



SLTC: South Africa Section 58th Annual Convention

The 58th annual convention of the SLTC, South African Section was held 5-6 June 2008, near to Johannesburg. Approximately 70 delegates attended the meeting, mainly from South Africa and adjacent countries, but delegates were also present from Germany, UK and Brazil.

The theme of the presentations was "Back to Basics", and all of the papers provided focus on fundamental issues. The objective was to attract both SLTC members and role-players from industry, to stimulate thoughts and ideas, and to discuss issues that impact upon the leather sector. Fourteen papers were presented in total, covering a full spectrum of leather-related technology.

There were two guest speakers and each gave two papers. The first, by John Basford, followed the development of leather making technology through the beamhouse over the last 50 years based on his observations and experiences. This was a particularly crucial phase for the leather industry as during this period it evolved from a craft and skill base into an industry underpinned by advanced chemical products, control systems, and sophisticated plant and equipment. In the second paper, the methodology needed to produce soft leathers consistently was discussed. In particular the focus of this paper was upon the preparation and performance of fatliquor emulsions.

The second speaker was Richard Daniels, technical editor of *World Leather*, who described the role of reedbeds for treating tannery effluent. Detail was given of the way that reedbeds work, how they are made, how they are managed and the benefits that they provide. This information was based on findings from both pilot studies and the subsequent installation of five major reedbeds. In a second paper the effects of salinity on crop irrigation at levels typically generated by tanneries were presented. The acid-salt pickle/tanning operations were then considered, with an overview of techniques aimed at reducing salinity arising from this process. It was stated that there was no single solution to the problem, but it was believed that salinity could be dramatically reduced through a combination of proven technologies that were already available.

A new and evolving technology developed to upgrade leathers was described by Dr D. Tegtmeyer (Lanxess). This concerned the penetration of thermo-expandable microspheres into the more open-voided parts of the leather structure and blood vessels during the retanning process. When the leathers were either sammed or dry, these micro-spheres could then be expanded (up to 40 times in volume) by the application of steam in a newly developed machine. The outcome was said to be an elimination of veininess, a reduction in looseness and, if required, an increase in substance.

A new and innovative approach for rationalising beamhouse processing was considered by Dr Hermann Birkhofer. This involved an alkali unhairing using 1,4-



Guest speaker: John Basford

dimercapto-butane-2,3 diol (DMB) in combination with a specific enzyme, hence the possibility of a lime/sulfide-free unhairing system. It was emphasised that at this stage DMB cannot be created on an industrial scale due to the high cost of manufacturing plant. However, the technology offers clean and sulfide-free by-products from leather manufacture. In particular proteins can be acid-precipitated from effluents as potential by-products as opposed to remain as soluble components for effluent treatment.

In the paper "Solid chrome wastes - from cost to cash generator", ways were considered where chrome-containing shavings and trimmings could be usefully employed, as opposed to incurring costs as waste. It was viewed that innovative processing could produce chromium compounds in a form that could be used for tannage, and protein hydrolysates. It was stated that these hydrolysates could be used as fillers in leathermaking, but also in other important areas such as animal nutrition and cosmetics.

There was also a strong emphasis on the role of bactericides and fungicides in the leather making process. The first presentation (Rj Reddy of Buckman Chemicals) studied the implications of inadequate preservation, the way that bacteria and fungicides grow and the results of their activity respectively on pretanned hides and skins and leathers. In a second presentation (D. Alexander of Acti-Chem S.A), the focus shifted to the influence of legislation, such as, the German Blue Angel directive and REACH.

The history of the SLTC, IULTCS and BSLT, the benefits that these organisations had provided to date, and the roles that they are likely to play in the future was presented by Dr Jeffry Guthrie-Strachan. Also given a presentation on the art of taxidermy, ranging from birds to game animals, by Andre van Rooyen, and another on the role of SHALCA both internationally and within South Africa by Pierre van Niekerk. 🌐



Presentation: Pierre van Niekerk, Gringo Leather, South Africa