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We're Not In Kansas Anymore: Global Cultural Trends Influencing Absorbent Product Markets

Elizabeth Hanson, *Marketing Technology Service, Inc.*

As absorbent product markets in developed countries mature, manufacturers look toward less-developed regions for market growth. These regions will provide 98% of the worldwide population growth that occurs between 1999 and 2015. It may be a temptation to treat these new markets as if they are the same as early markets in the developed world, with differences in demographics. However, cultural differences must also be considered, such as access to running water and toilet facilities; childbearing patterns and childrearing practices; attitudes towards disposables and availability of disposal methods; impact of religious beliefs; and others.

This paper presents some cultural considerations relevant to the less-developed regions of Africa; Asia and Oceania; and Latin America and the Caribbean.

A New Three Layer Performance Coverstock System

Philippe DeMunter, *Libeltex BVBA*

- To be Announced -

Delivering Care to the Adult Incontinence Market: A Mail Order Overview — 20 Years of Change

Bruce Grench and Mark Nedvin, *HDIS*

Home Delivery Incontinent Supplies (HDIS) last presented at Insight 1989 as a startup mail order provider for incontinence products to the at-home consumer. Much has changed since then with more product choices, better technology and discriminating consumers in today's market. This paper presents some insights into consumer purchasing data and the importance of gathering intelligence "under the radar".

Creating and Managing the Product Development Process – From Concept to Implementation

Donald A. Sheldon

I will discuss where new product ideas come from, how to organize them into a rational fast-paced controllable process, and how to manage multiple projects over the longer term. This process was created and implemented with the support of the Covidien Retail Senior Executives. The result was 23 on-time within-budget major new project initiatives, resulting in a vitality index of over 50%. We also increased our product margins and provided significant cost savings, while minimizing capital requirements.

Flush with Success, New Dispersible Toilet Care Wipes Lead the Charge

Phillip Mango, *Phillip Mango Consulting*

The market and the dispersible nonwovens which address it will be profiled, from Kimberly-Clark's "triggerable" latex bonded airlaid, to Ahlstrom's special Hydraspun™ , to Procter & Gamble's newest dispersible, biodegradable composite. New developments in the market segment as well as new products in development will also be discussed.

"To Infinity™ and Beyond!" - Absorbent Core Design on the Bleeding Edge

James P. Hanson, *Marketing Technology Service, Inc.*

MTS's early laboratory- and people-testing results on the new Always Infinity™ feminine pad suggest that it will be a winner when launched into the market this fall. The new design uses a foam absorbent core with two cell sizes instead of conventional absorbent materials. The performance and construction of this unique design will be detailed and compared to Always Maxi and UltraThins. Additionally a pad construction similar to Infinity™ will be demonstrated using an advanced design airlaid core material.

Tiny Fibers — Big Opportunities: Microfiber Nonwovens from Polymer Films

Dr. Mario Perez, *3M Company*

Very fine fibers, 0.01 to 10 microns, are formed from polymer films or other material forms where a high surface area and a minute fibrous structure coexist. The method of releasing or mining these micro-fibers from precursor films entail the application of fluid jets or ultrasonically induced cavitation. Of great advantage are molecularly oriented polymeric precursors which can be transformed into stiff microfiber mats, cloth-like materials, or structures with a highly enhanced surface area. These microfibers feature high fiber strength and stiffness. Their nonwovens have high acoustical and thermal insulation power, moisture imperviousness, breathability, softness, traction, cleaning power, high surface area, and printability. Great design flexibility is an inherent property of these nonwovens.

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Cost Savings Through Highly Efficient Drying Systems

Christian Haas, *STRAHM Hi-Tex Systems AG*

Dealing with rising energy costs while being stuck with our existing, non-energy-efficient systems is not only a reality for those of us driving cars today; it also has a great impact on those who are operating heat treatment plants for thermobonding or drying applications.

While there is yet to be a major breakthrough for improving the efficiency of an automobile we already own and operate, there have been breakthroughs in energy performance in drying and thermobonding systems that can be applied to both new and existing ovens.

The latest generations of dryers and thermal bonding ovens come equipped with an energy saving and recovery system called EnRec. The system allows for not only direct reduction of the drying or thermobonding energy, but also the recovery of energy that is currently lost as exhaust in ovens today. While we cannot overcome inefficient oven design of older ovens and how it effects direct energy consumption, we can improve the efficiency of an existing oven with our energy recovery system.

Energy assessments on existing systems provide a solution that will result in savings of up to 50%.

Cellulosic Fibers - Current and Future Activities

Nick Hrinko, *Lenzing Fibers Inc.*

An overview of regenerated cellulosic fibers: their properties, recent performance and a prediction for the future, including consumer trends, innovation and products.

Why3K? — Speed Barriers Shattered!

Michael K. Jelinsky, *Martin Automatic Inc.*

Process speeds continue to increase relentlessly. Nonwoven material structures and equipment are continually challenged to do more with less. Successful processes overcome these challenges by running faster, more reliably and with reduced waste. Earlier this decade speeds of 2,000 feet per minute seemed improbable, there are processes today that run that fast. Now a top end speed of 3,000 feet per minute is the new benchmark. This paper will cover the challenges encountered when running revised web structures at higher speed, and highlight new commercial technology available to address these challenges.

Pulpless Cores for Diapers Revisited

Donald C. Young, *Marketing Technology Service, Inc.*

Last year's discussion of advanced absorbent core designs for diapers and training pants included performance and comparative economics of filament core non-wood pulp versions against conventional designs. This presentation examines more new designs entering the market, including the newest P&G insert diaper, Change 'n Go, probably the most complex diaper system ever sold. Design details and mannequin testing performance will be covered, including comparative economics of these new market offerings in light of today's material costs. The economics of airlaid diaper cores will be further examined.

Drying Nano particles: an Exploding Event!

John M. Tharpe, *Marion Engineering & Technical Services, Inc.*

This presentation discloses the nature and composition of a newly manufactured Nano-sized Magnesium Hydroxide particle; along with an explosive method and apparatus for drying, while retaining the Nano platelets.

Hot on the Trail of SAP

Walter Becker, *Niederrhein University of Applied Sciences*

A six pack of SAP will be compared together with the help of some physical chemistry methods. Will there be differences in relevant criteria? Is there a usp of pure SAP or are SAP a commodity? Should you look more to other criteria like differences in price, after-sales service, reliability, security of supply, trust in your business partner and so on?

PLA Spunbond — Gateway to the Future

Stephen Chester, *Fiberweb*

The concept of sustainable development has evolved significantly over the years. In particular, the use of sustainable raw materials in packaging and consumer products has recently taken on increasing importance in the eyes of consumers as well as large retail outlets. This is certainly true of nonwovens and the products containing them such as diapers. Fiberweb has answered this demand in part by developing and commercializing the first spunbonded nonwoven containing Polylactic Acid (PLA), a polymer derived from 100% renewable resources. This paper will summarize the processing challenges that were overcome to commercialize this product as well as typical physical properties of spunbond fabrics containing PLA.

Flushable Wipe Technology in Light of the New Nonwoven Flushablity Guideline

David Powling, *Kimberly-Clark Corporation*

Consumer demand for the “Convenient, Confident, Clean” provided by personal flushable moist wipe products, has fueled a 20+% annual category growth rate for the past several years. With penetration and usage rates still relatively low, opportunity for further growth remains. Increases in market penetration means that personal wipes will become a more substantial part of the solids in waste water streams and attract increased scrutiny as to their potential impact on treatment systems. To help navigate this complicated environment, the consumer disposables industry recently published a guideline to help define flushability and methods to measure it. This presentation will discuss the impact of the guideline on flushable wipe technology, a comparison of offerings currently on the market and future technical innovation needed to deliver optimal in-use product performance, flushability and cost.

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Styrenic Block Copolymers for Elastic Fabrics and Yarns

John Flood, *Kraton Polymers LLC*

Styrenic block copolymers (SBC) are high performance thermoplastic elastomers engineered for a wide spectrum of end uses. The versatility of SBC polymers is due to their distinctive styrenic block copolymer molecular structure, which can be precisely controlled and tailored to perform in specific applications. The unique structure of these polymers impart flexibility and elasticity to a wide range of personal care applications including disposable diapers, adult incontinence products, wipes, and many other industrial film and nonwoven products.

New high melt flow SBC's have been designed specifically for continuous yarns, spunbond and meltblown nonwoven applications. The grades developed are to be used as the core in bicomponent fiber structures to produce elastic and strong yarns and nonwoven fabrics. The materials have excellent process stability and do not require drying. They are compatible with polyolefins and can also be combined with other materials in multi-layer structures. The SBC based spunbond nonwovens are elastic and strong. In addition, SBC based nonwovens are very soft, have a high elongation at break (100-500%), good set and almost isotropic properties. The nonwoven properties are very stable over time.

Pick & Place Application Concept - Don't Lose Control in Your Discrete Material Application!

Daniele Benini, *GDM SpA*

This paper presents technology based on articulated mechanical devices designed for transferring, acceleration, translation (lateral or lengthwise), rotation and discrete material phasing on a continuous web.

This kind of device enables the picking phase speed and position to be modified, ensuring synchronisation with the line acceleration of the converter before the material used is placed onto the continuous web in the Place phase and applied (the synchronisation phase) at a predefined distance depending on the length of the product.

Just before the Place phase, various conveying wheels can be interconnected in between to create a variety of movement combinations to ensure the position of the material used is constantly under control. This technology facilitates the application of discrete materials or special operations (folding, cutting, sealing) onto the product at high speed [up to 1000 products (baby) per minute] regardless of the kind of raw material used.

Examples where this technology proves valuable include:

- front and back elastic strips
- no-waste symmetrical elastic strips
- elastic strips for Pull Up products
- line-produced elastic materials applied in cross direction (i.e. elastic waist band)
- lengthwise and crosswise folding (folding system)
- sealing and cutting (pick+seal+cut+place system)

Challenges for Household and Personal Care Wipes

Mary Tabion, *Euromonitor International*

This paper will cover recent market trends under global economic stress, decoupling wipes and luxury/expensive perceptions, successfully increasing market share by segmentation – success stories and failures, profiting from safe and healthy functionality of consumer wipes.

The Tortuous Path of Intellectual Property Management (in the Aftermath of Paragon Trade Brands)

Rick Jezzi, *A.D. Jezzi & Associates, Inc.*

It has been ten years since the landmark patent litigation case between Procter and Gamble and Paragon Trade Brands. It becomes important then to review the lessons learned, as well as how to manage through the maze of intellectual property in the personal care absorbent industry in the aftermath. This paper will present a brief review of the nuances of patent infringement litigation and the consequences that they can result in, as well as provide an update on some of the more recent patents being disputed.

Just How do You Know if There is Enough SAP in a Wet Diaper?

James C. Robinson, *BASF Corporation*

Troubleshooting performance issues with hygiene products usually involves testing the products for the performance parameter of interest and then checking the superabsorbent (SAP) content to make sure that the correct amount of absorbent is present. Common SAP testing involves the use of sodium-ion meters to measure sodium content related to the SAP. Unfortunately, saline is used for performance tests, forcing the scientist to use one set of products to test performance and another set to test SAP content. This approach makes it difficult to assign cause and effect without making some difficult assumptions. At BASF we have developed an applications test that will allow the customer to directly analyze performance test products for SAP content, allowing more certain correlation between that SAP content and the performance measurement of interest.

The Vacuum-Dry Diaper, The Diaper that Likes to Stay Dry

Carlos E. Richer, *Richer Investments*

Finally a new kind of disposable diaper that actually does what every diaper should have done from the very beginning: to make sure that the user of the product stays dry and comfortable. This paper takes a close look at this new patented technology, explaining the use of the "salt valve," how it is made, its cost advantages and skin health benefits. The diaper requires no SAP, no batteries, no motors or electronic sensors, and works much better than anything available today. The diaper will be compared to regular commercial products, and even the new Pampers product currently being pilot tested. Several versions of the invention, including applications for sanitary napkins and tampons are presented with some hand-made prototypes of several versions of the invention to demonstrate its simplicity and ease of operation.

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An Overview of Elastic Action in Hygiene Products

Pricie Hanna, *John R. Starr, Inc.*

The penetration of elastic components in hygiene absorbent products continues to increase worldwide as elastics enhance body-fitting aesthetics and performance. Hygiene products with the most effective elastic materials are gaining market share as seen in the growth of pant products and the expansion of the premium diaper segment defined by elastic components in many regions. A new generation of elastic material alternatives is available offering a range of stretch and recovery levels and lower costs. This presentation will provide an overview of the latest market and technical developments in elastic materials and hygiene product components.

The Shaping of the Global Polypropylene Industry by Higher Energy Prices

Bob Dennett, *CMAI - Houston*

Higher energy prices have changed the world and have impacted the polypropylene industry, especially in North America. The industry will be reviewed with emphasis on feedstock issues, demand growth, capacity expansions, trade pattern changes and business cycle conditions and margins.

Whether Rocket Ship or Roller Coaster, Fibers are in for the Ride

Karen Jones, *CMAI*

Escalation and volatility in energy prices have had a dramatic effect on fibers. The recent impact of energy on raw material intermediates and fibers will be reviewed and the outlook for fibers for nonwovens will be presented with a focus on supply dynamics, demand growth trends and changes in trade flows.

Urinary and Fecal Incontinence: Prevalence, Trends and Treatment

Ruth Zielinski, *University of Michigan Pelvic Floor Research Group*

Currently there are an estimated 13 million people in the U.S. alone that suffer from urinary incontinence. Urinary incontinence is defined as: "involuntary loss of urine that is a social or hygienic problem." As the population ages and rates of obesity rise, this number is expected to increase accordingly. Incontinence costs in the U.S. alone are 32 billion dollars annually.

The greatest risk factor for incontinence is being female; 85% of the incontinent population is female; 25% of reproductive age women have urinary incontinence. There are essentially two types of urinary incontinence – stress and urge incontinence – although many people experience both.

Although treatment options are available, the majority of women (and men) are too embarrassed to mention this problem to their healthcare provider, and providers seldom ask. Furthermore, treatment options have limited success, medications have side effects, and surgery for incontinence has a high failure rate and is not free of risk.

There is ongoing research in the area of both fecal and urinary incontinence that will hopefully bring about better prevention and treatment modalities. Until then there is an urgent need to raise public awareness of the issue of incontinence so that women (and men) know that they do not need to suffer in silence.

Fecal Incontinence: The New "Secret Problem"

Elizabeth Hanson, *Marketing Technology Service, Inc.*

In 1984, Marketing Technology Service published the results of a 1983 survey of residents of Battle Creek, Michigan asking them to respond to questions about urinary incontinence. At that time, two basic incontinence markets were defined: institutional (dominated by P&G's Attends) and consumer (dominated by K-C's Depends). The MTS report attempted to further segment the market by gender, physical symptoms (frequency and volume), and physical limitations in order to better design products and marketing efforts.

Today, fecal incontinence is increasing in frequency, and yet knowledge, attitudes, and available treatment modalities suggest that the medical and absorbent products industries are where they were in the early '80s with urinary incontinence. This market could be very profitable for companies that apply what we've learned from the urinary incontinence market to the fecal incontinence problem.

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