur & Calcutta. and Graduated from Delhi University in B.Com (Hons) & became Member of The Institute of Chartered Accountants of India in 1982. Started career as a practising Chartered Accountant.

Started business of manufacturing Corrugated boxes in 1991 in Delhi. With his intrinsic business acumen Mr. Sethi is engaged in multifarious activities including expanded polystyrene, logistics etc.

As a member of NICMA since over 17 years he has been actively associated with NICMA and was President of NICMA for 3 years. As a Member of Managing Committee of FCBM for 12 years, Mr. Sethi has been contributing significantly to the activities and growth of FCBM. He was also the Co-Editor of 'The Corrugator' for many years.

Mr. Sunil Sethi is happily married with two sons.

Presidents Message

It is indeed an honour to be addressing the readers of The Corrugator as the President of FCBM.

Let me at the outset thank you all for bestowing your confidence and entrusting me the responsibility of leading the Federation. Its a matter of great pride and honour for me.

I assumed the office of the President of FCBM at the conclusion of the recently held 40th FCBM conference. I sincerely thank all the members of FCBM for their whole hearted support and look forward to their active participation in various activities of the Federation.

The Federation has worked wonderfully for four decades. Not a small achievement by any standards. I salute the founding fathers of the Federation for giving us a sound constitution. Our Past Presidents have nurtured and steered the Federation on the path of progress. It is now our responsibility to take the organization to greater heights.

Any organization or trade body depends on the vibrancy and active participation of its members, to make the organization strong and effective. Let us together infuse such effort that will keep us together like a united body and bring benefit to all of us and our industry as a whole.

TEAM NICMA had successfully hosted the 40th conference CORRUMET INDIA 2011 and also CORRU EXPO 2011 on International scale with over 1000 delegate participation setting very high standards in organization and hospitality.

The Corrugator is the mouthpiece of our industry and we need to disseminate pertinent information to all members with latest trends and technology. Learning and acquiring knowledge is a lifelong process and therefore it should be our endeavour to improve the content of the magazine constantly.

I whole heartedly thank the Editors Mr. R. Suresh and Mr. Ramchand Arora for their valuable contribution.

Regional Associations have played a very important role in the growth of the Federation. I urge them to be active and vibrant as in the past and provide valuable suggestions for improving the activities of the Federation.

We are at the end of an event full year and I hope the New Year will bring peace, goodwill, progress and prosperity to all of us.

Wishing you all a happy and a prosperous New Year

India Still Needs Packaging to Broadcast its 'Brand'

Since my first visit to India in 1988, I have revisited many times and always found it a pleasure. This great country which holds 17% of the world's population, with its long and proud heritage and historic links with the West stretching back more than two millennia is a nation full of colour, noise, scents and friendly optimism together with impressive serenity, spirituality and courtesy. One cannot fail to be excited by its energy and endeavour. Its global potential is enormous. But where are the people to fulfil the huge opportunities presented by modernising the paper and corrugated board industries?



Tony Pinnington
"Longview consultant"

Following my 2008 visit at the invitation of WICMA, I was moved to write the article 'Where is Brand India' which was published in 'The Corrugator' and outlined the need to expand fast the packaging sector in India. I was staggered at how basic and lacking in organisation, investment, development and standards the paper and corrugated industries were when sitting within such a vast nation with global industrial giants of the steel and automotive industries. It really is quite astonishing how small and fragmented the corrugated packaging sector is in India, especially given the nation's level of production of fruit, vegetables, milk, flowers and its rapid recent industrial developments in processed food, beverages and a wide variety of manufactured goods, serving the large and growing middle class.

I received a lot of positive feedback to that article from readers, much of it begging me to broadcast the message more widely in marketing, industrial and economic magazines, but that was for others to do.

The comparison tables were then as follows and are shown again here as there are no more recent official figures published for the industry in India:

In 2011, I have been given unconfirmed estimates from a supposedly reliable source that total production in India

Corrugated shipments 2007:		
	Million tonnes	Kg per capita
UK	2	31.8
Germany	2	55
Europe (total)	18.2	41.3
USA	30	68
China	24.7	18.7
India (2005)	2	1.8
(Source Indian FCMA)		

is 3.5 – 4 million tonnes, which with a population of 1.2 billion would equate to just 2.9 – 3.3kg per capita. The difficulty in obtaining official statistics itself demonstrates a lack of cohesiveness and strength in the industry.

Clearly there is tremendous scope for improvement in scale, quality and productivity in the corrugated board industry in the sub-continent. As ever here, the domestic market is so large that this will inevitably be the initial driver. But welcome as this luxury is, at some stage more attention will have to be paid to exports. 'Brand India' needs to be globally established on the basis of quality, reliability, design and service. The full range of packaging from transit to point-of-sale will simply have to reflect and promote these attributes if India is to utilise its enormous resources to grow its

prosperity and market share in the ever-increasing competitiveness of world trade outside its borders.

The national importance of the paperboard packaging industry was acknowledged by a government sponsored study, the report of which defined its broad needs as follows:

1. Sustained availability of good quality forest based raw materials and bulk import of waste paper to supplement them.
2. Adequate modernisation of manufacturing assets.
3. Improvements in infrastructure.
4. Quality improvements and reduction in cost of production.

Back in 1997, the paper and board industry was declared a priority sector for foreign collaboration; equity participation up to 100% should receive automatic approval following de-licensing of the industry. Of course, things here are never as simple or straight-forward as they sound and certainly nothing dramatic has happened in the fourteen years since. Some inward investment from the West would bring in a wealth of experience and expertise and raise the quality and productivity game. If this cannot be attracted, India has to fashion its own progress, though this will

be on a shaky basis and would take much longer. For sure this matter is far more urgent than that.

The main stepping stones to higher output are improved paper quality, increased width and running speed of the corrugators and wider, better use of flexo printing and rotary die-cutting. Wider corrugators need wider papers, so the paper industry needs to provide these and at the same time have an eye to more consistent caliper, moisture profile and then lighter weight grades. Greater use of wood fibre pulp would also help in quality, yield, energy consumption and corrugating roll life.

The standard of design and precision of manufacture of the corrugating and converting machinery needs to be stepped up at the same time as productivity. This is as important for the future as it is for the present because in due course, smaller flutes and lighter weight board will need to be introduced to meet world standards, reduce bulk and costs and allow well designed shelf-ready packaging to proliferate.

Such improvements could result in a reduced number of plants turning out more and better cases, so increased reliance will fall on the transport infrastructure for distribution of these products to the packer-fillers. Better roads would also facilitate the growth of large

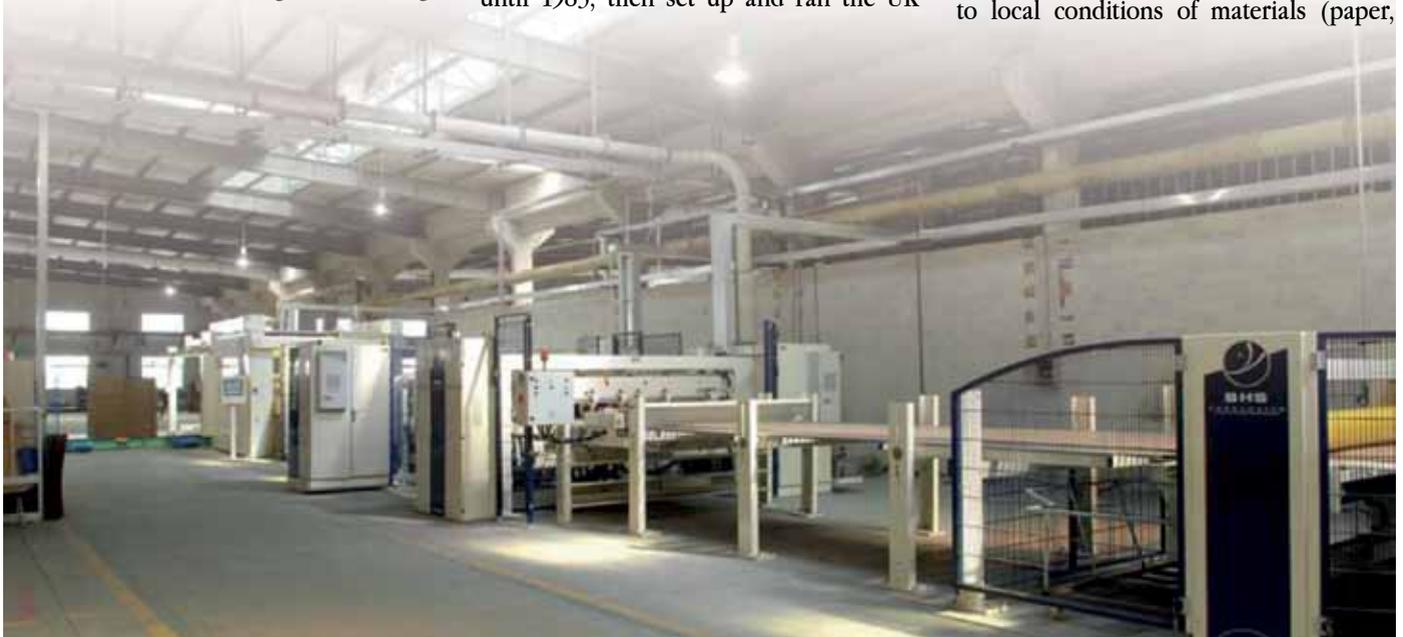
scale board manufacture feeding not only its own conversion but more dispersed converters or 'sheet plants' close to their own customers, thus continuing localised service and spread of employment as well as enhancing quality and reliability of box performance. Thus, you could see 'mega-plants' with wider, faster high output corrugators on the periphery of large cities servicing a number of localised converting plants.

The most visionary machine developments in recent years on the corrugator have emanated from Europe and to some extent Japan. Europe has been making and using recycled papers for decades. Its machinery companies have developed the machine technology and corrugating roll durability in the face of recycled paper but they face a price challenge with their disproportionate wage levels. To meet this challenge, at least one European corrugator manufacturer has for some years now been offering machine lines suitable for the Asian market, manufactured in Asia (China) and with good local service. These machines, though far less expensive than from Europe and still operable with lower cost labour, provide a very competitive return on investment and the means to reach for the levels of quality and output that is so far not being achieved here.

I joined the corrugated machinery business in 1969 and worked for Langston until 1983, then set up and ran the UK

arm of BHS Corrugated from the 1980s until 2003, which was shortly after first publication of my book 'The Corrugated Industry, In Pursuit of Excellence'. When I joined the industry in England, it had not changed much since the 1930s. Then in the seventies, splicers began to be installed on corrugators and realisation dawned of the further possibilities of continuous running, improved productivity and reduced waste. It was in the 1980s when the great leap forward in technology really began to take hold. Having lived through and seen the growing pains and what can now be achieved with giant machines up to 3.3m wide and running speeds of up to 400m/min producing microflute up to even four-ply board all of excellent quality, I know what can be done and it is there for anybody to see.

Perversely, we in the West have made life difficult for ourselves by now having it too easy, even though we – or perhaps our fathers - worked hard to achieve this. The social and moral aspects can be debated, but it is a fact we have high production costs relative to the growing, eager and very capable BRIC countries. But nobody should write us off. Our expertise and experience-based technology in many areas is superb, and that certainly includes box plant machinery. Furthermore, we are already addressing the cost issue by setting up manufacturing bases in Asia using modern European designs suited to local conditions of materials (paper,





starch) and labour and backed up by local manufacture of hardened and coated corrugating rolls and comprehensive service support and spares.

I shall illustrate this using the example of the company I know - BHS, a true world leader in our industry. They have a well-established factory in Shanghai making two corrugator lines designed at their German centre to fulfil ideally the conditions of the Asian market, The Steady Line and the Quality Line.

The Steady Line is made in 1800/2200mm working width and designed with the means to produce at steady speeds through order changes up to 180m/min. (splicers, bridge level control, continuous run features etc) It is a robust machine incorporating state-of-the-art technology and is designed 'green' to minimise electrical power and steam consumption, while handling well the present typical Indian domestic paper qualities. Its technology also includes many self-adjustment features which reduce the influence of the operators' skill. This line costs more than machines produced by local companies, but is wider and faster, stronger built and its lifetime running costs and productivity can easily justify the difference. The quality of board produced

is also an important consideration in all such buying decisions. These machines really can run at the claimed speeds and this line seems the ideal springboard for aspiring market leaders in India.

The Quality line is a step up in design, being made in 1800/2500mm widths, being still more robust to allow for the widest machine and to enable it to run at speeds up to 250m/min. This is also a line worth considering for those thinking longer term, but of course is a further step up in price.

Emphasis has been given to the corrugating rolls and the BHS factory in China makes hardened, coated rolls to provide optimum roll life expectancy using local papers which are quite abrasive. They have also developed flute profiles to help achieve higher running speeds with less paper breaks based on their experience with weak and lightweight papers worldwide. As a result, they have sold many roll retrofits into competitive machines in Asia as elsewhere. They give a unique local service for corrugating rolls with regular check-up and reporting of the state of the rolls.

I find it especially encouraging that BHS have recently retro-fitted a good number

of SPX splicers to existing corrugators in Indian factories. As I mentioned before, this development was the precursor of a surge in corrugator performance starting in the 1970s in Europe, so I glean from that some hope that history may be repeated and such a surge may come sooner rather than later in India. In my simple and distant view, that cannot come soon enough for the wider commercial and industrial interests of India. Huge opportunities beckon you in the export field once you can protect and promote your best products with well designed made and decorated packaging. Let the world wake up to Brand India.

Mr. Tony Pinnington of Longview consultants' is a Corrugated Industry consultant based in UK.

He is source of abundant information and he has been contributing since a long time to various industry magazines including the corrugator the success of this magazine's editorial matter.

e-mail: tony.pinnington@btopenworld.com.

Manufacture of Corrugated Boards / Boxes on Automatic Plant: Problems & Solutions

Continued from last issue



Surinder Singh Bhurjee,
Micro Mechanical Works, Mumbai, India

DELAMINATION

Reason Inferior quality of gum.	Solution Check the quality of gum used. Always remember that good quality gum will give better results.
Insufficient heat.	Check Heaters / Steam. Heat should be 130°-150°C on the surface of the Flute Roll and Pressure Roll.
Sometimes, when higher grammage paper is used, the heat may become insufficient.	In such a case, speed of the machine should be reduced or a higher capacity heater must be installed.
Low pressure of Pressure Roll.	Increase pressure of Pressure Roll.

DELAMINATION

DELAMINATION

GLUE UNIT ASSY. OF SINGLE FACER & SETTINGS

Reason Uneven application of gum due to distortion of Glue Applicator Roll and Doctor Roll.	Solution Regrind both Applicator and Doctor Rolls and set them right.
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DELAMINATION

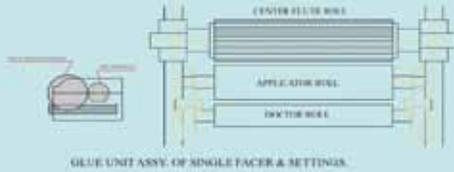
There are many reasons for delamination. First you need to check the type of delamination. Depending on the type of delamination, corrective steps should be taken.

DELAMINATION

GLUE UNIT ASSY. OF SINGLE FACER & SETTINGS

Reason Insufficient quantity of gum applied.	Solution Increase quantity of gum by adjusting the gap between Applicator Roll and Doctor Roll.
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DELAMINATION



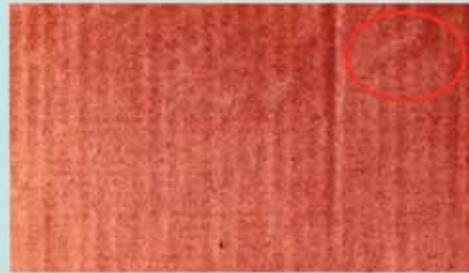
Reason

Application of gum not uniform from one end to the other. Glue Applicator Roll and Doctor Roll are not properly aligned.

Solution

Check the alignment of Glue Applicator Roll to the centre of Flute Roll. Also check alignment of Glue Applicator Roll to the Doctor Roll. The gap between the rollers should be even from end to another.

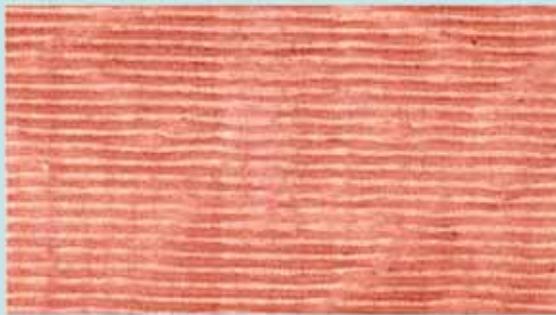
BLISTERS



Blister is another defect experienced in the production of corrugated sheets.

The pattern of the blisters should be checked.

CRUSHED FLUTES



BLISTERS

Reason

Blister portion is not gummed. Gum Applicator Roll is not even or Applicator Roll.

Blister portion is gummed. This means that the Pressure Roll is not even or there is distortion.

Solution

Regrind Glue Applicator Roll. there is distortion in the Glue or Applicator Roll.

Regrind the Pressure Roll.

CRUSHED FLUTES (Finger Type)



Reason

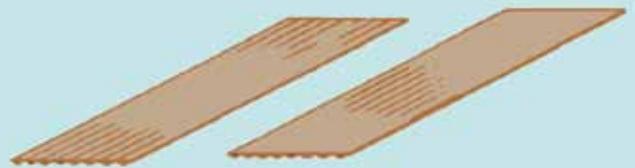
If the bottom portion of the adaptor is away from the Flute Roll, the fluted paper gets free from the Flute Roll prior to reaching nip between flute roll and pressure roll, and this portion of the flute gets crushed.

Solution

Reset the adaptor with uniform contact with the Flute Roll. In case after resetting also the problem persists, then it means the Adaptors are worn out and they require to be replaced.

UNEVEN PRESSURE

In the manufacturing of corrugated sheet pressure should be even from one end to another. Uneven pressure results in a bad sheet.



CRUSHED FLUTES (Fingerless Type)



Reason

The suction chamber is not proper, i.e., top portion of the suction chamber is away from the flute rolls as shown here.

Solution

Adjust the suction chamber so that it is in contact with the entire surface of the flute roll.

UNEVEN PRESSURE

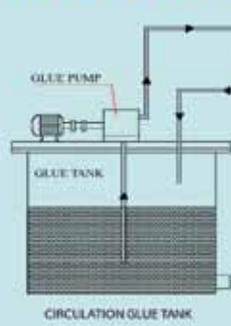
Reason

Pressure Roll is not even, i.e., down at ends or worn out at centre.

Solution

Regrind the Pressure Roll.

GELLING OF GUM



Gelling of gum in the tray occurs if old gum remains in the tray, then the bottom portion of the gum forms into a gell.

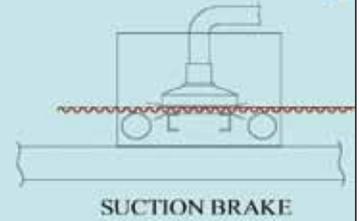
It is essential to install a circulation glue tank which will ensure continuous flow of fresh gum and eliminate the problem of gelling. This will also ensure better control on the quality of gum.

SUCTION BRAKE

Suction Brakes is provided on the bridge to provide tension to the 2-ply board while it travel into the Glue Unit.

If you do not have suction Brake on the bridge, the paper will get fed loose and causes defects like, misalignment, improper application of gum, resulting in a bad board.

Provision of brake on the bridge is a must to avoid bad quality board.



TAKE UP UNIT



The Take Up Units draws the 2 ply sheet from the Single Facer to the Double Baker Unit.

TRIPLEX PRE-HEATER



To pre-heat the 2-ply corrugated board as well as the liner paper.

TAKE UP UNIT



Caliper Loss

The belt that pulls the 2-ply from single facer should be properly set depending on type of flute - E, B or A.

If the belt is loose then paper is not pulled.

If the belt is tight, there will be Caliper Loss.

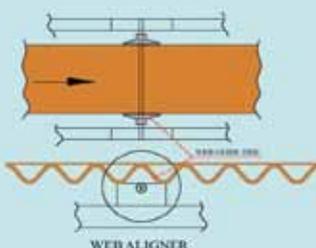
The remedy is to set the belt according to flute type.

GLUE UNIT



This is one of the important units where 2-ply boards are glued on the tips.

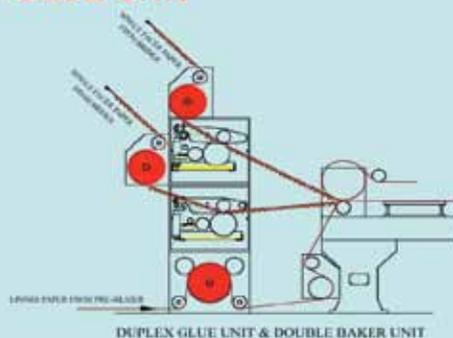
OVER LAPPING



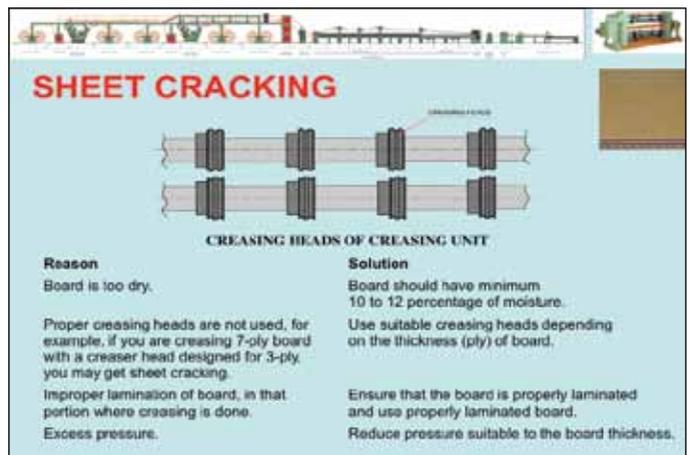
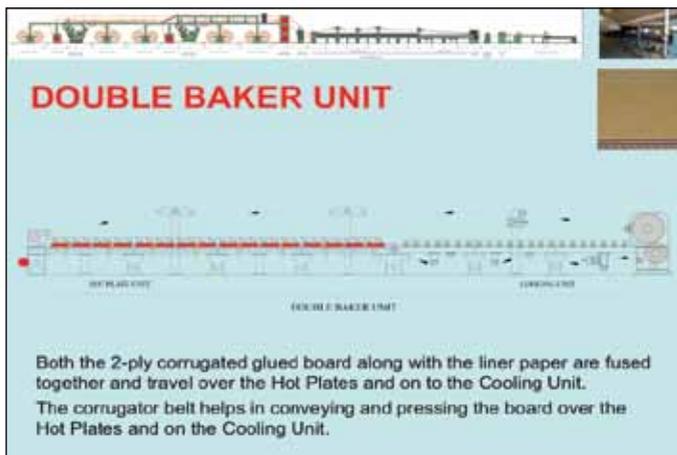
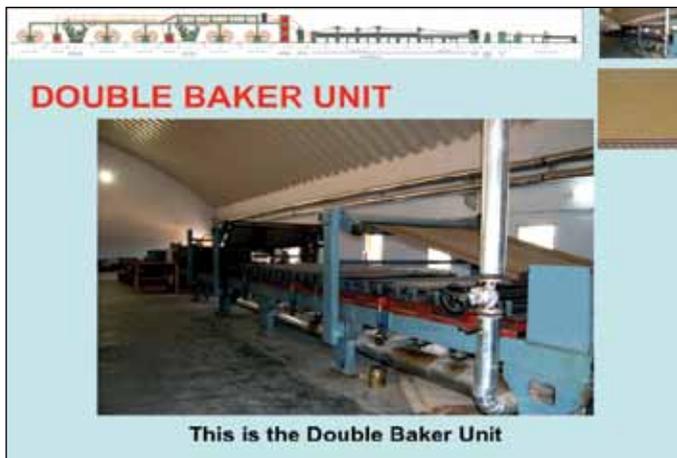
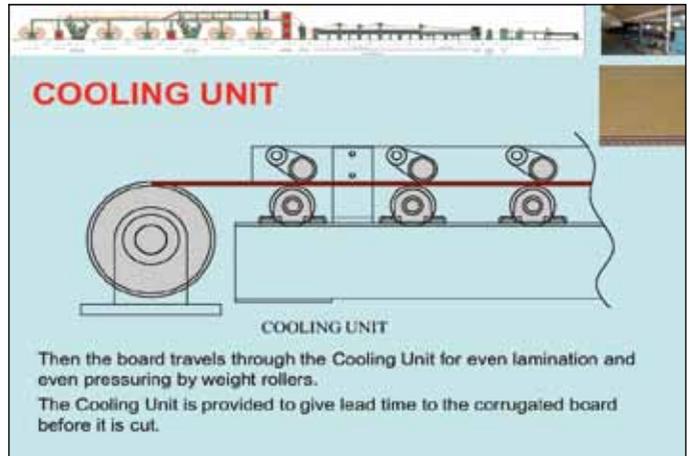
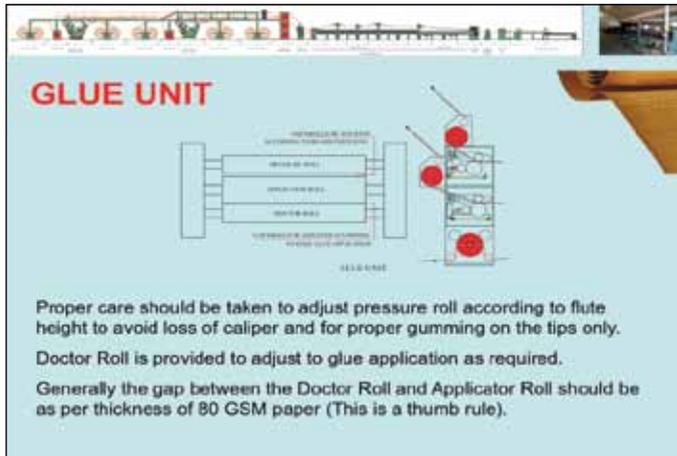
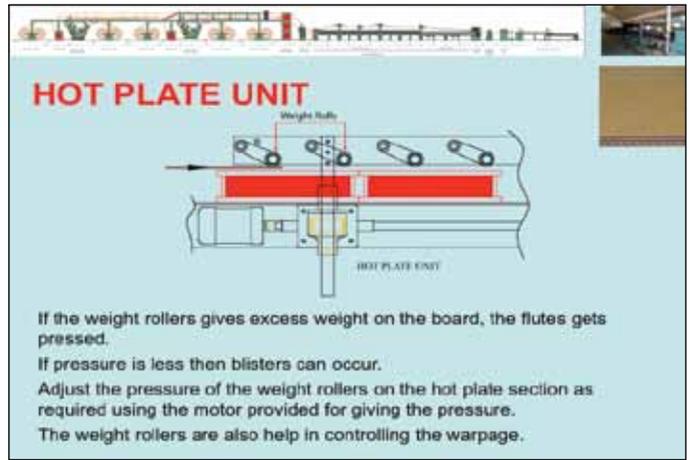
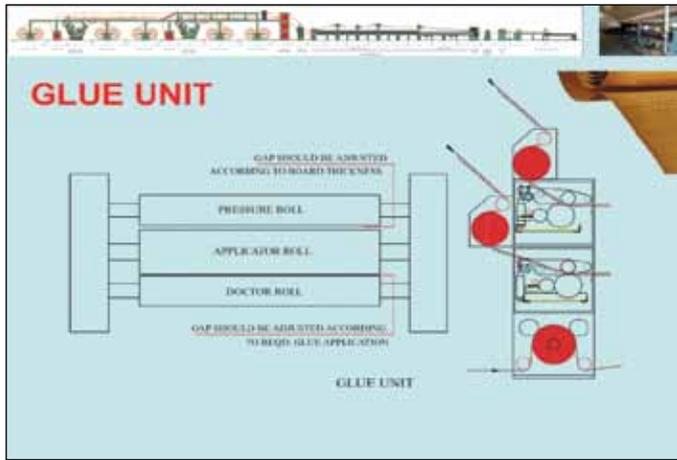
The two 2-ply boards are overlapping and not aligned properly.

Web Aligners are provided on the bridge to align one 2-ply board to match with the other two ply board and to avoid over lapping.

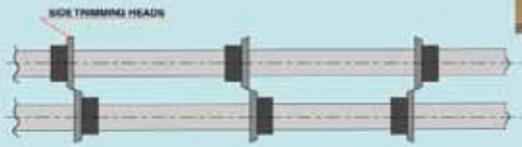
GLUE UNIT



You can see here the Duplex Glue Unit and the travel of the 2-ply board into the Double Baker Unit.



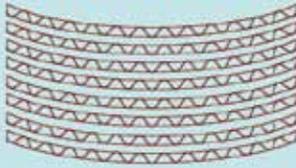
ROUGH CUTTING



TRIMMING HEADS OF CREASING UNIT

<p>Reason</p> <p>Cutter not properly set</p>	<p>Solution</p> <p>Generally, the cutters should be set with a gap of 2-3 thou.</p> <p>Even after proper setting if you get rough cut, then your cutter require regrinding.</p>
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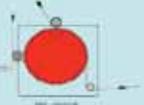
WARP BOARD



WARP BOARD

Warp is caused by a moisture imbalance between the top and bottom liners.

You have to maintain balance in moisture - by using the wrap round provided in Pre-heaters.



Lifting of the weight rolls in response to machine speed is important to control warp.

CUT OFF UNIT




Mechanical Cut Off Unit **NC Cut Off Unit**

In case of Mechanical Cut Off Unit the cutting length is limited from 600 mm to 2500 mm.

In case of NC Cut Off It is 500 mm to 9999 mm.

WASHBOARDING

EXCESS GUM



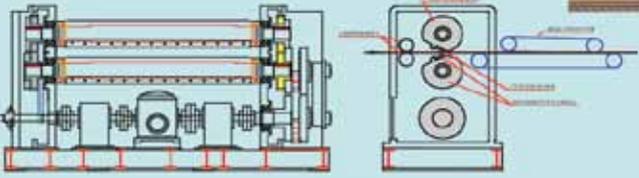
WASH BOARD

Washboarding is formation of ripples on the corrugated board. This ripple occurs when the liner and medium (the flute) are glued together by starch and the starch shrinks as it dries. This shrinkage pulls the liner and medium together.



Excess glue application and excess water in glue should be avoided to prevent washboarding.

CUT OFF UNIT



CUT OFF UNIT

The Cut Off Unit is meant to cut the corrugated board as per required length of the board.

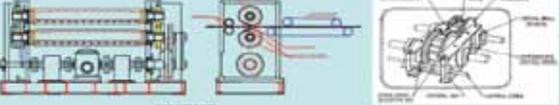
In this unit the setting of cutter is very important.

AUTO FLEXO PRINTER SLOTTER




This Machine slots, prints, and makes the corrugated board into a complete box with only glue joint or pinning as the final operation

IRREGULAR CUTTING



If irregular cutting occurs on the width of the board, the cutters should be adjusted with the setting bolts provided on the cuttor roll.

If there is rough cutting of board along the width it means that the cutting blade has gone blunt and needs resharpener.

If the cutting of the board in length starts varying plus or minus then the PIV gear box chain must be tightened.

If further tightening is not possible the PIV chain needs to be replaced.



The Value of Audits

A well managed audit programme is an effective way to sustain the process of fibre reduction without compromising ECT or compression strength.

During the last several years, I have spent a great deal of time visiting and working in box plants in a number of countries around the globe. There is certainly a need in our industry for machine calibration, operator certification, and product performance reviews in addition to fibre reduction in the sheets. Many European countries have introduced taxes at all levels that cover the expense of consumer packaging 'waste' and its relative costs. In North America, we are discussing fibre reduction as it directly relates to manufacturing cost and selling prices. Management teams are discussing this every day in their plants.

This brings to the surface the need to closely review the activities on the manufacturing floor and establish a strong, well managed audit programme. Remember that if we reduce the fibre content of the sheet, we must not compromise the ECT numbers or the compression strength numbers as they relate to packaging performance.

In recent articles, we have discussed the various methods of managing the integrity of board caliper once we receive the sheets from the corrugator. Board caliper is very important and we must minimise caliper loss in the converting process in both die-cutters and flexo folder-glueers. As we reduce the fibre content, the subject of caliper integrity becomes critical.

Maintaining Board Caliper

We have discussed the subject of the centre-lining method of calibration in previous articles. This is a manageable tool and production method that make it easy for the operators to sustain board caliper. Properly set up, it is easy for front line supervisors to assist their crews in maintaining proper board

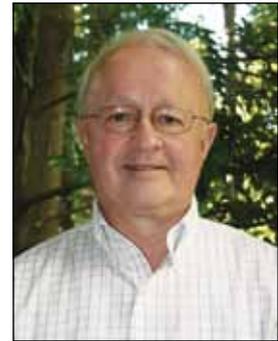
caliper and coach them in checking and verifying machine settings and inspection micrometers.

The center-lining process allows each flexo and die-cutter to have controlled and managed relationships between the nip dials and the actual nip settings in each section of the machine. The maximum caliper loss in the non-printed area of the sheet is 0.003 inches or 0.07 mm. The goal of course is '0' caliper loss. This is certainly achievable but we all live in a world of tolerances and this is what they are. In the printed area of the sheet, we allow another 0.002 inches or 0.05 mm. That means that in the printed area we allow a total of 0.005 inches or 0.127 mm.

This process starts in the feed section. The feed roll nips control the caliper of the sheet in the converting process and this determines how we print, slot, score and die-cut the sheet. Note: There is a major difference in this discussion as it pertains to sheet plants and box plants with in-house corrugators. The cure time of the sheet is a huge variable.

It is important to note that each plant should set up an in-house control system to be sure that this process is predictable and consistent. The management team must monitor this process so that the crews understand the importance of the plant's quality programme. This is where the audit side of the business controls the manufacturing cycle of converting sheets into RSCs or displays.

As we have learned in past years, SPC (Statistical Process Control) systems have enabled us to monitor our converting processes using random numbers that represent the manufacturing population.



Dick Target
"On Target Consultants"

We cannot afford to inspect every box. We can, however, inspect a process and audit that process that represents what we do. I would suggest considering SPC methods as they cannot only report on the process but these numbers can also predict machine wear and prevent unscheduled down time.

Charting Processes

The first area to address is one of 'easy to read' charts that everyone (including the operators) can understand and use as an effective audit tool. Be sure to include the crews so that they know what items we are checking and the effects those items have on their process. Also, if the management team spends an appropriate amount of time on the floor, they will have a better understanding of the real activity on their production floor. They will get to know their employees better and everyone wins.

The chart above shows the relationship between the nip dials in the machine and the actual nips within the side frames in each section of the machine. It is an e: format to follow. It is also a tool a quick and accurate calibration check of the machine centre under view. Properly introduced, this establishes a plant standard for offsets in all sections in all machines in the plant. It enables crews to switch from one machine to another with minimum training would also suggest that the plan-establish an audit schedule for machine

centre. This gives the plant adequate time to plan and prepare. If you have seven converting machines, the plant manager could schedule one machine audit a week. This means that each machine centre gets a complete audit every seven weeks (i.e. audit time is 6:30 am every Friday).

Properly done, this system will reinforce the subject of sustaining board caliper with the understanding of a manufacturing process using fewer fibres. The crews and quality managers will be encouraged to watch this part of the process carefully and respect the ECT numbers and compression strength numbers throughout the plant. The plant managers should post these results at each machine after every audit so that everyone knows what is going on in the plant. Note: This system will also give the sales people some positive points to discuss with their customers as they give them plant tours throughout the year.

Reducing Setup Times

Another area for continued audits is the 'Time & Register' calibration scheme. This is an effective tool for the One Box Setup' programme. This must be checked all the time. Once in place, the plant can enjoy positive numbers regarding reduced setup times for all orders.

For example, say the plant runs two shifts, five days a week, nine orders per shift per machine centre with seven converting machines. Let's take six minutes off each

setup due to proper machine calibration (Time & Register) and crew training. Six minutes multiplied by nine orders equals 54 minutes per shift per machine. This number multiplied by two shifts equals 108 minutes each day. This number multiplied by seven converting machines equals 756 minutes per week of additional production time for the plant. This equals 12 hours of additional production hours per week. In a business where we lose orders on pennies per box, these additional hours of reduced production time can be huge in the man hours per 1000 square meters in the plant. These cost savings go to the bottom line very quickly.

The chart above is an easy tool for the auditor to use in his or her audit process. As I have said before, include the crew in the audit process. The supervisors should post this audit form at each machine center so that the crews know exactly what is under consideration during their audit. There should be no surprises.

At this point, I would suggest that the sales group be involved in this process. They need to know more about the details that are going on in their plants. Properly done, this becomes a great story as they sit in front of their customers. This demonstrates their knowledge and understanding of the box making process. It will also arm them with knowledge as they try to determine what orders to run on which flexo or die-cutter in the plant.

As auditors, they will be better technical sales people for their companies. We need every angle in a business where we lose or gain orders on pennies per box.

The subject of fibre reduction is here to stay and the smart way to sustain your process is through an effective audit programme. We should also consider establishing an effective audit programme as a plant culture. In order to effect a culture change, it takes a concentrated effort for several months. Otherwise, it just becomes the flavour of the week.

The market continues to shrink and costs continue to be under the microscope. This should be taken seriously and should not be left to the floor on its own. I strongly encourage plant managers to get involved and control their success.

Dick Target is owner of "On Target" Consultants in Lower Gwynedd, Pa. He teaches converting short courses for TAPPI and is an active member of TAPPI's TCC (TAPPI Consulting Council). He can be reached at: dicktarget@gmail.com

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Indian Consumer – FMCG

Paper Presented at CORRUPACK SUMMIT 2010 at Hyderabad

Ramesh Krishnamurthy
Procurement Director, HUL

Consumer Mega Trends

- Literacy and Product awareness - Increasingly demanding
- Age and degree of richness - Better than china
- Urban - Rural divide - Would blur further
- Evolving Categories: Shift from basic "need" to "want" based products emphasis on health , beauty & wellness
- Value and Variety seeking across the Pyramid : Moving beyond the "survival" mode
- Degree of self-indulgence in purchase decision - Higher and higher

Indian consumer shift



The India Growth Story

Benchmarking with Other Markets

India - 12th largest consumer market currently.

By 2025, at the planned rate of growth, it is expected to be at the 5th spot behind US, China, Japan & U.K.

Consumption by category

Shift in "Share of wallet" from basic necessities to discretionary items.

Personal Products and services expected to have a larger share of wallet, going forward.



FMCG Roadmap to 2020 – The Game Changers



FMCG Player decision points

- Category choices**
 - § Which category to protect
 - § Which Category to invest and grow
- Customer & Channel choices**
 - § Which channels to strengthen positions
 - § What are the channels of tomorrow
 - Modern Trade, Cash & Carry, Chemists
 - § Urban vs rural or Go Direct
- Collaboration & Sustainability**
 - § Who to partnership with – for innovation & growth
 - § Sustainability – A compulsion more than a choice
 - § Build industry capability alongwith to service matured market

Corrugated Packaging - Implications

- Business Opportunity & Scale
- Technology & Innovation
 - Catering to MT needs
- Supply Chain flexibility
- Sustainability



**CORRU
MEET
INDIA**



Organisers & Hosts:
**NORTHERN INDIA CORRUGATED
BOX MANUFACTURERS' ASSOCIATION**



CONCURRENT EVENT
**CORRU
EXPO
INDIA**



40 FCBM Conference
16-18 December 2011
New Delhi – India

The 'Meet' that set a Milestone.

CorruMeet INDIA 2011, the 40th FCBM Conference took off to a colourful start on 16th December 2011 at the Crowne Plaza, Rohini New Delhi with 1048 Registered Delegates from 23 countries!!

Mr. A. B. Ajmera one of the most respected senior Past President of the FCBM inaugurated the concurrent event, CorruExpo INDIA 2011. The Exhibition has 32 booths which showcased latest in technology, services & materials to the Delegates & Participants.

The glittering Conference Hall, the watch out screen with the dynamically changing backdrop, the presence of Ms. Vinita Bali, Managing Director, Britannia Industries Ltd. and Mr. Keith Pearson, President,

WPO, and the speech by Mr. Shiv Khera – the world renowned motivator and the hall full of over 1000 delegates – all made the 'Meet' a memorable one.



Don't we all need a turning point?? The proceedings began with the motivating speech by Mr. Shiv Khera, on the turning point, followed by the colourful inauguration programme.

Mr. Subhash Goel, Chairman Elite, welcomed the gathering.

Mr. M. R. Gopalchary delivered the Presidential Address – highlighting the economic scenario and the activities of FCBM. Welcoming the government move to allow FDI in retail, Mr. M. R. Gopalchary said that with the farm sector set to be directly aligned with the organized retailing, the need for more

reliable and better sources of corrugated packaging is round the corner. He said that the Rs. 15,000 crore corrugated box manufacturing is projected to grow at a compounded annual growth rate 15% in the five years to 2015.

Ms. Vinita Bali, in her inspiring inaugural address called for innovation in packaging to delight its customers. Making a plea on behalf of FMCGs, white goods makers and overall industry, Ms. Bali said that Corrugated Packaging Industry could win more business by changing gears from its current, transactional mode, to a long term, relationship mode.





As a customer of corrugated box makers, she exhorted the 1000 plus attendees to deliver more value to customers by using innovation and use of technology. She emphasized that there is a need to integrate more technology to spur innovation in the sector. This will in turn help the sector in maintaining high growth and attract more business.

Mr. Keith Pearson, in his Keynote Address gave a presentation on 'CHINDIA', pointing out the rocket of opportunities for the Indian Corrugating industry vis à vis the tremendous growth achieved by China. He exhorted India to address US\$ 195.3 bn global corrugated packaging market.

"The world is coming to India to buy its products and services and India can take pride of place in packaging market, by embracing more technology in the sector," Pearson said.

NICMA presented the Life-time Achievement Award to Mr. Subhash Goel, with a citation that praised his contribution to the growth of NICMA in particular and the Industry in general.

Harlalka Award was presented to Mr. R. Suresh & Mr. Ramkumar Sunkara. Mr. Haresh Mehta of M/s Jayna Packaging, Mumbai was presented with the BK Doshi Award.



The CorruStar Awards were presented to the winners: M/s SECURIPAX PACKAGING, Roorkee, VIVA PACKAGING, Ahmedabad, PACKERS PRODUCTS, New Delhi, LATHA INDUSTRIES, Chennai and KCL Ltd., NOIDA.

Mr. Harish Madan was presented the Award for Excellence, as a token of love for his inspiring leadership in orchestrating the CorruMeet INDIA 2011 and motivating the Team NICMA.

The Technical Sessions revolving around the Conference Theme and structured on the 5M concept were a veritable 'feast for thought' with new ideas and new technologies presented by eminent speakers.

Speakers in the 2nd and 3rd Technical Sessions enlightened the audience on Role of fluting media; Next Generation Adhesive; Developments in Coatings;



Process Parameter Controls; Box Design Tools; Box Plant Waste Control; System Integration at a Box Plant; Role of Splicers; Role of Pressure Shoes / Contact Bars; Shortened Double Bakers, to create more sace for Auto Stackers,

The Role of Auto Stackers; Role of Gearless Lead Edge Feeders; Role of Semi Auto Stitchers in Improving Productivity, were the subjects deliberated in the 4th Technical Session.

In the final session the four eminent speakers threw light on how the corrugated packaging industry can leverage the positive growth trend in production of goods and increasing presence of global brands in the Indian Market. Hoe to make the pie bigger for the box makers!!

Flavours of North India – scintillating dances from North India & Bollywood along with the fireworks on Dec 16th regaled the delegates.

Sham-E-Qawwalli, accompanied with the street food of Delhi6 on 17th was a delight for all participants.

The extensive media coverage underlined the importance of the event.

“What they said” about the ‘Meet’

“Please accept my sincere gratitude for allowing me the privilege of sharing in Corru Meet India 2011.

I enjoyed every aspect of the procedures from the speaker events, packaging exhibition, to the music and song evenings.

In addition I would like to thank you and the sponsors for the very sensible going away gifts.

The excellence of the hotel facilities, require special mention, together with the efficiency of the hotel staff.”

Keith Pearson, President
World Packaging Organisation

“I offer my heartiest congratulations to Mr. Harish Madan, Mr. Subash Goel and Team NICMA for successfully conducting the FCBM Conference. All the hard work put in by them as a team had paid rich dividends to them.

I shall extend full co-operation and support to Sunil Sethi in discharging his duties as the President of FCBM and my full support will also be there for his entire team.”

M. R. Gopalchary, Hyderabad

“Dear Harish ..Kudos.....the event was not only well covered but very well organized.....hats off to you and NICMA team on this grand performance...

Venue was superb, food was excellent and all the arrangements were to the full satisfaction....congrats to you and your entire team...and the icing was your personal warm hospitality. keep it up.”

Kirit Modi, Mumbai

“My heartiest congratulations and thanks for the hospitality, every thing was to its perfection it was truly an unprecedented event organized by team NICMA hope this will set the new heights for followers.

Once again I extend my thanks to team NICMA for such a wonderful arrangement specially the cultural programmes and Mr Shiv Kherra’s motivation lecture are really unforgettable.

My best wishes to the newly elected FCBM President, Shree Sunil Sethi hope we shall be benefited by his experience and dedication.”

K. P. Singh, NOIDA, UPCBMA

“Dear Mr. Rajkamal Jindal ...
Congratulations To Team NICMA !!

I take this opportunity to thank you and your team for the highly successful show.

Your personalized arrangements of “To & Fro” Transport is highly appreciable . Your have made our stay very comfortable.

The Planning & Detailing of food for all three days was excellent.

The cultural programs were very entertaining. The inaugural session of Mr. Shiv Kherra was very interesting.”

Ashok Vyas, Mumbai

“This is to congratulate team NICMA for hosting such a wonderful Conference Arrangement right from Pick up, choice of Venue, seminars, menu selection, cultural programs, hospitality, were all excellent.

I really enjoyed my stay at venue so as seminars etc. I thank you all for the great event hosted.”

Sanjay Kedia
Prem Packaging Industries, Bangalore

“Hugely successful event !! As judged by 1000+ registrations !!

Sold out Corru Expo2011 !! 500+ attendance in technical sessions !!

Many foreign speakers !! Many local experts !!

Interesting and educative presentations !!

Effective Audio Visuals !! Good food and evening programmes !!

World class arrangements !!

Received feedback from several participants that they were happy and satisfied.

Some of the speakers were outstanding !!

Few other points worth noting.

Not all participants have interest in technical sessions.

Many register for networking, for exhibition, for enjoying company.

Some presentations were too technical, too new.

Some presentations were difficult to understand.

Some of the suggestions received.

Costing of corrugated boxes be covered in future

Presentations should avoid self advertisement and be pre screened

Copy of presentations be distributed

Pankaj Shah, Mumbai

“Dear Harishji... On behalf of the entire KACBMA delegation that attended the conference I would like to firstly congratulate You and the entire NICMA Team for organizing a truly world class conference.

In all aspects weather it was food, transport, content and speakers of the technical session, punctuality, choice of venue and courtesy of hotel staff it was an excellent experience.

This conference has not only raised the bar by quite a few notches but put the future Hosts under pressure because doing one up seems impossible, just matching your performance will be difficult.

Once again on a personnel note KEEP IT UP TEAM NICMA.”

Manish Gupta, President, KACBMA

“Dear Harish bhai & Team NICMA... Kindly accept my “Hearty Congratulations!!! “for hosting a remarkable & comfortable 40th FCBM Conference at Delhi.”

Dharmendra Pandya

VIVA PACKAGING PRODUCTS,
Ahmedabad

“As I always share the hotel room in FCBM meetings, I do share and agree fully with my room mate, Aruna’s view on the conference.

Congratulation team NICMA and Harish ji in particular, for one of best Conference, I have attended so far.”

Lalit Lath, Chennai

“It was one of the best managed, FCBM Meet attended by me. From Check-in, Registration, till Check-out, from Food to Entertainment, everything was top Notch. Cheers! to all involved.”

Ashish Khemka, Director

KCL Limited, NOIDA

“Thanks for excellent arrangement, which we enjoyed through out.

All the best dear Harish & Team NICMA.”

Biplab Datta, Kolkata

PRESS COVERAGE

Date	Source	Headlines
12/19/2011	Indiamart SME News (Online)	India’s packaging industry requires technology integration to attract domestic, international customers
12/18/2011	Sify News (Online)	Innovation in packaging must: Britannia
12/17/2011	SME Times (Online)	Technology can spur growth of packaging industry
12/17/2011	TheTop.in (Online)	Vinita Bali kicks off 40th Annual Conf Federation of corrugated box manufacturers at Delhi
12/17/2011	India Vision (Online)	Technology can spur Indian packaging industry’s growth
12/17/2011	Daijiworld (Online)	Technology can Spur Indian Packaging Industry’s Growth
12/17/2011	India Blooms (Online)	Innovation in packaging must: Britannia
12/17/2011	IIFL (Online)	Vinita Bali kicks off 40th annual conf federation of corrugated box manufacturers at Delhi
12/16/2011	Yahoo India News (Online)	Technology can spur Indian packaging industry’s growth
12/16/2011	Yahoo India Finance (Online)	Technology can spur Indian packaging industry’s growth
12/16/2011	Wow Delhi (Online)	Innovation in packaging materials must to delight customers: Vinita Bali
12/16/2011	Webindia123.com (Online)	Technology can spur Indian packaging industry’s growth
12/16/2011	Up2date News (Online)	Technology can spur Indian packaging industry’s growth
12/16/2011	EFY Times (Online)	CorruMeet India 2011 Kicks Off In Delhi
12/16/2011	MSN News (Online)	Technology can spur Indian packaging industry’s growth
12/16/2011	IANS (Online)	Technology can spur Indian packaging industry’s growth
12/15/2011	Sify News (Online)	CorruMeet India kicks off in Delhi
12/15/2011	New Kerela.com (Online)	CorruMeet India kicks off in Delhi
12/15/2011	Packaging Service Reviews (Online)	CorruMeet India kicks off in Delhi
12/15/2011	Indiamart SME News (Online)	Indian corrugated box industry to witness strong growth with opening of retail sector
12/15/2011	MSN News (Online)	Corrugated box industry to grow faster with retail opening
12/15/2011	IIFL (Online)	CorruMeet India 2011 kicks off in Delhi on Dec 16
12/15/2011	India Blooms (Online)	CorruMeet India kicks off in Delhi
12/15/2011	APN News (Online)	CorruMeet India 2011 kicks off in Delhi on Friday Dec 16
12/14/2011	Sify (Online)	Corrugated box industry to grow faster with retail opening
12/14/2011	IANS (Online)	Corrugated box industry to grow faster with retail opening

Awards and Honours Presented at CorruMeet 2011



Mr. Subhash Goel receiving the Lifetime Achievement Award



Mr. Harish Madan, felicitating the Chief Guest



Mr. Ramkumar Sunkara - The Harlalka Award recipient



Mr. Subhash Goel, felicitating the Keynote Speaker



Mr. R. Suresh - Recipient of Harlalka Award

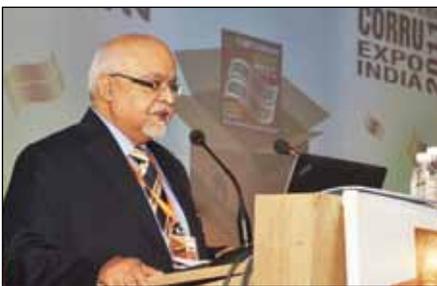


Chief Guest Presenting Memento to FCBM President



Mr. Haresh Mehta of Jayna Packaging, receiving B.K. Dosbi Award

Memorable Moments of the MEET



Memorable Moments of the MEET



40th FCBM Conference

16-18 December 2011, New Delhi - India

Presidential Address



Respected Chief Guest of today's inaugural function, Ms. Vinita Bali, Managing Director Britannia Industries Ltd; Mr. Keith Person, Key note speaker & President, World Packaging Organization; Shri. Subhash Goel, Chairman Elite, Conference; Shri. Harish Madan, Past President FCBM and Conference Chairman; Shri. Rajkamal Jindal, President of Northern India Corrugated Box Manufacturers' Association; my colleagues on the dais; distinguished speakers, invitees, delegates attending this conference, exhibitors participating in CORRUMEEET INDIA both from India and abroad, our valued customers & suppliers, friends from media, ladies and gentlemen., good After noon to you all.

As President of the Federation of Corrugated Box Manufacturers' of India I am privileged to extend a very warm and hearty welcome to you all to this

40th FCBM Conference at Delhi. I am indeed overwhelmed with the response NICMA has received for the Conference -CORRU MEET INDIA and the concurrent exhibition- CORRUMEEET INDIA with the large gathering present here for the inauguration. The Conference and the Exhibition are being held at the Capital city of Delhi which is truly cosmopolitan in all respects notwithstanding the amount of business interest the city generates for the whole country.

About FCBM

I will take a couple of minutes to brief you all about FCBM-established way back in 1972; and its activities. FCBM comprises of 12 Regional Associations, having an overall membership of around 2100 box makers spread all over the country. It is regarded as one of the most organized and well managed trade bodies also acting as

an interface between its members and the government and other authorities.

FCBM has various Sub-Committees like Research and Developments , Taxation, New Market Development, Paper Mill Co-Ordination etc to name a few.

R & D Committee is engaged in regularly conducting workshop and seminars to continuously carry out activities to continually improve and address issues of corrugated packaging; standardize specifications and quality parameters related to both the product as well as specific to its application.

Taxation committee keeps itself abreast of all the latest Notifications and rules of Direct and Indirect Taxes, prepares both Pre-Budget and Post-Budget Memorandum for submission to the Ministry of Finance, Government of India. It acts as an educator

to the members of FCBM and also makes representations on various issues concerning the members to the various Government departments and Ministries.

New Market Development Committee conducts seminars and workshops to try and explore new markets for usage of corrugated packing where other alternative packing methods are used.

Paper Mill Coordination Committee engages in constant dialogue with the various paper mills and their associations regarding quality parameters required for corrugated packaging.

Economic Outlook

As per the recent announcement made by the Ministry of Finance, Govt. of India the GDP for the 2nd quarter of 2011-12 had come down 6.9% which is lower than 7.7% growth recorded in the previous quarter this fiscal. This has been the lowest growth in GDP in the last nine quarters. However, the government exuded confidence that over all GDP growth would be 7.75% this fiscal. But the growth performance for 2nd quarter is not all that disappointing as the manufacturing sector grew 2.7%. The negative growth in the Mining and Quarrying industry has been made a dent in the overall growth for this quarter. With economies like Europe and US seeing reduced growth there seems to be good chance for India to go ahead of them in the race to be a economic super power. The Govt. too is optimistic about the economy and expects it to rebound in the 4th quarter the overall growth rate this fiscal is expected to be 7.75%.

The recent announcement made by the Govt. of India regarding FDI in retail sector, though opposed by various State Govts., would be welcome news for Packaging industry. Also, with the farm sector set to be directly aligned with the organized retailing, the need for better and more reliable sources corrugated packaging is on the anvil.

India is no longer said to be part of emerging economies and has long since been considered truly emerged economy by all super powers. At the same time, the per capita consumption of corrugated boxes in India is far behind as compared with China, UK and the US.

Government Policies and Notifications

The much awaited GST has still not seen the light of the day due to differences from some of the State Governments. I hope that the problem is resolved at the earliest as the entire gamut of industry is keenly waiting for the introduction of GST.

FCBM Awards and Recognitions

At every annual conference FCBM presents Late Shri Harlalka Award to an eminent member of the Federation in recognition of his contribution to the growth of Industry and Federation. I congratulate this year's awardees.

FCBM also had instituted Late Shri B K Doshi Award to an organization in recognition of their contribution to innovation and excellence in Corrugated packaging.

40th FCBM Conference theme: 5Ms-Man, Material, Method, Machine and Marketing.

In this rapidly changing world of business, in order to stay in it and also stay ahead, a manufacturer's ultimate quest is to deliver the best product. The 5Ms as aptly mentioned in the theme, form the cornerstones in this endeavour - with the kind of people who contribute to it; newer and cost effective raw materials used; traditional and accepted or advanced practices; faster/better and state of art technology; need for awareness & spreading the benefits of the offering.

All of these sum up the need of the hour in even our Corrugated Industry with ever demanding customer and the constraints that are on hand.

Special Thanks

I would not like to take further time of yours as you are eagerly waiting for the Technical Sessions lined up by the Host Association. Before I conclude, I would like to thank all the Past Presidents and for sharing their rich experience and continuously guiding me during my tenure and I cherish and value their guidance and co-operation.

I thank all the Chairmen of various Sub Committees for the excellent work done by them during my tenure as President. I thank all the Regional Presidents for their co-operation extended to me.

I thank both the Editors of the House Magazine, "The Corrugator" for making improvements in the lay out and contents and this has been appreciated by one and all.

I shall be failing in my duty if I do not offer my special thanks to my colleagues Mr.Sunil Sethi, Mr.Raju Ankola, Mr.Pradip Bosmaya and Mr.Vincent Mathias and other Managing Committee members for the excellent support given to me throughout the year. I also wish to thank Ms.Sudha Menon, Executive Secretary and the staff of FCBM for their hard work put in throughout the year.

Last but not the least, I thank Team NICMA for making such wonderful arrangements for the Conference and I am sure that all the Delegates attending this event will go back home with fond memories to cherish and richer in knowledge with the experience shared by eminent speakers.

Thank you one and all.



Kerala Corrugated Box Mfrs. Association

KeCBMA had its Managing Committee meeting recently. The meeting evaluated the conduct of MC meeting hosted by KeCBMA and the members appreciated the President and other members for the successful conduct of the meeting. The MC strongly felt the need for hosting an annual conference of the Federation since Kerala had never a chance to host the annual conference even though it has been an affiliate member of the Federation for more than three decades. President informed the members that he had already requested the Federation to give us an opportunity at the earliest. He also stated that we have already created a history in the annals of the Federation by organizing the meeting in a mega conference boat floating in Sea.

Our Past President and Chief Editor of Master Carton, Mr. R Suresh was honoured with Haralalka 2011 National Award for the excellent service rendered to the corrugated industry in India sponsored by the FCBM and the award was presented at the National Conference held at New Delhi. The Award was given by Mrs. Vineeta Bali, MD of Britannia Industries.

KeCBMA also discussed about the holding the Annual General Body meeting of the Association during January, 2012 at Kochi. A family get-together is also being planned along with a small presentation by one of the veterans in the Federation. A committee has been formed to chalk out and monitor the programmes.



Western India Corrugated Box Manufacturers' Association

WICMA, Marathwada Division held a seminar on 13.11.2011 on 3 P Optimization : Parameter, Process & Profit For Semiautomatic Plants In Today's Environment. Shri Ramkumar Sunkara was the speaker. There was a good attendance of about 80 persons.



A half-day Seminar on "How to fight low price competition" was held in association with NCQM on 26.11.2011 at WICMA Auditorium. Expert faculty from NCQM, Shri Madhav Karbelkar gave a very interesting and informative presentation on the relevance of Productivity to pricing and the different strategies to counter low price competition. About 35 persons attended the seminar.



Seminar on Technical ways to cut the cost organized by UPCBMA Corrugators

The Uttar Pradesh Corrugated Board Manufacturers Association (UPCBMA) organised a technical seminar for the industry on at Noida,

Mr. Pankaj Shah and Mr. Ram Kumar Sunkara the speakers emphasised the techniques on reducing costs and enhancing productivity.

Mr. Pankaj Shah, through a series of slides showed where the costs can be cut. He displayed a ten point method to reduce the costs and the ways it can be reduced. The ten points he displayed were large diameter paper reels, crush stitch flap, extended manufacturer's joint, material handling - paper reels and sheets, take up factor, cutting top paper with 2-ply liner glue versus stitch joint, baler and power factor

Ram Kumar Sunkara suggested a few improvements in the manufacturing process. Board quality, automatic plants, single facer quality and double face moisture. Single facer quality, as Sunkara implied, is poor compared to an automatic plant.

Mr. Sunkara emphasised on the various reasons why automatic plants are more successful than the manual ones. He said that the drying of board is faster and the turn-around time is less in automatic plants, while in manual plants the boards take longer to dry and if the climatic conditions are not supportive the moisture of the boxes will not be as required and the delivery will fail.

The 39th AGM of FCBM



Mr. Sunil Sethi getting "pinned" to the post of FCBM President by Mr. M. R. Goapalchary, the outgoing President



Acceptance Speech by Mr. Sunil Sethi



Popping up the Celebration

At the 39th AGM of FCBM held on 18th December 2011, in New Delhi, the following office bearers were elected for the year 2011-12.



Mr. Sunil Sethi
President



Mr. Raju Ankola
Vice - President - I



Mr. Ram Arora
Vice - President - II



Mr. Pradeep Bosmaya
Hon. Secretary



Mr. Sandeep Agrawal
Hon. Treasurer



M. R. Gopalchary
Ex-Officio

CHINDIA - The Big Picture

Keynote Address presented at the CorruMeet INDIA 2011. by Keith Pearson, President, World Packaging Organisation (WPO)

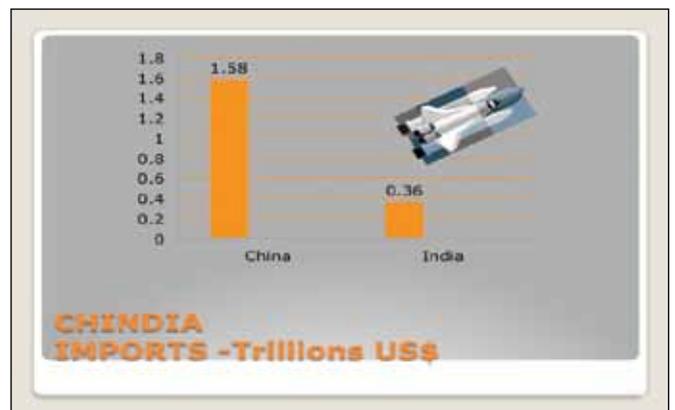


Be Prepared

- the journey
- the destiny
- the strategy

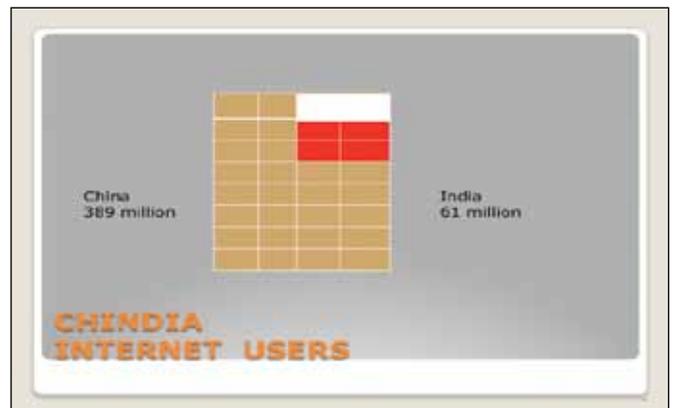
Corrugated Industry

CorruMeet INDIA 2011



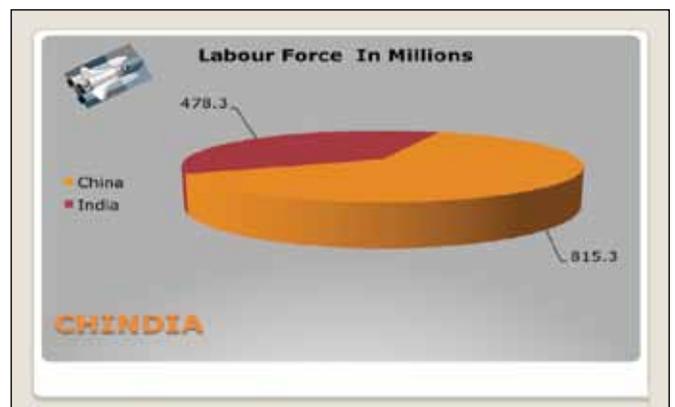
CHINDIA - The Big Picture

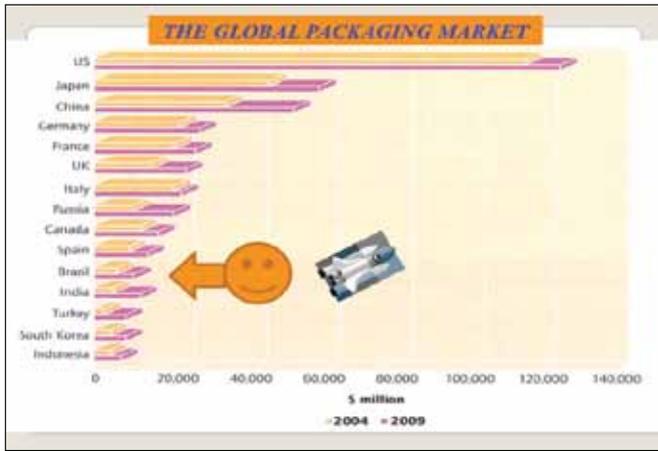
Metric	China	India
POPULATION in billions	1.34	1.20 ✓
MEDIAN AGE in years	35.5	26.2
GDP purchasing power parity in trillions of dollars	10.09	4.06
LITERACY	92%	61%
India - English		✓



CHINDIA

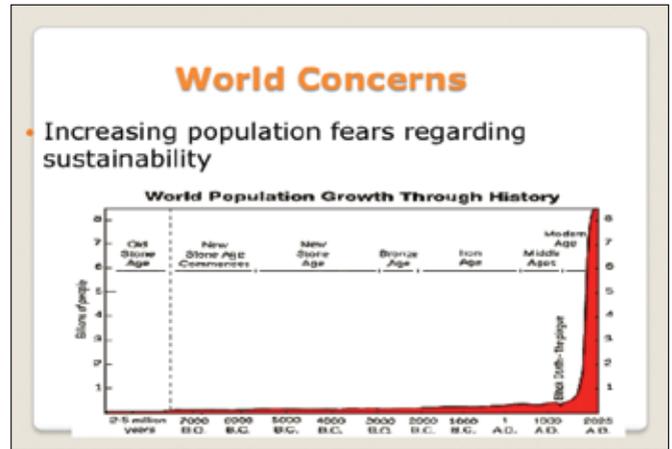
Metric	China	India
INFLATION RATE 2010	3.2%	12.0%
RESERVES OF FOREIGN EXCHANGE AND GOLD (In trillions of US\$)	2.88	0.29





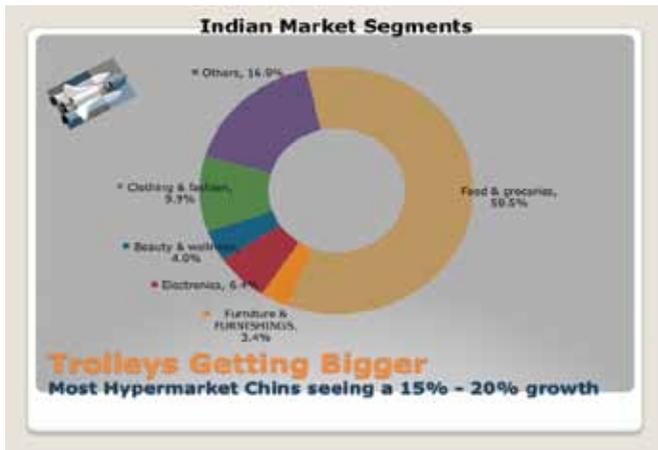
Corrugated Industry

- US\$195.3 billion by the year 2015
- Driven by the increased demand for packaging products from emerging markets supported by accelerated industrial development the trend towards urbanization



- At least 70% of world Population will be urban by 2050
- The scale of urbanization will impact:
 - Countries
 - Communities
 - Economies
 - Governments
 - Environment

URBANIZATION



- Consumers are becoming more critical
- Economies are dependent upon consumer spending
- Power balance between developed & developing world is shifting
- Sheer numbers of potential workers in developing world will shift business even further away from the developed world



DIRECTION

Chindia

- Ratan Tata has said: "China is the factory of the world ; India can become the knowledge centre of this region -----If we orient ourselves to working together, we could become a formidable force of two nations --"



China & India

- Both China and India Heading for Super Power Status
- Which country will achieve this high status?

Concluding the presentation, Mr. Keith Pearson said the need of the hour is to **“Provide for the Journey the strategy.”**

Food contamination from recycled paper – fact or fiction?

Dr. Alistair Irvine

Pira International

Introduction

- Contaminants in Recycled Fibre
- Use of corrugated board in food contact applications
- Recycled content and the problems it poses
- Mineral Oil Hydrocarbons
- UV Cured Inks and Photoinitiators
- The 'Industry Guideline'

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Contaminants in Recycled Fibres

- Recycled fibres inevitably carry traces of contaminants from previous use of the reclaimed articles.
 - Inks
 - Adhesives
 - Evidence of consumer use and misuse
- Recycling of paper does not take place under conditions which can guarantee efficient removal of contaminants as would be the case with glass, metals and plastics.

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Typical Contaminants

- The paper industry over the last 20 or 30 years has faced a series of challenges relating to contaminants in recycled fibres;
 - PCBs which came from carbonless copy paper (largely now resolved following phase out of PCBs)
 - Di-isopropyl naphthalenes (DIPN), which arose from ink jet inks
 - Di-isobutyl phthalate (DIBP) from inks
 - Primary aromatic amines from inks
 - Michler's ketone and benzophenone related photoinitiators from UV cured inks
 - Mineral oil saturated hydrocarbons and mineral oil aromatic hydrocarbons (MOSH and MOAH) from newspaper inks
 - And other 'molecules of the month'

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Existing Safety Legislation

The EU Framework Regulation

Article 3 of EC Regulation 1935/2004 requires the use of GMP to ensure that materials and articles do not, under their normal or foreseeable conditions of use, transfer constituents to foodstuffs in quantities which could:

- (a) endanger human health; or
- (b) bring about an unacceptable change in the composition of the food; or
- (c) bring about a deterioration in the organoleptic characteristics (taste, odour etc) thereof.

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Existing Safety Legislation

- Within EU, the most commonly applied standard for food contact cardboard is German BfR XXXVI
- This contains controls on a short list of contaminating chemicals (from previous use).
 - PAAs
 - Phthalates DEHP DnBP, DIBP
 - Michler's ketone and benzophenone
 - Bisphenol-A
 - DIPN
- These are just a short selection based on historical cases and do not cover all contaminants
- Compliance doesn't stop you getting caught out by the next 'molecule of the month'

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FCBM Publications

P. No. Title of Publication

3:90	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Bursting Strength of Corrugated fibre board.	24:02	Project Report (Full Version) i) A study on the Important Properties of Kraft paper at Different Climatic Conditions ii) A study on the influence of Properties of Kraft paper on the Properties of Corrugated Board and Box at various climatic conditions
4:90	Proceedings – Technical Sessions of Conference 1982 – 1990	25:02	Project Report (Condensed Version)
6:91	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Puncture Resistance of Corrugated fibre board.	26:03	Technical Information Booklet – Industry Survey – 2002
7:91	Corrugated Box manufacturers' Practical Standards – Nomenclature: A Glossary of Terms related to the Corrugated Packaging Industry	27:03	Proceedings – Technical Sessions of 31st Conference 2002, Mumbai
8:92	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Water Absorption (COBB Method)	28:03	Proceedings – Technical Sessions of 30th Conference 2001, Chennai
9:92	Technical Information Booklet – Variable Speed - Drives for Corrugated Machines	29:04	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Thickness of Board
10:93	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Grammage of kraft paper and Corrugated fibre board	30:04	Technical Information Booklet – Industry Survey – 2003
11:94	Technical Information Booklet – Adhesives	31:05	Proceedings – Technical Sessions of 32nd Conference 2003
12:94	Technical Information Booklet – Box Styles	32:05	Proceedings – Technical Sessions of 33rd Conference 2004
14:96	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Compression Strength of Corrugated Box	33:05	Technical Information Booklet – Industry Survey – 2004
15:97	Corrugated Packaging Brochure	34:06	Proceedings – Technical Sessions of 34th Conference 2005, Bangalore
16:97	Technical Information Booklet – Industry Survey - 1996	35:06	Technical Information Booklet – Industry Survey – 2005
17:97	Operational Manual ACS (ver 4.2) (Account Computing System)	36:06	Technical Information Booklet – Units of Measurement and Conversion Factor
18:98	Technical Information Booklet – Industry Survey - 1997	37:06	Technical Information Booklet – International Rules for Corrugated Board and Cases
19:98	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Ring Crush resistance of Paper and paper board.	38:07	Proceedings – Technical Sessions of 35th Conference 2006
20:99	Technical Information Booklet - Industry Survey – 1998	39:07	Technical Information Booklet – Restricted Heavy Metals Specification in packaging Material
21:99	Corrugated Box manufacturers' Practical Standards – Standard Test Method for Moisture Content in Paper and paper board.	40:07	Technical Information Booklet – Guidelines for Designing Heat Transfer System using Heat Transfer Fluids
22:00	Technical Information Booklet – Industry Survey – 1999	41:08	Proceedings – Technical Sessions of 36th Conference 2007
R-1:00	Corrugated Box manufacturers' Practical Standards – Box Dimensions, styles, Mfrs. Joints	42:10	Proceedings – Technical Sessions of 38th Conference 2009
23:02	Technical Information Booklet – Industry Survey – 2001	43:11	Proceedings – Technical Sessions of 39th Conference 2010 – Interactive DVD
		44:11	Technical Information Booklet – Industry Survey – 2010

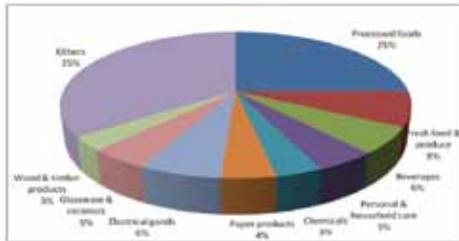
For further details contact:

FEDERATION OF CORRUGATED BOX MFRS. OF INDIA

Tel.: +91 22 2850 0687, E-mail: adminfcbm.org, www.fcbm.org



End-use markets for corrugated board in 2009, volume



Figures from Pira International, 2010



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CORRUGATED
INDUSTRY CONFERENCE

Are these levels safe?

- Microcrystalline wax (which is chemically indistinguishable from some MOSH) is the direct food additive E905, but when used as a food additive, it is subject to strict purity criteria.
- Highly refined mineral oils may be used as plastic additives under the plastics in contact with foods legislation where they are subject to purity criteria and technical specifications.
- Low molecular weight polythene looks a lot like MOSH.
- However, hydrocarbons used in printing inks for newspapers are unlikely to have been selected on the basis of food contact suitability and are technical mixtures not meeting the above purity specifications and with significant aromatic content and cyclic hydrocarbons as well as straight chain hydrocarbons.



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Food Contact Corrugated Board

- Approximately 20 million Tonnes of corrugated board are shipped in the EU. However,.....
- Only 4% of this is actually used in direct contact with foods (most of the rest would be used in secondary packaging)
- Typical direct food contact applications include
 - Packing of fresh produce (inherently a low risk application from food safety standpoint, due to ambient temperature, non-fatty foods and likely washing/peeling of product before consumption)
 - Pizza boxes (inherently a high risk application due to high temperature and fatty foods)

Figures courtesy of SCA packaging



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How can they transfer into foods?

- Evaporation into the trapped airspace of a pack followed by absorption into food.
- Seen numerous times already with dried foods (including breadcrumbs and bread mix) stored at ambient temperatures.
- If anything, the high temperature environment of a pizza box (containing a significant % of recycled fibres) might be expected to raise levels of migration.
- We are not aware of any data showing transfer into Pizza, but there may be some information in a forthcoming surveillance report from the Food Standards Agency.



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Particular Issues relating to Corrugated Board

- Across the EU approximately 80% of corrugated board is manufactured from recycled fibre (in the UK, this is close to 100%).
- High potential for exposure of food packed in corrugated board to contaminating chemicals
- Even where food contact layer virgin (e.g. white kraft paper), there is a potential for transfer of contaminating chemicals through the vapour.



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What are the potential health risks?

- Toxicological information suggests potential of MOSH and MOAH to bio-accumulate in the liver, heart valves and lymph nodes and cause inflammation of these organs.
- Additionally, there are additional concerns of potential carcinogenicity caused by the aromatic fraction.
- However, these are all long-term chronic affects and regulators (FSA, BfR etc) agree that people eating a balanced diet should not suffer any adverse health consequences in the short or medium term.



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Mineral Oils in Recycled Paper

- Mineral Oil Saturated Hydrocarbons (MOSH) and Mineral Oil Aromatic Hydrocarbons (MOAH)
- Two studies by the Official Food Control Authority of the Canton of Zurich (Dr K Grob)
 - February 2010 report highlighted identified the inclusion of newsprint in recycled paper and board as the main source of the mineral oil, found 'high' levels of migration and noted conflict between recycling targets and food safety.
 - October 2010 report analysed 119 samples of dry food packed in paperboard boxes for migration of mineral oil. Mineral hydrocarbons were found in all the foods packed either with or without an inner plastic bag, with MOSH at concentrations of 4 to 28 mg/kg and MOAH at concentrations from 0.7 to 6.1 mg/kg depending on the food type and time in contact.



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What would be a safe limit?

- FAO/WHO Expert Committee on Food Additives set an ADI for MOSH in 2002, which can be used to set an unofficial specific migration limit of 0.6 mg/kg which has been informally used for risk assessment purposes by both the Canton of Zurich and the German BfR.
- German Health Authorities are expected to set specific migration limits of 0.6 mg/kg for MOSH and 0.15 mg/kg for MOAH during September 2011.
- BfR, Swiss Authorities and UK FSA agree that levels should be reduced to mitigate risk, but there is time to resolve the situation in a careful and planned manner.



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How do you reduce exposure?

- Use a layer that is a barrier to mineral oil migration. This has cost implications and needs tests to demonstrate efficacy.
- Incorporate more virgin fibre in paperboard food packaging. This does not eliminate the problem unless 100% virgin fibre is used. Also there are cost, environmental and supply chain implications if widely adopted in the short-term.
- Encourage the manufacturers of mineral oils (and printers) to produce (and use) cleaner oils with lower content of MOSH and MOAH.
- Improve sourcing of recycled fibre so that newspapers do not find their way into food packaging. This would vastly reduce exposure to mineral oil, but not completely eliminate it because some cardboard is printed with mineral oil containing inks.



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Industry Guideline

- Cross industry body put together to try to set agenda. This grouping comprised of several European Trade Bodies;
 - CEFIC (Representing Chemical Suppliers),
 - CEPI (P&B suppliers),
 - CITPA (P&B Converters) and
 - FPE (P&B Multilayer Manufacturers)
- Suggested a new approach to ensuring compliance based on GMP, selection of appropriate fibre for recycling and suitable recycling technologies together with limits for certain contaminants (not currently MOSH and MOAH)
- Not a legislative document, but offers a useful framework for recycling.



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UV Cured Inks & Photoinitiators

- ITX issue focussed attention on issue of photoinitiators (PIs) in UV cured printing processes.
- Pressure to reformulate without ITX led to a wider range of other PIs being used or re-used; benzophenone (BP), 4-methyl benzophenone (4-MBP) etc. Many of these had their own problems.
- In 2009, 4-MBP was the subject of a number of RASFF Rapid Alerts in breakfast cereals.
- Appeared to be migrating from ink and present in recycled board.
- Rapid substitution without proper planning could possibly lead to sub-optimal selections being made.
- Photoinitiators continue to offer the potential for future scares.
- Lower volatility PIs appear to reduce potential for migration.



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Summary

- Constituents of Inks have the potential to cause scares either when used directly on packaging or present in recycled fibres.
- This will apply to corrugated board in the same way that it does to other types of cardboard.
- Careful selection of inks and recycling process technologies can help mitigate this risk, but testing of recycled cardboard and inks is important.
- There is no 'magic bullet' at the moment.
- There is an inevitable trade off between environmental and safety in use considerations for food contact corrugated board.



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Tuesday, May 03 2011 3PM 13°C 6PM 10°C 5-Day Forecast

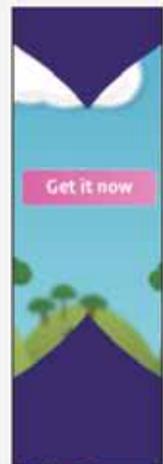
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Cornflakes cancer scare: Cereal makers drop recycled cardboard boxes containing deadly oils

By SEAN POULTER
Last updated at 2:00 AM on 9th March 2011

Comments (87) | Add to My Stories

- Tests found mineral oils could even leak through plastic inner packaging

Breakfast cereals, pasta, rice and other foods packed in cardboard boxes could be tainted with toxic chemicals, researchers warn.

The substances appear to be leaching from the recycled paper used to make most cardboard boxes.

Studies in Germany and Switzerland found the levels to be up to 100 times the agreed safe limit in products sold in supermarkets.

The chemicals – mineral oil hydrocarbons – are said to cause inflammation of internal organs.



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9/10
Oral-B power brush users said they'd never go back to a manual tooth brush.
now 50% off POWER BRUSHES

FEMALE TODAY

► Bridget Bones: Super-slim Renee Zellweger proudly shows off her muscular back in sheer gold gown
— as ex Bradley Cooper



Digital Flexo Suite – Corrugated

Paper Presented at CORRUPACK SUMMIT 2010 at Hyderabad

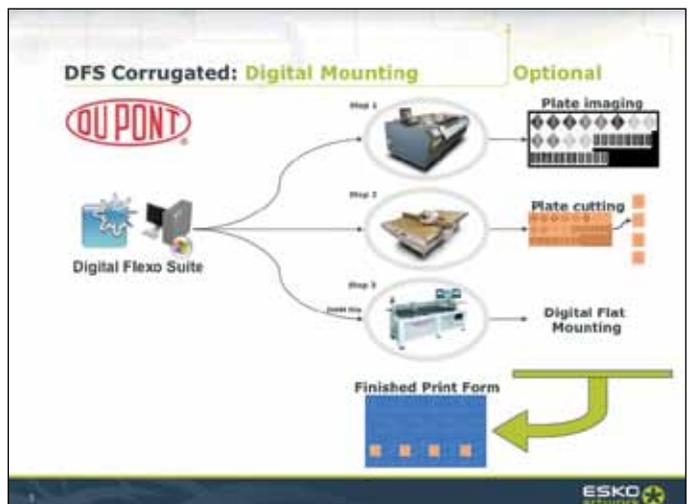
Mr. Shri Hari Rao
ESKO-Graphics India P. Ltd.



EskoArtwork at a glance...

- Over 30 years of experience ...
- Leading provider of Packaging Pre-Production solutions
- Over \$200 Million net revenues worldwide
- R&D funding over 10% of net sales
- 1000+ employees worldwide
- Corporate: Gent, Belgium
- Local office : Bangalore, India for more than 15 years

ESKO artwork



PlatePatcher (part of DFS for Corrugated) Detail

Size: 870mm x 1150mm
4 x Spark 4835 Plates

PLATEPATCHER
Plate optimization

4 plates reduced to
1 Spark 4835 plate

ESKO
integrated

Cost Savings Realized First Two Years

- Developed visual work instructions
- Recycled 7,000,000 lbs of corrugated
- Reduced paper by "Green E-Link" purchase orders (48,200 transactions)

Total Green Waste Savings	\$ 304,134
Employee Cost Savings	\$ 158,936
Time Recording Window & Signal	\$ 47,785
Afternoon Break Elimination	\$ 57,650
TOTAL	\$568,505

PlatePatcher Detail

Plate optimization

ESKO
integrated

Introduction

"Revolutionary" workflow for Digital Polymers sheets.

- Perfect register
- Highest quality possible
- Wide polymer range
- Simple
- No Liquid Frame
- No filmsetter
- No mounting machine

PreMount carrier sheet

ESKO
integrated

Plot & Cut: summary

Workflow for Digital Polymers sheets.

- Low polymer consumption
- Wide polymer range
- Low register accuracy
- Simple
- No Liquid Frame
- No filmsetter
- No mounting machine

Plot & Cut carrier sheet

ESKO
integrated

PreMount Workflow Overview

- Step 1: Page layout data (vector or pre-mounted) is used to generate a "bug" cutting guide for Königberg.
- Step 2: carrier sheet preparation, identification, center line, punch holes & cut to size
- Step 3: A piece low cost material is cut on table as a "bug location guide"
- Step 3a: A raw digital plate is automatically cut on the Königberg (oversized sheets)
- Step 3b: flat mounting
- Step 4: The carrier sheet with plates in position is imaged in CDI or pinned down
- Step 5: The imaged carrier is main exposed and processed
- Step 6: Lead edge chip strip clipped into position on finished carrier and sent to press.

ESKO
integrated

PreMount

ESKO
integrated

Washing and Drying

- Plate side is very smooth after washing process
- Carrier gets washed (viscosity regulator recommended) & dried

Before After

Drying

ESKO
integrated

Finishing

- Lead strip is attached to the carrier sheet
- Carrier sheet is ready for shipment

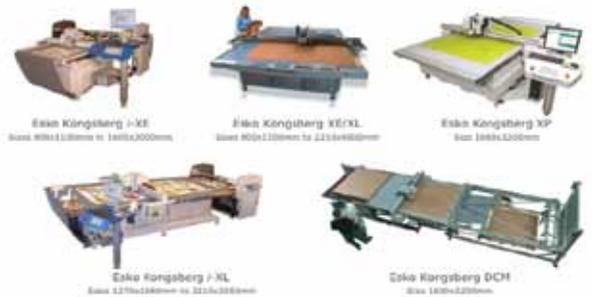


EskoArtwork – Flexo CTP product portfolio



Digital Workflow Advantages

EskoArtwork – Digital converting tables



PreMount: Strong advantages

- Substantial reduction of plate & solvent consumption
- Highest imaging quality possible
- Automated workflow
 - No plate mounting experience required
 - Automated patch creation with patch location guide
 - Faster than any corrugated technology!
- Perfect Print register
 - Less setup time on the press
 - Multiple colors (screened) possible
 - Highest accuracy, plate & imaging quality
- Mounter/Liquid Frame is redundant



Digital converting – Market trends

- | | | |
|---|--|--|
| Corrugated & POP <ul style="list-style-type: none"> Creative solutions for outside & inside protection Tailor-made and/or just-in-time deliveries Shrinking lot sizes More short-run jobs Focus on productivity and ROI justification | Folding cartons <ul style="list-style-type: none"> More complex and sophisticated boxes (marketing impact) Faster delivery times for prototypes Brand owners bring design in-house Increased need for special finishes, e.g. spot varnish | Sign & display <ul style="list-style-type: none"> Fast growth driven by flatbed digital printing Convert and finish a constantly expanding range of materials High demand for multi-functional finishing solutions: cutting & milling, flexible and rigid materials... |
|---|--|--|



A success story...



EskoArtwork – Digital converting tooling options



Marketing Your Boxplant

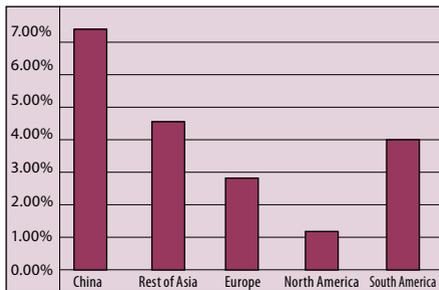
In this, the second in a series, Raj Bhardwaj of the UK based sales, marketing and recruitment consultancy, Know It All, looks at ways in which boxmakers can improve how they portray themselves to the marketplace.



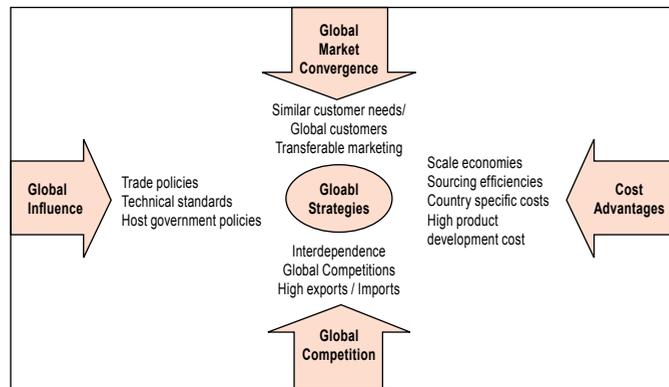
Raj Bhardwaj

There are three ways of making more money - Improve productivity and efficiency; Increase your prices; and sell more product. To increase sales you need to develop a marketing plan that is structured, targeted and cost-effective. Lets start by clarifying what marketing is. Peter Drucker put it this way: The aim of marketing is to make selling superfluous.

The aim is to know and understand the customer so well that the product or service fits him and sells itself.” Put another way, the aim is to create a vacuum-effect around your business, generating so much interest that customers are drawn toward you. Depending on where you are in the world, growth in demand for corrugated over the next six years will vary:



Whilst creative destruction brings both opportunity and threat via free market economics (although for the Economics purists, Schumpeter was referring to innovation rather than lower-cost competition - the impact stands comparison), we must not forget that our destiny remains in our own hands. Our industry's bigger players have the option of deploying global strategies, although some also have the problem associated with trying to do a U-turn in a super tanker - you will continue to drift in the wrong direction whilst you're turning (See Fig 2).



statement that excites interest will not make a sale - it sets up the customer to be receptive to further information.

Attention and interest are not enough to clinch a sale. The customer has to be brought to

If you read the last strategy article ('How to Survive and Thrive'), for the purpose of this article it will be assumed that you have settled on a target market and a preferred product range.

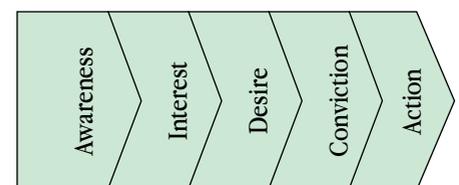
The AIDCA Model

Whatever the size of your business, the AIDCA model shows the evolution of a potential clients mindset, which the marketing mix should support.

The message should get the Attention of the customer in order to make a sale. This could be an all-singing, all-dancing act, or by an introduction from an influential person. You have to win the customers' eyes and ears before you can win their hearts, minds and wallets. Capitalising on attention by turning it into Interest depends on understanding and pressing a customer's 'hot-spot'. That is the promise that the potential purchase will meet a genuine customer need. On its own, the

a condition of Desire. Where promotion attracts attention, details about a product arouse interest. Extras, like discounts or preferential payment schemes, provide additional attraction of your USP that can tip the scale and can be seen as the main objects of desire. This desire needs to be galvanised into Conviction.

The test of effectiveness is Action. The two key principles supporting this are immediacy and urgency - you want the customer to place their order now so you make it appear that the opportunity will not last forever. This situation may be artificial, but unless elements of urgency can be created, the sales process may drag on, and impetus may be lost. Then the



whole AIDCA sequence will have to be repeated, with lower chances of success. Properly timed, the sequence is logical and highly effective.

You may well be thinking that the AIDCA model has been laboured, but it is worth emphasising. How then does one take this worthy and somewhat esoteric model and make it happen? The answer is your marketing mix, which needs to support each stage of the AIDCA process.

The Seven Ps of Marketing The Marketing

Mix is one of the major concepts in modern marketing; it is a set of controllable marketing variables that a business can blend to produce the response it wants in its target market. It consists of everything the company can do to influence the demand for its product. The many possibilities can be collected into seven groups of variables know as the seven 'Ps': price, product, promotion, place, people, physical evidence and process (See Fig 4).

- Price stands for the amount of money customers have to pay to obtain each product. Each 'price' has to be in line with the perceived value of the offer, or else buyers will purchase competing products;
- Product stands for the 'goods-and service' combination that the company offers to the target market;
- Promotion stands for activities which communicate the merits of the product and persuade target customers to buy it; - Place represents the various company activities that make the product available to target consumers such as integrated plants, sheet plants

or warehouses - including checks on stock and the arrangement of efficient transportation and storage of the product;

- People stands for those involved in making the products or services available to the marketplace. In our business, that means external sales people and the sales office - they are effectively our shop window. It is also important not to forget the other interface with our clients - drivers. Yes, our people should be competent at their job, but they should also be friendly and have a passion for making clients happy.

Physical evidence refers to those things that clients interface with from your business. Consideration should be given to what clients see, hear and touch. The physical evidence should resonate with the impression that you wish to give of your business. If you want to convey a quality feel, pay attention to your website, stationery, vehicles and presentation of your sales people. The quality of the fixtures and fittings is central;

- Process needs to be consistent. The goodwill generated from achieving 99 per cent on-time in full (OTIF) deliveries for 50 weeks of the year would be hugely undermined by 80 per cent OTIF in the run-up to Christmas when demand typically rises by 30 per cent. Key Performance Indicators should be measured and managed - OTIF and quotation turnaround time are recommended as a minimum. These measures should form part of the balanced scorecard, which is discussed later.

Modern marketing calls for more than developing a good product, pricing it

Price	Product	Promotion	Place / distribution channel	People	Physical Evidence	Process
		Personal Selling	Direct			
		General advertising	Distributors			
		Public relations				
		Sponsorship				
		Direct mail				
		Website				

attractively, and making it accessible to target customers. Companies must also communicate with their customers. For most companies the question is not whether to

communicate, but how much to spend on promotion and in what ways. Although research has identified that the most effective promotional tools in industrial selling are personal selling (see chart below) followed by sales promotion, let's look at all of the relevant options open to a corrugated marketing manager to spend his budget:

Personal selling - the main cost here is in salaries. However, sales people benefit from sales and negotiation technique training as most of the sales revenue in industry is brought in by this method;

General advertising - there are many places in which to advertise, however this needs to be carefully targeted using a suitable vehicle;

Sales promotion - must come high on the list as the market is suffering from over-capacity and therefore is price sensitive. Any sensible form of sales promotion will foster increased desire for your product;

The dark art of public relations comes in many different guises, from press releases to customer 'freebies'. Just beware of the old adage that "there is no such thing as bad publicity" this is simply not true;

Other vehicles for promoting your company include: sponsorship, direct mail and a good website to give your company a quality brand feel to it.

Fig 5 indicates that advertising is most effective for consumer goods, but this is trumped by personal selling when it comes to industrial goods.

Personal Selling

Hence in business-to-business trading, personal selling is central. However, there are more options for personal selling than you might think. Give some thought to how you can innovate to add value to clients and stand out from the crowd.

Sales Directors and Managers. Any customer entertainment should be targeted at a spread of key clients and prospects. Change events regularly to avoid inviting only the same familiar faces

to events. Do ask clients what they would like to do in advance, and respond to the subsequent demand;

Account Managers. How about sending your best sales person to do a presentation at a trade gathering or awards event?

Sales Representatives. Consider offering training to suppliers to improve symbiotic relationships;

Sales Administrators. Make time to introduce them in person to their key clients. Putting a face to a name enhances relationships;

Trade fairs / exhibitions are different from almost all salesman-client interactions. The client has chosen to seek you out. They are in buying mode and it can accelerate the AIDCA process if you catch them in this mindset.

Remember, people buy from people - deploy them to your maximum advantage. Innovation can help you shine, but equally important, to quote Cohn Williams, selling is an active verb - be active.

General Advertising

Investing heavily in general advertising is tempting, but should be resisted. Better to target your advertising - more rifle-shooting and less machine-gunning in approach. To continue the metaphor, ammunition is expensive so don't waste it. The key is to know what your target markets are, and then judiciously use the appropriate media.

Public Relations Options

PR can be wonderfully cost-effective, and make your business feel good about itself. Options are varied:

- Freebies for (potential) customers such as pens are OK. However, what about a USB portable hard drive with your company presentation on it?
- Events for charity or good causes are a great idea from every angle. Good for the soul and good for business! Mond's commitment to 'good citizenship' for example, is to be applauded;
- Regular press releases to your chosen media make good sense. Remember to make them interesting and punchy;
- High quality customer gifts to influential decision makers;
- Publicity stunts to get on the local news e.g. sponsored charity bike rides;
- Editorial comment in trade publications.

Sponsorship options

Similarly, sponsorship can be a low-cost way to help ensure that you name permeates:

- Sponsor schools or universities. Perhaps sponsoring an award on a Packaging Technology course or buying text books for a local school;
- Support local charities and events;
- Community contact to improve your image in the local community;

- At the other end of the cost scale you could sponsor industry awards to help raise your profile, and increase your association with innovation and excellence.

Direct Mail Options

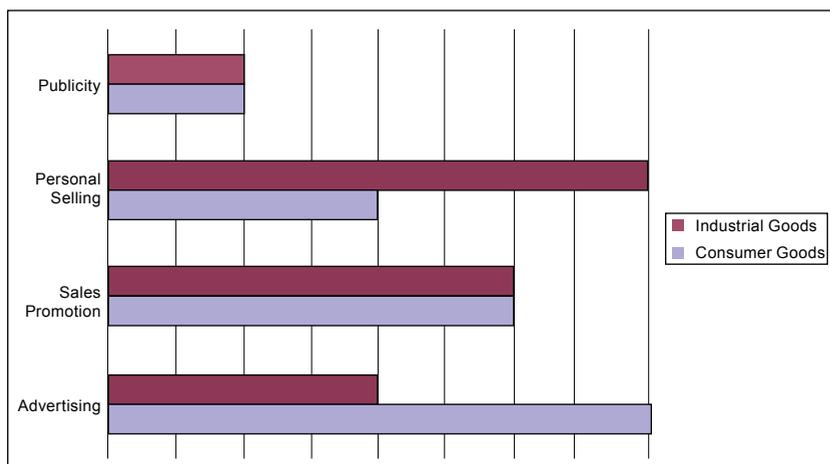
Business to business marketing is at its best when it is targeted at the individual. Direct mail can be a useful component in the marketing mix.

- Postal mail shots addressing the decision-maker personally. The average take-up rate on flyers is just 1 per cent, so do try to mould the message to each recipient;
- Direct mail by fax can be perceived as a huge pest. However, it has its place if it can be seen to be of value to the recipient. An example is a fax highlighting lead times have changed
- 'get your orders in or miss your delivery slot' is crude but can be effective in breathing life into a quiet order book;
- For direct mail to be of value it is strongly recommended that you invest in your own database, and then keep it up to date;
- E-mail advertising has the same pros and cons as fax promotion, but the quality of the output is much better. SPAM filters can undo your hard work, which underlines the value of sending bespoke messages.

Sales Promotion Options

Sales promotions are not restricted to washing up liquid. There are many avenues for a packaging business to stimulate demand:

- Free trial run samples;
- Free origination - if you commit to a certain volume;
- Extended credit terms for a limited period;
- Discounts, eg 10 per cent off your first order if you take delivery this month;
- Rebate, eg 2 per cent of your sales value back if you spend at least f500,000 per annum;
- Reciprocal trading schemes.



- Cont. on Pg. 95

- Cont. from Pg. 91

Website Options

In this technically-advanced age, the internet seems to be under-exploited by many packaging businesses. Websites are effectively electronic brochures, but they can also be used for:

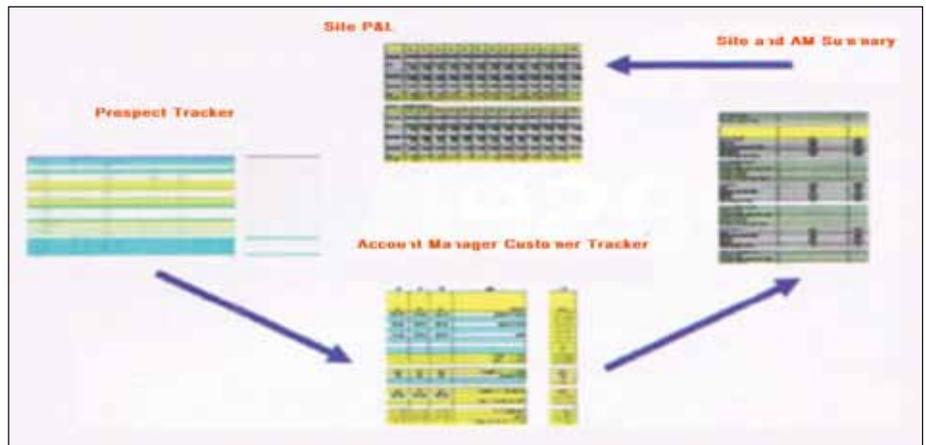
- On-line promotions;
- E-commerce, and therefore another distribution channel. Unlike humans a website never sleeps and is available globally;
- What about an internet 'blog' site for customer feedback? Be aware though, this is for the courageous!

Control Mechanisms

Once you've settled on your marketing mix, you need to manage the subsequent marketing action plan. To this end there are two control mechanisms that are recommended to monitor and control the cunning plan. A balanced scorecard is a cockpit of KPIs to steer your business by. Making boxes is a messy business - typically 4,000 live products; hundreds of clients; hundreds of bespoke orders per week; hundreds or even thousands of pallets delivered per week; thousands more pallets in stock...you get the picture. Amongst this complexity it is easy to get lost in detail. A balanced scorecard is a powerful tool for helping you to focus on some key areas.

Budgets

At the detail level, comparing actual performance with budgets is a good start. However, if you tie in your prospect tracker and a sales forecast for each sales person and the sales team collectively you can see where you are going as well as where you've been.



If you tie in your profit and loss too, you can model the impact of potentially winning an account on your bottom line,

In Summary

Put like this it seems simple doesn't it? If you execute your plan you'll end up targeting your chosen market sectors with a great message. ("Next to doing the right thing, the right thing is to let people know that you are doing the right thing." John D Rockefeller)

As previously noted, there are other important aspects of developing and delivering strategy, which we'll continue to review in this series of articles:

Sales - how to increase sales, in profitable markets;

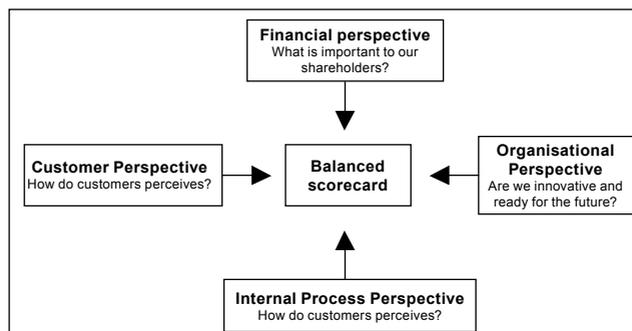
- Recruitment - finding the right people (i.e. enthusiastic, rounded sales people that can sell to varying personalities, and can read, write and do sums), and how to keep them incentivised;
- Infrastructure - is your product mix suited to the equipment you are operating and vice versa;

Investment - how to justify and select new / used equipment.

Raj Bhardwaj is an energetic, uncommonly enthusiastic workaholic who has developed a highly successful approach to getting professional results in a hurry. Experience in 9 packaging plants; most of these years were spent in senior sales and operational management roles.

This experience is underpinned by a sound education: an MBA 1st class degree in Marketing with Systems Analysis; a Diploma in Marketing and a Diploma in Management.

He set up his own business in 2004 - Know It All Ltd. the UK based sales, business and recruitment consultancy, with an initial focus on the packaging industry, but has now diversified into a range of sectors.



This article was published first in International Paper Board Industry September 2006 issue and we reprinted this in 'The Corrugator' immediately after it was published by International Paper Board Industry and now we are bringing this for the benefit of new entrants into the industry The readers will surely find it very useful.

Shaping the Future

Paper Presented at CORRUPACK SUMMIT 2010 at Hyderabad



A global paper and packaging company

- USD 23 billion revenue
- 60,000 employees worldwide
- Operations in 20 countries and sales in 100+ countries
- Most Admired Company by *Fortune* -- 8 years running
- Most Ethical Company by *Ethisphere* -- 4 years running

* International Paper Annual Report 2009

Over 200 corrugated plants around the world

Plus 10 million tons of containerboard production

9,100 employees and 36 locations in Asia



Paul Brown
President, International Paper Asia

"India is not simply emerging, India has already emerged!" – Barack Obama

India!

Projected annual GDP, in 2006 dollars

Year	India	U.S.
'14	~10	~15
'54-'14	~40	~35
'54	~50	~40

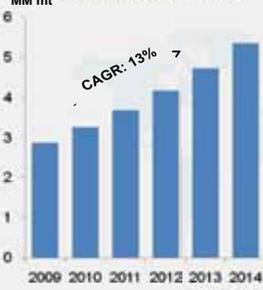
Source: Goldman Sachs



Indian corrugated market is growing fast

INTERNATIONAL PAPER

Corrugated production



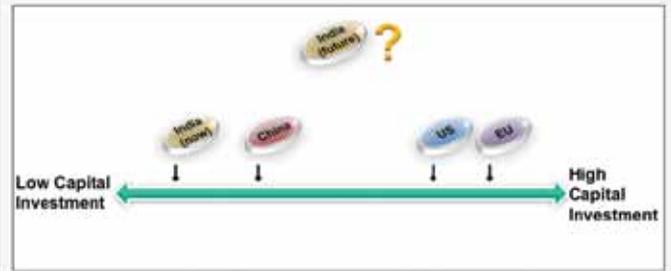
- Large population and hence packaging demand
- Growing industry production
- Rising middle class

Source: ICCA

8

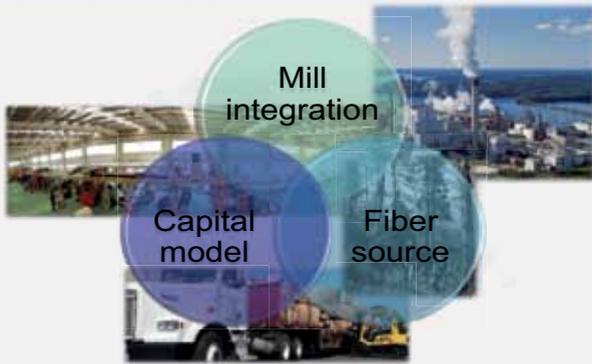
Capital model

INTERNATIONAL PAPER



Three paradigms to consider...

INTERNATIONAL PAPER



9

Challenges for India

INTERNATIONAL PAPER

Big box retailers will require higher packaging quality



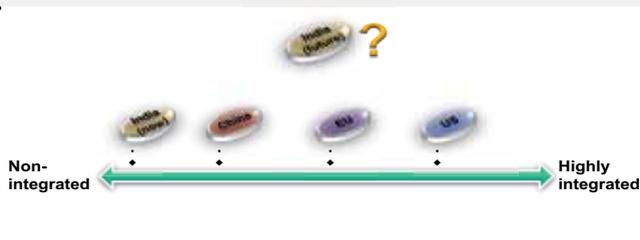
Now



Coming...

Mill integration

INTERNATIONAL PAPER



10

Challenges for India

INTERNATIONAL PAPER

Better infrastructure



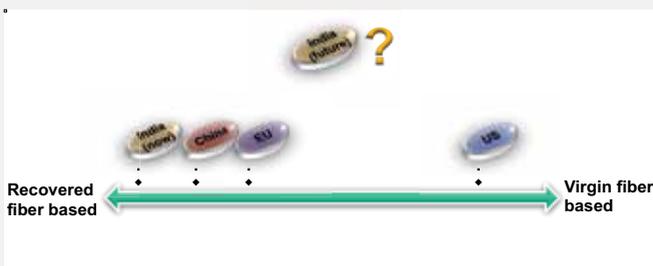
Now



Coming...

Fiber source

INTERNATIONAL PAPER



Challenges for India

INTERNATIONAL PAPER

More efficient freight movement



Now



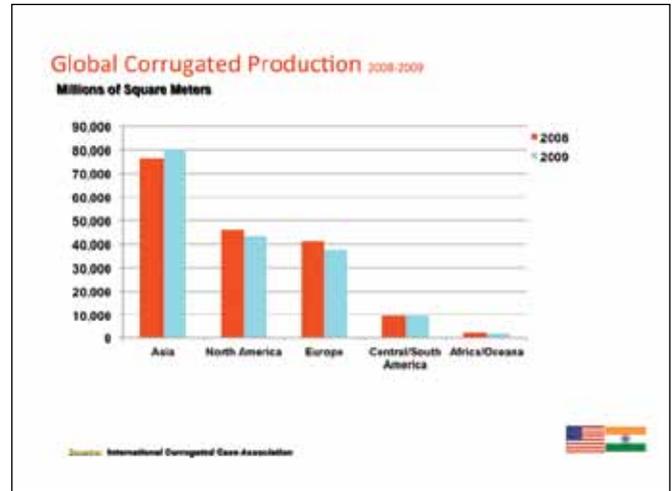
Coming...

The New Paradigm in the Global Corrugated Industry

Paper Presented at CORRUPACK SUMMIT 2010 at Hyderabad

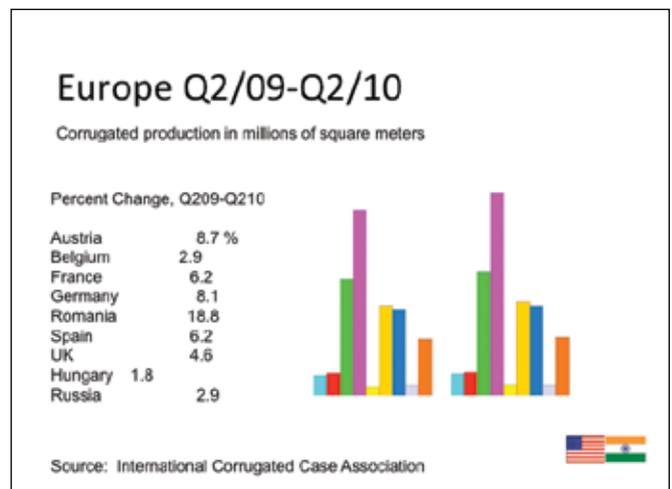
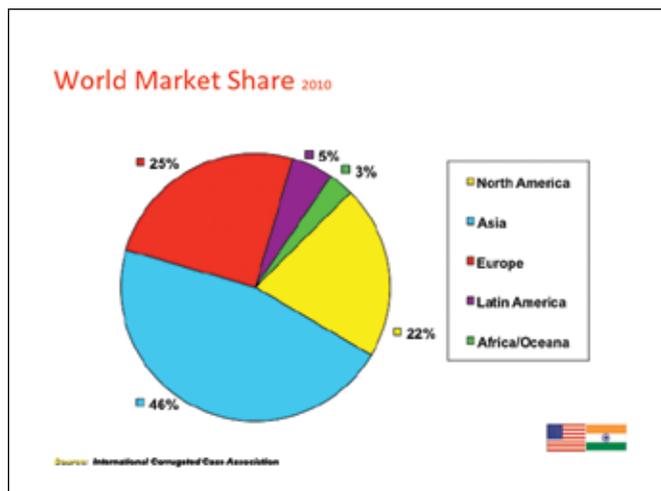
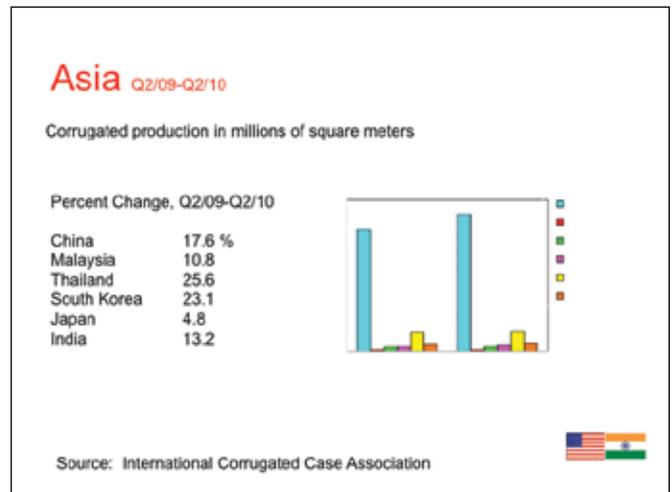
How independent companies are leading the way to a more profitable future

James E. Haglund
 President
 Central Container Corporation
 Overseas Director, AICC

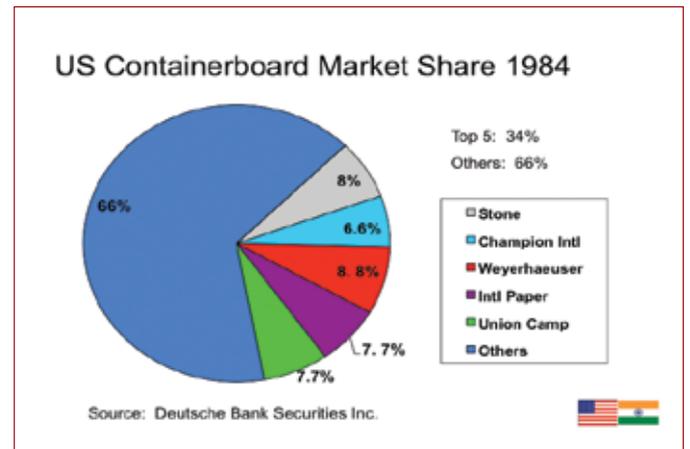
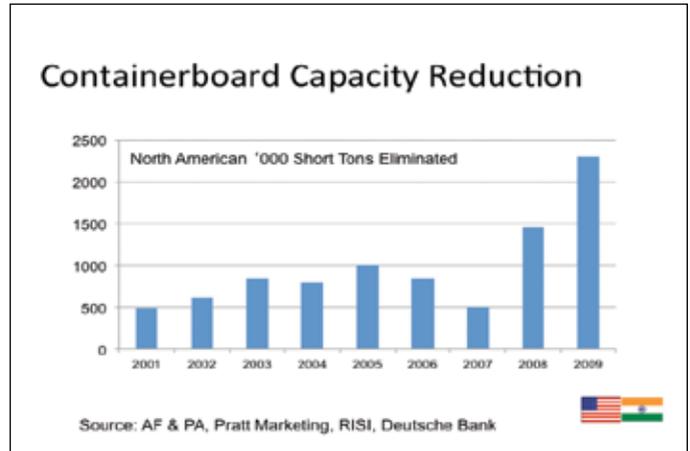
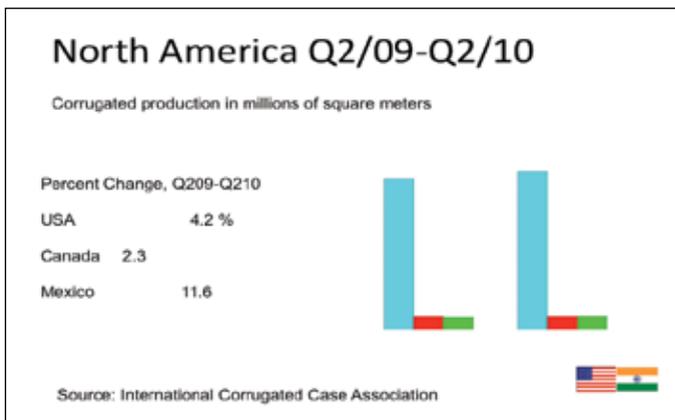
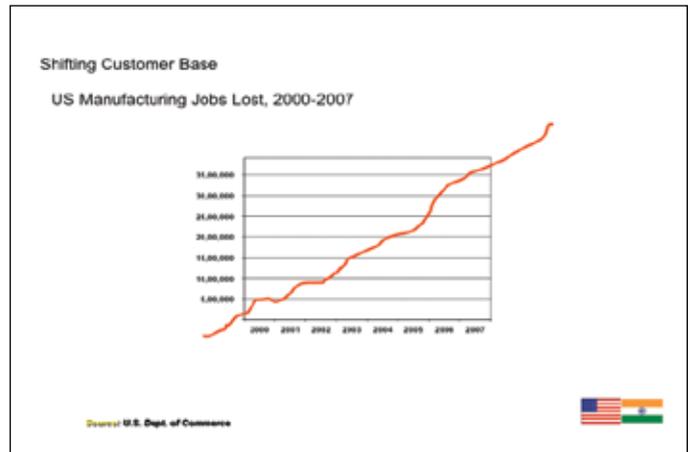
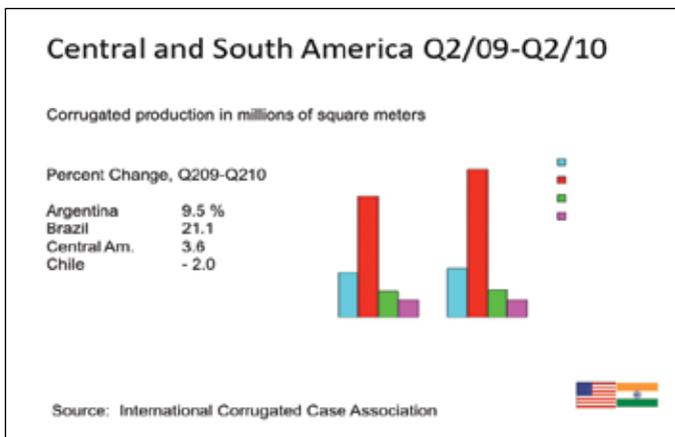
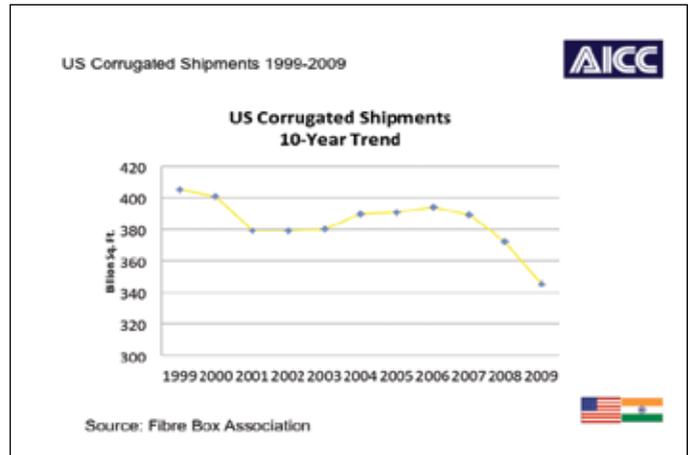
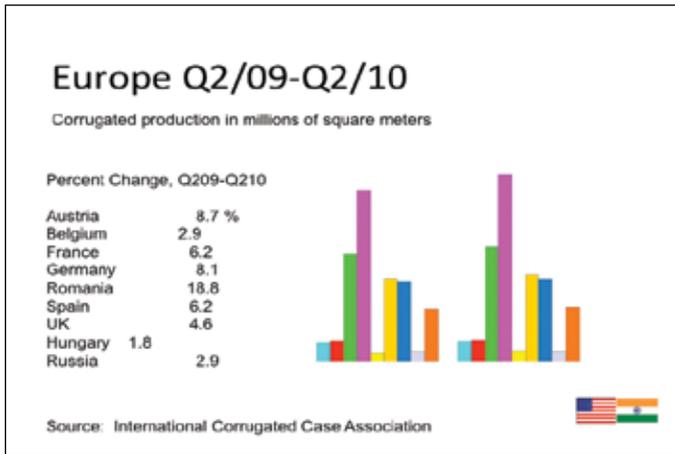


Overview

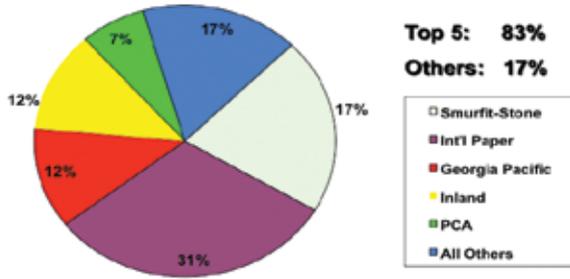
- The Global Picture Today
- Forces of Change in the Industry
- Effects of Change in the Industry
 - Capacity Changes
 - Raw Material Supply
 - Sustainability and its Opportunities
- How Companies are Responding
- Questions

- Cont. on Pg. 111



US Containerboard Market Share 2010



Source: Deutsche Bank Securities, Inc.



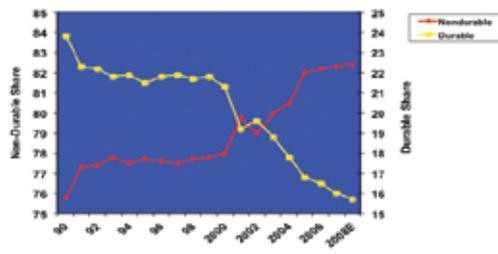
Displays & Promotional Packs



Value-added, not just "brown"



Opportunities



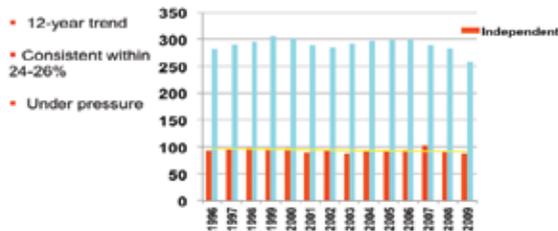
Source: RISI, Corrugated End Use Market Study



Displays & Promotional Packs



Independent Market Share 1996-2009



Source: Fibre Box Association



Sales Growth 1974-2009

Compounded Annual Increase/Decrease in Sales

Last 3 Years	9.06%
Last 5 Years	11.60%
Last 10 Years	5.23%
Last 34 Years	7.87%



Manufacturing

- State of the art corrugated converting
- From small to large format die cutting and label laminating, a full range of standard styles
- Totally modern warehousing & distribution
- 4500+ pallet dedicated for customer goods and stock products
- 24-hour delivery



Sustainability a big issue with large retailers

Walmart's 7 Rs

- Remove Packaging:** Eliminate unnecessary packaging, extra boxes or layers
- Reduce Packaging:** "Right-Size" packages and optimize material strength
- Reuse Packaging:** Design for multiple use
- Renewable Packaging:** Use materials made of renewable resources; select biodegradable or compostable materials
- Recyclable Packaging:** Use materials made of highest recycled content without compromising quality
- Revenue:** Achieve all above principles at cost parity or cost savings
- Read:** Get educated on sustainability

Central's Lean /Green Initiatives

- Hired full time Lean Enterprise Manager
- Wall-to-wall continuous improvement
- Activities documented in management review
- Mentoring and training on lean tools
- All employees - administrative, shop, managers
- Extending lean training to supply chain
- Awarded 2007 incumbent worker training grant
- Awarded 2008 GAP funding to implement green supplier network



Cost Savings Realized First Two Years

- Developed visual work instructions
- Recycled 7,000,000 lbs of corrugated
- Reduced paper by "Green E-Link" purchase orders (48,200 transactions)

Total Green Waste Savings	\$ 304,134
Employee Cost Savings	\$ 158,936
Time Recording Window & Signal	\$ 47,785
Afternoon Break Elimination	\$ 57,650
TOTAL	\$568,505



Why Should We Do This?

(sounds like an expense)

- **The Right Thing to Do**
 - ✓ Ethical responsibility for the future

"We did not inherit the earth from our parents, we are borrowing it from our children"

Native American Proverb

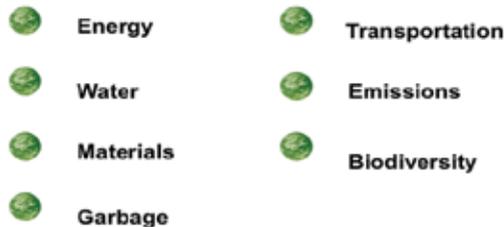


Green Awards and Certificates

- 1st Minnesota Company – Member of Green Supplier Network, 2008
- Enterprise Minnesota "Most Dedicated Green Business", 2008
- AICC Innovation Award "Lean and Green", 2009
- National Institute of Standards "Sustainability Excellent Award", 2010
- Total Energy Concepts "Certified Green Facility", 2010
- Learn by Doing – Leads to Opportunities



A Green Value Stream has Many Parts



Source: Brett Willis



Universal Law of Business Success



**If you're not UNIQUE
you better be CHEAP!**

Cost Savings Realized First Two Years

- Energy: installed condensers on 12 motors – improved power factor 81-99%
- Reduced 21,000 sf of floor space by consolidating folding carton operation into corrugated facility
- Reduced distance traveled by fork trucks 782 miles 3,088 pallets by increasing unit height
- Removed 1,100 unnecessary items
- Improved Safety by reducing clutter – 5S, visual workspace



"To Improve it Takes Change.

When the rate of change outside your organization exceeds the rate of change inside, the end is near!"

– Jack Welch, former CEO of General Electric



German Packaging Institute awards

In the course of a celebration gala on the evening of the 9th November, the competition for the German Packaging Award 2001 came to an end. The gala was hosted by the German Packaging Institute and awarded 21 innovative packaging solutions considered to be economically, technically, aesthetically and ecologically trend-setting. Among the award-winning submissions were user-friendly closing or sealing systems, new solutions in the field of migration and food safety, innovative materials and material combinations, further possibilities for branding and packaging design, processes to conserve resources, dosage and security systems, active and intelligent packaging as well as machine technology. The competition for the German Packaging Award has been held since 1963. It is an international competition and is under the patronage of the German Federal Ministry of Economics and Technology. Here are a few of the award winning displays

Fruit fresh + the innovative packaging solution

The fruit crate fruit fresh' made of corrugated cardboard, uses for the first time the hollow spaces between the corrugations to apply active materials, in this case all absorber. The shelf life of certain fruit and vegetables is profoundly affected by the formation of ethylene gas which, for example is produced by apples during ripening. The ethylene absorbing corrugated cardboard crate call to slow down the process of decay and reduce losses due to more rapid ripening. To make this active packaging a binding element

is applied to the corrugation cavities, the ethylene absorber applied to this in powder or granule form and covering paper put on top of this. The further production of the crate call carry on as normal. The compatibility with foodstuffs IS guaranteed.

Participant: SCA Packaging
Deutschland Stiftung & Co

Designer: Volker Fleischmann SCA Packaging
Deutschland Stiftung & Co Norbert Rodler
Fraunhofer IVV Freising

Manufacturer:
SCA Packaging Deutschland Stiftung & Co

User: SCA Packaging Deutschland Stiftung & Co



Drinks – Multipacks

The drinks multipack is characterised by its form and the integrated carrier grip. The possible LISCS of the integrated carrier grip for return to the POS is already known. What is new is the adaptation of the cardboard carrier grip which has only been possible so far in a plastic version. This carrier grip enables carrying of the drinks multipack above the bottle-top area and thus reduces the danger of consumer



injury. The drinks multipack is designed for the variants 4 x 0.33l bottles up to 10 0.5l bottles. Removal of the bottles from the pack is ensured with perforated access areas. The octagonal form on the one hand, and the push-down possibility of the carrier grip during storage and transport on the other hand, together make up the special features of this packaging. In this way both concept and construction have been focused upon and have been evaluated as innovative as well as advantageous for the consumer.

Participant: BayPack

Designer: Andreas Schuster

Manufacturer: BayPack, Türkheim

User: BayPack

Load-Carrying display NESCAFE 3 in 1 Stix

This display impressed the jury with its three-dimensional effect as well as its correspondingly adapted presentation of the product. The single packages are clearly visible, simple to take out and stably placed. The effect of the display remains even when the product is sold out. The processing was also graded well, as the display consists of only one material thus simplifying disposal in retail outlets.



Participant: SCA Packaging Deutschland Stiftung & Co

Designer: Katrin Hecht und Michael Hautz (Nestlé & Schokoladen GmbH), Nicolette Kemp and Jorg Dassow (SCA Packaging Deutschland Stiftung & Co)

Manufacturer: SCA Packaging Deutschland Stiftung & Co

User: Nestlé Deutschland - Coffee & Beverages

Outside-in display

The one-piece construction of this display enables a low-cost and efficient inline production as the body of the display and the back wall can be made from one piece. Due to the folding technique applied, only the outside wall of the display can be seen thus a printing of the inside wall is not necessary.

Participant: SCA Packaging Deutschland Stiftung & Co

Designer: Berndt Diethei (SCA Packaging Deutschland Stiftung & Co)

Manufacturer: SCA Packaging Deutschland Stiftung & Co

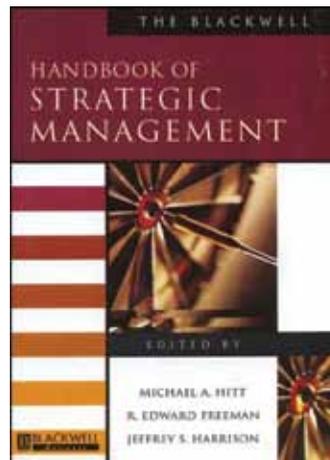
User: ZöllnerWiethoff Packaging South Asia Nov. 2011



Blackwell Handbook of Strategic Management

Edited by Michael A. Hitt, R. Edward Freeman and Jeffrey S. Harrison

In this major reference work, top scholars in the field of strategic management present major ideas and theories in the field drawing on their own research and special expertise. Offers complete coverage of the field of strategic management. Incorporates new ideas on strategy topics from leading scholars in the field. Edited by three of the World's leading management academics.



2012 TAPPI Best Practices on the Corrugator

2/14/2012 to 2/17/2012
TAPPI Training Room

By attending the TAPPI Best Practices on the Corrugator, a range of plant employees will learn how to achieve higher productivity, better product quality and waste reduction during one comprehensive course.

The TAPPI Best Practices on the Corrugator Course teaches participants how to understand each element within the corrugating process. They'll study the basics of how each component in the corrugator system works and how to run each component with optimum settings for peak performance. Both old and new equipment are covered.

Participants develop an understanding of the critical properties of the raw materials that are vital to guarantee acceptable quality board. Course instructors teach participants how the "Centerline Process" can be adopted in their plant to achieve a product that is consistent every day and on all shifts.

Participants will also learn the causes of excess waste and how to measure and eliminate this waste.

New for 2012!! Video clips will be used to demonstrate defects in the making—and measures taken to resolve the defects.

Contact: memberconnection@tappi.org

Product Profile

Material Management Solution by Intellisys

The system is able to receive automatically electronic delivery notes with full roll data preventing from manual entry errors and speeding up supply chain operations. Alternatively, mill barcode labels can be scanned to register rolls. At the same time, RFID on barcode technology tracks every roll event.

The system improves the efficiency of clamp truck operations providing accurate roll locations by providers, paper type, width, etc and consequently reducing the operator's dependency. Material requirements generation can be based on minimal stock levels, historic consumption and forecast projections. The splicing operation is automated providing precise paper quality for each order change, bridge control and end of roll splice. Traceability functionality provides exact and instant knowledge of roll lifecycle, paper consumption and generated waste.

Intellisys provides a high Return On Investment (ROI) ensuring the features

and functionalities are deployed to the best advantage.

The Intellisys Material Management Solution (MMS) provides complete real time management of materials and operations from roll reception to finished products. This state-of-the-art solution provides accurate real time stock information and full traceability all the way through the entire roll life cycle.

1) Roll Reception Module

Management of roll entries and electronic delivery notes from roll providers.

2) Roll Stock Module

Keeping up-to-date roll inventories in real time and avoiding rolls lost.

3) Clamp Truck Module

Automatic roll selection and location for clamp truck operators.

4) Roll Feeding Module

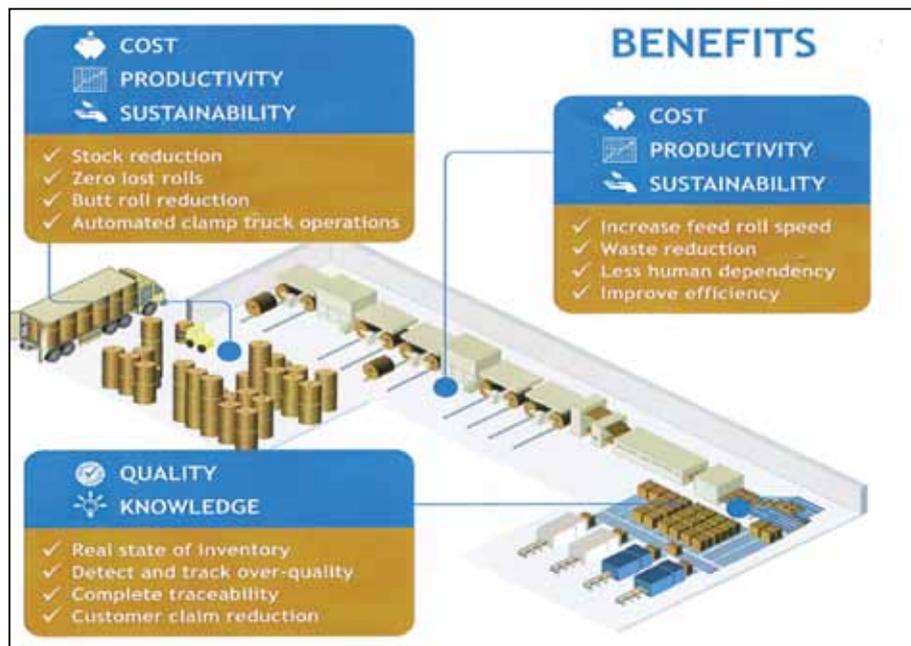
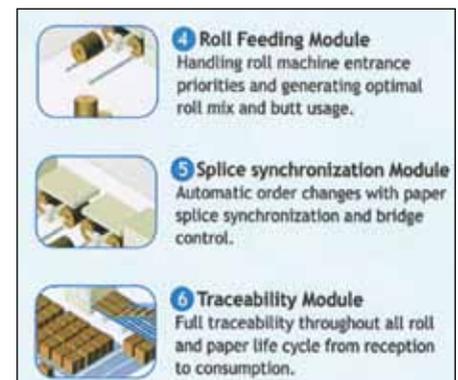
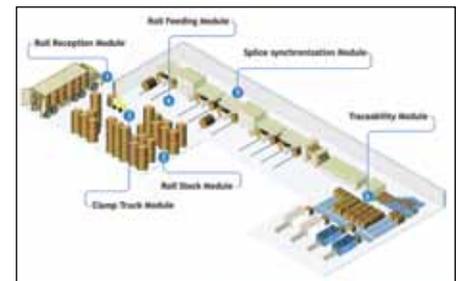
Handling roll machine entrance priorities and generating optimal roll mix and butt usage.

5) Splice synchronization Module

Automatic order changes with paper splice synchronization and bridge control.

6) Traceability Module

Full traceability throughout all roll and paper life cycle from reception to consumption.



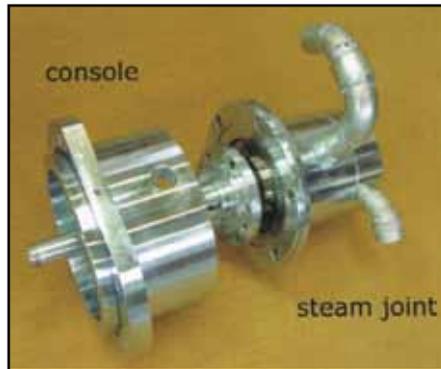
For more information:

sales@intellisys-corrugated.com
www.intellisys-corrugated.com

New Console – supported Steam Joint

Friese GmbH is world's one of the leading manufacturers of Corrugating rolls since more than over a decade. They have been offering the corrugating industry corrugating rolls with a special surface polishing on the Rockwelle (tungsten carbide) coating making the finish as smooth as chrome. These rolls are known for their outstanding performance. The performance of corrugating rolls is often affected by the condensate remaining inside. To overcome this problem Friese designed Controlled Condensate Removal System (CCS)

The condensate pipe is held by a support mounted in the shaft 2mm away from the roll's inner wall. At the same time anew concept rotary joint was designed to enable the proper assembly of such a device.



As claimed by the company these are the advantages.

Max performance of rolls throughout full production line as there is little condensate left inside. There is no need for the period of checking of the components, there is no need to change any parts during the rolls life.

Due to the vibration created due to corrugating rolls and pressure rolls



working together, the corrugating rolls cannot run correctly and results in loss of productivity and also affects the board quality.

To solve this problem, a special Internal Dynamic Damping (IDD) pressure rolls, the latest version of IDD can be installed in any single face. It is possible to retrofit the system in European, Taiwanese and American single facers.



TIPS FOR GOOD HEALTH

1. Early to bed and early to rise. Get up in the morning before one and half hour of sunrise.
2. Drink 2 -3 glasses of warm water with lime & honey.
3. Do not drink Tea/Coffee on empty stomach.
4. For healthy teeth, press top & bottom teeth, against each other while passing motion.
5. Fill the mouth with water and sprinkle cold water on the eyes to keep them healthy.
6. Clean the place below the tongue with thumb to avoid diseases of eye, ear, nose and neck.
7. Rub mustard oil on both legs and elbows before taking bath to keep the eyes healthy. Walk on green grass without shoes.
8. Brush teeth with Babool or neem stem in the morning and clean the teeth in the night before going to sleep.
9. Take bath with water mixed with lime to remove bad smell of skin.
10. Early morning do Yoga / Jogging / Pranayam / Walking etc.
Regular Pranayam can cure all diseases and keep the body healthy. It gives peace to mind and increase stamina.
11. Breakfast should be light with sprouted grains, fruits, daliya , etc.
12. Sit in Vajrasan After Food For 10 Minutes and little walking after dinner.
13. Drink 8 to 12 Glasses of water every day.
14. Always keep the spine straight while sitting
15. Sit on the floor and get up without any support.
16. Keep the nails small and clean. Do not cut nails with teeth.
17. Do not drink water while taking food. Drink before half an hour or after half an hour. Drink water slowly drop by drop.
18. Be Vegetarian. Light & easy to digest food to be taken only when hungry. Eat slowly. Bite as many times as possible.
19. Avoid fast food, cool drinks, smoking, alcohol and non-vegetarian food.
20. Eat Less, eat for living. Do not live for eating. Half portion of stomach to be filled with food, quarter portion filled with water and quarter portion to be left for air/gas.

*Contributed by: Mr. Santosh Lath
To be continued.....*

Events

Intelpack

23-25 Feb 2012

Venue: Bombay Exhibition Centre(BEC)
Mumbai, Maharashtra, India

The event will offer the perfect platform to explore huge business potential in the country. Moreover, it will also serve as the grandest networking platform for all the major players and decision makers. Intelpack will facilitate the process of direct selling to the trade buyers. Latest technologies and products will be displayed at this three day exhibition.

Over 250 exhibitors and 6000 visitors are expected to visit the event.

More details From : Intel Trade Fairs & Expositions Private Limited

Pharmapack Expo

Date: 23-Feb-2012 to 25-Feb-2012

Venue: Bombay Exhibition Centre(BEC),
Mumbai, Maharashtra, India

Pharmapack Expo is the most cost effective marketing opportunity and is also the best opportunity to meet senior buyers and decision makers from all facets of the user industry. This is your chance to meet the people that matter most to your business - all in one place, all at one time.

Processing & Packaging Expo

Date: 24-FEB-2012 to 26-FEB-2012

Venue: Pragati Maidan, New Delhi, Delhi,

Processing & Packaging Expo will be an ideal platform for all kinds of technology suppliers, specially in processing & packaging machinery & inputs, in the changed retailing atmosphere.

INDPACK 2012

15th-17th March, 2012

Maniram Dewan Trade Centre, Guwahati

For Further information log onto:
www.indpack.org

SinoCorrugated South 2012

April 11 to 13, 2012

Guangdong Modern International
Exhibition Center in Houjie, Dongguan



Right now, the global economy is recovering steadily. The preliminary findings of the OECD's 2011 Economic Outlook report show that six major developed economies, excluding Japan, realized stronger-than-expected economic growth, an estimated yearly increase of 3%, in the first half of the year. As the recovery of the global economy continues, so demand for corrugated packaging grows.

The corrugated industry has entered a new stage of development – one filled with numerous opportunities and potential. According to statistics from the World Packaging Organization, the total output value of the world's packaging industry was USD 563.8 billion in 2009, of which USD 216 billion, or 38%, came from the paper packaging market.

SinoCorrugated South 2012, organized by Reed Exhibitions, will reflect this shift, and serve as a convenient, highly efficient, channel for communication among exhibitors, visitors and buyers.

The exhibition will span an area of 45,000 sqm and attract over 600 exhibitors. An additional 1,200 corrugated manufacturing machines and 1,000 related consumables will be featured. Outside of the displays will be a further 10+ technical presentations and

industry exchange meetings. Altogether, 21,500 local and international visitors and over 30 industry associations are expected on-site.

SinoCorrugated South 2012 will attract globally renowned suppliers of corrugated cardboard processing machinery, carton processing equipment, consumables and spare parts. The event will display the world's most advanced carton and cardboard manufacturing devices, as well as related, cutting edge consumables. Well-known companies like BHS, FOSBER, DONGFANG PRECISION, MING WEI, JUSTU, KAITUO-NC, SINOVAN, KESHENGLONG, K & H, MARQUIP, ETERNAL, Tsai Yi Group, TAN CHEN, etc. will display their newest manufacturing and processing solutions on-site. Reed expects most exhibitors to feature a large range of machines live. Several pieces of equipment that are rarely seen outside of the companies' plants will be prominently displayed in exhibition booths. On-site demonstrations will give visitors a real sense of the production plant, and allow them to see how effective and high in quality the equipment is.

Reed will hold a range of exciting, complementary activities around key issues in the corrugated box industry. Every aspect of corrugated box production - from management training to symposiums on standards of finished products, to lectures on how new technologies are delivering crucial solutions - will be covered. The activities will enable attendees to grow their share of the market by helping them to access the latest information; better understand the market and its development trends and uncover important opportunities, while touring the exhibits on-site. Through SinoCorrugated South, participating companies will also be able to access an important channel through which to share details of the industry and study market trends.