



Re-starting of ILIFO Newsletter and Journal of Cleaner Tanning

ILIFO is pleased re-start its quarterly newsletter and Journal of cleaner tanning after a gap with a new design. The news items in this limited circulated issues focuses on sustainability issue of leather and allied industries, in line with the objectives of ILIFO. Readers are encouraged to send their views to ilifo@vsnl.com

Safety audit

ILIFO has been engaged by Vanitec to conduct safety audit in 132 tanneries and two CETPs of Vanitec. Under this safety audit project, the occupational safety and health related aspects are assessed in tanneries starting from raw hides handling to finishing area including pre-treatment facilities. Detailed recommendations priority-wise are provided to each tannery separately indicating potential contractors and suppliers with an estimated cost of improvements.



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ILIFO-CLRI-SITDA workshop on "Salt-less Tanning Technology"

An innovative salt-free tanning technology has been developed by the scientists of Central Leather Research Institute (CLRI) to address the following two important aspects of chrome tanning: (1) reduction of cost of chrome tanning by reducing the quantity of BCS used; and, (2) eliminating the application of salt in pickling completely, thus reducing the discharge of total dissolved solids, while improving or maintaining the quality of wet-blue. The technology demonstrated by CLRI has been already practiced in a few tanneries.

As CETPs move towards ZLD system, one important aspect to be taken care of is to reduce the amount of TDS in effluent as much as possible in-process. In this manner, the life of the membranes could be extended and thus the cost of operation somewhat reduced. In due course, CETPs may have to start charging the tanneries according to the amount of TDS discharged by them in their effluent.

Keeping this scenario in mind, Indian Leather Industry Foundation (ILIFO) and CLRI are partnering to replicate this technology among the tanneries in Tamil Nadu in a large way.

The technology can be applied both for chrome and vegetable tanning.

A joint workshop by ILIFO, CLRI and South India Tanners and Dealers Association (SITDA) was organized on 8 March 2011 in Ranipet in order to exchange the information on this technology.

There were about 70 participants including owners, technicians from tanneries and technicians from leather chemical companies. At the end of the workshop, seven companies have expressed their interest to adopt this technology in their tanneries. ILIFO in cooperation with CLRI has initiated the implementation of the technology in three tanneries and others will be taken up soon.



Mr. M.M. Hashim, Chairman, ILIFO inaugurating the workshop



Energy auditing and conservation

Energy auditing provides a wide opportunity for tanneries to cut down the cost for electricity, fuel oil and firewood. The energy conservation has become one of the focus areas for tanneries located in Pallavaram, which face perennial shortage of electric power.

The main energy consuming equipment in a tannery is the tunnel drier of autospray. The firewood energy is more expensive than electricity. Alternative sources of energy like solar air heating and IR lamps provide good scope for reducing the energy spent for drying in tunnel driers of autospray.

Electrical energy consumption can be optimized by several ways. Some of them are: bearings for drums, machine cut gears and pinions, gear box system in place of flat belts, use of capacitors at load end, arresting leaks of compressed air, water conservation, load optimization in process vessels, use of energy efficient motors and HVLP spray guns.

The potential energy savings varies from 20% to 27% in a tannery according to past experience.

Activities of ILIFO



ILIFO's activities in the year 2010-11 are categorised in the areas as mentioned in table below:

Domain area	Main activities
Environment	<ul style="list-style-type: none"> • Environmental upgradation of Calcutta Leather Complex • Zero Liquid Discharge (ZLD) systems in PLIES and Vishtec • Effluent treatment plant at Al Ganoub Tanning Factory, Saudi Arabia • Support to CEMCOT in ZLD systems
Energy	<ul style="list-style-type: none"> • Energy audit in PTIETC CETP, Pallavaram • Energy audit in 5 tanneries in Pallavaram (under a project with Entrepreneurship Development Institute of India Business Development Services Market Development Project) • Workshop on wind energy
Social aspects of manufacturing Trade	<ul style="list-style-type: none"> • Survey on Private Standards and follow up research on Private Standards • Trade Opportunity Study in Leather Sector between India and COMESA Countries
Training	<ul style="list-style-type: none"> • Workshop on reduction of salt from tannery effluent
Collaborative projects	<ul style="list-style-type: none"> • Participation in UNIDO Leather Panel at Addis Ababa, Ethiopia • Memorandum of Understanding with EDII, Ahmadabad • Evaluation of training under on HRD programmes of CLRI in Manipur and Rajasthan

Current activities of ILIFO

Currently, ILIFO has been working on the following areas:

- Safety audit in 132 tanneries and two CETPs of Vanitec
- Design studio upgradation for ILPA Infrastructure Development Foundation in Kolkata
- Design studio, testing lab and trade fair facilities in Agra
- Testing laboratory in Ranipet
- Energy audit in 10 tanneries in Pallavaram, Chennai
- Implementation of Salt-less tanning technology in 4 tanneries in Ranipet
- Collection and management of solid waste from tanneries in Vaniyambadi
- Drum modification to improve efficiency of post tanning operations
- Solar air heating for hot water generation in 3 tanneries
- Training workshops
- Common facility centres in Ranipet
- Support services to CLRI in IDLS implementation



Update on ZLD systems implemented by CEMCOT

What is CEMCOT?

Chennai Environmental Management Company of Tanners (CEMCOT) is a special purpose vehicle promoted by seven common effluent treatment plants with the specific objective of implementing zero liquid discharge (ZLD) systems in six locations. CEMCOT receives funds from Government of India under "Environmental Initiatives" component of Indian Leather Development Programme (ILDP) of Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Government of India, Government of Tamil Nadu and also from member tanneries through the respective CETPs.

While four of the CETPs at Vaniyambadi and Ambur have, under the aegis of Ambur Economic Development Organisation (AEDOL), taken up ZLD projects with financial support of IIUS scheme of Department of Industrial Policy and Promotion (DIPP), Government of India, two others at Melvisharam near Ranipet and Perundurai near Erode have taken assistance under ASIDE scheme of Department of Commerce of Government of India.

The implementation of ZLD systems of CEMCOT in the six locations is ongoing with varying progress at each location. The following table provides the progress as of now along with the capacities of these plants.

Name of the CETP	Design capacity, m ³ /d	Number of tanneries	Status of implementation	Percentage of work completion (approx.)
Pallavaram CETP, Chennai	3000	152	Civil works and materials supply nearing completion, erection started	55%
Ranitec, Ranipet & Meltec, Melpudupet, near Ranipet	3000	94	Civil works ongoing, materials supply and erection started	55%
SIDCO I, Ranipet	2500	86	Civil works ongoing, materials supply and erection started	65%
SIDCO II, Ranipet	1000	40	Civil works ongoing, materials supply and erection started	55%
Pertec, Pernambut	1000	37	Civil works nearing completion, materials supply and erection nearing completion	80%
Dintec, Dindigul	2500	61	Letter of intent issued, detailed engineering documents being prepared	5%



RO installation at Ranitec CETP



Construction in progress at SIDCO II CETP



Upgraded aeration tank in SIDCO I CETP



Evaporator being installed at Pertec CETP

CEMCOT is working towards completion of installation & commissioning of 5 projects before June 2011. Dindigul project will be completed by September 2012.



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Salt-less Tanning

In this methodology, the pH is adjusted in a way that there is no salt and acid required for pickling and thus the salt is completely avoided. This technology does not require any specialty chemicals or investment in infrastructure. The chrome uptake is more than 90% while the uptake is about 60% in conventional processes and the quantity of BCS is reduced from 8% weight of raw material to about 6%. The TDS reduction is up to 20% in the combined effluent. It was reported that the direct cost savings from reduction of BCS is up to Rs.6 lakhs per annum for a tannery processing 2 tonnes per day.

In the workshop, Mr. R. Ramesh Prasad, Chairman, Ranitec CETP welcomed the participants and expressed that the technicians in the tanneries and chemical suppliers are important to spread the technology.



Mr. A. Sahasranaman making a special address in the workshop

Mr. A. Sahasranaman, Vice Chairman, CEMCOT mentioned that the salt usage in pickling is one of the main contributors of TDS in effluent.

In order to bring down the TDS to prescribed level, treatment plants based on reverse osmosis technology has become a necessity, which requires huge investment. Technologies such as “Salt-less Tanning Technology” will be useful though the RO is necessary and in place. Reduction in salt and TDS will increase life of the membranes and thus decrease the cost of operation of the plants. He has mentioned that the RO plant in Melvisharam is expected to go on stream within this month and the same in Ranitec by April 2011 with RO section.

Mr. Sahasranaman also suggested to the tanneries to shake off the solid salt adhering to raw material either by physical shaking or using a desalting machine, thus preventing it getting dissolved in effluent.

Mr. M. M. Hashim, Chairman, ILIFO and Chairman, CEMCOT encouraged the tanneries to adopt newer technologies to reduce salt application. He stressed that the desalting of raw skins and hides has to be adopted in all tanneries regularly. There are about 4 to 5 tanneries are going in for BLC audit due to buyer requirements in this area. He concluded that the companies should keep their tanneries in an orderly way by adopting good housekeeping measures to obtain a good image among the public and buyers.

Dr. C. Muralidharan, Scientist, CLRI, in his technical presentation, mentioned that the “Salt-less Tanning Technology” has not been new. The technology has been tried in several ways in the last 20 years with various levels of success, but all in pilot scale. After obtaining a series of success in this particular methodology in lab scale, this was first applied in Pakkar Leather Exports in Vaniyambadi. In order to gain confidence and make sure that the technology

“Adopting salt-less tanning technology requires trials from experimental scale to bulk commercial scale”

works better than the conventional pickling-tanning, a series of trials was conducted starting from experimental batches to bulk commercial scale level. Currently the tannery has been adopting the “Salt-less Chrome Tanning” for the last 1½ years. He mentioned that though the tannery processes only skins, this technology has been tried successfully in lab scale for cow, cow calf, buffalo and buff calf materials.

Mr. Sayeed of Pakkar Leather Exports apprised the tanners of the experience of his tannery in adopting this process & technology. He expressed complete satisfaction about the operation-ability of the technology.



Dr. C. Muralidharan and Mr. Sayeed Ahmed providing a clarification

Mr. Sayeed Ahmed, Pakkar Leather Exports interacted with the participants about the experience in adopting the technology. He mentioned that initially there was skepticism about the technology among his technical team, as generally expected in tanneries. There were difficulties of colour of wetblue and shape of wetblue in the initial trials. After overcoming the difficulties, salt free tanning is adopted in all production. All types leathers, like garment leathers, more importantly full chrome garment suede leathers, nappa and shoe upper leathers are being produced with this technology.

After the technical presentations, there were lively questions and answers. The participants raised questions about the application for hides. It was clarified that the technology can be adopted to any type of raw material and finished leather but with little modifications in the processes.

ILIFO congratulates Mr. M. Rafeeqe Ahmed

ILIFO congratulates Mr. M. Rafeeqe Ahmed, Director, ILIFO and Chairman, CLE on being awarded Padmashree by Government of India.

Ambur Open returns

After the grand success of the maiden edition of 'Ambur OPEN 2010' the ISF-IFCOMA Exhibition of Footwear Components, Accessories and Finished Leather, the next edition of the Exhibition, "AMBUR OPEN 2" will be presented by ISF and IFCOMA on 9 & 10 July 2011 at Ambur Trade Centre, Ambur.

8th Asia International Leather Conference

Indian Leather Technologists Association (ILTA) in association with Council for Leather Exports (CLE) organized the Eighth Asia International Conference on Leather Science and Technology (AICLST) on the theme Leather 2020: Challenges and Opportunities from 12 to 14 November 2010 in Kolkata.

ILIFO had been engaged by UNIDO to conduct a survey on footwear industry on the prevalent private standards, like buyer codes of conduct, voluntary standards and certifications, obstacles faced by the industry and approximate expenditure for meeting the standards.



Making Private Standards Work for You

A guide to private standards in the garments, footwear and furniture sectors

UNIDO Guidebook on Private Standards



Global brand owners and retailers increasingly require their suppliers from developing countries to comply with certain social, environmental and safety norms. These norms are now referred to as 'private standards'. Compliance should, of course, not be a major problem for developing country producers where national laws and regulations already incorporate these standards. However, private standards imposed by producers of global brands and retailers may also go beyond national and local laws, and/or contain further conditions related, for example, to health and safety issues.

In order to bridge the knowledge gap on private standards in certain industrial sectors, UNIDO recently conducted a global survey focusing on footwear in India, textile in Turkey and Sri Lanka and furniture sector in Brazil. Based on the survey results, UNIDO has published the guide book titled as "Making Private Standards Work for You".

The guide book and an introductory video are available in the following link: www.unido.org/privatestandards

The 71-page publication by UNIDO, titled "Making private standards work for you: A guide to private standards in the garments, footwear and furniture sectors", outlines a strategic approach for suppliers in developing countries.

"Today, more and more companies in developing countries and emerging economies are becoming global producers. The liberalization of consumer markets provides these companies with opportunities for exporting their products to global markets where they are increasingly required to comply with 'private standards' – a phenomenon on the rise. Also known as business values, norms, ethics, codes, practices, guidelines, principles or morals, private standards are considered to be one way of promoting social development and environmental sustainability", the guide says. Private standards essentially focus on social, safety and environmental issues and are required by brand producers and retailers when they source their products.

Some estimates suggest that more than 1000 codes of conduct and management systems exist. But most companies in developing countries do not have much tangible information.

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