

## The Three Rs

Recreation, Resources and Retirement  
- The Role for Technical and Nonwoven Textiles

30th & 31st August 2007

Country Comfort Novell Tree Inn  
Albury, NSW - Australia

Recreation



Resources



Retirement



## SPEAKERS

### **Mr Ian Butler: Worldwide Prospects for the Nonwoven Industry & India – Nonwovens Outlook 2007-2012**

The worldwide nonwoven industry has grown steadily for more than the past decade about 7.5% per year in tonnage. While the nonwoven industries' growth in North America (US & Canada), Europe and Japan have slowed with maturity, but, these countries' growth still remain in the 5% range per annum. A significant portion of worldwide nonwoven expansion is due to the rising demand for these materials as emerging economies expand. This presentation will review the world's nonwoven growth in several key and emerging markets.

In final, the presentation will focus on the opportunities present in the rapidly emerging nonwovens industry in India. The most significant of the disposable and durable nonwoven markets are identified and their current size (2007) and growth rate in tonnes are provided with a five-year forecast through 2012. The factors driving the growth will be discussed. India's nonwoven consumption in 2007 is broken out by nonwoven technology in tonnes and a forecast is provided through 2012. The total volume of fibres and spunlaid resins are provided.

**Mr Adrian Trioli: Intellectual Property Rights – Why Are They Important For The Technical Textiles Industry?** An overview of intellectual property rights, including patents, trade marks, designs, trade secrets, copyrights and why are those rights important to the technical textiles industry.

### **Mr Gerard Murphy: Composite Materials Used in Recreation by Retirees**

This presentation will create an awareness of the current and future uses of textiles in the production of composite products that will be used or consumed by retirees in Australia, covering the following:

- Who the retirees are - % of population 55 yrs+;
- How they use or consume textiles in composite products;
- Which textiles they use;
- The effect on the environment in manufacturing these textiles;
- Their effect on the economy;
- Is it commercially attractive to pursue the manufacture of these textiles?
- Australian Bureau of Statistics data showing that the trends are real;
- SWOT analysis – Graph or matrix to display options and strategies.

### **Mr Chris Hurren: Sol-gel Coatings, Functionality for the three R's**

Since the early 1990's there has been a lot of interest in sol-gels. In recent years this research has started to focus on textile applications. Sol-gels can be employed to impart functionality on a surface. These can include self cleaning, UV protection, antimicrobial, colour, photochromatic effect, increased cell growth and flame redundancy. These functional finishes will be an important property in textile items used in recreation, resources and retirement. This presentation will describe the chemistry of sol-gels along with a look at some of the functionality that they can provide. It will also include case studies into specific applications for sol-gels under research at Deakin University.

### **Mr Tshun Thart Chan & Dr Niall Finn: Degradation of Textile Covers for Anaerobic Ponds**

The Western Treatment Plant at Werribee utilises floating membrane cover at its anaerobic ponds for its initial treatment process. These covers allow compliance with EPA Victoria license in odour control and allow the harvesting of combustible gas. There are three such covers in the plant which consist either of High Density Polyethylene, Ethylene Interpolymer Alloy or Reinforced Polypropylene. Throughout the years, Melbourne Water with the assistance from CSIRO has undertaken numerous material testing to better understand the failure mechanism of these covers. The purpose of this paper is to summarise the results of the material testing carried thus far.

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### **Mr Michael Coates: Measurement of Resource Efficiency in Manufacturing**

The efficient use of resources is essential for sustainable manufacturing, and is a pillar of Lean Manufacturing. Resource efficiency is simply a measure of business inputs less business outputs – the rest is waste.

INC Corporation participated in a Sustainability Victoria benchmarking project, through which waste measurement tools were developed.

This presentation focuses on operational activities, where overall measurements of resource efficiency are seldom used. It has been generally assumed that there is a degree of “unavoidable” waste in manufacturing processes. However a methodology is proposed for measurement of total resource efficiency at the management accounts level and at lower, more detailed levels.

Resource efficiency measures published on the INC intranet allow employees to monitor their performance and to participate in waste reduction.

### **Ms Vanessa Dwyer: Evaporation Protection of Water Resources**

The future of water availability and assuring the quality of this water has become one of the major environmental issues in recent years. The reduction of water loss through evaporation and seepage in our storage systems is a key element in any water management strategy.

The particular shading system being discussed uses a double layer woven fabric with open mesh sections allowing rainwater to enter the basin, whilst significantly reducing water loss through evaporation. The system has a unique installation method, as the double layer of fabric allows suspension cables to be threaded through the fabric, negating the need to have poles in the basin itself.

The environmental benefits of this system will be discussed and compared to other systems available.

### **Dr Andrew Poole: Next-to-skin Wool Garments for Preventing Skin Tears**

The skin of elderly people is easily damaged. The bumps and scrapes of everyday life can tear the skin, creating open wounds that are slow to heal. New protective garments are being produced using fine Merino in a fabric construction that imparts high stretch with low power. The garments are highly conformable without compressing the skin and are easy to apply. The garments have been successfully trialled in nursing homes and are awaiting clinical evaluation. The global need for such garments is large with over 40 million people aged 80 years or older in the more developed countries of the world.

### **Dr Peter Cookson: Medical Applications of Fibres and Textiles**

The latest developments in ‘medical textiles’, a term that covers a vast range of products and structures in the medical/hygiene sector, are the subject of this presentation. Fibre-based articles used in first aid, the clinical treatment of a wound or medical condition (for example surgical gowns, wound dressings, sutures, blood filters and dental products), as well as hygiene products (which deal with the absorption of bodily wastes), are included under the heading of medical textiles. The buoyant global demand for ‘medical textiles’ will continue to rise as populations in developing countries increase, and as populations in developed countries age.