TANNET NEWSLETTER 1

TANNET – A Concerted Action for the European Leather Industry

April 1999

INFORMATION ABOUT THE TANNET PROJECT

The TANNET-project, which is a Concerted Action for the European Leather Industry, supported by the EU Environment and Climate Programme started its activities on the 1st April 1998. The main objectives of TANNET are:

- To set up a network of public and private parties concerned with the economic and environmental performance of the leather sector;
- To elaborate a strategy for environmental research for the European Leather industry

The activities during the first year have been focused on:

- increasing the **number of members** in TANNET;
- making a survey on **state-of-the-art**;
- developing the first preliminary list of **research priorities** for environmental research for the leather industry.

At the present moment, TANNET has over 100 members and many tanneries and other stakeholders have showed a huge interest for the initiative.

Although, TANNET started during the 4th Framework Programme, TANNET are now looking into the 5th Framework Programme in order to identify future possibilities for relevant environmental research for the leather industry in the different programmes within the 5th Framework Programme.

Information about 5th Framework Programme (FP5)

The final agreement for FP5 took place at a meeting of the Council of Ministers on 22 December 1998 and the first call for proposals was issued on the 6th March 1999. The total budget for the FP5 is 14.96 billion Euro over the next four years. The FP5 is built up by four thematic, or vertical RTD programmes, with three horizontal programmes (see tables below).

Within FP5, the concept of the "key action" is a major innovation. The key actions in the thematic programmes will target specific objectives and integrate the entire spectrum of activities and

disciplines needed to achieve these objectives. More information about the different key actions can be found at **http://www.cordis.lu**

Among the different key actions, several are strongly relevant for environmental research for the leather industry. Some of them are presented below:

- **Water and sustainable management of water**

(In the thematic programme *Energy, Environment and Sustainable Development*)

The water key action includes development of cost-effective and/or more specific water treatment techniques for the provision of non-potable and industrial process water as close as possible to the source. Furthermore, the water key action includes novel sludge treatment techniques and abatement of water pollution from contaminated land, landfills and sediments

- **Innovative products, processes and organisation**

(In the thematic programme *Competitive and Sustainable Growth*)

The key action include cleaner processes, products and eco-efficient technologies and the RTD should aim at, for example, the application of best and clean technologies to raw material processing and manufacturing.

- **The cell factory**

(In the thematic programme *Quality of Life and Management of Living Resources*)

One of the aims of the cell factory is improving environmental sustainability. This includes the development of cleaner technologies and the improvement of bioremediation and waste biotreatment processes, recycling and/or biodegradation of wastes and industrial by-products.

Thematic Programmes	Quality of Life and Management of Living Resources	user-Friendly Information Society (IST)	Comprehensive and Sustainable Growth	Energy, Environment and Sustainable Development

Horizontal programmes
• Confirming the International role of Community Research; • Promotion of Innovation and Encouragement of Participation of Small and Medium-Sized Enterprises (SMEs) ; • Improving Human Research Potential and the Socio-Economic Knowledge Base

How can TANNET help you prepare a proposal?

TANNET can help you to identify relevant research partners, such as: tanneries, leather research institutes or other relevant stakeholders. Furthermore, TANNET has the possibility to evaluate any research ideas, in order to estimate the need from the industry.

TANNET can help you to secure that the research results, which are generated in a European research project, can be transferred in to the leather industry.

TANNET workshops in 1999

TANNET will organise four regional workshops in 1999**.** The main objective of the workshops is to identify the environmental research needs for the leather industry in different regions in Europe.

The following workshops will be arranged by TANNET in 1999:

Italian workshop Date: 6 May 1999 10.30-12.30 a.m. Place:Lineapelle Fair, Bologna, Italy Contact: Dr. G. Zilli, UNIC Tel. +390 2 80 1026 Fax. +390 2 72000072	**British workshop** Date: 2 July 1999, full day Place:BLC, Northampton, UK Contact:Mr. B. Wood, BLC Tel. +44 1604 679999 Fax. +44 1604 679998
Greek workshop Date: 24 September 1999, full day Place:Athens, Greece Contact:Dr. Papakonstantinou (ELKEDE) Tel:+30 1 9247266 Fax:+30 1 9247269	**Spanish workshop** Date: 19 October 1999, full day Place:AIICA, Igualada, Spain Contact:Dr. J. Adzet, AIICA Tel. +349 3 8055388 Fax. +349 3 8050618

All corresponding members and other stakeholders are kindly invited to participate in any of these workshops. The aim of the workshops is to identify the relevant research priorities in the different regions in Europe.

Example of interesting projects

Example of relevant and promising projects at the moment, for TANNET, are:

- Application of modern Membrane Technologies for the Conservation of Raw Materials and the Treatment of Effluents from Leather Manufacture
- Leather Ash Reuse Project
- Process Technology for the Recovery and Recycling of Chromium from Leather Waste and Sludge

Application of modern Membrane Technologies for the Conservation of Raw Materials and the Treatment of Effluents from Leather Manufacture, (Contract No. ENV4-CT97-0613)

This project is supported by the EU Environment Programme and co-ordinated by BLC Leather Technology Centre in Northampton.

The project aims to develop and evaluate a series of novel membrane separation technologies for waste minimisation and the treatment of difficult effluent streams from leather manufacturing. The long-term objective is to establish and promote practical membrane based recycling and recovery cleaner technologies for the European leather sector towards achieving the ultimate goal of zero discharge.

The project is divided into different tasks in order to reach the final objective of the project. An overview of the tasks are given below:

Task 1 Recovery and recycling of Spent Tannery Liquors
Task 2 Concentration and Recovery of Chemicals and By-products
Task 3 Recovery of Oils and recycling of Surfactants from Degreasing

The initial trials in laboratory scale are ongoing at the moment and within a couple of months the most promising solutions will be tested in tanneries.

For further information, please contact:
Farid Turan, BLC Leather Technology Centre, info@blcleathertech.com
Stefan Rydin, Danish Technological Institute, Stefan.Rydin@teknologisk.dk

Leather Ash Reuse Project (Contract No. BRST – CT96 – 5085)

Most of the leather used in the production of footwear is tanned with trivalent chromium. Nowadays, the leather scraps generated by footwear and leather goods manufacturers are mainly dumped, and in incineration situations no added value is given to the resulting ashes. The possibility of using the chromium contained in these ashes by reintroduction in the tanning process and its application in footwear adhesives and building materials is being evaluated. The achieved results indicate the technical viability of reusing these ashes as a leather-tanning agent, as pigment and filler, and as pigment cement.

For further information, please contact: Maria José Ferreira, Centro Tecnológico do Calçado, ctic@mail.telepac.pt

Process Technology for the Recovery and Recycling of Chromium from Leather Waste and Sludge (Contract No. ENV5 CT94-0542)

The project is co-ordinated by BLC, and the general objectives for this project are:

- To recover chromium from solid wastes produced by the tanning industry;
- To recover chromium from discarded leather items, such as worn out footwear, upholstery and clothing;
- To recycle the chromium as a tanning agent.

For further information, please contact: Richard Bowden, BLC, The Leather Technology Centre, info@blcleathertech.com

---

Members in TANNET

The Danish Technological Institute is the co-ordinator in this project working very closely together with *The Confederation of National Associations of Tanners and Dressers of the European Community* (COTANCE). Furthermore, national focal points have been established in the different member states. Generally, the leather research centres in the different EU-countries have been appointed as national focal points.

The Confederation of National Associations of Tanners and Dressers of the European Community (COTANCE)

COTANCE is a non-profit international association, registered under French and Belgian law, and it is the representative body of the European leather industry.

COTANCE's core activities are concentrated in the management of transnational common sectoral interests, according to the ones identified by its membership. Its members are all national leather trade associations of EU member States.

COTANCE's activities includes, among others:

- Monitoring of the development of the leather sector at EU level;
- Development of statistical intelligence concerning production and trade;
- Development of sectoral newsletters, databanks, surveys and studies;
- Follow-up of the legislation that has an impact on the tanning industry;
- Participation in the decision shaping/making at European level;
- Support of the development of R&D as well as training to the benefit of the leather industry.

COTANCE's involvement reflects the EU tanning industry interest in the TANNET-Project and ensures the widest possible dissemination of the results to sectoral operators. COTANCE experiences in the management and co-ordination of pan-European projects have been proven in several, such as: SPRINT, FORCE, LEONARDO and EXPROM.

Groupement Européen pour la Recherche dans l'industrie du Cuir (GERIC)

GERIC is a partnership formed by all European leather research and training centres, which objective is to contribute to the improvement of industrial processes and technologies in the tanning industry. The national focus points for TANNET are mainly the GERIC members.

National Focus points

Project Co-ordinator

Dr. S. Rydin
Danish Technological Institute
Stefan.Rydin@teknologisk.dk

Associated Contractors

Belgium Mr. Gonzalez Quijano GERIC info@euroleather.com	France Dr. Vulliermet Centre Technique Cuir, Chaussure Maroquinerie ctclyon@ctc.fr	Greece Dr. Papakonstantinou ELKEDE elkede@elkede.gr
Germany Dr. Germann Lederinstitut Gerberschule Reutlingen lgr@schwaben.de	Italy Dr. Zilli Unione Nazionale Industria Conciaria, info@unic.it	Portugal Dr. Martinho Centro Tecnológico das Industrias do Couro ctic@mail.telepac.pt
Spain Dr. Adzet Asociación de Investigación de las Industrias del Curtido y Anexas aiicacuero@retemail.es	Dr. Tomaselli / Dr. Ummarino Stazione Sperimentale per l'Industria delle Pelli e delle Materie ssip@iol.it	United Kingdom Mr. Wood BLC, The Leather Technology Centre info@blcleathertech.com

Corresponding members

At the present moment, TANNET has over 100 members and many tanneries and other stakeholders have showed a huge interest for the initiative.

List of research priorities

TANNET has identified a preliminary list of research priorities for 1999. Below you will find the different project ideas divided into different areas.

Water

Reduction and monitoring of micropollutants (such as surfactants, recalcitrant organics and pesticides) in waste water.
Efficient management of water in tanneries, in order to a reduction of the water consumption in the leather industry.
Advanced wastewater treatment units, leading to open or closed-loop recycling of water.
Reduction/treatment of sludge from tannery effluent treatment plants.
Small and cost-effective treatment plants for specific tannery effluents.
Reduction of the salt-discharge from tanneries.
Assessment of the long-term environmental impact of tannery contaminated sites on e.g. groundwater.
Development of remediation technologies for tannery contaminated sites.

Solid Waste

New and innovative cleaner technologies for the prevention of solid waste.
Valorisation of by-products from leather manufacturing by e.g. biotechnology.
Gasification of leather waste.

Air Pollution

Reduction of VOC emissions from finishing operations.
Reduction of odour emissions from tanneries.

Other

Tools to evaluate the impacts on relocating tanneries from city centres to industrial park.
Tools to assess and compare the environmental impact from different processes during leather production.
Improved energy efficiency in tanneries.

---

information about the leather industry and the environment

There have been many publications concerning the leather industry and its environmental performance. Below follow some examples of reports, which are available for free for TANNET-members (contact the project co-ordinator):

- **Practical Possibilities for Cleaner Production in Leather Processing (Frendrup, W) (1999);**

- **IUE Documents concerning tannery environment (updated 1998):**

    - IUE Recommendations on Cleaner Technologies for Leather Production (6 pages);
    - IUE Recommendations for Tannery Solid By-Product Management (5 pages);
    - IUE Recommendations for the utilisation of chromium containing sludge (3 pages);
    - IUE Document on total Dissolved Solids in Tannery Management (1page).

- **ES – VOC – CG Briefing Paper on the Newly Adopted Solvent Emissions Directive;**

Furthermore, the IUE-Commission has produced data on typical pollution values and typical performance for wastewater treatment.

Short presentation of other concerted actions in the EU Environment Programme

There are at the moment four other ongoing concerted actions, supported by the EU - Environment Programme:

European Network - CHAINET

Is a network in the chain analysis for environmental decision-making and support in design and manufacturing, recycling, waste management and transport. The objective is to bring together different sectoral groups under the umbrella of life cycle experts. A focal point is environmental design aimed at preventing damage at the earliest stage in the most environmental way, thus contributing to sustainable development.

Biosensors for Environmental Technology BIOSET

Is aimed at enhancing the developments for biosensors for practical applications in monitoring environmental pollutants in air, water, soil and waste. The main targets on which developments will be focused are ground water, surface water, effluents, air, and improvement in preventative technologies, control of waste disposal sites and efficiency control of remediation activities. Particular attention will be devoted to process control- Partnerships will be sought between analytical providers and users with monitoring needs.

Contaminated Land rehabilitation Network CLARINET

Is based on the conclusion of the earlier CARACAS project. This network brings together policy makers, technology providers and researchers in the field of risk assessment of contaminated land. The objective is to arrive at specific methods for rehabilitation based on a generally acceptable risk assessment technology.

Environmental Technologies Concerted Action - ETCA

Has the objective of promoting environmental technologies in the direction of integrated sustainable development.

FUTURE DEVELOPMENTS

The main activity for TANNET in the next months will be the organisation of the workshops. Therefore, the next newsletter is expected to be published in October/November 1999, and will include the conclusions of the workshops.

We invite all members to provide input to the next newsletter and we welcome new research ideas, which will be included in the list of research priorities for TANNET.

For further information please contact your national focus point or the co-ordinator of the project: Stefan.Rydin@teknologisk.dk