



ILTA
Since 1950

JILTA

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Our Activities

- An Association with over 600 members from India and abroad working since last 68 years for the growth and development of Leather and its allied industries.
- Organize seminars, symposiums, workshops in order to share information, knowledge & latest development and interactions for the benefit of all concerned.
- Organize Human Resource Development programmes on regular basis.
- Publish for over 60 years, a technical monthly journal namely "Journal of Indian Leather Technologists' Association" (JILTA), widely circulated through out the World.
- Publish books for the benefit of the students at various levels of study, for the Research Scholar and the Industry.
- Work as interface between Industry and the Government.
- Assist Planning Commission, various Government Institutions, Ministry and autonomous bodies to formulate appropriate policies for the growth of the Industry.
- Assist small and tiny leather goods manufacturers in marketing their products by organizing LEXPOs in Kolkata and different parts of India.

Indian Leather Technologists' Association

[A Member Society of International Union of Leather Technologists' and Chemists Societies (IULTCS)]

'Sanjoy Bhavan', 3rd Floor, 44, Shanti Pally, Kolkata- 700 107, WB, India
Phone : 91-33-2441-3429 / 3459 ★ WhatsApp +91 94325 53949
E-mail : admin@iltaonleather.org; mailto:ilta@rediffmail.com
Website : www.iltaonleather.org

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

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Contents

Portfolio.....	03 - 08
Editorial.....	09 - 10
STAHL Corner.....	11 - 14
ILTA News.....	15 - 16
Solidaridad Corner.....	17 - 22
Article -"Sustainability of Leather Society – A Thought" by Goutam Mukherjee, Susanta Mallick.....	23 - 27
IULTCS Corner.....	28 - 29
Prof. B. M. Das Memorial Lecture.....	30 - 35
News Corner.....	36 - 38
Down Memory Lane.....	39 - 53
Economic Corner.....	54 - 58

Hony. Editor : Dr. Goutam Mukherjee

Communications to Editor through E-mail :

admin@iltaonleather.org; jiltaeditor@gmail.com

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Indian Leather Technologists' Association

'Sanjoy Bhavan', 3rd floor, 44, Shanti Pally

Kasba, Kolkata - 700 107, WB, India

Phone : 91-33-2441-3429

91-33-2441-3459

E-mail : admin@iltaonleather.org;
mailto:ilta@rediffmail.com

Web site : www.iltaonleather.org

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JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

Indian Leather Technologists' Association is a premier organisation of its kind in India was established in 1950 by Late Prof. B.M.Das. It is a Member Society of International Union of Leather Technologists & Chemists Societies (IULTCS).

The Journal of Indian Leather Technologists' Association (JILTA) is a monthly publication which encapsulates latest state of the art in processing technology of leather and its products, commerce and economics, research & development, news & views of the industry etc. It reaches to the Leather / Footwear Technologists and the decision makers all over the country and overseas.

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Phone : 91-33-24413429 / 91-33-24413459
E-mail : admin@iltaonleather.org / mailtoilta@rediffmail.com
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Inflation Forcing a Global Radical Change



The European Central Bank (ECB) increased interest rates for the first time since 2011 in July. The Bank indicated further hikes ahead as it hopes to reach its 2.0% inflation target in the medium term; Euro area inflation hit a series high of 8.9% in July. But the ECB's hawkish turn poses a problem: It threatens to further widen bond spreads between the highly-indebted southern countries and northern countries, which are considered far less volatile environments for investment. In response, the ECB announced the creation of the Transmission Protection Instrument (TPI). The TPI allows the ECB to make potentially unlimited purchases of public debt in order to narrow bond spreads between core and peripheral Euro area countries.

However, the ECB has said it would prefer not to use the TPI. Buying heavily-indebted countries' debt could encourage moral hazard: governments may take on more debt if they knew servicing costs would be artificially deflated by the TPI. Instead, the Pandemic Emergency Purchase Program (PEPP) remains the "first line of defence," ECB President Christine Lagarde explained. The ECB stopped net purchases of government bonds under the PEPP in March. Now, as the debt from those purchases matures, the ECB is reinvesting it strategically in order to cap borrowing costs in peripheral economies. In June and July, ECB data indicates that the Bank sold nearly 20 billion euros of French, Dutch and German bonds, and bought over 17 billion euros of debt in Italy, Spain, Portugal and Greece. Therefore, the TPI is only likely to be put to use in the case of speculative selling of peripheral countries' bonds. Italy, where public debt amounts to 150% of GDP, would be the most likely recipient of intervention amid recent political chaos. Spreads between German and Italian 10-year bond yields sat at around 2.3 percentage points at the end of August, having peaked at above 2.4 percentage points in late July. There is significant risk

associated with the September snap elections—the likely victorious rightwing coalition has pledged tax cuts, which could enlarge Italy's debt pile further and cause bond yields to spike. In any case, the TPI may not need to be used in order to be useful. The mere announcement of the TPI went some way towards limiting the ascent of Italian bond yields. Similarly, the Outright Monetary Transactions (OMT) scheme—also designed to limit spreads—was announced in 2012 during the European sovereign debt crisis but has never been used. The creation of the OMT itself decreased risk perceptions, supporting investment and lowering government bond yields in Spain and Italy. That said, while new tools such as the TPI will stop bond spreads from becoming too extreme, our analysts still expect a notable premium on peripheral country bonds relative to German ones over our forecast horizon to 2026.

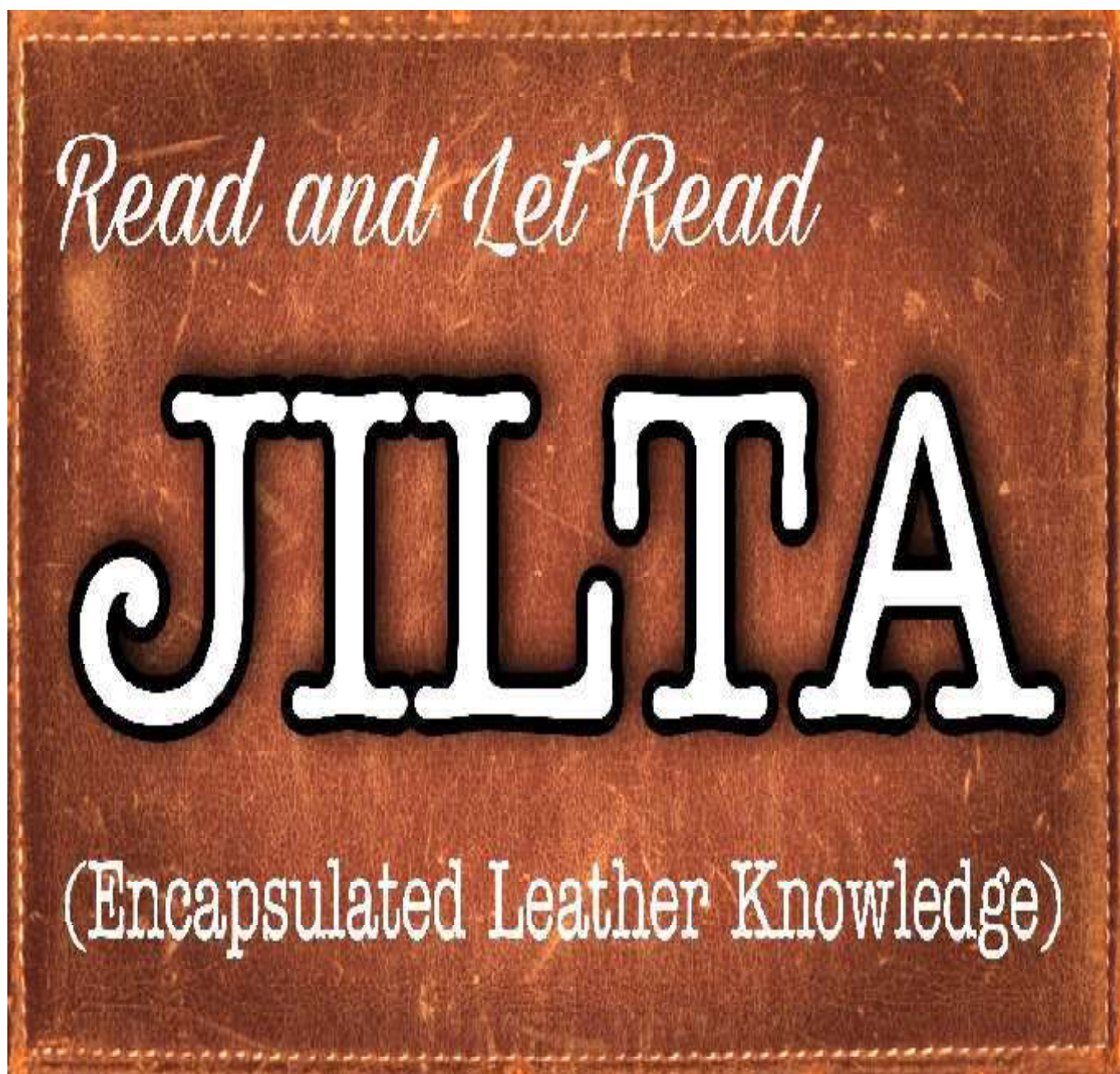
George Buckley, chief UK and Euro area economist at Nomura, commented on the imprecise nature of the TPI's guidance: "Details behind the scheme were limited. However, that didn't appear because it wasn't finalized but rather what seemed like an intentional decision to give the Governing Council significant latitude to decide on whether and by how much to intervene – and presumably to avoid the markets constantly testing specific spread levels at which the ECB might intervene."

Analysts at Goldman Sachs highlighted how that uncertainty may not prevent investors from manipulating the bonds market: "We view the TPI as a potentially powerful tool that could ultimately be effective in anchoring sovereign credit in Europe. However, the lack of clarity on the conditions under which TPI will be activated suggests that market participants could test the ECB's resolve, especially in the context of higher political uncertainty in Italy."

The world has started to feel the heat of post covid recession flared in addition by the Russia – Ukraine conflict. Inclement environment has affected food production in Europe, China and many other countries. Such kind of situation has passion towards inviting war like situation among the nations, if not thought about rationally about the after effects. So, the global leaders have to be highly careful about the general folks of the

nations before following expansionist ideology and war of ego / doctrine. People have to be given priority with right to peaceful livelihood.

Goutam Mukherjee
Dr. Goutam Mukherjee
Hony. Editor, JILTA



Tell me and I forget, teach
me and I may remember,
involve me and I learn

Stahl Campus[®]



As an active proponent of responsible chemistry, Stahl has established the Stahl Campus[®] training institute in its Center of Excellence for sustainable leather technologies in Kanpur. With our Stahl Campus[®] Leather Modules, we can offer training and information, such as responsible chemistry and sustainability in leather production. We believe that in this way, we facilitate transparency that inevitably will lead to a better supply chain with responsible chemistry.

Our approach is modular, making it easy to tailor learning programs to specific needs. Stahl Campus[®] has at its core the drive to unlock human potential and make that new

competitive advantage. By providing the possibility of sharing knowledge, we embrace our role in the dynamic leather and chemical industry. Stahl Campus[®] is a great opportunity to strengthen skills and capabilities in order to make working methods more efficient by sharing experiences and studying products and procedures.

If you're interested to receive more information on Stahl Campus[®], please contact Prasanna Maduri (Prasanna.maduri@stahl.com).

If it can be imagined, it can be created.





Stahl

We imagine sustainable pickle-free leather tanning

If it can be imagined,
it can be created.

Tanners benefit from higher process efficiency, reduced water, chemical and salt consumption and a reduced environmental impact. This makes it possible for tanners to have an efficient process that is also sustainable and yields ecofriendly premium leathers.

High-quality leather no longer forces a choice between responsible processes and efficiency. The main benefits of a pickle-free system that avoids salt addition during pickling are:

- Reduction of water consumption by up to 40%
- Shorter process time on cow, sheep and goat
- Cleaner effluent, TDS reduction by up to 60%

STAHL UNDERLINES RESPONSIBLE SUPPLY CHAIN COMMITMENT WITH ECOVADIS PLATINUM RATING

Stahl, an active proponent of responsible chemistry, has been awarded the highest EcoVadis Platinum rating, placing it within the top 1% of companies assessed by EcoVadis. The award underlines Stahl's commitment to collaborating with its partners to reduce its environmental impact and build a more responsible and transparent supply chain.

EcoVadis is a globally recognized evidence-based assessment platform that reviews the performance of organizations across areas key of more than 90,000 companies

including environmental impact, labor and human rights standards, ethics, and sustainable procurement practices. The latest report from EcoVadis highlights Stahl's positive progress across all these areas and builds on the Gold rating achieved by the company in 2021. Stahl's 2030 target is to maintain the EcoVadis Platinum rating by working closely with its value-chain partners to help them reduce their environmental impact – including by supporting their transition to renewable feedstocks. In 2021, 80% of Stahl's total spend on raw materials was supplied by EcoVadis-rated suppliers.



The new EcoVadis rating comes as Stahl accelerates its efforts to ensure a more responsible and transparent supply chain. Recent steps have included establishing a dedicated Supply Chain Transparency division within the company's ESG department. The division will be tasked with coordinating a new product development framework that prioritizes the responsible sourcing of raw materials. Furthermore, in July 2022 Stahl submitted a new greenhouse gas (GHG) emissions reduction target, including a specific commitment regarding the company's Scope 3 upstream emissions. Stahl aims to reduce these by at least 25% over the next 10 years, compared with the base year (2021). Stahl expects to achieve this reduction primarily by working with its suppliers to replace fossil-based raw materials with lower-carbon alternatives.

Ingrid Weijer, ESG Performance Manager: *"Achieving an EcoVadis Platinum rating is further evidence of Stahl's strengthened ESG focus and our commitment to working with our suppliers and other industry partners to reduce our environmental impact and build a more responsible value chain. By working side by side, we can achieve our common objective of helping limit the global temperature increase to 1.5°C above pre-industrial levels by 2050, as agreed at the 2015 Paris Climate Accords."*

(Stahl News – 19/09/2022)

STAHL – HELPING TO SHAPE A BETTER CHEMICALS INDUSTRY

With headquarters in Waalwijk, the Netherlands, Stahl works with partners worldwide to develop and deliver the necessary chemistry behind everyday materials, including footwear, clothing, cars, and home furnishings. Supported by a global workforce of nearly 2,000, our processing and specialty coatings technologies help these materials to perform better for longer, while reducing their environmental impact.

Stahl was established in 1930. Nearly a century later, we remain committed to shaping a better chemicals industry – one that enables high living standards within planetary boundaries. We have identified four areas of strategic importance to help us realize our goals: digital transformation, open innovation, renewable feedstocks, and sustainable development. By applying our efforts to these areas alongside our value chain partners, we can deliver more value for our employees, customers, investors, and society at large.

STAHL AND UNIVAR SOLUTIONS STRENGTHEN PARTNERSHIP BY EXPANDING DISTRIBUTION AGREEMENT TO CUSTOMERS IN BRAZIL AND COLOMBIA

Stahl, an active proponent of responsible chemistry, has confirmed a new distribution agreement with Univar Solutions, a leading global solutions provider to users of specialty ingredients and chemicals for coatings, adhesives, sealants, and elastomers. Univar Solutions Brazil and Univar Solutions Colombia will deliver Stahl products to customers in Brazil and Colombia, respectively. The agreement was made effective September 1, 2022. With more than 90 years of experience in chemical and ingredient distribution, Univar Solutions' expertise will help Stahl



anticipate and leverage meaningful growth opportunities in two of South America's most dynamic economies. The new agreement builds on Stahl's long-standing partnership with Univar Solutions, who has served as Stahl's distributor in Eastern Europe for several years. The companies share a commitment to sustainability, social responsibility, and supply chain efficiency, making the collaboration highly beneficial for both parties.

Stahl is delighted to announce this expanded partnership with Univar Solutions," said Raymond Bakker, Global Business Director Stahl Polymers. "With" our values and priorities so closely aligned, Univar Solutions was the natural choice to help Stahl expand in South America. By working more closely together, we will deliver greater value for customers, investors, and wider society .

Under the new agreement, Univar Solutions will distribute Stahl's extensive range of products and polymers for coatings material customers. The products are mainly acrylic resins, polyurethanes, and the special polymers from Stahl's European and Brazilian production and are used in various industrial and wood coating applications. The registered trade names Picassian® and Relca® are already established in the market and are well known in the coatings industry.

"I'm very pleased to expand our relationship with Stahl into Brazil and Colombia, thus bringing more product solutions to our industrial coatings customers. Growing relationships such as this showcase the true global nature of the Univar Solutions' CASE business and how we bring value to customers and supply partners," said Chris Fitzgerald, global vice president, CASE, Rubber and Plastic Additives for Univar Solutions.

(Stahl News – 09/09/2022)

From the desk of **General Secretary**



64TH ANNUAL GENERAL MEETING OF ILTA

The 64th Annual General Meeting of ILTA would be organized on Friday the **14th October**, 2022 at 03.00 PM IST (Registration from 02.30 pm IST) at the Seminar Hall, of Science City, Kolkata.

The Printed Annual Report & Audited Statement of Accounts for 2021-22 along with the Notice of the 64th AGM and Proceedings of the last i.e., 63rd AGM was posted for the members through Indian Post on 22nd September'2022 and also soft copy of the same was sent via email on the same date.

LEXPO – XXXXI AT KOLKATA

The Kolkata LEXPO – XXXXI which has been rescheduling repeatedly due to COVID 19 situation since last two years has now been proposed to be organized at Kolkata Ice Skating Rink from 23rd December to 1st January' 2022.

Booking money of the venue for the fair had already been deposited to the KISR authority earlier.

However, latest progress and status report regarding the proposed fair will be informed in due course.



(Susanta Mallick)
General Secretary

YOUTUBE CHANNEL & FACEBOOK PAGE OF ILTA

An official **YouTube Channel** namely **ILTA Online** and a **Face Book Page** namely **Indian Leather Technologists' Association** has been launched for sharing the activities of our Association since November' 2020 and July' 2021 respectively.

You may find all the Lives / Video recordings of different Seminar, Symposiums & Webinars on both of these social medias along with our website **www.iltaonleather.org** time to time.

You are requested to kindly do **Like & Subscribe** the YouTube Channel and **"Follow"** the FaceBook Page to get regular updates on the activities of our Association.

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PUBLISH YOUR TECHNICAL ARTICLE

Faculties, Research Scholars and students of various Leather Institutes may wish to publish their Research / Project papers in an Article form in this monthly technical journal, JILTA.

Interested author may sent their paper (in MS Word format) along with a PP Photograph and Contact details like Email, Mobile etc. to our email IDs : admin@iltaonleather.org / jiltaeditor@gmail.com

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- b) Kindly mention your **Membership No.** (If any) against your each and every communication, so that we can locate you easily in our record.



General Secretary and the Members of the Executive Committee are available to interact with members at 19.30 hrs, at our Registered Office on every Thursday



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Solidaridad

With over 50 years of experience in developing sustainable solutions to make communities more resilient, Solidaridad has been working on many different issues, from supporting marginalized communities to fostering a more sustainable supply chain.



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Tea



Sugarcane



Leather



Textile



Palm Oil



Aquaculture



Dairy



Fruits &
Vegetables



Gold



Soy



Cocoa



Coffee



Livestock



Medicinal Plant

Solidaridad

switchasia  GRANTS PROGRAMME

**EFFECTIVE WASTE MANAGEMENT AND SUSTAINABLE
DEVELOPMENT OF MSME TANNING COMPANIES IN KOLKATA
LEATHER CLUSTER (BANTALA)**

2022-2023



PROJECT PARTNERS IN ASIA



Pradipta Konar, Programme Manager-Leather(Kolkata): pradipta.konar@solidaridadnetwork.org

Solidaridad Regional Expertise Centre

158/5, Prince Anwar Shah Road, Kolkata-700045 | Contact: 033-40602211, +91-9830279866

A COMPENDIUM OF SOLIDARIDAD'S INTERVENTIONS ON EFFICIENT WATER USAGE IN KANPUR-UNNAO LEATHER CLUSTER

Journey of Solidaridad

With its presence in 5 continents and more than 50 countries all around the globe, on various commodities in the last 50 years, Solidaridad has embarked on its leather journey in India from its flagship project in Kanpur - Unnao Leather Cluster in 2016 as a part of rejuvenating the Ganga River basin.

Under the project on 'Pollution Prevention and Efficient Water Use in Kanpur - Unnao Leather Cluster, Currently, Solidaridad is working towards water stewardship in 100 tanneries in the Kanpur-Unnao leather cluster with a vision of effectively controlling and reducing the water usage and reducing the pollution load discharged from the tanneries. For this purpose, global and national techno-commercially viable eco-friendly best practices and technologies have been evaluated, assessed, and further implemented in 52 tanneries till date.

Importance of Water

The scarcity of groundwater in India affects hundreds of millions of people across the country. A major portion of the population does not have a reliable and constant means of getting water for their daily needs. Despite this fact, water is being used for the processing of leather just by following traditional practices without the knowledge of its impact on the environment.

Due to the high extraction and exploitation of groundwater in the Kanpur-Unnao area, aquifers are shrinking. Whereas high intensity of rainfall causes more surface runoff, gives little time for rainwater to recharge aquifers in the area. The aquifers are moderately yielding in this region but do not provide sustained water supply during the peak summer period. The gap between global water supply and demand is projected to reach 40% by 2030 if current practices continue.

Solidaridad being one of the pioneers on the ground for leather industries aiding in moving towards a green and clean approach for a sustainable future, traced the need of the industry and conducted water audits in tanneries to assess the gaps, challenges, and scopes of water saving and have implemented water saving technologies on a larger scale in the SMEs of Kanpur Unnao Leather cluster.

Water Consumption Practices/Present Scenario – Kanpur and Unnao

The leather industry is one of the most water-intensive industries. Fresh groundwater is used for almost every process right from the beam house to the Finishing operations. The leather tanning industry has been perceived as one of the major consumers and polluters, though many other industries are adding to the woes.

There are currently no limitations on the water usage in the tanneries of the Kanpur-Unnao leather cluster as of now, due to the fact of its abundance and the flow of Mother Ganges. The limits on utilizing the groundwater and directions of CGWA are right now being in the implementation phase, but still there is no cap on the same. Tanning includes a lot of chemicals like lime, acids, chromium, salt, sulphides, etc. These areas have evoked the interest of **Solidaridad**, culminating the creation of project, in which the reduction of water usage and efficient usage of the same is a major objective.

Annual Groundwater Availability	Annual Water Consumption (Domestic & Industrial)	Annual Groundwater Recharge (in ham)	Net Groundwater Availability (in ham)	Net Groundwater Availability for Future Irrigation development (in ham)
4212.16 (MCM)	4311.04 (MCM)	101328.46	92661.75	28628.99

Table 1 Groundwater availability-Kanpur

At present, an immense amount of water is used by this industry perennially which is very high. To address this issue, Solidaridad has conducted experiments and trials to reduce excessive water consumption in leather processing through the 3R (Reduce, Reuse, Recycle) strategies Solidaridad and has evolved in implementing interventions such as Water Flow Meters and Smart Water Saving System (SWaSS) which has created a positive impact on the image of the tanning sector.

Average Depth of Groundwater level			
Place	PTM- 2020	PRM- 2021	Decline
Kanpur Nagar	10.42 m	11.91 m	1.49 m
Kanpur Dehat	10.51 m	12.07 m	1.56 m

Table 2 Average Depth of Groundwater

From the above tables, it is very much evident that the groundwater level is receding or going down both in the urban and rural areas, which is a major concern.

Hence, nature has never given the option to use its resources unscrupulously and it is the responsibility of every individual to contribute their part. With larger units of more financial stability are somehow coping up with available options to implement newer technologies, small and medium enterprises assume that reduction in the effluent volume is linked with expensive technologies. However, the reduction in consumption could be through behavioural changes and also using techno economically viable options.”

There is also the need to build the capacity of such industries and sensitize by capacitating them to reduce their water footprint and increase their sustainability standards on which Solidaridad has made a mark in various other commodities.

1. Water Flow Meters:

The water flow meters mounted on the drums are one of the most effective techno-commercially feasible devices for the

precise measurement of water in the leather industry and the minimization of wastewater produced by each operation.

The flow measurement component of water meters includes both the impeller and the totalizer. The flow metering section's body is composed of brass to prevent corrosion. Water meters are shielded from splashes by a clear plastic cover, and their interface is visible even in the darkest areas of the ground. The water meter displays the real water usage. It has an indicator for the current water flow and consumption.



It is a low-cost intervention that requires no large investments in operation or maintenance. This system is simple to implement on any type of pipeline without substantial modifications, and it requires minimal translation to drum operators to initially understand how to record it.

“Earlier I used to assume that water-saving technologies are expensive and only large-scale tanneries can afford them. But when Solidaridad installed water flow meters, I actually found that it's not that expensive to save water, and realises that I was consuming more water than required”.

Mr Mohd Ahsan -Saira Tannery (Akmal &sons) -Small Tanners Association.

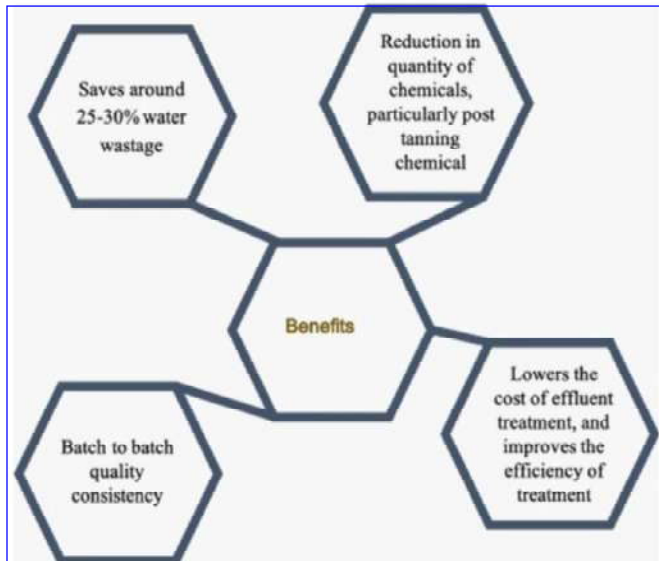
The Water Flow meters being one of the cost-effective and economically feasible solutions have been further evaluated in the tanneries and studies were done on the reduction of water usage.



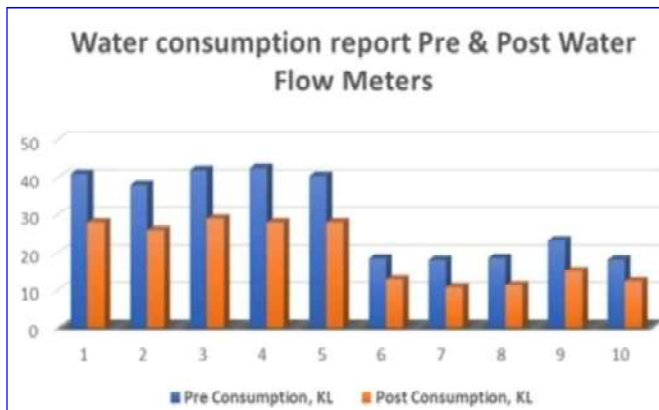
ILTA
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Solidaridad Corner

A mixed bag of positive results was found and the assessment work has been carried out in 30 of the total 52 tanneries installed.



Generally, in tanneries, the volume of water used during the process is not measured but only visually estimated. Thus, the project has helped in reducing the wastewater or optimizing the utilization of water in each process of leather manufacturing through the installation of water flow meters at each drum.



The intervention comes with a big note of profitability and future acceptance that is helping to reduce the water footprint along with undersupplying of water.

2. Smart Water Saving System (SWaSS)

Since the introduction of the SDGs, the leather industry's commitment to sustainable water management has

increased manifolds. Digital water feeding and mixing systems are advantageous for enhancing production productivity and quality. This also helps prevent human mistakes and improve the atmosphere and safety of the workplace.



With Water contamination and tannery wastewater being significant issues, Keeping the volume of effluent as low as feasible is therefore essential and Digitalization comes to help, which can range from a very simple platform to a highly complex one, with costs ranging from a few hundred thousand dollars to over a million. As other options also exist within the water management systems, the field expertise of the Kanpur Solidaridad Team has simplified it for Cluster. This method was in fact motivated by the examination of water meter data and an audit of water usage.

SWaSS is a straightforward, ingenious, and user-friendly approach to the water feeding system for tanning drums which has been designed and manufactured in India. With the trials conducted for evaluation and based on observations and analysis, we were able to save 35–45% of water in relation to conventional systems. Using SWaSS, tanneries will be able to control their whole water use with a single device.

It provides the possibility to prevent human mistakes while simultaneously enhancing the working environment

Solidaridad

switchasia
GRANTS PROGRAMME



and safety. The most significant aspects in the procedure are quantity and quality (temperature). Therefore, automated water feeding/mixing systems are beneficial for increasing production efficiency and quality. Computer control directs the amount of water at a certain temperature that the operator has set to the drum. "Using SWaSS, we are able to manage all the water in one shot, and we are able to reduce water usage by 35-45%".

The system is a user friendly interface for controlling every parameter for up to 10 drums independently.

Storing temperature, volume, and other information provide ease for later processes.

Highest accuracy

Digital control

Manual, semi-automatic, and fully automatic handling.

Reporting and printing actual water fed per consumer and daily, monthly, and yearly figures.

Scheduling a series of water additions to the different consumers to be executed sequentially or simultaneously.

Mr. Asad K Iraqi, AKI India Ltd. Unnao:

The pilot Demonstration Unit installed in Kanpur tannery provides an opportunity to demonstrate such benefits:

Our's commitment

Solidaridad stepped into leather value chain with thought process and intentions to support the industry with a vision to capacitate on ground in tackling the pollution in the tanneries across the major leather clusters of India.

With the interventions on water usage, along with the comprehensive approach on reducing the various pollution parameters it is committed to create a positive impact along the leather value supply chain not only limited to the ganges river basin, but across the leather fraternity.

The clear motive is to enable the business by having a collective approach in alleviating the pollution parameters and reduction and efficient usage of water by creating and promoting strong public and private partnerships.



SUSTAINABILITY OF LEATHER SOCIETY - A THOUGHT

¹Dr. Goutam Mukherjee, ²Susanta Mallick

¹Group A Officer, Govt. of West Bengal and Professor, Govt. College of Engineering & Leather Technology, Kolkata

²General Secretary, Indian Leather Technologists' Association and Director, Alcems Marketing Pvt. Ltd.



PREFACE

Leather is the oldest matrix used by humans and still hectically popular. Indeed, at the moment, this multi-billion-dollar assiduity serves a growing demand, despite rising review of its severe environmental impact. Leather product contributes to global warming and pollutes water with toxic chemicals (if left untreated or under-treated), especially in developing countries, where numerous leather / leather ware suppliers are located. As mindfulness for the negative environmental impact of leather rises, so does consumer demand for environmental evidence of how it is made and what the possible druthers are? Thus, leather sourcing phenomena may be coming in the knowledge revolution, according to Sourcing Journals. But is it indeed possible fore-conscious fashion brands to source leather that is produced in an eco-friendly and sustainable way?

DISCUSSION

Humanity stands on the edge of the ocean. We face huge empirical pitfalls now from the impending collapse of the global currency system, to the pitfalls accompanying the speed and impact of the biotech revolution and the eventuality of near-term release of an artificial super intelligence. The impact of these three alone could make former world wars look insignificant. We are entering a period in which the eventuality by just a single human being able to destroy us all is growing exponentially. By the end of this decade, it will be possible for a child to produce a killer complaint in their bedroom and that brings with it extraordinary challenges. There is no control system in the world that can deal with the impact of the pitfalls ahead of us. However, there needs to be a revolution of a different kind, if we are to survive and thrive as a mortal race.

Important segments of our time should be spent on working on re-imagining an ideal government. Still, much of what will truly change the world is beyond that. We need to re-wire our minds to live another way exclusively. No government can presently achieve that. These days, we suppose about change in terms of raising knowledge. We do mean to raise individual mindfulness of one's own actuality, sensations, allowed awareness about surroundings. We cannot take on the challenges we face without a step- change in adding global knowledge and to deal with what lies ahead, we have to understand what lies beneath utmost problems we face in the world.

From studies in raising our own position of knowledge in recent times, we are now starting to realize that dealing with particular trauma and pain is the gateway to resolving numerous of the toughest challenges in the world. It means trauma and pain in a vast range of areas societal, educational, and situational. Numerous unintentional and purposeful effects get happened to us every day that take us down from our original, pure characters and state of mind. In turn, individual pain causes the maturity of global problems e.g. poverty, wealth, power, war, crime, dependence, climate change, internal illness and further. Our nonstop studies have taken us on a trip of discovery, from the Psychedelic Renaissance, through the explosion of indispensable mending modalities, to the knowledge of experts presently working at the extreme edges of neuroscience. We are a far more mortal being as a result of those studies. We do live and work in stopgap of humanity shifting fleetly towards a fully different type of actuality. Given the pitfalls that we face and the timescale in which they are being, there is no choice but to look at a radically different approach to working out all

the problems in the world. Healing process in our collaborative hearts and minds is the key to doing that.

We have to suppose about how we can heal all pain. We have to suppose about how to leave no- one behind in that global mending process. Given the implicit pitfalls we could face from just one existent, we cannot go to leave any one existent before. Studies lead to believe that individual mending can be gauged encyclopedically, and that medium is the key to changing the world.

THE ENVIRONMENTAL COSTS OF CONVENTIONAL LEATHER PRODUCTION

Today, utmost hides come from bovines like cows, lamb, and scapegoats. In 2015, the Food and Agriculture Organization estimated that around 3.8 billion cows and other bovine creatures were used in leather product each time, which comes down to roughly one beast for every two people on the earth. The parenting of beast for the meat and leather assiduity, especially on the expansive scale on which it is done for bovines, has severe environmental impacts. Deforestation, hothouse gas emigrations, as well as water and land overuse, are high contributing factors to climate change. The Higg Accoutrements Sustainability Index (MSI) provides information on the impacts of accoutrements used in the product of vesture, footwear, and home fabrics. It gives most leathers an impact of 159 or further, due to its high donation to global warming, water use, and pollution. As a comparison, synthetic leather shows an impact of 43, cotton a 98, and polyester a 44.

Also there stands the tanning process. Tanning turns hide into leather by altering the protein structure of the skin to make it more durable and less susceptible to condemnation. Utmost tanners still use a process called “chrome tanning” to tan their hides, which includes chromium tanning agents, to produce the largely noxious carcinogenic chromium, if handled wrongly. This system is faster than others, but the chromium sulfates used are dangerous to health and terrain. The regulations governing use of chromium sulfates have closed down tanneries in the US and in Europe- but in developing countries, they frequently flow straight into original aqueducts, along with other undressed waste laced with lead, arsenic, acids and other associated wastes.

SUSTAINABLE LEATHER PRODUCT

Leather is made of dead beast skin and is thus no way be beast-friendly and tanning and manufacturing of any kind will always

have some kind of environmental impact. Still, hides substantially come from creatures raised for their meat; they are a derivate from another assiduity rather than taking up fresh coffers and while vegetable tanning is more precious / benign and does not always yield the necessary wispieness, it produces further eco-friendly leather. It is important to understand that we are looking at a diapason. It is not the question for black or white, ethical or unethical, environmentally friendly or contaminating, rather, leather product falls on a diapason. Companies seeking to be eco-friendly must try to ensure their conditioning process have minimum negative impact by working according to stylish practices and transnational norms. But tanning of leather can surely be eco-friendlier and more sustainable than conventional styles if allowed e.g. Green product, green collection, meets ambitious pretensions, like chrome-free tanning and detergent-free finishing. It indeed avoids swab treatments and conserves water by using only the freshest hides. The leather is produced according to European environmental normative and uses neither pentachlorophenol and/ an organo-chlorine emulsion nor chlorofluorocarbons.

How can Green Hides guarantee thee co-friendly and sustainable leather product? The Key lies in our force Chain. Leather’s force chain is complex; the product is a substantially vertical process across a myriad of countries and suppliers. Just relating the beast’s origin (was it domesticated or wild?) can be extremely delicate. As an importer, you are not in control of the leather product stages, unless you enjoy the entire force chain, which is largely doubtful. Yet numerous eco-conscious fashion brands make a trouble to understand their force chain and to source from suppliers who gain and treat their hides in sustainable, eco-friendly ways. But to understand whether you are on the right track, a brand needs to first comprehend the leather force chain.

Three top stages of Leather Production :

There are three stages of manufacturing leather products –

- a) Carrying raw accoutrements, rearing beast or catching wild creatures
- b) Sacrifice, preparing the hides, tanning, encrusting
- c) Producing finished leather / goods.

As it has been formerly mentioned, the first two stages are especially problematic to handle in a sustainable, eco-friendly

and ethical way, but let us take a near look at them from a force chain point of view.

The leather assiduity consists of refining raw skin into leather products. This whole process requires number of complex chemical and mechanical processes. Among all these processes, tanning is the most important process. The leather assiduity too generates high profile of pollution by using chemicals similar as biocides, surfactants wastewater discharge and solid waste. Several measures to reduce the environmental impact of tanneries have been developed for the leather assiduity. Some of the important features are that it is necessary to train the staff for occupational health and safety of workers, tanneries must develop environmental operation system, workers must be handed masks to avoid gobbling poisonous feasts, there must be proper drainage system to help the conformation of hydrogen sulfide in the tannery, solid waste from the tanneries must not be used for direct discharge. Likewise, there are ways available to exercise the chrome, discharged in the effluent similar as direct recycling of chrome, recycling of chrome after physico-chemical modification, etc. Wastewater from the tanneries should be treated at two situations. The first position treatment includes mechanical webbing, pH leveling, flocculation, solidification and sedimentation. The alternate position treatment requires natural process to remove organic matter from the waste water. Treatment technologies like actuated sludge, bleeding sludge; aerated lagoon, facultative lagoon etc. are available. Actuated sludge treatment is a proven and effective technology to treat tannery wastewater and is used all over the world.

Research has shown that multitudinous chemicals released by the leather assiduity have dangerous effects on the terrain. Hence, it is necessary to make sweats to exercise and reclaim chemical factors. Thus, farther environmental recommendations have been suggested to make leather product terrain friendly. Training programs of ultramodern ways must be handed to all the workers. Safety accoutrements like defensive securities, acid resistant gloves, aprons, masks must be made available to each worker. Instructional tips for safety, health and terrain must be displayed in the tanneries in regional languages. To conserve water, orderly washing rather of nonstop washing system should be used. This would not only save water but also reduce the quantum of wastewater treatment. Eco-friendly chemicals like enzymatic products must be used replacing sulfides and surfactants.

With the help of new dyeing technologies, major cloth and leather processing countries like China, India and Bangladesh will reduce

their water consumption by over 50. In the path of espousing environmental measures, major vesture / footwear brands and retailers have set a thing of achieving zero discharge of hazardous chemicals (ZDHC) by 2020. This plan has set new norms of environmental performance in cloth and leather assiduity.

The vacuity for the treatment of hides for leather material is affected by environmental factors common to the main producing countries and regions, and depends on –

- Climate change
- Water failure
- Environmental pollution
- Raising of the creatures
- Nutrition of the creatures
- Living conditions of the creatures

In addition, there are several mortal factors that also affect the leather force chain –

- Mortal rights
- Factors on original populations – noise, pollution, buying up of land
- Safety and health of the workers

With such a large number of possible external issues that affect stage 1 of our force chain, it is no surprise that leather is delicate to reference in an ethical and sustainable way.

Consumers are getting more environmentally conscious and have a lower forbearance for environmental pollution and unsustainable cloth manufacturing practices. However, their first step is to choose leather from suppliers that meet transnational environmental compliance, laws and norms, if fashion brands want to offer their buyers sustainable and eco-friendly particulars. For illustration, Issara, a Melbourne-grounded brand that sells ultra-expensive leather bags and accessories, sources their hides from New Zealand, which is famed for its beast husbandry ways and has strict beast weal assurance conditions. The company also produces bags on demand rather of running a mass- product, which minimizes

destruction. Let us take a look at a many exemplifications of sustainable leather suppliers from which brands like Issara can be a reference for their eco-friendly leathers.

THOUGHT FOR SUPPLIERS OF SUSTAINABLE AND ECO-FRIENDLY LEATHER

World leaders in the specialty chemistry of coatings, processing and treatments - including leather tanning support the move towards zero discharge of hazardous chemicals and pushes for a transparent and sustainable supply chain. Companies are actively trying to replace petrochemicals with renewable resources in compliance with their mission of "Responsible Chemistry".

For example, M/s EcoHides treats their leathers with only the most environmentally friendly, sustainable materials, promising "gorgeous leather hides with amazing durability and eco-friendly style". Another leather supplier who does focus on the environment is M/s. Sørensen. The company strives to fulfill the strictest environmental requirements in the industry. M/s. Sørensen maintains that leather is actually a very sustainable product when produced in environmentally friendly ways. Then there is Foremost, a manufacturer of synthetic leather that develops a series of high-end eco-friendly synthetic leathers called N°Pelle® since 1985. Foremost is devoted to providing DMF- and cruelty-free vegan leather alternatives, that still look and feel like leather. Who did know that we can make leather-like materials from pineapples - from the fibers of pineapple leaves, to be exact. Ananas Anam creates this material, called Piñatex, by extracting the fibers from the leaves. They are turned into a base material to make durable wallets and bags.

As we can see, there are a myriad of suppliers focused on producing sustainable and eco-friendly leather or leather alternatives that environmentally-conscious fashion brands can source their materials from - and they are just the tip of the iceberg.

LEATHER SUPPLY CHAIN AWARENESS

Knowing and understanding every origin and step of every item, fabric, and material in a brand's supply chain, is an effort of Herculean proportions. Supply-Chain management (SCM) software, especially cloud-based, can help your supply chain's transparency - but it is only as good as the information it is fed. An SCM software's main focus lies on optimizing order

management, production planning across warehouse locations and reducing order cycle times, rather than on providing brands with transparency into their suppliers' production processes, materials manufacturing or working conditions which is where Software companies come into play. It provides a platform for brands to bring more transparency into their supply chain, as well as for end consumers to gain insight into just that supply chain - and for suppliers and manufacturers to offer their eco-friendly and sustainably produced goods to brands.

COMPILING DATA IN ONE PLACE

To allow consumers to track their product along its entire supply chain from supplier to vendor, a brand has to amass and compile a ton of data from many different sources: suppliers, manufacturers, logistics service providers, warehouses, and vendors are only the tip of the iceberg.

If, for example, a company receives a customer's inquiry about where and how a specific dress is made, it is far easier to let that customer check themselves via a software that accesses the sought-after information from a single database, rather than having to access every one of the company's suppliers' databases individually and getting all that information back to company's client in a clear format. Having all manufacturers and suppliers putting in their data into a single database makes it a lot easier for interested consumers to access the product-specific information they are looking for.

To spin this concept further: A transparency software and linked database used by all parties involved - suppliers, brands, vendors, logistics providers, consumers - can be user-friendly if set up properly. For example :

- 1) Suppliers can easily input the material and manufacturing specifications into the database.
- 2) Brands can search the database for suppliers offering the types of clothing made with the specific criteria they are looking for.

CONSUMERS CAN SIMPLY SCAN A QR-CODE TO FIND OUT ALL ABOUT A PRODUCT'S SUPPLY CHAIN WITH ONE TAP.

Imagine, for example, a company is looking for a new supplier of regenerative fibers to meet the rising demand for eco-friendly clothing items. If they have a database filled with (and by) fabric



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suppliers, all they would ideally have to do is search for “regenerative fibers” to generate a list of suppliers - instead of researching and then calling every single potential supplier to ask if they offer what a company is looking for. It sounds deceptively simple, It really is that simple and any brand can benefit from it - including ours.

MANAGING INFORMATION AND DATA

Obviously, it is great if a database compiles all the relevant data in one accessible, user-friendly platform - but good transparency technology goes beyond that by also organizing and analyzing the data and its efficient flow across entities. Transparency is the step that can only come after information management, opening the collected data up to being published to outside entities. Without proper information management, it would be impossible to provide intuitive, understandable and accessible transparency. Effective information management in transparency software will especially contribute to the following factors.

DECREASING COMPLEXITIES

Let us imagine all the data that accumulates over the entire supply chain of a single shirt / bags, including (but not limited to) :

- Methods of growing and harvesting / keeping up of cotton / animals and other materials involved following prescribed humane norms,
- Procedures of turning those materials into fabrics, leathers, buttons, zippers, etc.
- Processes of making and applying dyes,
- Transportation dates, modes, and locales,
- Methods of sewing and manufacturing items,
- Healthy wage paid to workers along every step of the way,
- Social security provided to the workers involved,
- Precautions taken towards occupational safety and health hazards,
- Percolation of thought about taking care of recycling of waste product to customers after completion of life cycle of the supplied products to them.

And that is just for a single item.

Wading through all that information manually to sort it into something tangible and applicable for a brand's entire stock is impossible. Supply chains in their entirety are a complex amalgamation of data you could not just dump into a consumer's lap, even if you wanted to provide them with every single piece of data.

A good transparency software sorts and distills all the data provided, decreasing its complexities into the pertinent information that interests potential buyers, in an easily understandable, manageable way.

LOOPING INFORMATION GAPS

Brands and vendors are aware of certain aspects of their supply chains and already communicate them to consumers. Any fashion brand, for example, can tell you the fiber content and country of origin of any item of clothing they sell, because this is all information required to be shown on a clothing item's tag.

CONCLUSION :

Transparency, though, goes far beyond fiber content and origin country. Consumers, who care about sustainability, the health and safety of workers, understanding where their goods come from, want to know more wish to go away more. Brands who aim to provide their customers with more have to close the information gaps in their data. Software that provides transparency to suppliers and consumers with a database to hack all that information would close those gaps in the most efficient way possible.

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It is with great pleasure, that we invite you to participate in the 12th Asia International Conference of Leather Science and Technology (AICLST), hosted and organised by the New Zealand Leather & Shoe Research Association in the beautiful and picturesque city of Queenstown in New Zealand's South Island on 18-20 Oct. 2022.

Queenstown sits on the shores of the South Island's Lake Wakatipu, set against the dramatic Southern Alps. Renowned for adventure sports, it's also a base for exploring the region's vineyards and historic mining towns. There's bungee jumping off Kawarau Gorge Suspension Bridge and jet-boating on the Shotover and Dart rivers. There is also the possibility of skiing on the slopes of The Remarkables and Coronet Peak.

The three-day programme promises excellence in science, along with practical examples of science impact and the drive to sustainable leather production. We seek to foster strong and lasting bonds between leather scientists across the international community with companies engaged in leather production and chemical companies who deliver the products used to manufacture leather.



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Main Topic Areas:

- ❖ Advances in Basic Science of leather
- ❖ Benign chemical developments
- ❖ Cleaner leather production and closed-loop processing
- ❖ High value uses for leather manufacturing by-products and wastes
- ❖ Technologies to advance protection of the environment in the leather industry
- ❖ Advances in detection technologies applied to leather manufacture and quantification
- ❖ Intelligent leather technologies – Industry 4.0
- ❖ Design innovation for fashion leathers

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The Application of Leather in Modern Architecture



Subrata Das, M. Tech (Leather Technology)

Freelance Leather Technologist & Consultant, Chennai

ABSTRACT

In recent times, leather has found increased favour and preference as an architectural prop and material. Today, a wide variety of leathers in an array of finishes, optics, designs, densities and colours are available to architecture and interior design professionals. This revival of interest in leather has been instrumental in enthusing architects, designers and artisans to audaciously and assiduously essay and experiment with various physical, material and performance properties of leather, to breathe life into unprecedented and pathbreaking creations. Advances in leather technology have also fostered the development of leathers for both indoor and outdoor applications. These have unveiled exciting pathways for architects, engineers and decorators to immerse themselves in aesthetic and functional innovations and to bring their creative visions to fruition, and in the process to provide exceptional customer service and forge inter-disciplinary collaborations.

INTRODUCTION

The last decade has witnessed a confluence of architecture, construction and engineering to harness the untapped potential of leather as an architectural prop and fabric. Their triple entente has been eminently successful in making leather sufficiently manageable, manipulable and malleable, to develop beautiful creations with a high level of craftsmanship.

Astonishing wonders, embracing leather, in bold and exciting designs, from various countries, are frequently featured in architectural digests. Artistic elegance in complex depiction and creative technical execution, riding on the temerity to experiment, by talented and inspired architects and engineers, have catalysed an unprecedented symbiosis between steel and glass, brick and mortar and leather - the only natural, three-dimensional, non-woven fabric in the world.

Leather radiates physicality, longevity and identity - A tri-junction where architecture, engineering and construction come together to breathe life into creations that radiate both aesthetics and functionality.

The intensely physical orientation of leather - its robustness, presence and appeal, coupled with its strength and resilience, serve to highlight the structural and functional integrity of the projects.

Today, contemporary architectural innovations are offering holistic aesthetic experiences, by combining modern innovations with traditional workmanship.

Leather has become a true marquee of timeless style and a steadfast guarantor of a high level of excellence.

Some notable examples of the use of leather in architecture are as follows :-

22 Bishopsgate, London, UK



Corresponding author E-mail : katasraj@rediffmail.com

The second tallest building in the United Kingdom, is the 276m tall, 62 storied commercial skyscraper known as 22 Bishopsgate. The building offers two million square feet of internal floor space which can accommodate 12000 people. The landmark is Britain's first "Vertical Village", with optimal space efficiency and modern resident-centric design, for quality ,high-rise living and working. It seeks to reconcile modern or traditional living and working standards with a soaring tower block.

Global industry leader in interiors, bespoke leather products, and furniture - Bill Amberg Studio - worked in close collaboration with PLP Architects, for three years. This interdisciplinary alliance, explored the functional, aesthetic and material possibilities of leather.

The atrium, referred to as "The Library", is a masterpiece of outstanding architectural leatherwork. Displaying exemplary teamwork and craftsmanship, Bill Amberg Studio and PLP Architects, integrated heavily drummed, natural dry milled, Cornish cowhide, into the interior spaces and dimensions of the lobby.

Imitative of graceful leather ribbons, in complex choreography, padded leather panels were concatenated from the escalator underbody at ground level, to coil and twirl across the ceiling, before descending on the opposite side of the lobby to the floor level, creating a mesmerizing visual impact.

Functioning also as a gallery for temporary art exhibitions, "The Library" serves as the centre point between the building's two entrances. The gorgeous visual and multisensorial interpretation of leather in the lobby, invariably draws passers-by into the rich, multi-layered and standout interior.

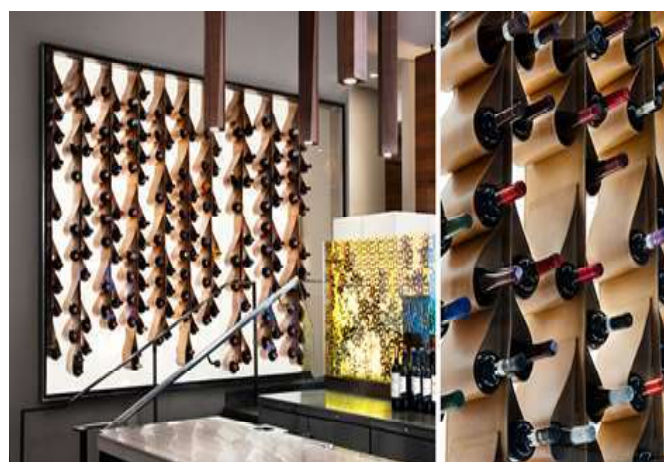
The suspended ceiling system consists of two basic components: a perimeter track and a lightweight fabric membrane that stretches and clips into the track to create exceptional site sensitivity.

The "material alchemy" imparted by the understated tan finish, highlighting the visual luxuriance and resonant optic of the leather creates a sense of seamlessness and continuity in the atrium.

The architecture also invites light and air into the space and dimension. These elements accentuate the softness, smoothness, sheen and the tonal and textural variations of the panels, complementing the internal finishes of brick, mortar, glass and steel.

22 Bishopsgate is the largest project by floor area in the UK to be registered for WELL health and wellbeing certification, and it has also been designed to achieve a BREEAM Excellent rating for sustainability.

Nota Bene Restaurant, Toronto, Canada



In recent times, talented and inspired designers have synergized leather with a wide range of materials, to produce a joint effect greater than the sum of their separate effects. This has brought refreshingly new perspectives to leather technologists, on uses of leather, unknown or not existing before.

Interior design firm +tongtong has collaborated with Owner/ Chef David Lee to renovate the interiors of Nota Bene, a restaurant in Toronto, Canada.

A distinctive, bespoke wine display made from leather, was accorded the pride of place in the restaurant, as a part of the renovation.

+tongtong is a multi-disciplinary design studio headed by John Tong, who is a graduate of the University of Toronto, School of Architecture. He founded +tongtong in 2012.

+tongtong collaborated with Owner/Chef David Lee to renovate the interiors of Nota Bene, a restaurant in Toronto, Canada.

As part of the renovation, the designers came up with a unique custom designed wine display made from leather.

The back lit wine wall that sits behind a wall of glass, was designed to mimic bunches of tiny grape flowers blooming from new vine shoots, presenting Chef Lee's expansive wine offerings.

The wine wall is made of full-grain vegetable tanned bovine leather of medium density, which allows the installation also in both dry and humid conditions. The leather is treated to be waterproof and stain-proof, and also have sound-absorbency properties.

Each wine cradle can be installed and replaced easily and without structural work. The composition of the cradles, which don't have any rigid or heavy embellishments, also allows the perfect installation on any surface, even curved or irregular and their lightness does not affect the weight of the structure. The saddling does not use either glue nor solvent resin.

The advantages of a vegetable tanned leather wine wall are :

- Beautiful and artistic – creates an impact in any dimension.
- Leather walls are sound absorbent, pliable, stain- and flameproof.

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- Tailored Finish – cradles mount securely to the wall with no sagging, wrinkling, or tension points. Can be used on curved surfaces and columns.
- Offers a luxurious soft touch and exceptional resiliency.
- Flexible design possibilities – unlimited combinations by permuting sizes, shapes, and leathers.
- Simple and cost effective to install.
- A damaged cradle can be easily removed and replaced.

Lee & Sons Office Building, Bangkok, Thailand

Haptics in architecture means anything which can be touched, grasped or stroked as related to architecture. This may mean handrails for stairs or elevator buttons. Since leather is a haptic material, it can be incorporated into any design.

ASWA (Architectural Studio of Work - Aholic), a Bangkok-based architecture firm designed an office building for a leather manufacturing company in Bangkok, by cladding the curves and contours of the frontage and elevation of the building with leather.



Haptics in architecture means anything which can be touched, grasped or stroked as related to architecture. This may mean handrails for stairs or elevator buttons. Since leather is a haptic material, it can be incorporated into any design.

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From the very beginning, the entire project was conceptualized to function as a totem in physical form emanating a narrative of the company's product, brand and image in physical form. The brief demanded the creation of maximum visual impact, by incorporating a strong conceptual expression of the brand's identity into the design.

Viewed from a distance, it would be near impossible not to take a second look at the majesty of the leather wrapped building - its beauty, physicality and commanding presence.

The solidity, density and compactness of the leather used in wrapping the volumes and facades of the building, seeks to replicate a high quality, luxurious leather belt, which is supple enough to be partially bent but concomitantly unyielding, to never be entirely folded.

Strategically placed vertical dimensions, serve to interrupt the elevation in the form of recessed windows, functioning on pivots, which claim indirect sunlight, which illuminates the interior, without adversely impacting the leather stocks, stored inside.

This unprecedented architectural marvel, ingeniously makes use of leather as a fabric for artistic expression, to embody the concept of the project.

The entire footage of leather, used externally, has been weather- and water-proofed and imparted the highest possible resistance to UV-light by using the high quality, proprietary chemicals and auxiliaries available in the market.

Tokyo Fashion Museum



The 100-metre high, cube shaped Tokyo Fashion Museum is an iconic Tokyo edifice, located in the densely urbanized Omotesando street of Shibuya in downtown Tokyo. The building has 22 levels of which, three are below ground level.

Due to the limited dimension of the parcel of land available to the museum, the shape of the building narrows at street level to accommodate a layered and staggered system of horizontal levels in an essentially vertical structure.

The result is truly awe inspiring as the various concrete cubes have been juxtaposed, one over the other, to simulate an elastic band, which has been unrolled and extended vertically, as a complete antithesis of museums worldwide, which are conceptualized as vast, expansive halls, showcasing exhibits or expositions.

The entire volume and facade of the tower, soon after its completion and commissioning in 2011, was swaddled in homogenic leather by MUS (Made Up Spaces) Architects, based in Katowice, Poland.

Hundreds of metres of homogenic leather cords were wound clockwise around the edifice, with a second layer going around in the opposite direction, to create an interwoven plait. Angular intersection of the fibres and cords of homogenic leather were affected at different places and their density and mass, judiciously regulated, keeping in view apertures, incident lighting and other aesthetic and functional considerations.

The outer shell of the building, made from light frame carbon pipes, solar tubes, supplying the museum with sustainable energy, provided the foundation and support to maintain the shape and structure of the homogenic leather mesh. The final effect was that of a human body, draped in a woven gown, symbolizing fashion itself. The white colour of the leather mesh blended seamlessly with the vertical partitions and geometric shape of the museum from its apex to the street level entrance, where a clear, frameless glass façade invites passers-by in.

Dividing the space with the intricately woven homogenic leather cords helps reduce the volume of the building mass optically and relates its horizontal directions to the height of the surrounding buildings.

Thus, by the creative and imaginative use of leather, the plan of the building and the mutual shift of the concrete cubicles comprising it, could be seen and appreciated, keeping viewers and visitors in constant interaction with the building.

Simon Astridge Architecture Workshop

The tri-dimension of leather - its evocative, aroma, unmatched tactility and visual luxuriance, was elevated to an art form by British architect - Simon Astridge architecture Workshop in 2012 in collaboration with specialist leather supplier, Bill Amberg and the client, in renovating the latter's South London home.

The architects received an inspirational brief from the homeowner to use leather, for a powerful multi-sensorial experience and non -language communication in detailing the joinery between the bathroom and study to the master bedroom, creating in effect a leather tunnel, which would function as a dressing room.



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After deciding upon British cowhide from Cornwall, the stakeholders studied the width, length, shape and substance of the leather to arrive at the best possible panel dimensions for cladding the dressing room walls and floors.

After detailed research on the strengths and weaknesses of the Cornish cowhide, intended for use as an architectural fabric, the architects defined the dimensions of the "walk-through" dressing room.

The size of the sliding doors were defined by the maximum possible butt size commercially available. To enable the leather to age gracefully, worn authentically by hand, and develop an attractive patina, as a part of its normal life cycle, no handles or pulls were provided to the sliding doors. This also emphasised the inimitable tactile qualities of the cowhide used.

To offer sartorial privacy in a secluded space, provisions were made for the leather walkway to be secured by a concealed mirrored door operating on pivots.

Rust-coloured leather floor panels complemented the leather wall panels. Provisions were made for underfloor heating to offer warmth and exhilaration.

The richness and opulence of the leather were highlighted by strategically positioned pendant lights.

With the walls, doors and floors radiating the material alchemy and value structure of leather, the final effect was scintillating and gorgeous in equal measure.

CLB Architects and Brandner Design



Wyoming, USA based, CLB Architects and Brandner Design designed a bespoke leather and steel handrail for the stairs for a client's home. The integration of the constituent materials endows a contemporary industrial ambience to the home's



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Since 1950

interior. A saddle leather encased black steel railing is embellished with a stitched leather strap, woven through the steel rails, providing a contrasting detail and extra grip.

The architectural firm is renowned for using leather extensively in various projects. These include - stitched leather wrapped door handles, railing and braided spindles, balustrades, door pulls and wrap handles.

CONCLUSION

In recent times, leather has been finding increased favour and preference as an architectural prop and material. Today a wide variety of leathers in an array of finishes, optics, designs, densities and colours are available to architecture and interior design professionals.

This revival of interest in leather has been instrumental in enthusing, architects, designers and artisans to audaciously and assiduously essay and experiment with various physical and performance of leather, to breathe life into unprecedented and pathbreaking creations.

Recent advances in leather technology have also fostered unique range of leathers for both indoor and outdoor applications. These are offering exciting pathways for architects, engineers and decorators to immerse in aesthetic and functional innovations and to bring their creative visions to fruition.

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TANNERS PLAN MOVE TOWARDS MORE “SUSTAINABLE” LEATHERS



Analysis from the 2022 edition of the ILM Tanner Business Confidence Survey reveals a trend towards more sustainability-focused leathers.

ILM added three new questions to the latest edition of the annual ILM tanner survey in response to moves from the industry further towards the kinds of leather processing that appeals to contemporary consumers.

These new questions were: “Are you considering producing fully biodegradable leathers in the next year?”, “Are you looking to source more biobased chemicals for your leather production in the next year?” and “Are you planning to move towards metal-free tanning systems in the next year?”

While the answers from tanners who responded to this year’s survey were not unexpected, it’s interesting to have confirmation of a trend towards these aspects of leather manufacturing.

A total of 57% of the respondents said that they would consider producing fully biodegradable leathers in the next year, keying into a hot topic for ILM’s reporting in the past year, with more chemical companies and leather brands seeking to offer the opportunity for biodegradable leather. Although this counters the classic longevity aspect of leather, it is an aspect that a natural material such as leather can offer when synthetic competitors are almost always unable to.

Switch to biobased

Meanwhile, a vast majority of tanners, at 84%, said in the survey that they are planning to source more biobased chemicals for their leather production in the next 12 months, with just 16% confirming that they wouldn’t.

You need only look at the marketing efforts of any leather chemicals company across the world, particularly in Europe, to see the trend in this direction. Biobased is the buzzword of the moment for the chemicals industry and the demand is clear, customers and consumers want leathers that can tangibly prove their sustainability across the board and, by using responsibly sourced and low-impact chemicals from renewable feedstocks, tanners can add another string to their bow on the environmental front.

Evolution of tanning

Finally, although metal-free and chrome-free tanning are tough subjects to tackle, it has become clear that more leather producers are looking to move away from those types of tannages either entirely or to offer an option for customers looking for a more “sustainable” leather, primarily from an image standpoint.

Most respondents from the 2022 survey, a total of 69%, confirmed that they wanted to make a move in this direction in the next year, while a not insignificant 31% counted it out. Chrome tanning is not yet out of the door, but it seems that by moving to a tannage which is tangibly or perceived as better for the environment or easier to market in a pro-environmental way, tanners can make great headway towards producing leather for markets which demand certain standards or images for pro-environmental consumers.

Ultimately, leather and the way it is processed is changing. A slow change to be sure but one which ILM is dedicated to keeping an eye on. We can only wait and see what comes next but, though further surveys in the years to come and key expert insights from the tanning and chemical sectors, ILM will ensure that you can see where the road will lead.

(ILM – 13/09/2022)

III IULTCS EURO CONGRESS BEGINS IN VICENZA



III IULTCS Euro Congress has kicked off in Vicenza, Italy, with two days of scientific presentations ahead. The theme of the event is Renaissance – The Next Leather Generation.

The event will feature 26 oral presentations alongside 27 poster presentations covering the latest updates from across the European leather supply chain, especially around the topics of novel leather chemistries, environmental protection and new analytical techniques.

Opening the event, Giancarlo Lovato, III IULTCS Eurocongress, President spoke of a message of hope and explained how the event not only serves to present the latest updates but to provide stimulus for the industry in developing new ideas.

Dr Luis Zugno, IULTCS Secretary, echoed Lovato's thoughts, saying: "For two days, Vicenza is going to be the leather scientific centre of the world." For further developments from EuroCongress, keep an eye on the ILM website and look to our upcoming November/December issue of the magazine for a full review of the event.

(ILM – 19/09/2022)

NEXT WORLD FOOTWEAR CONGRESS TO BE HELD IN ISTANBUL ON MAY 2023

The next **WFC**, which was created in 2003 by CEC to bring closer all footwear players around the world, **will be organized jointly by CEC and the Footwear Industrialists Association of**

Turkey (TASD), and take place in Istanbul, "a city where Europe and Asia meet", to remind the footwear industry of the **need of working together** to foster competitiveness, growth, and equal chances for all in a new challenging macro environment.



This was announced in Milan, following CEC's Board Meeting which took place yesterday by the occasion of MICAM Milano's most recent edition, which comes to a close today. CEC's Members have confirmed the place and date of the event during their gathering.

"In less than three years since the last Congress edition in Naples, **the world has lived the major challenges since World War II**, which started with a pandemic, and was followed by transport disruptions, scarcity of materials, accelerated climate change, a war, energy crisis, huge inflation rates, etc.", said CEC.

"It is therefore logic that the Congress's motto should be **the footwear sector's recipe for this New World**", urged the European organization, recalling that in recent years **Turkey became a major producer in the global footwear scenario** thanks to investments in manufacturing processes and high-design capacity.

During the Congress, companies will have the opportunity to share and learn from international speakers, as well as meet other companies and visit factories.

(worldfootwear.com – 20/09/2022)

ILM PODCAST - WORKING AND NETWORKING IN THE MODERN LEATHER INDUSTRY



Deputy Editor Tom Hogarth revisits three articles around how the leather industry can best work and network in the post-Covid landscape, and some of the opportunities ahead.

The three articles featured in this podcast episode centre around the changing attitudes towards work and workplaces themselves, and how this even extends to the tanning industry, the way we should be networking versus the most common understanding of the practice as well as a look at some of the events taking place throughout September for the wider leather supply chain.

Where to find the podcast

To listen to or download the latest episode of View from the Top, head to the **episode page**. You can also find our podcast on Spotify, Apple Podcasts and Google Play.

Each episode of ILM's podcast series is designed to appeal to all parts of the leather supply chain, including tanners, traders, suppliers, academia and research organisations, OEMs, brands and retailers. All podcasts from ILM's View from the Top series are free to listen to or download to be enjoyed offline.

(aplif.com – 20/09/2022)

SUSTAINABLE LEATHER FORUM EXPANDS WITH A NEW FORMULA

New this year, the Sustainable Leather Forum (SLF) will welcome 15 exhibitors in the Nave of the Palais Brongniart on September 12 in Paris.



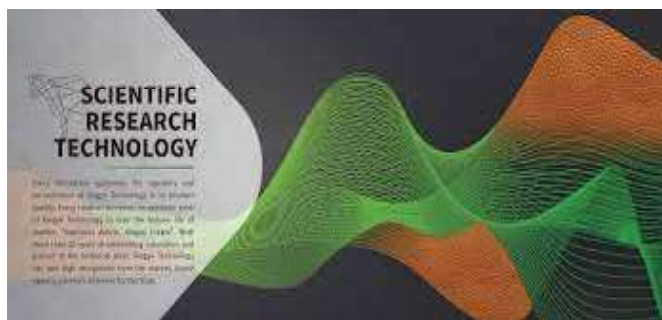
New this year, the Sustainable Leather Forum (SLF) will welcome 15 exhibitors in the Nave of the Palais Brongniart on September 12 in Paris.

Do you want to improve your CSR approach in your company or organisation but don't know how to do it? In addition to the round tables and presentations, the Sustainable Leather Forum will offer for the first time an area with 15 exhibitors who will be present during break times.

Organised by the Conseil National du Cuir (CNC), this novelty will promote networking during this essential event in the leather sector.

Exhibitors present will include International Leather Maker as well as: ADC, the incubator that accompanies young brands in their development; CETIA, the first innovation platform dedicated to the automated sorting and dismantling of end-of-life and unsold textile and footwear products; and the Leather Working Group, the not-for-profit community organisation dedicated to driving excellence in sustainable leather production.

(ILM – 05/09/2022)





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SCIENCE AND TECHNOLOGY

Chrome Tanning And Finishing Of Upper Leather For Use In Direct Vulcanized Process Shoes

By RAM ROCHAN SEN GUPTA

Abstracted from author's thesis of same title, submitted in July 1970, to City & Guilds Institute, London, as part of requirements for Insignia Award in Technology.

An indication of how recent is this subject of DVP leather can be had from the fact that neither the Progress of Leather Science (1920-1945) of BLMRA, nor the first three volumes of the recent monograms *The Chemistry and Technology of Leather* (American Chemical Society, the 3rd volume, 1962) mention it.

Historically, Direct Moulding Construction is traced by Thornton to 1935 in Italy, Germany and Spain. Introduced to England as late as in 1949, by C & J Clark of Street, Great Britain, became by 1958, according to Grimwade, the leading country in the development of footwear with moulded bottoms.

Some of the outstanding features of DVP shoes have been mentioned by Kennedy and Seligsberger, pointing out the following advantages that led to its adoption in combat boot manufacture :

- (a) A boot of great durability and longer serviceability ;
- (b) the possible elimination of field repairs and maintenance ;
- (c) ultimately, lower costs per pair ;
- (d) an improved sole ;
- (e) simple method in leather finishing ;
- (f) economy in

- labour and time in shoe manufacture ;
- (g) easier and less work in shoe finishing ;
- (h) better wearing properties, water tightness and pliability of the shoe without having welt construction.

The main types of footwear in DVP construction are largely (a) leather heavy boots for industrial (including agriculture) and military personnel, for example, U.S. all weather combat boots ; (b) Oxford and Gibson shoes for children, boys and men ; (c) suede bootees and slippers for women.

In outline, the Direct Vulcanized Process mainly involves direct moulding and vulcanizing a soling material, of natural rubber and SBR, using various additives, vulcanizing agents and conditions, directly on to the leather uppers and the insole. Earlier machines used a sponge type soling having a 'blowing mixture' in the compound, so that on application of heat, the evolved gas would generate enough pressure inside the mould and no external pressure was needed.

For sponge soles on bootees and slippers, this simple 'sponge' type method is still done. The other and more popular



NOVEMBER 1980

9

type of machines use a 'pressure device' of a ram operated by mechanical, hydraulic or pneumatic means, which allows suitable soling compound to be moulded and attached to the lasted bottom and then vulcanized very effectively. To reduce the process time and thereby increase productivity, the present trend is to raise the temperature and pressure as high as possible for the leather to withstand.

A general method of constructing DVP shoes consists of six basic steps broadly described in the following sequence: (a) The assembled upper is firmly lasted and secured to the insole with tacks or staples; (b) The lasted over margin of the upper is carefully buffed to remove the top finish, exposing the fibres to ensure sound bonding; (c) A special cement is applied over the shoe bottom including the roughened upper, for bonding the sole and then be vulcanized with it; (d) The soling compound, preheated by high frequency valves, and in the rough shape of a sole, is now placed into an electrically heated mould according to the shape and size of the sole required. The lasted and cemented shoe assembly is then placed accurately on the mould, with the nip-line of the upper contacting the 'ring' firmly to act as a seal against the molten rubber from leaking through; (e) The heat softened soling compound is then pressed from the bottom forcing the mass to all parts of the mould and against the bottom of the last, and thus form the moulded design of the engraving, including trend design, welt indentation and other features. During the curing time a

slight adjustment or settling down between the last and the ring occurs without lowering the pressure inside the mould; (f) After the requisite time of curing, the last is lifted and unlocked from the ring and any spue of soling compound at the lower edge of the sole is trimmed off.

General types of 'pressure type' machines are those made by BUSMC, Ferrari C.E.M.A., the Pinto, the Nova, Svenska Skolastfabriken Co., Direct Vulcanization Co. Ltd. DESMA (Germany), SVIT (Czechoslovakia) and others. The main variations in features of these machines lie in the following factors: 1. Pressure mechanism: pneumatic or hydraulic or mechanical. 2. Pressure load available for application: from 25 to 65 kg/cm² or more, inside the mould. 3. Temperature applicable, depending on the curing time, pressure and composition (accelerator, etc) of the soling mixture, varies between 150° and 200°C for chrome tanned upper. 4. Mode of heating the last and the mould and the ring is usually electrical, but some types with steam or oil heating are also available. For leather uppers, the last temperature is not normally heated but about 70°C is reached. When heated, the temperature is kept low to about 105°C for vegetable tanned leather and little higher for chrome tanned. 5. Method of loading: in most machines, invertible lasts are fitted, the higher position for lasting the upper in to the insole, and the lower ones for moulding. Some machines will have two lasts mounted opposite to supporting stand, so that while one is



downed into the mould, the other can be used for the lasting during the curing time of the former. Thus the productivity is raised. 6. Variations in other mechanical details may also be mentioned. In the Ferrari machine, the base of the mould is fixed and the last and ring are forced downwards by air pressure. Other machines may have a moveable base that can be pressed upwards to the predetermined pressure. Automatic devices for temperature, pressure and curing time control are also incorporated in the latest machines of BUSMC, SVIT and others. Even the sequence of operations is made automatic, so that one operator can look after about a set of 10 machines and produce economically.

7. Curing time: dependent on temperature, pressure, selling composition and thickness of the sole, the time for vulcanization varies between 4 and 12 minutes. The higher the temperature applicable (the limiting factor being the heat resistance of the leather used), the shorter is the curing time.

Cements

The adhesive must be able to bond efficiently the leather and insole and be vulcanized together with the soling compound. The main practice is to use heat activated cements, made of natural and synthetic rubber in aromatic solvents and cross linked with isocyanides like Desmodour R, which is a 20% solution of polyisocyanide in methylene chloride (B.P. 41°C), or for tropical countries, in trichloroethylene (B.P. 87°C). A structural formula of triisocyanate of leukorosaani-

line or triphenyl 4,4',4'' triisocyanate indicate a three dimensional form with active hydrogen atoms that bonds with OH groups. Therefore moisture should be avoided, in the application of Desmodour R.

Chlorinated rubber neoprene with epoxy primer has been used on leather containing 20% fat, to provide a most satisfactory base for subsequent application of neoprene based adhesive. Polyamides and polyurethane find extensive scope in the adhesive compound. Natural rubber is not considered a suitable base, even after cross-linking with isocyanate, as it is not as resistant to ageing, oxidation and oil as synthetic rubber.

In practical application in the industry, Neoprent based adhesive with 5 to 10% Desmodour R added within (one hour of its use) has been found quite suitable for leather containing about 5% fat. If the fat content is higher, an extra 2% Desmodour R is added to the adhesive. The general difficulties with cements range from poor bond strength to damaged upper by splitting during its application or moulding. Foot hygiene also disallows certain objectionable cements. The development of a cement that will not need 'roughening' of the shoe bottom is a much desired dream of the shoe industry. A leather finishing resin—Eukanol Binder GGN Special (Bayer)—claims to eliminate the need to remove the leather finish by roughening. It is believed to contain some synthetic rubber or resin with a heat activated cross bonding or vulcanizing agent. The finish



NOVEMBER 1980

11

gives a heavily coated appearance, and so far roughening could not be fully eliminated due to lowering of bond strength and slipping of the bottom during moulding, due to fluidity of the adhesive, when pressure is applied.

Soling Material

Natural rubber with or without high-styrene resin, synthetic rubber SBR, or a mixture of natural and synthetics are all used as the base material compounded with other ingredients, like inert fillers, plasticisers, anti-oxidants, zinc oxide and others. To shorten the curing time at a relatively lower temperature and without scorching, when using leather, a fast curing accelerator system is formulated. The accelerator must have a good ageing property, as the degree of vulcanization is not uniform but varies through the thickness of the solid rubber moulded-on sole.

Two factors influencing the choice of compounding ingredients are: (a) Materials of construction of footwear, or their tolerances for heat and pressure. A shorter curing cycle at a higher temperature and pressure, for when heated lasts are used, is not possible when only applied from one side of the sole. (b) The design and operating conditions of the equipment, which may be interdependent with the above factor.

Characteristics Required of DVP Leather

Fully chrome tanned leather, often retanned with resin+syntans are found generally suitable, provided they con-

form to other chemical and physical specifications. Chrome leather with heavy vegetable retanning must be tested before use. Full grain (aniline of glazed finish) or corrected grain, both are suitable, although due to scarcity of good grained leather, the latter is more prevalent. Maddams suggests that tanners should declare if a particular leather supplied is suitable or not for DVP, for the benefit of shoemakers. Recommended tests for this quality of thermal resistance and suitability for DVP, attempt to simulate actual moulding conditions.

The primary characteristics of DVP leathers are: 1. High thermal resistance to be able to withstand the curing temperature, time and pressure, it is subjected to during moulding. This is more a function of increasing amount Cr_2O_3 content and low moisture content than any other factor. A minimum of 3.5% chromic oxide content was recommended previously for vulcanization at about 150°C to 170°C , curing time of 8 to 12 minutes and a moulding pressure $16\text{kg}/\text{cm}^2$ to $63\text{kg}/\text{cm}^2$. Nowadays, even for the thicker soled boots and shoes, the trend is to use higher temperature and pressure so as to reduce curing time and thereby increase productivity. Depending on the thickness of the sole and its composition, curing time can be reduced even to as little as $1\frac{1}{2}$ minutes, while increased pressure is claimed to give more abrasion resistance to the sole. A temperature as high as 190°C is now being used, for which a leather with 4 to 4.5% Cr_2O_3 content as the minimum has been recommended by a BLMRA and



SATRA research team. But no direct co-relationship between the shrinkage temperature and the thermal resistance, specially at the nip-line, of chrome leather has been established. The usual nip-line damage, apart from the above deficiency in chrome content, are also caused by other factors like high moisture content, low water vapour permeability, incorrect design of the ring around the featherline, as will be elaborated. Heat resistance of leather is improved if it is predried immediately before processing. Karoline and Miecyslaw found that the influence of temperature increase on heat resistant leathers, specially chrome tanned, lead to a corresponding increase in tensile strength up to a certain point and then decrease, decrease in water absorption and air permeability and increase in grain crack.

ii. Low Moisture Content

The moisture content of leather is recommended not to exceed 14%, as heat resistance is increased with lower moisture content. Brooks mentions dry leather standing up heat lasting up to 205°C. High fat contents with hydrophilic ingredients holds up more moisture than usual, and it also resists drying. Fats and the presence of moisture reduce the rate of conduction of heat through the cross section, and therefore retains more heat in the leather to make it susceptible to heat damage.

Radil and Cik found that shrinkage during vulcanization is a function of the water content. Leather containing 10-14% water showed shrinkage of 10-12% during vulcanization at 140°C,

while it was only 1.5% shrinkage with less than 5% water. They also found that resistance to vulcanization temperature decreased with the lowering of the pH value of the aqueous extract. Herfield and Steinlein recommends a neutralization end-pH between 3.5 to 5.00 for heat resistant leather.

iii. Low Fat Content

As already stated, the hydrophilic constituent of fat makes the leather more hygroscopic and therefore less resistant to heat. Presence of fat reduces initial bond strength between the sole and insoled bottom of the shoe. Often a good initial bond may weaken during storage due to migration of fat from the inner layer of the leather to the bonded intersurface. Mineral or neutral type of oils are more liable to migrate, than polar types, and therefore should be avoided, as far as possible. Unsaturated fats like raw fish oil also weaken the bond by combining with the cross-linking agent meant for the adhesive, or swelling the bonding material.

Baumann gives paramount importance to the good roughening of the leather for an open-structure of the corium fibres to allow the adhesive to penetrate well. Excessive fat makes it difficult to achieve this good exposure of longer fibres that ensure good adhesion of the sole. For one component adhesive (that is without a cross-linking agent) he recommends maximum 8% fat in the leather and for a two-component system a maximum of 12%. Tame (SATRA) recommends a maximum 7% fat and 2.5% fatty acids, as the free fatty acid interferes with the cross bond-



NOVEMBER 1980

13

ing agent, already referred to, and contribute towards failure of sole bonding.

Rosenbusch recommends use of chlorinated linear hydrocarbon type of synthetic oils, which are water insoluble fatting agents, having polar groups more strongly bound to the leather than normal sulphonates and natural oils. This helps in obtaining greater heat stability as required for DVP leathers. Those emulsifiers having various long chain fat radicals and polar groups at the ends, in their chemical composition, also get firmly attached to leather and act as fatting and softening agent. Such non-extractable fat contents help to make the leather more stable against vulcanizing temperature.

iv. Uniformity of Thickness

The thicker part of the upper at the nip-line gets more compressed than the thinner part, and thus becomes more susceptible to heat damage.

v. Heat Resistant Finish

Resin finished corrected grain leather will have a thermoplastic film, which should be modified by suitable blending with thermosetting ingredients like casein, polyamide etc., to withstand the vulcanizing temperature. Landmann and Sofia found that water vapour permeability of the finish did not have the expected influence on the heat resistance. While developing the nip-line test, Mitton had found that the design of the nip-line plate had a significant influence on the damage caused on leather, because a wider or lower ridge prevented the escape of moisture and thereby

increased the heat damage. But this experience of heat damage being partly dependent on the ease of heat escape through water vapour permeability could not be corroborated by the above workers. The fastness to heat of different types of finish indicated that at 200°C, acrylate gave the best result, but surprisingly the acrylate+nitrocellulose lacquer emulsion gave yellowing. For black finished leather, this problem is not serious, and as black is usually 60 to 65% of all the shades manufactured, the process described in this paper will include this method of finishing, found successful in actual practice.

Industrial Practice

A typical checklist, used by one of the largest shoe factories in the world, adheres to the following specifications, in line with laid down standards, for their mouldable leather uppers.

Moulding time 6 to 8 minutes and temperature 170°C, aluminium last.

Thickness: as agreed between purchaser and supplier—usually for gents shoes, it is 1.3 to 1.4 mm. Tolerance on agreed thickness ± 0.1 mm. Tensile strength: kg/cm² 210 (min). Elongation at break: 30-60%. Stitch tear strength: kg/cm 80 (minimum). Lastometer test (SATRA): Extension at crack: 7 mm (minimum). Bursting 10 mm (minimum). Flexural endurance (bally flexometer): 100,000 (minimum) without cracking. Colour fastness: (a) Wet rubbing—to pass the test (SATRA & SLTC). (b) Dry rubbing—to pass the test (SATRA & SLTC). Heat resistance: 8 minutes at 170°C. No burning of leather or finish. Shrinkage (linear) 5% maximum. Mois-



ture : 14% (basis for calculation of other values). Oils and fats : 2-6%. Water soluble matter : 3% (maximum). Chrome oxide : 3.5% minimum. pH of water soluble : not below 3.5.

Usual Difficulties in the DVP at the Factory

(i) Adhesion trouble or failure of the bonding of sole : Fischer recommends a product like Desmocal (essentially a linear polyester of high molecular weight) modified with cross-linking isocyanate, as a good bonding agent for high fat content leather. Surface degreasing with solvents like petrol, carbontetrachloride is done in practice to reduce this defect. (ii) Poor shape retention due to shrinkage of upper or midsole : Higher chrome content and pre-drying before moulding are two answers to avoid this. (iii) Cracking of grain or peeling of pigments or finish : specially at the nip-line. Apart from the defect in the leather itself, defective manufacturing of the shoe may also contribute or aggravate this fault. Insufficient blending of thermo-plastic resin with thermo-setting (casein or polyamide) ingredients in the finish formulation may make the coat too thermo-plastic for the vulcanization temperature. Uneven thickness of the leather is another factor already mentioned.

Critical characteristics of vulcanizable leather are thus the high chromium content, low moisture content, low fat content and free fatty acid, uniformity of thickness, heat resistant finish, and high water vapour permeability.

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SCIENCE AND TECHNOLOGY

Chrome Tanning And Finishing Of Upper Leather For Use In Direct Vulcanized Process Shoes—II

By RAM ROCHAN SEN-GUPTA

Abstracted from the author's thesis submitted in July 1970 to the City and Guilds Institute in London as part of requirements for the Insignia Award in Technology. In the last issue, the background was surveyed.

A Manufacturing Process of DVP Leather in a Medium-size Tannery

Although full chrome, full grain glazed finished leather gave excellent results, due to the scarcity and high price of top quality raw hides, devoid of surface defects, resort had to be made, successfully, of producing chrome retanned, corrected grain resin finished leather in bulk quantities. Leathers produced by the process developed and described below, had been regularly supplied for DVP shoe-making in Desma machines satisfactorily.

The process and procedure followed were more or less similar to many other chrome tanneries, but some deviations were also made. To ensure volume control, in the drum department, the goods were always taken out and then reloaded after deliming, pickling and other processes where volume is an important factor. Addition of water was made through a water-meter to record the correct amount. As after initial trials it was found that glucose or sawdust-reduced chrome-liquor gave a fuller leather than the powder method,

the first main tannage was done with the former, followed by eventual chrome retanning with basic chrome crystals, to achieve better chrome uptake and simplicity of retanning operation.

The strategic points of control, in the production of DVP leather, viz., chrome content, fat content and the finishing were specially done after a general process up to tanning and blue sorting: because of the commercial or costing reasons for product-mix. DVP leather alone would not give high enough average selling price for profitability, so that higher priced speciality leathers like football, drafting apron and calf gloving, etc. were to be sorted in blue and then processed separately from splitting-shaving onwards. Only about 60% of the soaked quantity would normally be found suitable for DVP leathers, from the raw materials procured. But this limitation of having to follow a general procedure up to tanning for all types of leather was in no way a handicap. The role of retanning became very vital in adding the special qualities desired in each of the products, and for DVP leather, rechroming after shaving and



JOURNAL OF THE INDIAN LEATHER TECHNOLOGISTS ASSOCIATION

special fatliquor without fish or mineral oil were stressed. The leather qualities looked for DVP in the blue sorting were: tight grain, suitable thickness, not too defective surface for correction and uniformity of tannage.

Production of side Upper Leather for use in DVP shoes : Details

Raw Material

1. Rawhides Weight taken.

2. Soaking : on Raw Weight : First or dirt soak is done in a special paddle

400% Water (Tube-well) 25°C
0.01% Bleaching Powder
pH 6.5 to 7.

Then add

1.1/2% Sodium Sulphide (60%)
25% Water.

Run 10 minutes, then 2 minutes every hour for next 3 hours as per programme outlined in the flow-sheet. At the 4th hour, the drum is filled with 100 to 150% water and run for 20 minutes, and

20-30 kg average 25 kg W/S Melbourne
10-20 kg average 12 kg W/S Coimbatore
Slaughtered.

3. Taken out, and put back in a new bath for main soaking or 2nd soak (4) in paddle or pit.

400% Water 25°C
0.01% Sodium Sulphide 60%
0.01% Slaked Lime

pH about 7.
Total hours 16 (including Over-night.

Next morning : the hides are rinsed (5) individually and piled on a bank to drain for 1 hour prefleshed. (6) Then soaked and drained weight is taken (7), on which basis, chemicals for liming is taken.

8. Liming (In Drum 8 ft. dia x 7 ft. wide, 2RPM)
250% Water
3% Slaked Lime
1.1/2% Sodium sulphide (60%)

then left overnight. Next morning, the drum is run for 15 minutes, the liquor drained out 3/4th (9) of original volume, run for 20 minutes for pulping out the hair. (10) The unhaired hides are then taken out (11) and machine fleshed (12) and left overnight (13) in a paddle or pit with 300% water.

0.01% wetting Agent (anionic)
3% Slaked Lime.
0.01% ammonia Liquor.

The hides are thrown into the ready-made solution and run for 20 minutes.

Next morning, the hides are band or machine-scudded (14) and sent



DECEMBER 1980

5

for Drum House processing. The scudded hides are kept in plain soft water until all are completed. Pelt Weight: Taken in batches of 20 sides.

15. Washing—the pelts are run in a drum (8 RPM).

200% Water, 25°C Run for 15 minutes, then drained.

16. Deliming On Pelt Weight

100% Water

1% Ammonium chloride or sulphate

0.25% Sodium bisulphite.

Run for 1 hour after which a thick cut piece is tested with phenolphthalein to show a thin (1/4 of total thickness) of lime remaining in the centre. The pelt should look fallen, supple and easily pressed by fingers. A good smell of ammonia, when the hides are taken out, also indicated a routine check of the process to a trained nose, together with the appearance and 'feel' of the pelt.

Bating was not done to Indian hides, being already poor in structural nutrition and tending to be loose-grain. For Australian hides alone 0.5% Pancreol 3A or Oropon OR added with the ammonium chloride and run together with normal deliming. Deliming Test (17) already mentioned is then made. Pelt are then given.

Wash: Once in drum

100% Water Run 15 Minutes.

Take out and reload to

18. Pickle With

60% Water Run

7% Common salt 5 Minutes

1% Sodium formate

0.5% Alum or Aluminium Sulphate.

19. Add 1. 25% sulphuric acid (1.82 S.g.) diluted with 20% water & cooled. Added in 3 instalments \times 10 minutes. Then run further 30 minutes (Total run 65 minutes).

20. Test and pH 3-3.5, with Bromocresol Green indicator, giving a definite yellow. pH of inner streak left a little higher to produce a fuller feel and temper in the finished leather.

Take out and reload

Chrome Tanning: Both the methods mentioned were followed but home-made chrome liquor gave a fuller and better leather and was preferred.

a) Powder Method

21. The pickled stock is put into a drum (8RPM) with a bath of 3% common salt } Run 5 minutes.
60% water 25°C

22. Then add together in powder form through the door, avoiding direct contact

10% basic chrome crystals
(25-26% Cr_2O_3)

0.75% sodium carbonate.
(33% basicity)

: initially with pelt, i.e. directly into water inside.

Run 6 hours, leave overnight.

Next morning

23. Check up penetration, should be well penetrated even to thickest parts, Run 15 minutes, then add 0.3% sodium thiosulphate (Hypo)
20% water.

Run 15 minutes. Check end pH 3.5 to 3.8.



6 JOURNAL OF THE INDIAN LEATHER TECHNOLOGISTS ASSOCIATION

b) Home made chrome liquor method

21. 3% common salt } Run 5 minutes.
60% water }

• 22. Add 20% chrome liquor (16-17% Cr_2O_3) in 3 hourly instalments as follows

i) 8% Chrome liquor, initially, run 1 hour (33% Basicity).

ii) To next 6% of chrome liquor, add 40 gms of soda ash per kilogram of chrome liquor or 0.024% on pelt weight to basify to approximately 42%, age 1 hour.

Then add through the hollow axle, slowly, and run one hour.

(iii) To the last 6% of chrome liquor, add 60 gms of soda ash per kilogram of chrome liquor/or 0.036% on pelt weight to basify to approx. 50%, age 1 hour.

Then add through the hollow axle, slowly, and run one hour.

After the above 3 hours total running time, run further 3 hours, then leave overnight.

23. Next morning :

Add 0.036% soda ash

0.036% sodium thiosulphate.

0.036% sodium hexameta phosphate

20% water.

Run 20 minutes.

24. Boiling test taken of a thicker cut piece to stand 100°C (2 mts.)

The piece should not become rubbery or hard and shrink more than 5% in area.

25. Take out and pile flat grain to grain for at least 24 hours.

26. Sammying by machine and then the goods are piled on sorting table, grain up.

27. Next morning : Sorting in blue is done as per quality of the hides and production programme to meet sales orders : viz. in this production we had about 10% fine grain, uniform tannage, smaller pieces, thin (2 to 4 mm) for drafting apron production.

About 10% thick (5mm and above) for full chrome football.

About 60% medium thickness and with not too deep surface defects, tight grain for DVP leather.

About 20% poor quality and very bad grain for heavily retanned and corrected sandal and printed leather.

The first 20% of speciality leather sell at high profit margin, while the lower 20% at slightly above costs, allowing the 60% shoe leathers for DVP to be sold at a moderate margin of profit—discussed under Yields and Costing.

28. Splitting : Of DVP leather is usually done at 1.7 to 1.8 mm.

29. Shaving : of above was done at 1.5 to 1.6 mm.

30. Shaved weight is taken on which further chemicals are based, in retanning, fatliquoring, etc. drum load for retanning is standardized (for 8 ft. dia \times 7 ft. wide, at 8-10 RPM drum) to 180 to 200 kgs, above which the leathers tend to get tangled up.



DECEMBER 1980

7

31. Chrome retanning :

Wash with 200% water 25°C for 10 minutes and drain (pH 5.0)

Rechrome with

5% Basic chrome crystal (25-26% Cr_2O_3)

0.5% soda ash

100% water at 45°C

Run for one hour then add

0.5% sodium thiosulphate

Run 25 minutes, (pH 4.00)

Add 200% water 45°C, run 15 minutes.

32. Take out and reload for

33. Neutralizing or deacidification

150% water

1% calcium formate.

1/4% sodium bi-carbonate or borax.

Run for 1 hour pH of bath 4.3 to 4.8,

Test neutralization with Brom Cresol Green : surface green blue, inner green, centre yellowish green, this gradation in pH through the cross-section tend to give a mellow leather with good temper.

34. Take out and reload

35. Resin retannage with

100% water 65°C.

(0.25% acid or direct dye (if required, normally not) Run 30 mts.

Add

1/2% fatliquor (Standard** as described separately) Run 15 mts.

Add

2% Resin Retan (Urea formaldehyde type like Relugan A or Retigan R6)

Run 45 minutes.

Add

1% Neutral type Syntan (like Tani-gan P or Basyntan FC). Run 5 mts.

Add

2 1/2% Mimosa Extract (68-70% Pure Tan content)

Run for 30 mts.

Add a mixture of

** 2 1/2% sulphonated Neats foot oil or sperm oil,

1% Raw Castor oil

1/2% Sulphotan P or Sorbolene OT

0.01% antimould (sodium penta-chloro phenate)

0.05% Borax.

0.05% China Clay.

Run one hour, check proper up take of fat liquor and clearness of bath,

End pH 4.5 to 4.8

36. Take out and pile on a horse, having plank or board on both sides for smooth piling without marks from protruding edges of wood. Leathers are piled grain to grain.

37. Sammed by machine.

38. Semi-dried by suspension drying.

39. Machine set and finally hand set

40. Final drying by suspension (will be replaced by vacuum dryer).

41. Crusting (for three days) the goods are piled in a cool not too damp room, to allow ageing and uniformity in moisture content in the leathers.

42. Conditioning : instead of normal procedure of saw-dusting, the leathers were paired together in sides with flesh side out and dipped in plain water for 5 seconds each, and then piled in a wooden chest overnight so as to get uniform conditioning for next day's staking.

This was not only a quicker and easier process, the over-dampness before straining, gave a tighter grain in finish than normally obtained from poor quality fallen hides.

43. Staking: done by Slocomb machine (to be replaced by automatic staker).
44. Straining (to be replaced by vacuum dryer) Nailing on wooden boards were preferred as it gave a fuller leather, due to ability of the leather to pull the nails in the direction of its drying shrinkage, in places of overstress. Left overnight.
45. Denailing done by early morning and then the sides trimmed (46)

A typical formulation for Curtain Coating mixture.

Fast Coating Bottom ON (BASF)	2 kg.
Eukanol Binder PS (Bayer)	10 kg.
Wax emulsion (ICI)	1 kg.
Plastic Binder K (BASF)	2 kg.
Water	30 kg.
Ammonia liq.	1/4 kg.
3% Dye soln (acid/Direct)	1 kg.
	46 1/4 kg.

47. Buffing on flesh sides, with 150 or 220 (new) grit paper, mainly of thinner bellies not cleaned previously by shaving machine.
48. Sorting the goods were now inspected for quality control of workmanship etc. and general trend of tannage and other processes and also grouped as per order requirement of sales department, for finishing.

49. Snuffing: leather with very heavily defective grain were separated from those with less surface defects, and the former buffed deeper with 150 grit emery-paper, before normal snuffing with 220 grit of the whole batch.

50. Dusting both sides of buffing dust was done by machine, and then sent to finishing.
51. Impregnation coat done by brush/pad coat or Curtain-coating machine, but the former is preferred for individual attention to different area requirement of a leather is possible.

A Hand coat mixture.

Eukanol Binder PS (Bayer)	2 kg.
Eukanol Binder IM (Bayer)	1/2 kg.
Wax Emulsion (ICI)	0.1 kg.
Icipol B. Oil (ICI)	0.05 kg.
Sandozin NIS (Sandoz)	0.40 kg.
1/2% Antimucine O	1.00 kg.
	2.95 kg.

Viscosity, Ford Cup 4=13 seconds at 25°C

Speed of conveyor = 200/feet/minute.

Gram of bottom coat per square % of leather=15 gm/sq ft.

Absorption should be uniform and speedy.

Dry slowly, overnight, first in suspension in air, then piled grain up for the impregnants to deposit properly.



DECEMBER 1980

9

Emboss hair-cell print : 85-90°C,
200 kg/cm², 3 seconds.

52. Apart from uniformity in grain appearance, it helps in tightening up of grain by heat and pressure on the impregnated.

53. Rebuffing the grain is smoothened with 400 or 500 grit paper, to take out any deep surface defects and further tighten the grain break.

54. Dusting

55. Curtain coating one or if necessary two coats (57). A typical formulation.

Pigment paste (ICI)	11 kg.
Icipol Brilliant Oil (ICI)	0.5 kg.
10% Casein Soln. (Lactic)	3.6 kg.
1/2% antimucine O (Sandoz)	11.4 kg.
F.O.B. on (BASF)	18 kg.
EM lacquer G (BASF)	2 kg.
Luron Binder U (BASF)	2 kg.
	<u>48.5 kg.</u>

Viscosity Ford Cup No. 4 : 16 seconds,
speed : 200 ft/minute.

Weight of finish (wet) per square foot of
leather : 10 gm/coat.

56. Sorting to check up covering and grain. Some sides may need re-haircell, to improve break or remove any surface defects and 2nd curtain coat (57)

58. Dry on conveyor with hot air canopy.

59. Spray Coat to cover, two or three cross coat to be replaced by airless spray.

Pigment Paste
(Casein free)

10% casein	6 kg.
Wax emulsion	3 kg.
Luron Binder U (BASF)	0.5 kg.
Icipol B. Oil (ICI)	3 kg.
Water	0.5 kg.
	<u>32 kg.</u>
	45.0 kg.

Consumption of about 20-25 gms
per square foot.

60. Dry on conveyor through hot air canopy

61. Smooth Plate :
90-95°C 175-200 kg per cm², 5 sec.

62 Trim

63. Lightly Trim

64. Measure.

65. Inspect

66. Fixing Spray coat

EM Lacquer G (BASF)	10 kg.
Water	5 kg.
Formalin (35%)	1/4 kg.
	<u>15.25 kg.</u>

Spray consumption about 6 gms-10
gms per square foot.

67. Final inspection and grading.

(To be continued)

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Association, Calcutta

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(To be continued)



NEW TRADE POLICY ON THE CARDS TO BOOST EXPORTS; LIKELY TO BE ANNOUNCED



The new Foreign Trade Policy will come on 30 September and the policy has been designed with the next five year in view. The policy will lay down a road map of the 'Amritkaal'. The policy will give a boost to Indian exports. Here are some top things to know about the policy.

- ❖ The policy is likely to be announced on 30 September
- ❖ It will have provisions related to One District One Product (ODOP)
- ❖ Under the policy ecommerce and new export hubs will be created
- ❖ The policy will provide incentives for competitive and qualitative export promotion
- ❖ There will be a separate export promotion council that will be set up.
- ❖ The Special Economic Zones or SEZs will be upgraded and modified to DESH - Development of Enterprise and Services Hub
- ❖ the consultation work has been completed
- ❖ The new foreign trade policy could be announced before 30 September
- ❖ The policy is coming after a gap of over 2 years
- ❖ The government had extended the existing policy in the wake of the Coronavirus Pandemic.
- ❖ The previous policy was to end by 2020
- ❖ The scheme for the first phase will be worth Rs 2200-2500 cr
- ❖ The Ministry of Commerce and Industry has readied a road map for the implementation of ODOP
- ❖ There will be an export hub in all districts
- ❖ All districts have enough potential not found even in many nations

- ❖ The Commerce ministry has created an export promotion committee for each districts
- ❖ A work on creating necessary infrastructure is ongoing
- ❖ A full list of exports has been created

The domestic business will benefit from the FTAs (Free Trade Arrangements)

- ❖ This will give a huge boost to the exports
- ❖ There will be changes to benefit the MSMEs
- ❖ The government has been making trade agreements with many countries
- ❖ Trade agreements with UK is expected to take place this month
- ❖ FTA with Canada likely to be done by Diwali

Restructuring of Commerce department

- ❖ The changes are being made to make India a developed economy
- ❖ The people from the corporate world will be included
- ❖ There will be experts from respective sectors for policy making

(Zbiz.com – 05/09/2022)

EFFECTIVE BUSINESS CONTINUITY PLAN: SUSTAINABILITY SUTRA FOR SMALL BUSINESSES, START-UPS AMID UNCERTAINTY



Chasing scalability and sustainability relentlessly, planning growth-hacking strategies, raising funds as well as weathering funding winters, often takes away the focus of small business and startup founders from the need to develop an effective framework to handle business emergencies and contingencies arising out of expected turns of events such as personal

exigency, the sudden demise or incapacitation of the founding members. Given the growing uncertainties in life, if promoters genuinely want their ventures to outlive them, expand business continuity horizon with a long-term vision and safeguard the interest of all the stakeholders involved, they should break away from an overtly sensitive sense of security and work towards building a succession or continuity plans so that the survival and growth prospects of their ventures are not threatened by sudden unanticipated developments.

Research carried out by Professor Sascha O Becker from the University of Warwick, UK and Professor Hans K. Hvide from the University of Bergen, Norway published in the public domain underlines the necessity of a contingency plan. The research report prepared based on a sample size of 341 privately held companies in Norway with 10 years of existence and founders deceased showed that the sales had decreased by 60 per cent after four years of the demise of the founders. According to the report, the survival rate of the companies after two years of the death of the founders was 20 per cent lower than that of similar firms with founders or promoters at the helm. Retrenchment and bankruptcy also challenged the existence of such companies battling founders' death-related exigencies, as per the report.

The fact that markets are increasingly becoming hyper-competitive and customers have become unforgiving makes it even more critical for emerging and growth-focussed small businesses and startups to have carefully designed business continuity and succession plans in place which can accelerate the bounce-back process from unfortunate setbacks like founder's demise without letting that tragic event become a trigger for a full-blown existential and economic crisis for the company and all the stakeholders.

Large business conglomerates in our country and across the globe have developed a robust business continuity plan to prevent the adverse impact of any unforeseeable event on businesses, leadership, operations and stakeholder engagement. There have been instances of how large corporates have managed to navigate contingency fuelled by promoters' sudden death. Taking a leaf out of their books, new-age businesses which have garnered a reasonable market share should initiate measures to mitigate such unanticipated risks. After all, the show must go on.

A few years back, a term called 'drop dead succession plan' gained currency in the media as well as in India Inc. as an

emergency succession plan which enables a corporate to choose an interim successor in case there is a sudden demise of a key leader or decision-maker. The interim successors shoulder the responsibility to facilitate smooth functioning of the operations, and assure the investors of business continuity. They eventually bow out once the successor is ready to take charge of the business. In a family-controlled and generation-driven business environment, emergency succession planning still faces roadblocks. However, in our progressive small business and startup ecosystem, the process of formulating such plans shouldn't be fraught with complexities and multi-layered approvals.

As safeguarding the investors' interest is equally critical for businesses as much as the economic interest of the founders' kin, the founders can create a provision to invoke a 'key man clause' provision similar to that of private equity or venture capital firms or mutual funds. The provision prohibits a firm from making a new investment in case of the absence of its key decision maker due to death, exit or any professional reason, which in this case on a parallel analogy would be for any action by the company which could erode the value be it economic or intangible. It's a great way to assure investors of no deviation from the pre-defined approach, which was the basis of the investment thesis. Such a clause also underlines the promoters' sincerity in ensuring efficient leadership direction for any action that can impact the company or the brand negatively further, in light of an already severe and grim situation.

To protect the shareholders' interest, the business continuity plan should generally have an arrangement similar to that of a cross-option agreement which is prevalent in the developed markets, which in the local context of market documentation would be seen as an unnatural event of default. In a situation like this, the surviving founders can acquire the shares of the incapacitated or deceased shareholder or shareholders at the fair market value, to ensure economic interest protection, with modes of financing such acquisition being detailed further. This could be in tranches, single or multi. There could be a kicker construct which allows a certain portion to stay with the kin to enjoy the delta on the value some years later.

The other option available under the agreement could be to ensure that the employee welfare trust purchases the shares again at the fair market value and the same is utilised to bring in professional management to fill in the void and build the company there onwards, alternatively if feasible the

company can buy back the shares of the incapacitated founder. The purpose of all this would be to ensure that business continues and the company's operations do not get impacted beyond repair. This also allows the continuing leadership to control the functioning and decision-making processes and stave off the entry of any unqualified individual into the management ecosystem.

Opting for a living trust could be a way founders try to build their contingency preparedness. All assets of the founder are transferred into the living trust once it is created. The founder remains the trustee as long as she/he is capable of discharging the duties. In case of the founder's sudden demise or incapacitation, the successor trustee chosen by the founder can exercise her/his legal authority to keep the business operations running without any legal interventions. The successor trust usually manages the assets and runs the business as per the suggestions expressed by the original trustee or the owner. This though will need to be seen with a lens of marriage on the terms of the agreement and the rights of the investors so as to ensure the constructs there are not diluted.

Leadership voids due to exigency hurts all – customers, employees, investors, vendors, lenders, etc. Small businesses and start-ups need to control the preparedness narrative by setting up a robust structure which can help them ride out the unpredictable storms and assure the stakeholders. To be continued is the mantra that allows somewhat an essence of perpetuity.

(Financial Express – 24/09/2022)

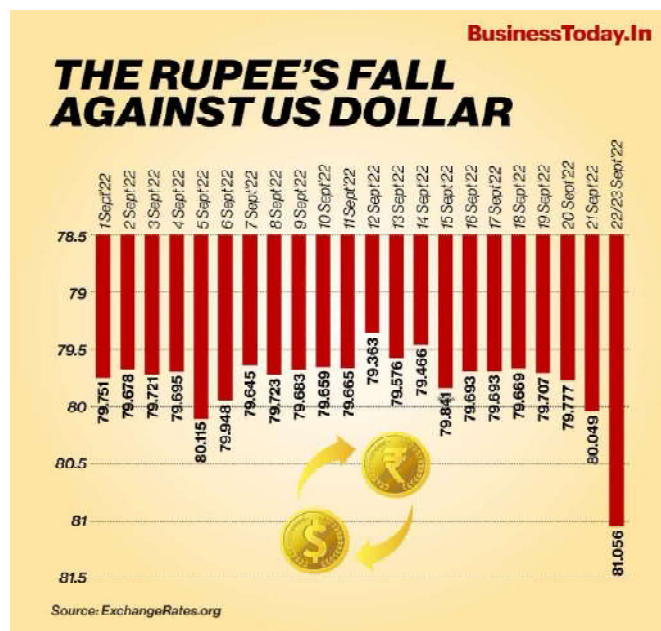
RUPEE HITS NEW LOW, BREACHES THE 81-MARK AGAINST US DOLLAR



Rupee down to 81: The domestic currency fell as US Treasury yields climbed to fresh multi-year highs and dollar demand from importers.

The Indian rupee on Friday started on a weak note and touched the 81 mark, which is its newest low against the US dollar after a choppy Thursday. The Rupee opened at 81.03 a dollar and touched an all-time low of 81.13. It touched 81.15 a dollar, almost down by 0.33 per cent from 80.87 on Thursday. The low is on the back of US Treasury yields climbing to fresh multi-year highs and dollar demand from importers. As per reports, the 10-year bond yield jumped 6 basis points to hit a two-month high on the back of a surge in US treasury yields.

So far this year, the domestic currency has recorded a drop of 8.48 per cent, as per news reports. On Thursday, the currency saw a major fall and saw its biggest single-session percentage decline since February on the back of the US Fed's hawkish hike of interest rates.



Experts feel that the rupee is struggling due to the Reserve Bank of India's less aggressive stance while taking action to tame inflation. As per reports, in the last seven sessions of the total eight, the currency has seen a major drop and lost over 2.51 per cent in the last few days.

Just before the Fed's hike announcement, the Indian currency was hovering around the 79.96 level. After the Fed hiked the rates by 75 basis points, the rupee breached the 80-mark, which was about 7 per cent lower than in January. Not just the rupee,

most Asian currencies opened on a weaker note, like the Chinese yuan dipped below 7.10 to the US dollar. In comparison, the US dollar climbed up sharply to a new 20-year peak on September 22 (the day of the rate hike), which shook global investors. The dollar advanced 0.88 per cent to 111.61.

What lies ahead?

As the US Fed has promised more hawkish rate hikes in the coming months, not just the rupee as major currencies will be under pressure as the Dollar index can see a significant increase. This would directly impact the business environment in India as a stronger dollar would make everything expensive for traders and companies.

On the other hand, after the Fed hike, most central banks, including the RBI, would be forced to increase their base interest rates to release the pressure on their domestic currencies. This would again increase the volatility in equity markets.

A host of experts also feel that the rupee will continue to remain under pressure even if there is a rate hike. They think that the central bank will be in a tight position to take strict actions to stop the rupee fall further as the liquidity in the banking system is back into the deficit mode after being in a surplus mode for almost 40 months due to Covid-19 and other reasons.

(BusinessToday.in – 23/09/2022)

ECONOMIC REFORMS, EASE OF DOING BIZ LIKELY TO TAKE INDIA'S FDI TO \$100 BN THIS FISCAL, SAYS GOVERNMENT



Government on Saturday said that India is on track to attract USD 100 billion foreign direct investment (FDI) in the current fiscal owing to economic reforms and ease of doing business. The country received the "highest ever" foreign inflows of USD 83.6 billion in 2021-22.

"This FDI has come from 101 countries, and invested across 31 union territories and states and 57 sectors in the country. On the back of economic reforms and Ease of Doing Business in recent years, India is on track to attract USD 100 billion FDI in the current FY (financial year)," PTI quoted the commerce and industry ministry as saying.

It said that to attract foreign investments, the government has put in place a liberal and transparent policy wherein most sectors are open to FDI under the automatic route.

The reform measures include liberalization of guidelines and regulations, in order to reduce unnecessary compliance burden, bring down cost and enhance the ease of doing business in India, it added.

FDI equity inflows in India dipped by 6 per cent to USD 16.6 billion during April-June period of the current fiscal. It also said that to address the import of low-quality and hazardous toys and to enhance domestic manufacturing of toys, several strategic interventions have been taken by the government.

The import of toys in 2021-22 have reduced by 70 per cent to USD 110 million (Rs 877.8 crore). On the other hand, exports rose by 61 per cent to USD 326 million.

(Economic Times – 24/09/2022)

ASIAN DEVELOPMENT BANK PARES 2022-23 GDP GROWTH FORECAST FOR INDIA TO 7% FROM 7.5%



India's inflation, ADB said, has turned out to be more persistent than expected, and led to a sharp tightening in monetary policy, while eroding consumers' purchasing power. The Asian Development Bank (ADB) has pared its 2022-23 growth projection for India's economy to 7% from 7.5% estimated in

April, terming it a “modest downward revision” driven by higher-than-anticipated inflation and monetary tightening.

The Bank also raised its inflation forecast for India to 6.7% for this year, while widening its current account deficit (CAD) estimate to 3.8% of GDP. The CAD is expected to drop to 2.1% of GDP in 2023-24 while inflation will moderate to 5.8% as demand pressures from strengthening economic activity are tamped down by easing supply bottlenecks, the Bank reckoned.

The first quarter growth of 13.5% reflected strong growth in services for India, but GDP growth forecasts were being revised downward as price pressures are expected to adversely impact domestic consumption, and sluggish global demand and elevated oil prices will likely be a drag on net exports, the Bank said. In 2023-24, the ADB expects India to grow 7.2%.

India’s inflation, ADB said, has turned out to be more persistent than expected, and led to a sharp tightening in monetary policy, while eroding consumers’ purchasing power. “Sticky core inflation will adversely impact spending over the next two years if wages fail to adjust,” it warned.

“Subsidised fertiliser and gas, the free food distribution programme, and the excise duty cuts will help offset some of the effects of high inflation on consumers, but the tax on packaged food products will likely be a burden on consumers already dealing with rising inflation,” the ADB update noted.

China concerns

China’s economy will record lesser growth than the rest of developing Asia for the first time in three decades, the Bank

said in an update to its Asia Development Outlook (ADO) on Wednesday, at 3.3% in 2022, from 5% forecast earlier, marred by lockdowns triggered by its zero-Covid strategy, property sector problems and weaker external demand.

For 2023, the Bank forecast growth of 4.5% for China compared to 4.8% previously projected, due to ‘deteriorating external demand continuing to dampen investment in manufacturing’.

South Asia

The lower growth hopes for India along with a sharp contraction in Sri Lanka, ADB said, translate into slower growth for South Asia at 6.5% in 2022, from 7% projected earlier and 6.5% growth in calendar year 2023, compared to its previous estimate of 7.4%. India accounts for 80% of the region’s economy.

While growth will be lower, ADB expects inflation in South Asia to be pushed up by higher energy and food costs to 8.1% in 2022 and 7.4% in 2023. It had earlier estimated inflation to be 6.5% in 2022 and 5.5% in 2023, and said the upward revisions mainly reflect surging global commodity prices accelerating inflation in India, Pakistan, and Sri Lanka.

“The revision mainly reflects the pattern of inflation in India. Headline inflation there breached the monetary policy target of 2%–6% in the first quarter of 2022-23 on food price increases and pressures from rising global oil and commodity prices following the Russian invasion of Ukraine,” the Bank said.

(The Hindu – 21/09/2022)

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ILTA PUBLICATION

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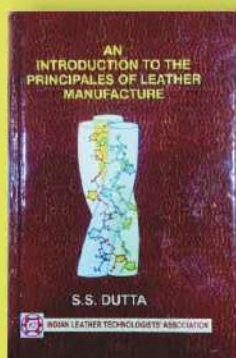
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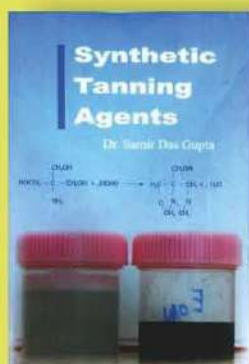
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Send your enquiries to :

Indian Leather Technologists' Association

'Sanjoy Bhavan', 3rd Floor, 44, Shanti Pally, Kolkata- 700 107, WB, India

Phone : 91-33-2441-3429 / 3459 * WhatsApp +91 94325 53949

E-mail : admin@iltaonleather.org; mailto:ilta@rediffmail.com

Website : www.iltaonleather.org

History and Activities of Indian Leather Technologists' Association

The Indian Leather Technologists' Association (ILTA) was founded by Late Prof. B. M. Das, the originator of Dea-Sidney theory and father of Indian Leather Science on 14th August 1950.

The primary objectives of the oldest Leather Technologists' Association which celebrated its Diamond Jubilee year in the 2010, are :

- ◆ To bring all concerned with the broad spectrum of the leather industry under one umbrella.
- ◆ To organize seminar, symposium, workshop in order to create information, knowledge and latest development for the benefit of all concerned. To offer a common platform for all to interact with each other in order to understand each other's problems and prospects.
- ◆ To publish monthly journal as a supplement to those above objectives. The monthly journal of ILTA is known as Journal of Indian Leather Technologists' Association and is the most widely circulated technical journal concerning leather technology.
- ◆ To publish text books for the benefit of students at various levels of study, for the researchers and industry.
- ◆ To have interface between urban and rural sector.
- ◆ To assist Planning Commission, various Government Institutions, Ministry and autonomous bodies to formulate appropriate policies acceptable and adoptable to the industry.
- ◆ To organize practical training and to provide skilled manpower and to motivate good students for study.
- ◆ To conduct activities related to the growth of the export of leather and leather goods from India.
- ◆ As the part of many social activities ILTA has donated Rs. 1 lac to Consul General of Nepal towards relief of earthquake effected of Nepal on 16th Sept, 2015.

INTERNATIONAL & NATIONAL SEMINAR

- ◆ ILTA is the Member Society of International Union of Leather Technologists & Chemists Societies (IULTCS), a 115 years old organization and for the first time the IULTCS Congress was organized in January 1999 outside the developed countries in India jointly by ILTA and CLRI.
- ◆ 2017 IULTCS Congress is scheduled to be held in India again.
- ◆ 8th Asian International Conference on Leather Science & Technology (AICLST) was organized by ILTA in 2010 during its Diamond Jubilee Celebration year.

SEMINAR & SYMPOSIUM

ILTA organizes Seminar & Symposiums on regular basis to share information, knowledge & latest development and interactions for the benefit of all concerned. Few are as under :

- ◆ Prof. B. M. Das Memorial Lecture every year during the Foundation Day Celebrations on 14th August every year.
- ◆ Sanjoy Sen Memorial Lecture on 14th January every year, the birthday of our late President for several decades.
- ◆ Prof. Moni Banerjee Memorial Lecture on 16th March every year, the birthday of this iconic personality.
- ◆ Seminar on the occasion of India International Leather Fair (IILF) at Chennai in February every year.

It has also organized :

- ◆ Prof. V. Nayudumma Memorial Lecture.
- ◆ Series of Lectures during "Programme on Implementing Emerging & Sustainable Technologies (PriEST)".
- ◆ Seminars on occasion of India International Leather Fair, 2014 and 2015 at Chennai etc. Many reputed scientists, industrialists and educationists have delivered these prestigious lectures. Foreign dignitaries during their visits to India have addressed the members of ILTA at various times.

PUBLICATION

ILTA have published the following books :

- ◆ An Introduction to the Principles of Physical Testing of Leather by Prof. B. S. Datta
- ◆ Practical Aspects of Manufacture of Upper Leather by J. M. Dey
- ◆ An Introduction to the Principles of Leather Manufacture by Prof. S. S. Dutta
- ◆ Analytical Chemistry of Leather Manufacture by R. K. Sarkar
- ◆ Comprehensive Footwear Technology by Mr. Somnath Ganguly
- ◆ Treatise on Folliquors and Folliquoring of Leather by Dr. Samir Dasgupta
- ◆ Synthetic Tanning Agents by Dr. Samir Dasgupta
- ◆ Hand Book of Tanning by Prof. B. M. Das

ILTA has a good Library & Archive enriched with a few Important Books, Periodicals, Journals etc.



AWARDS OF EXCELLENCE

- ◆ ILTA awards Prof. B. M. Das Memorial, Sanjoy Sen Memorial, J. M. Dey Memorial and Moni Banerjee Memorial Medals to the top rankers at the University / Technical Institute graduates and post graduate levels to encourage the brilliants to evolve with the Industry.
- ◆ J. Sinha Roy Memorial Award for the author of the best contribution for the entire year published in the monthly journal of the Indian Leather Technologists' Association (JILTA).

LEXPOs

To promote and provide marketing facilities, to keep pace with the latest design and technology, to have better interaction with the domestic buyers, ILTA has been organizing LEXPO fairs at Kolkata from 1977, Siliguri from 1992 and Durgapur from 2010. To help the tiny cottage and small-scale sectors industries in marketing, LEXPO fairs give the exposure for their products. Apart from Kolkata, Siliguri & Durgapur, ILTA has organized LEXPO at Bhubaneswar, Gangtok, Guwahati, Jorhatpur and Ranchi.

MEMBERS

The Association's present (as on 31.03.2018) strength of members is more than 600 from all over India and abroad. Primarily the members are leather technologists passed out from Govt. College of Engineering & Leather Technology, Anna University, Chennai, Harcourt Butler Technological Institute, Kanpur, B. R. Ambedkar National Institute of Technology, Jalandhar and Scientists from Central Leather Research Institute.

ESTABLISHMENTS

In order to strengthen its activities, ILTA have constructed its own six storied building at 44, Shanti Pally, Kasba, Kolkata - 700 107 and have named it "Sanjoy Bhavan".

This Association is managed by an Executive Committee duly elected by the members of the Association. It is absolutely a voluntary organization working for the betterment of the Leather Industry. None of the Executive Committee members gets any remuneration for the services rendered but they get the satisfaction of being a part of this esteemed organization.



ILTA
Since 1950

Indian Leather Technologists' Association

[A Member Society of International Union of Leather Technologists' and Chemists Societies]

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Phone : 91-33-2441-3429 / 3459 * WhatsApp +91 94325 53949

E-mail : admin@iltaonleather.org; mailtoilta@rediffmail.com

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