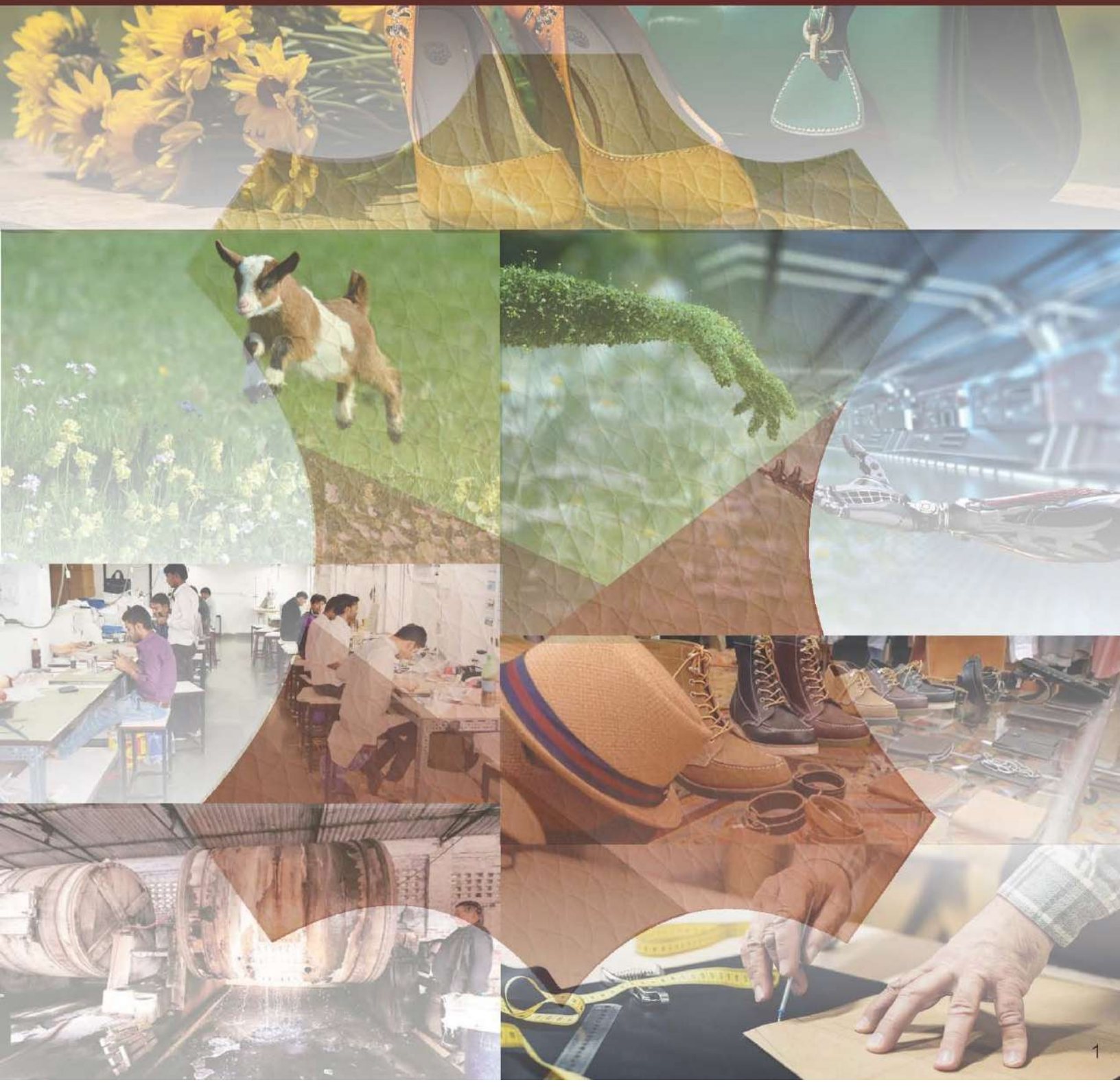
ILTA
Since 1950

JILTA

Journal of Indian Leather Technologists' Association

Rgtn. No. KOL RMS/074/2022-24
Regd. No. ISSN 0019-5758
RNI No. 2839/57
Date of Publication: 6th
₹ 50.00

VOLUME : LXXIV No. 11 NOVEMBER' 2024



ILTA PUBLICATIONS

Title of the Book
Treatise on Fatliquors and Fatliquoring of Leather

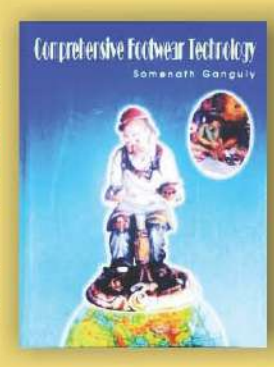
Author
Dr. Samir Dasgupta

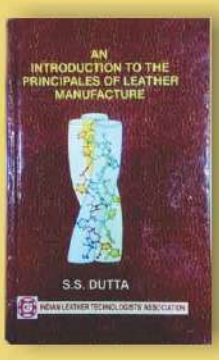
Price per copy*
₹ 1500.00 / $ 60.00

Title of the Book
Comprehensive Footwear Technology
(Presently out of stock)

Author
Mr. Somenath Ganguly

Price per copy*
₹ 500.00 / $ 50.00





Title of the Book
An Introduce to the Principles of Leather Manufacture

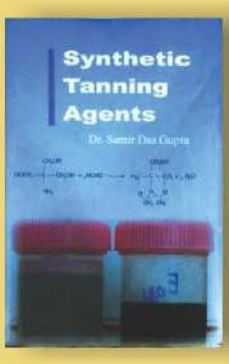
Author
Prof. S. S. Dutta

Price per copy*
₹ 800.00 / $ 50.00

Title of the Book
Analytical Chemistry of Leather Manufacture

Author
Mr. P. K. Sarkar

Price per copy*
₹ 300.00 / $ 10.00



Title of the Book
Synthetic Tanning Agents

Author
Dr. Samir Dasgupta

Price per copy*
₹ 900.00 / $ 30.00

Title of the Book
Hand- Book of Tanning

Author
Prof. B. M. Das

Price per copy*
₹ 750.00 / $ 25.00

*Packing and forwarding charges extra

ILTA
Since 1950

Indian Leather Technologists' Association

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

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

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

NOVEMBER, 2024 VOL.: LXXIV NO.: 11 RNI NO.: 2839/57 REGD.NO.: ISSN 0019-5758

Contents

Hony. Editor : Dr. Goutam Mukherjee

Communications to Editor through E-mail :

admin@iltaonleather.org; jiltaeditor@gmail.com

Cover Designed & Printed by :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Published & Printed by :

S. D. Set, on behalf of Indian Leather Technologists' Association

Published from :

Regd. Office : 'Sanjoy Bhavan', 3rd Floor,

44, Shanti Pally, Kasba, Kolkata - 700 107

Printed at :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Subscription :

Annual	Rs.(INR)	400.00
Foreign	$ (USD)	45.00
Single Copy	Rs.(INR)	50.00
Foreign	$ (USD)	4.00

All other business communications should be sent to :

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; mailtoilta@rediffmail.com

Web site : www.iltaonleather.org

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.

Advertisement Tariff

Full Page / per month

Black & White	Rs. 5,000.00/-
Colour (full page)	Rs. 10,000.00/-
Colour Insert (One side) (Provided by the Advertisers)	Rs. 5,000.00/-

Full Page / per anum

Front inside (2nd Cover)	Rs. 96,000/-
3rd Cover	Rs. 84,000/-
Back Cover	Rs. 1,20,000/-

Mechanical Specification

Overall size	:	27 cm X 21 cm
Print area	:	25 cm X17 cm

Payment should be made by A/c. Payee Cheque to be drawn in favour of :

Indian Leather Technologists' Association
and Payable at **Kolkata**

Send your enquiries to :

Indian Leather Technologists' Association
'SANJOY BHAVAN'
3rd floor, 44, Shanti Pally, Kasba, Kolkata – 700 107
Phone : 91-33-24413429 / 91-33-24413459
E-mail : admin@iltaonleather.org / mailtoilta@rediffmail.com / iltaonleather1950@gmail.com
Website : www.iltaonleather.org

INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (ILTA)

(Member Society of International Union of Leather Technologists and Chemists Societies)

Executive Committee (2024-26)

Central Committee

President : Mr. Arnab Jha

Vice-Presidents : Mr. Asit Baran Kanungo
Mr. Pulok Majumdar
Dr. S. Rajamani

General Secretary : Mr. Susanta Mallick

Joint Secretaries : Mr. Bibhas Chandra Jana
Mr. Pradipta Konar

Treasurer : Mr. Keshab Ch. Mondal

Committee Members:

1. Mr. Abhijit Das
2. Mr. Ajay Kr. Mishra
3. Mr. Amit Kumar Mondal
4. Mr. Aniruddha De
5. Mr. Dipayan Adhikary
6. Mr. Kunal Naskar
7. Mr. Laxminarayan Sahoo
8. Mr. Sudagar Lal
(Secretary North/West Region)
9. Dr. R. Mohan
(Secretary South Region)

Ex-Officio Member : Dr. Goutam Mukherjee

Regional Committees

Southern Region :

President : Mr. N. R. Jagannathan

Vice-President : Dr. J. Raghava Rao

Secretary : Dr. R. Mohan

Treasurer : Dr. Swarna V Kanth

Committee Members :
Dr. K. Krishnaraj
Dr. N. Nishad Fathima
Dr. P. Thanikaivelan
Dr. S. V. Srinivasan
Dr. Subhendu Chakraborty

Northern / Western Region :

President : Mr. Jai Prakash Saraswat

Vice-President : Mr. Deepak Kr. Sharma

Secretary : Mr. Sudagar Lal

Treasurer : Mr. Sunita Devi

Committee Members:
Mr. Jaswinder Singh Saini
Mr. Kamal Sharma
Mr. Mohinder Lal
Mr. Rajvir Verma
Mr. Sunil Kumar

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

EDITORIAL BOARD OF JILTA

Looming Global Water Crisis

Water scarcity is becoming an urgent global crisis, affecting billions of people. According to the UN World Water Development Report 2024, approximately 2.2 billion people lack access to safe drinking water and half of the world's population experiences severe water scarcity for at least some of the year.

Amid these alarming statistics, the recycling of wastewater is emerging as a vital solution. Currently, more than 80 per cent of the world's total wastewater — and more than 95 per cent of it in some developing countries — is released into the environment without being treated first. This has alarming consequences for public health and the environment.

In developing nations, only 8 per cent of industrial wastewater undergoes any form of treatment. If viewed as a resource rather than waste, recycled wastewater can ease pressure on freshwater supplies, support agricultural irrigation and sustain industrial processes. India is among the most water-stressed countries in the world, in part due to pollution and its massive population. New data from WRI's Aqueduct Water Risk Atlas show that 25 countries — housing one-quarter of the global population — face extremely high water stress each year, regularly using up almost their entire available water supply and at least 50% of the world's population — around 4 billion people — live under highly water-stressed conditions for at least one month of the year.

Living with this level of water stress jeopardizes people's lives, jobs, food and energy security. Water is central to growing crops and raising livestock, producing electricity, maintaining human health, fostering equitable societies and meeting the world's climate goals. Without better water management, population growth, economic development and climate change are poised to worsen water stress. Across the world, demand for water is exceeding what is available. Globally, demand has more than doubled since 1960. Increased water demand is often the result of growing populations and industries like irrigated agriculture, livestock, energy production and manufacturing. Meanwhile, lack of investment in water infrastructure, unsustainable water use policies or increased variability due to climate change can all affect the available water supply. Water stress, the ratio of water demand to renewable supply, measures the competition over local water resources. The smaller the gap between supply and demand, the more vulnerable a place is to water shortages. A country facing "extreme water stress" means it is using at least 80% of its available supply, "high water stress" means it is withdrawing 40% of its supply.

Without intervention — such as investment in water infrastructure and better water governance — water stress will continue to get worse, particularly in places with rapidly growing populations and economies. Twenty-five countries are currently exposed to extremely high-water stress annually, meaning they use over 80% of their renewable water supply for irrigation, livestock, industry and domestic needs. Even a short-term drought puts these places in danger of running out of water and sometimes prompts governments to shut off the taps. We have already seen this scenario play out in many places around the world, such as England, India, Iran, Mexico and South Africa. The five most water-stressed countries are Bahrain, Cyprus, Kuwait, Lebanon, Oman and Qatar. The water stress in these countries is mostly driven by low supply, paired with demand from domestic, agricultural and industrial use. The most water-stressed regions are the Middle East and North Africa, where 83% of the population is exposed to extremely high-water stress, and South Asia, where 74% is exposed.

By 2050, an additional 1 billion people are expected to live with extremely high-water stress, even if the world limits global temperature rise to 1.3 degrees C to 2.4^{0}C (2.3^{0}F to 4.3^{0}F) by 2100, an optimistic scenario. Global water demand is projected to increase by 20% to 25% by 2050, while the number of watersheds facing high year-to-year variability, or less predictable water supplies, is expected to increase by 19%. For

the Middle East and North Africa, this means 100% of the population will live with extremely high-water stress by 2050. That is a problem not just for consumers and water-reliant industries, but for political stability. The biggest change in water demand between now and 2050 will occur in Sub-Saharan Africa. While most countries in Sub-Saharan Africa are not extremely water-stressed right now, demand is growing faster there than any other region in the world. By 2050, water demand in Sub-Saharan Africa is expected to skyrocket by 163% — 4 times the rate of change compared to Latin America, the second-highest region, which is expected to see a 43% increase in water demand.

This increase in water use, mainly expected for irrigation and domestic water supply, could foster major economic growth in Africa — projected to be the fastest-growing economic region in the world. However, inefficient water use and unsustainable water management also threatens to lower the region's GDP by 6%. Meanwhile, water demand has plateaued in wealthier countries in North America and Europe. Investment in water-use efficiency has helped reduce in-country water use in high income countries, but water use and dependencies extend beyond national boundaries, and the water embedded in international trade from lower-middle income countries to high income countries will increasingly contribute to rising water stress in low and lower-middle income countries. Increasing water stress threatens countries' economic growth as well as the world's food security. According to data from Aqueduct, 31% of global GDP — a whopping $70 trillion — will be exposed to high water stress by 2050, up from $15 trillion (24% of global GDP) in 2010. Just four countries — India, Mexico, Egypt and Turkey — account for over half of the exposed GDP in 2050. Increasing water stress threatens countries' economic growth as well as the world's food security. According to data, 31% of global GDP — a whopping $70 trillion — will be exposed to high water stress by 2050, up from $15 trillion (24% of global GDP) in 2010. Just four countries — India, Mexico, Egypt and Turkey — account for over half of the exposed GDP in 2050.

It is good to understand the state of the world's water supply and demand, but water stress does not necessarily lead to water crisis. For example, places like Singapore and the U.S. city of Las Vegas prove that societies can thrive even under the most water-scarce conditions by employing techniques like removing water-thirsty grass, desalination, and wastewater treatment and reuse.

Every level of governance, as well as communities and businesses, must step up to build a water-secure future for all. The world will ultimately require an all-of-the-above approach, as well as solutions specific to individual catchments and regions.

Goutam Mukherjee

Dr. Goutam Mukherjee
Hony. Editor, JILTA

Stahl Leather solutions

Stahl is proud to launch the renewed Stahl Neo® range: a future-proof portfolio of low-impact solutions covering the entire wet-end and finishing stages of leather production.

With growing awareness of environmental and health and safety impacts, the Stahl Neo® portfolio has been extensively reviewed and tested to help customers meet today's fast-evolving certification and compliance landscape for leather chemicals. This includes the recently updated Zero Discharge of Hazardous Chemicals (ZDHC) Manufacturing Restricted Substance List (MRSL) 3.1.

Following a rigorous internal review and testing programme, all products in the Stahl Neo® portfolio are in compliance with the following three criteria:

1. ZDHC: All Stahl Neo® products are compliant with Version 3.1 of the ZDHC MRSL for leather manufacture.

2. EU CMR: Stahl Neo® products are certified free from carcinogenic, mutagenic or reprotoxic (CMR) substances as per EU criteria.

3. EU REACH SVHC: Stahl Neo® products meet EU REACH criteria for substances of very high concern (SVHC) (less than 0.1% concentration).

As a result, Stahl is now able to offer tanners the most comprehensive range of future-proof solutions on the market – providing peace of mind for stakeholders across the leather article value chain.

Scan the QR code to download the Stahl Neo® brochures and discover the specific benefits of each product in our portfolio.

www.stahl.com

Stahl is a world leader in speciality coatings and treatments for flexible materials. Around the world, nearly 2,000 Stahl colleagues are driven by a clear purpose:
Touching lives, for a better world.

Our diverse teams work on creative and innovative surface solutions that enable our customers to make fantastic products. Our coatings are found on everyday materials in the automotive, luxury goods, packaging, apparel and home furniture market, among others. When consumers touch everyday products, we touch their lives.

Being a world leader means we are dedicated to contributing to a better world together with our value chain partners. At Stahl, we aim to impact the market through innovation and sharing knowledge and by reducing our own operational footprint. Our approach is underpinned by our robust ESG strategy and our strong sense of social responsibility, a characteristic shared by leading global companies.

We promote:

- Teamwork
- Initiative
- Personal development
- Innovation
- Creativity

Working at Stahl, means being part of a versatile, ambitious team that is committed to working on innovative, high-quality coating solutions for our customers while making the world a better place. You will also be joining a diverse global community: headquartered in Waalwijk, the Netherlands, Stahl operates a network of 16 production sites and 37 application laboratories, supported by sales offices in 22 countries.

stahl.com

Stahl

STAHL OPENS NEW POLYURETHANE DISPERSIONS FACILITY IN SINGAPORE

Stahl, the world leader in speciality coatings for flexible materials, has announced the opening of a new state-of-the-art facility for the manufacturing of polyurethane dispersions (PUD) in Singapore. This strategic expansion is designed to better serve the growing demand in the Asian and South Pacific regions. The new facility underscores Stahl's commitment to sustainability and innovation, while also supporting the company's environmental, social, and governance (ESG) goals.

A strategic geographical shift

Historically, Stahl's PUD production has been centred in Europe, with products imported into Asia to meet market demand. With the establishment of the Singapore facility, Stahl can now streamline its supply chain, reducing delivery times and improve service for its customers across the region.

Therefore, the shift underscores Stahl's long-term commitment to investing in the region and supporting its customers with faster, more sustainable solutions tailored to the unique demands of the Asia-Pacific market.

Driving innovation with high-performance PUDs

The new facility will focus on producing high-performance polyurethane dispersions, which offer a range of beneficial properties critical for various industries. These advanced PUDs provide exceptional fastness, water resistance, print retention, and high flex durability, making them ideal for use in demanding applications.

PUD technology plays a key role in reducing solvent usage, making it an important component of Stahl's broader sustainability strategy. By producing more water-based coatings, Stahl reduces the environmental impact of its operations, supporting the transition to more sustainable materials across industries. The Singapore facility will further explore renewable energy and bio-based formulations, advancing the company's ESG goals and paving the way for future innovations.

Dennis Koh, Site and Operations Manager at Stahl Singapore, expressed the significance of this new development 0: "the new facility for PUD manufacturing in Stahl Singapore is designed to serve the Asian and South Pacific markets, spanning from China and Japan to New Zealand. This expansion supports our ESG goals by increasing the production of water-based coatings and decreasing solvent usage. With this new development, we can simplify our supply chain and shorten lead times for our customers. We are proud to include PUD in our service offerings, enhancing our technical capabilities to collaborate on challenging projects. I am extremely proud of my team who worked closely with the main contractor, essential engineering & construction, to successfully complete this project in 18 months."

(Stahl News – 15/10/2024)

STAHL COMPLETES ACQUISITION OF WEILBURGER GRAPHICS

Stahl, the world leader in speciality coatings and treatments for flexible materials, has completed the acquisition of WEILBURGER Graphics GmbH, a leading German-based manufacturer of water-based and energy cured coatings for the graphic arts and packaging industry.The transaction significantly strengthens Stahl's new packaging coatings divisionfland supports its strategy to broaden its franchise for coatings for flexible materials.

The acquisition of WEILBURGER Graphics, a division of Grebe Holding GmbH strengthens Stahl's strategic position in Europe, positioning the company as the second-largest player in the region. WEILBURGER Graphics had 2023 sales of 70 million euros and over 140 employees – primarily based in Germany.

Maarten Heijbroek, CEO of Stahl: "I am very excited to now officially welcome our new colleagues to the Stahl Group. We have been highly impressed by WEILBURGER Graphics' quality, advanced technology, and the deep customer knowledge of their people. flWe can't wait to work together as of today. We are committed to ensuring a continued service to all customers during and after the integration."

Günter Korbacher, managing director of WEILBURGER Graphics GmbH, comments on the acquisition: "The affiliation with Stahl is a perfect strategic fit for WEILBURGER Graphics. With our long and successful growth story of more than 140 years and a high level of brand awareness as an innovative and trustworthy supplier of packaging and graphics coatings, this decision offers excellent synergy effects and growth opportunities for our site in Gerardshofen. We are confident that we have made the right decision for our continued success. Becoming part of Stahl will accelerate our growth and offer our customers even greater added value."

(Stahl News – 30/09/2024)

STAHL MAINTAINS PLATINUM ECOVADIS RATING FOR THREE CONSECUTIVE YEARS, REAFFIRMING ITS COMMITMENT TO SUSTAINABILITY

Stahl, the world leader in speciality coatings and treatments for flexible materials, is proud to announce that it has again been awarded the Platinum rating by EcoVadis, the world's leading provider of business sustainability ratings. This marks the third consecutive year that Stahl has achieved this prestigious recognition, placing the company in the top 1% of over 100,000 companies assessed worldwide. In the 2024 assessment, Stahl earned their highest overall score to date of 85/100, further solidifying its position as a leader in sustainability.

EcoVadis provides globally recognized ratings in business sustainability, assessing over 100,000 companies across 175 countries. The evaluations are based on four key pillars: Environment, Labour & Human Rights, Ethics, and

Sustainable Procurement. With a maximum overall score of 100, a Platinum rating is awarded to the top 1% of companies globally. The 2024 ratings process has become more rigorous because of the updated benchmarks, making it even more challenging to maintain such high standards year after year.

Driving sustainable growth through innovation

Stahl's success in the EcoVadis assessment underscores its mission to drive responsible innovation and sustainable development throughout its operations and supply chain. The company's impressive EcoVadis track record reflects its long-term commitment to sustainability. Starting with a Bronze rating in 2015, Stahl has progressively improved its performance, achieving Silver in 2017 and 2020, Gold in 2021, and Platinum from 2022 onwards.

The 2024 EcoVadis assessment revealed the progress Stahl is making in multiple categories, scoring 90 out of 100 points on Environment, 80 out of 100 points on Ethics, and 90 out of 100 points on Sustainable Procurement. These scores reflect the company's ongoing efforts in stringent environmental practices, a commitment to employee well-being, and ensuring ethical standards across its global operations.

Laura Willemsen, Group Director Sustainability and Marketing at Stahl : "The continuous improvement in our EcoVadis score is a testament to the hard work and dedication of our global teams. Achieving a Platinum rating for three consecutive years in such a competitive landscape is no small feat. While we are honored to have achieved a Platinum rating again, we recognize that there is still room for improvement for both Stahl and the wider market. We remain committed to driving further improvements in sustainability, transparency, and responsible practices."

Continuous innovation to meet 2030 ESG ambitions

Stahl has set ambitious sustainability targets for 2030, aiming to maintain its Platinum rating and continue improving across all ESG pillars. The company is working closely with its supply chain partners to reduce environmental impact, drive social responsibility, and promote ethical business practices worldwide. In line with its commitment to employee well-being, Stahl has also been awarded the Living Wage certification by the Fair Wage Network, ensuring that its nearly 2,000 employees receive fair compensation. With this renewed Platinum recognition, alongside the Living Wage certification, Stahl reaffirms its commitment to a sustainable future — one where innovation and responsibility go hand in hand.

(Stahl News – 17/09/2024)

STAHL STRENGTHENS PACKAGING COATINGS BUSINESS WITH WEILBURGER GRAPHICS ACQUISITION

Stahl, the world leader in speciality coatings and treatments for flexible materials, has agreed to acquire WEILBURGER Graphics GmbH, a leading German-based manufacturer of water-based and energy cured coatings for the graphic arts and packaging industry, subject to customary approvals.

The transaction significantly strengthens Stahl's new packaging coatings division and supports its strategy to broaden its franchise for coatings for flexible materials.

The acquisition of WEILBURGER Graphics, a division of Grebe Holding GmbH from Weilburg, will enable Stahl to accelerate the global expansion of its growing packaging coatings offering. WEILBURGER Graphics had sales of 70 million Euro in 2023 and employs over 140 people, mainly in Germany.

Maarten Heijbroek, CEO of Stahl: "I am very excited to welcome WEILBURGER Graphics to the Stahl Group. This is another important step on our strategic journey. The acquisition further strengthens our packaging coatings business, building on the acquisition of ICP Industrial Solutions Group (ISG) in March 2023. Importantly, it will enhance our position in the European packaging coatings market with its innovative portfolio in growth markets like food and beverages, cosmetics and pharmaceuticals, unique expertise, state-of-the-art manufacturing facilities and a distinct focus on sustainability. I have gotten to know the WEILBURGER Graphics team as one of the best in the industry.

Günter Korbacher, Managing Director of WEILBURGER Graphics: "We look forward to joining the Stahl Group to combine our expertise and grow our worldwide presence in packaging coatings. Stahl is a prominent and respected brand, and with our complementary product portfolios, geographical coverage and our alignment with the QIS principle, which covers the success factors of quality, innovation and sustainability, we will create a well-rounded and truly global offering for the market."

(Stahl News – 29/08/2024)

CREATE UNIQUE APPEARANCES WITH STAHL EDGE PAINT

Stahl's Edge Paint portfolio gives manufacturers the ability to customize and protect the edges of accessories, unlocking the creativity of designers and providing a final touch of class. Alongside its aesthetic appeal, our Edge Paint offers outstanding performance and low environmental impact while opening up efficiencies in the production process. For any producer of accessories, our Edge Paint delivers the quality and responsible chemistry that today's customers expect.

From the desk of General Secretary

14th ASIA INTERNATIONAL CONFERENCE ON LEATHER SCIENCE & TECHNOLOGY (AICLST)

ILTA is going to organize the 14th Asia International Conference on Leather Science & Technology (AICLST) in the year 2026 at Kolkata, India. Official confirmation has been received so far from IULTCS.

The event will be organized as a part of the Platinum Jubilee Celebration of ILTA in 2025.

Planning and details of both the program would be shared in due course.

HEALTH CARE BENEFIT FOR ILTA MEMBERS

ILTA has launched Health Care Benefits for all the Members of the Association in collaboration with M/s Narayana Health w.e.f. 1st April, 2024. Initially the scheme has been launched for the members of Eastern Region only as the Pilot Project.

For benefits and other details about this project, you may kindly follow the HRD Corner.

DIGITALIZATION OF ILTA PUBLICATIONS

ILTA is going to launch a digital platform for availing all its publications including Leather Text Books, JILTA and different articles from renowned authors of Leather Fraternity online.

Working on this project is under process. The details of the same will be published very soon.

IDENTITY CARD FOR LIFE MEMBERS OF ILTA

The Executive Committee of ILTA has decided to issue a unique Plastic Identity Card to all the Life Member of ILTA against their Membership.

Hence, all the Life Members are advised to send the following information through official Email ID - **admin@iltaonleather.org** and/or WhatsApp No. - **9432553949** to ILTA office just as soon as possible.

1) Name of the Member (In capital letter)
2) Full Residential Address of the Member
3) AADHAR No. of the Member
4) Blood Group of the Member
5) A HD quality Photo of the Member
6) Copy of the AADHAR card of the Member
7) Email ID of the Member
8) Mobile No. of the Member

(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.

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

Members are requested to :-

a) Kindly inform us your '**E-Mail ID**', '**Mobile No**', '**Land Line No**', through E-Mail ID: admin@iltaonleather.org or over Telephone Nos. : 24413429 / 3459. This will help us to communicate you directly without help of any outsiders like Postal Department / Courier etc.

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

RECEIVING PRINTED COPY OF JILTA EVERY MONTH

We have started to post Printed copy of JILTA from April' 2022 to members and all concerned as it was before Covid period. Simultaneously we have been sending the e-copy of JILTA through email also to all the concerned receivers.

If you are not receiving JILTA by Post or through email, may please verify your Postal Address and/or Email Id with our office at the earliest.

General Secretary and the Members of the Executive Committee are available to interact with members at 18.30 hrs, at our Registered Office on every Thursday

Solidaridad

switchasia

Funded by the European Union

PROJECT PARTNERS

PISIE

CLC TANNERS ASSOCIATION
(We Care for the Environment)

dugros

Stahl

Pradipta Konar, Sr. Programme Manager- Leather (Kolkata): pradipta.konar@solidaridadnetwork.org
Solidaridad Regional Expertise Centre
158/5, Prince Anwar Shah Road, Kolkata-700045 | Contact: 033-4060211, +91 98302798666

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

POLLUTION ABATEMENT AMONG LEATHER & TEXTILE SUPPLIERS IN SOUTH ASIA

Micro, small and medium enterprises (MSMEs) account for nearly half of the GDP of South and Southeast Asian nations, playing a crucial role in job creation, innovation and economic growth. MSMEs are particularly important in the leather and textile sectors of Bangladesh, India and Sri Lanka, and contribute significantly to foreign exchange earnings in those countries.

The Challenges

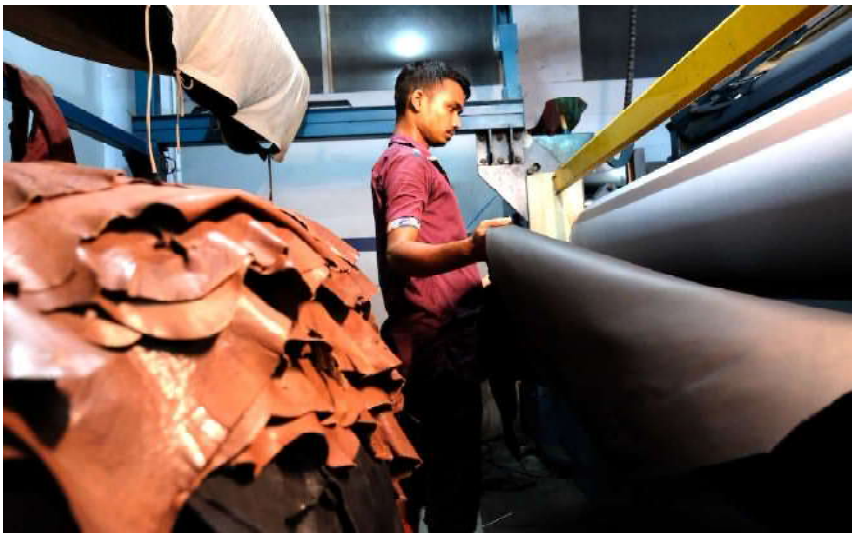
Despite their contributions, MSMEs in the leather and textile sector face several challenges:

- They are water-intensive and known to cause pollution.
- They require significant access to limited natural resources such as water and land, and contribute to greater scarcity.
- They cause high levels of air, water and soil pollution, in addition to their large carbon footprint.

The burden of these consequences is often borne by the most marginalized populations of society, leaving them vulnerable to the effects of pollution and scarcity.

Opportunities & Interventions

Greening of the leather and textile supply chain is the need of the hour. To this end, Solidaridad has been working with MSMEs in the leather and textiles sector to embed sustainability in their operations, since 2017.



Solidaridad's strategy is designed around four critical components: Good Practices, Supportive Business Ecosystem, Enabling Policy and Market Uptake.

The interventions address core issues: lack of waste management, inefficient use of water, untreated effluent discharge into river systems, and inadequate training of workers at the units to mitigate occupational health and safety risks.

By working together with multiple stakeholders, Solidaridad in Asia has been able to achieve these results in 2023:

- 1.6 billion liters of water conserved
- 252 processors have reduced pollution at their workplace
- 188 processors have committed to decent working conditions and fair wages
- 23 techno-economically viable business models on pollution abatement established
- 23,844 workers under improved working conditions

Solidaridad

Solidaridad

switchasia
GRANTS PROGRAMME

Consumer Behaviour Towards First-Copy Footwear

Dr. Dibyendu Bikash Datta

Dept. of Fashion Management Studies, National Institute of Fashion Technology, Kolkata

Abstract

India's first copy footwear industry, a crucial part of the footwear market, offers replicas of branded footwear at lower prices. First-copy footwears mimic popular brands, making high fashion accessible at reduced costs. Advancements in manufacturing and distribution have facilitated this growth. However, the rise of replica footwear raises ethical concerns about Intellectual Property Rights violations and consumer deception, challenging regulatory frameworks and brand integrity. The strong consumer demand for first-copy footwear, driven by affordability, perceived value, and fashion trends, is reshaping market dynamics and impacting legitimate businesses and the economy. Using a mixed-method approach, this study combines qualitative insights from literature reviews with quantitative data analysis to explore the first-copy footwear industry's complex nature. It addresses historical trends, ethical dilemmas, economic contributions, and regulatory challenges, advocating for a sustainable and ethical marketplace for footwear in India and globally, a cause that is of utmost importance.

Keywords : First copy footwear, Intellectual property rights, Consumer behaviour, Ethical implications.

Introduction

First copy is a term often used in the context of counterfeit or replica products. It refers to items designed to imitate the appearance of popular branded products, but the original brand owner does not produce them. The replicas are usually made to deceive consumers into believing they are purchasing genuine products, while in reality, they are getting a cheaper, lower-quality version. They are typically found in the markets where Intellectual Property Rights (IPR) enforcement may be lax or challenging. These counterfeit products can range from clothing, accessories, and shoes to electronics, watches, and more.

The first-copy footwear industry in India has emerged to cater to a specific consumer segment: those seeking trendy shoes at affordable prices. This industry offers unauthorised replicas of popular brands. The surge in consumerism and demand for luxury goods, triggered by economic liberalisation in the 1990s, was met with high prices of authentic branded footwear, which remained a significant barrier (Bijapurkar, 2009). In response, local manufacturers and traders began importing cheaper replicas (Figure 1). These affordable, branded-looking alternatives were quickly embraced by price-sensitive consumers, highlighting consumer behaviour's role in shaping the first-copy footwear market (Samaddar & Gandhi, 2024).

Studies highlight several reasons for buying first-copy footwear. Price remains a major factor, with consumers viewing them as cost-effective alternatives to authentic brands (Samaddar & Gandhi, 2024). The aspirational value of branded footwear also drives demand as consumers seek to emulate celebrity styles (John, 2023). Online platforms and social media facilitate easy access to these products, appealing to a tech-savvy demographic (Esbenshade, 2004). Despite their popularity, first-copy footwears raise significant ethical and legal issues. These replicas infringe on the original brands' IPR, undermining their revenue and tarnishing their reputation if inferior quality is associated with the originals (Sah & Ezhilanban, 2023; Maaz & Ali, 2020). Production often occurs in unregulated environments, leading to worker exploitation and poor labour standards (Blakeney, 2023; Sushin, 2019). Substandard materials in replicas can pose health risks to consumers (Butt et al., 2023).

The first-copy footwear industry presents both opportunities and challenges. It stimulates consumer spending and allows broader participation in fashion trends (Shrivastava, 2023; Nora & Fatima, 2023). However, it also undermines legitimate businesses by reducing incentives for innovation and brand

Corresponding author E-mail : dbdatta@yahoo.com

development (Wilke & Zaichkowsky, 1999).

This paper examines consumer motivations for choosing replica footwear, the ethical and legal challenges, and the impact on the footwear sector. It also provides stakeholder recommendations. By evaluating literature, empirical evidence, and industry insights, this study aims to offer a nuanced understanding of the implications of first-copy footwear in the global market.

(a) Fake (b) Original

Figure 1: The letter "F" on Fake Fila footwear has stitching irregularity

Literature Review

The first-copy footwear industry in India has emerged as a significant player within the global footwear market, catering to a demand for affordable alternatives to popular brands (Nora & Fatima, 2023). This literature review examines various aspects of this industry, exploring consumer behaviour, IPR, ethical considerations, and the economic impact. By analysing existing research, the review aims to shed light on the complex dynamics surrounding first-copy footwear.

a) Consumer Behaviour

Consumer behaviour towards first-copy footwear is primarily driven by cost efficiency. Consumers consider them affordable alternatives to branded footwear, especially among younger, price-sensitive demographics (Bingwa, 2023). The convenience of online retailing, offering a wide selection and competitive pricing, also contributes to the industry's growth (Nawab, 2023).

b) Intellectual Property Rights

Footwear that is produced as a first copy infringes on the IPR of original brands, leading to legal and ethical concerns regarding trademark violations and counterfeit practices. Companies invest heavily in research, development, and branding, and counterfeit products undermine these efforts (Chaudhry & Zimmerman, 2009). Enforcing IPR is challenging due to jurisdictional complexities and the rapid growth of online sales (Huang & Lin, 2019).

c) Ethical Considerations

Ethical issues surrounding first-copy footwear include labour conditions, environmental impact, and consumer deception. Manufacturing in countries with lax labour regulations often involves exploitation, including child labour and unsafe working conditions. Substandard materials used in production contribute to environmental degradation and pose sustainability risks (Esbenshade, 2004).

d) Economic Impact

The first-copy footwear industry impacts formal and informal sectors in developing economies, employing people in manufacturing, retailing, and distribution. However, it challenges legitimate businesses, causing revenue loss, reduced consumer trust, and competitive disadvantages for original brands (Fink et al., 2016).

e) Industry Dynamics

The first-copy footwear industry intersects consumer demand, legal challenges, ethical dilemmas, and economic dynamics. It raises concerns about IPR, labour practices, environmental sustainability, and market integrity. Addressing these issues requires regulatory reforms, consumer education, ethical business practices, and international cooperation (Agarwal & Panwar, 2016).

Methodology

This research employs a qualitative approach to explore and analyse various aspects of the first copy-footwear industry in India. The methodology is structured to gather comprehensive data through a literature review and expert interviews, providing insights into consumer behaviour, ethical considerations, legal implications, and industry dynamics.

a) Literature Review : Examining academic journals, industry reports, and online sources on IPR, consumer behaviour, ethical concerns, and economic impact related to counterfeit products.

b) Expert Interviews : Conducting semi-structured interviews with a purposive sample of industry stakeholders. This sample includes representatives from original footwear brands, legal professionals specialising in IPR, consumer rights advocates, and stakeholders within the first-copy footwear industry. Selection is based on their expertise and ability to provide diverse perspectives.

c) Data Collection : An online questionnaire was developed to gather broader consumer insights on purchasing motivations, brand awareness, and attitudes towards first-copy footwear. A convenience sampling approach was used for recruitment, relying on readily available online channels to distribute the questionnaire.

d) Data Analysis : Thematic analysis identified recurring themes and insights from literature and interviews, while descriptive statistics were employed to analyse quantitative data from the online questionnaire.

Ethical considerations will be paramount throughout the research process. Findings will be presented thematically, supported by interview quotes, relevant literature, and key findings from the online questionnaire. This mixed-methods approach offers a comprehensive understanding of the multifaceted nature of the first-copy footwear industry in India.

Results and Discussions

These tables and discussions provide insights into consumer behaviours, attitudes, and purchasing patterns regarding counterfeit footwear products in India based on the survey results from a sample size of 116 respondents.

a) Quantitative Analysis of Consumer Preferences

Table 1: Demographic Characteristics of Respondents

Demographic		Frequency	Percentage (%)
Gender	Male	60	51.7
	Female	56	48.3
Age Group	18-25 years	30	25.9
	26-35 years	50	43.1
	36-45 years	20	17.2
	Above 45 years	16	13.8
Educational Level	High School	25	21.6
	Bachelor's	55	47.4
	Master's	26	22.4
	Ph.D.	10	8.6
Occupation	Student	40	34.5
	Professional	45	38.8
	Self-employed	18	15.5
	Other	13	11.2

The sample includes a balanced gender distribution, with most respondents aged between 26 and 35. Most respondents have attained at least a Bachelor's degree, reflecting a relatively educated sample. The occupation distribution is diverse, with students and professionals comprising the largest groups.

Table 2: Frequency of Purchase of Footwear

Frequency of Purchase	Count
Quarterly	30
Bi-annually	25
Yearly	40
Anytime when I like it	21

A significant portion of respondents purchases footwear yearly, indicating a planned approach to shopping. Quarterly and bi-annual purchases are also notable, suggesting seasonal or occasion-based buying patterns. The preference for purchasing 'Anytime when I like it' highlights spontaneous buying behaviour among a segment of consumers.

Table 3: Awareness of Counterfeit Footwear

Awareness Level	Count
Very Aware	35
Somewhat Aware	45
Not Very Aware	25
Not Aware at All	11

Most respondents demonstrate some awareness regarding counterfeit footwear, with a significant proportion being either 'Very Aware' or 'Somewhat Aware'. This awareness likely influences their purchasing decisions and perceptions of product value.

Table 4: Factors Influencing Purchase Decision

Factors Considered	Percentage (%)
Price	65.5
Brand Reputation	50.9
Quality	45.7
Style/Design	38.8
Authenticity Assurance	30.2
Social Media Influence	15.5

Price is the most influential factor in footwear purchase decisions, followed closely by brand reputation and quality. Authenticity assurance, though important, ranks lower in influencing decisions, indicating a potential gap in consumer education or trust regarding product authenticity.

Table 5: Attitudes Towards Counterfeit Footwear

Attitude	Percentage (%)
Negative	42.2
Neutral	31.0
Positive	26.7

A notable proportion of respondents hold negative attitudes towards counterfeit footwear, suggesting concerns about quality, ethical considerations, or legal implications. However, a significant percentage remains neutral or positive, indicating varied perceptions and possibly differing motivations behind purchasing counterfeit products.

Table 6: Actions Taken to Avoid Counterfeit Footwear

Actions Taken	Percentage (%)
Purchase from Authorized Dealers	55.2
Check for Brand Labels	40.5
Research Online Reviews	35.3
Compare Prices	28.4
Use Authentication Apps	15.5

Many respondents employ proactive measures to avoid counterfeit footwear, such as purchasing from authorised dealers and checking for brand labels. The use of technology, such as authentication apps, is less common but highlights a growing trend towards leveraging digital tools for product verification.

Table 7: Sources of Information on Footwear

Information Source	Percentage (%)
Social media	48.3
Retail Stores	35.3
Online Reviews	30.2
Friends/Family	25.9
Company Websites	18.1

Social media emerges as the primary source of information on footwear among respondents, indicating the significant influence of digital platforms in shaping consumer perceptions and purchasing decisions. Retail stores and online reviews also play substantial roles, highlighting the multi-channel nature of consumer information-seeking behaviour.

Table 8: Impact of Counterfeit Footwear on Buying Decisions

Impact	Percentage (%)
Avoid Buying	37.9
Lower Price Expectation	31.9
No Impact	21.6
Influence Buying Decision	8.6

A considerable percentage of respondents report that counterfeit footwear impacts their buying decisions by causing them to avoid purchases or lower their price expectations. This finding underscores the perceived risks associated with counterfeit products and their influence on consumer behaviour.

Table 9: Consumer Perceptions of Counterfeit Footwear

Perception	Percentage (%)
Lower Quality	52.6
Legal/Ethical Concerns	47.4
Lack of Warranty/Support	35.3
Similar to Original	18.1

Most respondents associate counterfeit footwear with lower quality and express concerns about legal and ethical implications. A significant portion also highlights issues related to warranty and support, suggesting that consumer perceptions of counterfeit products encompass various dimensions beyond price and appearance.

Table 10: Consumer Responses to Counterfeit Footwear Incidents

Consumer Responses	Percentage (%)
Complain to Seller	45.7
Share Experience Online	30.2
Seek Refund/Exchange	25.9
Do Nothing	18.1

When faced with counterfeit footwear incidents, most consumers proactively complain to the seller or share their experiences online. However, a significant segment either needs more recourse or takes no action, reflecting varying levels of consumer activism and response to counterfeit encounters.

a) Inferences from Expert Interviews

The study includes semi-structured interviews with industry experts to gain diverse perspectives on the first-copy footwear industry in India. The interviewees represent original footwear brands, legal professionals specialising in IPR, consumer rights advocates, and stakeholders from the first-copy footwear industry. The interviews focus on market dynamics, ethical concerns, legal challenges, consumer motivations, and industry practices.

(i) Representative from an Original Footwear Brand

- Market Dynamics : The proliferation of first-copy footwear has greatly affected sales and market share. Brands face challenges in maintaining exclusivity and premium positioning in the market.
- Ethical Concerns : Ethical issues include brand reputation damage and consumer deception due to inferior quality replicas. Brands prioritise authenticity and quality in their production and marketing strategies.
- Legal Challenges : Legal actions focus on trademark infringement and enforcement of IPR. Effective legal measures include stringent enforcement and international cooperation.
- Consumer Motivations : Consumers opt for first-copy footwear primarily for cost savings and accessibility. To educate consumers, brands emphasise the value of authenticity and quality.

(ii) Legal Professional Specializing in IPR

- Market Dynamics : Legal frameworks need help to keep pace with the rapid growth of online sales and global counterfeit operations. Adaptive legal measures and enhanced international cooperation are required.
- Ethical Concerns : Ethical considerations revolve around fairness to original brands, protecting consumers from counterfeit products, and advocating for awareness and ethical purchasing.
- Legal Challenges : Include jurisdictional complexities, enforcement issues, and evolving counterfeit tactics. Recommendations include strengthening laws and increasing penalties.
- Consumer Motivations : Consumers buy counterfeit products for affordability and perceived value, and legal penalties aim to effectively deter this behaviour.

(iii) Consumer Rights Advocate

- Market Dynamics : First-copy footwears raise concerns about consumer rights, including product safety and fair-trade practices. Advocacy focuses on educating consumers about risks and promoting ethical choices.
- Ethical Concerns : Ethical issues in producing counterfeit goods include labour exploitation and environmental impact. Advocates push for transparency and ethical sourcing.
- Legal Challenges : Consumers face challenges seeking redress for counterfeit purchases, including limited legal protections and complex enforcement procedures. Advocacy calls for stronger consumer protection laws.
- Consumer Motivations : Consumer motivations stem from affordability and fashion trends. Advocates aim to shift consumer behaviour towards ethical purchasing through education and policy advocacy.

(iv) Stakeholders from the First Copy Footwear Industry

- Market Dynamics : The industry attributes growth to consumer demand for affordable fashion and accessibility through online platforms. Competition with authentic brands underscores market segmentation.
- Ethical Concerns : Addressing ethical concerns involves ensuring fair labour practices and product quality standards. Industry stakeholders navigate ethical dilemmas through compliance and industry standards.
- Legal Challenges : Legal challenges include IPR disputes and regulatory compliance. Industry stakeholders

advocate for clearer regulations and industry self-regulation.

- Consumer Motivations : Consumers choose first-copy footwear for cost savings and trend availability. The industry aims to balance consumer demand with ethical considerations and legal compliance.

(v) Industry Analyst

- Market Dynamics : Trends indicate significant growth in the first-copy footwear segment driven by affordability and online accessibility. Market dynamics reflect shifting consumer preferences and competitive pressures.

- Ethical Concerns : Ethical issues include brand integrity and consumer trust impacted by counterfeit products. Analysts monitor consumer sentiment and industry responses to ethical challenges.

- Legal Challenges : Legal challenges encompass jurisdictional issues and enforcement effectiveness. Analysts recommend adaptive legal frameworks and collaborative approaches.

- Consumer Motivations : Consumer motivations include price sensitivity and fashion trends. Analysts emphasise the importance of market education and brand differentiation in effectively addressing consumer preferences.

These insights from the literature review and expert interviews provide a comprehensive understanding of the implications of first-copy footwear in India's footwear market, encompassing economic, ethical, legal, and consumer behaviour perspectives.

Conclusion

The study examined the impact of counterfeit footwear products on consumer behaviour in India using the survey-based methodology to gather insights. It analysed demographic profiles, purchasing habits, and consumer perceptions, uncovering key findings on consumer attitudes towards counterfeit goods and their implications for the footwear market.

The demographic profile of respondents revealed a diverse cross-section of Indian footwear consumers, encompassing various age groups, educational backgrounds, and occupational categories. This diversity underscores the broad applicability of the study's findings across different population segments.

Many respondents reported purchasing footwear quarterly or bi-annually, indicating a regular engagement with the market. This frequent interaction underscores the relevance of factors influencing consumer buying decisions, such as perceived product authenticity and quality.

Social media emerged as the predominant source of information influencing consumer perceptions of footwear products. Retail stores and online reviews also played significant roles, highlighting the multifaceted nature of consumer decision-making processes in the digital age.

Consumer responses indicated a substantial negative impact of counterfeit footwear on buying decisions. Concerns over product quality, ethical considerations, and legal ramifications influenced consumer attitudes towards counterfeit goods.

Consumers saw counterfeit footwear as lower quality and had ethical concerns about buying them. Responses varied, with many complaining to sellers or sharing experiences online. This showed a range of actions, from avoidance to advocacy.

Implications and Recommendations

The findings of this study have several implications for stakeholders in the footwear industry, consumer advocacy groups, and policymakers:

a) **Consumer Education** : There is a clear need for enhanced consumer education initiatives to raise awareness about the risks associated with counterfeit products. Educating consumers about identifying authentic products and understanding the consequences of purchasing counterfeit goods can empower them to make informed decisions.

b) **Regulatory Measures** : Policymakers and regulatory authorities should strengthen enforcement measures against counterfeit trade practices. This includes stricter penalties for counterfeiters and enhanced consumer protection laws to safeguard consumer rights and promote fair trade practices.

c) **Industry Collaboration** : Collaboration among footwear brands, retailers, and e-commerce platforms is essential to

combatting counterfeit trade effectively. Implementing robust authentication technologies and supply chain transparency measures can help differentiate authentic products from counterfeit ones, restoring consumer confidence in legitimate brands.

d) Ethical Business Practices : Emphasize ethical business practices and corporate social responsibility. Transparent communication about product origins, manufacturing, and anti-counterfeiting measures can build consumer trust and loyalty.

Limitations and Future Research Directions

While this study makes significant contributions, several limitations should be acknowledged :

a) Sample Size and Generalizability : The sample size may limit the generalizability of findings to the broader population of Indian footwear consumers. Future research could expand the sample size and include a more diverse demographic representation to enhance external validity.

b) Cross-Cultural Variances : Consumer attitudes towards counterfeit goods may vary across cultures and regions within India. Exploring regional nuances and cultural factors influencing consumer behaviour could provide deeper insights into the complexities of counterfeit markets.

c) Longitudinal Studies : Conducting longitudinal studies to track changes in consumer perceptions and behaviours over time could offer valuable insights into the evolving dynamics of counterfeit markets and consumer responses to anti-counterfeiting interventions.

In conclusion, this research offers valuable insights into the relationship between counterfeit footwear products and consumer behaviour in India. It provides a basis for stakeholders to develop targeted strategies to combat counterfeit trade and promote a marketplace that prioritises consumer trust by highlighting factors influencing consumer perceptions and purchasing decisions.

References

1) Agarwal, S., & Panwar, S. (2016). Consumer orientation towards counterfeit fashion products: A qualitative analysis. IUP Journal of Brand Management, 13(3).

2) Bijapurkar, R. (2009). We are like that only: Understanding the logic of consumer India. Penguin Books India.

3) Bingwa, S. (2023). Factors influencing millennials' e-satisfaction and e-loyalty towards online footwear purchases (Doctoral dissertation, University of Johannesburg).

4) Blakeney, M. (2023). Luxury goods. In Counterfeit goods and organised crime (pp. 223-244). Edward Elgar Publishing.

5) Butt, I., Al Balushi, M. K., Lee, S. H., Mohan, M., Ahmad Khan, N., & Haines, S. (2023). Four decades of counterfeit research: A bibliometric analysis. Cogent Business & Management, 10(3), 2284814.

6) Chaudhry, P. E., & Zimmerman, A. (2009). The economics of counterfeit trade: Governments, consumers, pirates and intellectual property rights. Springer Science & Business Media.

7) Esbenshade, J. (2004). Codes of conduct: Challenges and opportunities for workers' rights. Social Justice, 31(3 (97)), 40-59.

8) Fink, C., Maskus, K. E., & Qian, Y. (2016). The economic effects of counterfeiting and piracy: A review and implications for developing countries. The World Bank Research Observer, 31(1), 1-28.

9) Huang, L., & Lin, W. (2019). Jurisdictional complexities in enforcing intellectual property laws: A case study of the first-copy footwear industry. Journal of Legal Studies, 31(3), 210-225.

10) John, J. (2023). Customer perception and motives towards counterfeit products in Kerala (Doctoral dissertation, Department of Commerce, St. Thomas College (Autonomous), Thrissur).

11) Maaz, M., & Ali, T. (2020). How counterfeits goods are destroying brand reputation. Journal of Engineering and Economic Development, 6(2), 38-49.

12) Nawab, D. (2023). Do e-commerce platforms provide safety to trademark owners against infringement?: A comparative study between India and China. International Journal of Law, Management & Humanities, 6(1), 219-239.

13) Nora, H. A., & Fatima, F. (2023). Global trade in counterfeit products-facts & solutions. Journal of Contemporary Business and Economic Studies, 6(02).

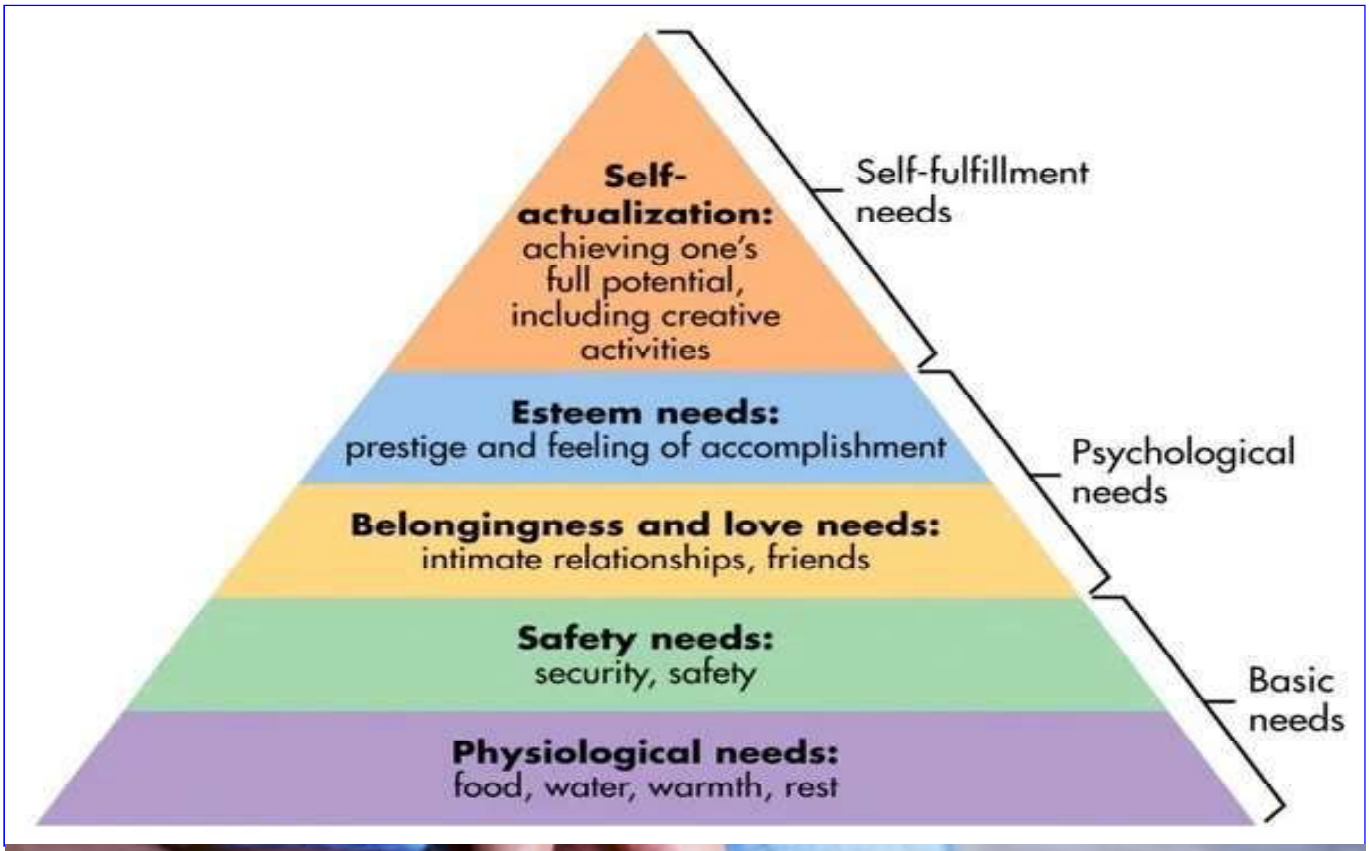
14) Sah, N., & Ezhilanban, J. J. (2023). IPR and Indian fashion industry: Challenges and possibility. Journal of Intellectual Property Rights, 28(5), 432-437.

15) Samaddar, K., & Gandhi, A. (2024). Exploring customer perceived value towards non-deceptive counterfeiting: A grounded theory approach. South Asian Journal of Business Studies, 13(2), 201-225.

16) Shrivastava, M. N. (2023). The role of consumers' attitude in the purchase of counterfeit products in India. EPRA International Journal of Multidisciplinary Research (IJMR), 9(1), 84-88.

17) Sushin, M. (2019). Antecedents of consumer attitude and purchase intention towards counterfeit products (Doctoral dissertation, Department of Management Studies, Pondicherry University).

18) Wilke, R., & Zaichkowsky, J. L. (1999). Brand imitation and its effects on innovation, competition, and brand equity. Business Horizons, 42(6), 9-18.



INTERNATIONAL UNION OF LEATHER TECHNOLOGISTS AND CHEMISTS SOCIETIES
(www.iultcs.org)

NEWS RELEASE FROM IULTCS

IULTCS YOUNG LEATHER SCIENTIST GRANT PROGRAMME 2025 ANNOUNCED

IULTCS and the IUR Commission headed by Dr. Volker Rabe are extremely happy to announce that the IULTCS Young Scientist Grant Programme for 2025 is underway. The details are as follows and further information can be found on the IULTCS website https://iultcs.org/ or by contacting the IUR chair Dr. Volker Rabe (Volker.rabe@tfl.com)

Background :

The IULTCS is committed to further intensifying co-operation between the individual member societies and to providing a platform to promote the latest innovations in the field of leather science and technology. For this reason, the latest findings in this field are shared with a broad public in the form of presentations at the global IULTCS congresses organized every two years by a regional member society.

In addition, the IULTCS would like to make a more direct contribution to leather research through its IUR Commission and at the same time provide additional support for younger scientists. For this reason, the Young Leather Scientist Grants were created to recognize outstanding achievements in three different categories by individual young scientists. The grant is freely available to the winners. Optionally, the winners are also given the opportunity to present their award-winning work at an IULTCS congress.

Award categories

1) **Basic Leather Research Grant** – Sponsored by TYSON Leather (1500 €)

- Basic research in collagen and/or leather.
- Analytical method development
- Innovative leather processing or new chemicals thereof
- Hide/skin preservation.
- Tannery waste treatment
- Environmental studies applied to the tanneries

2) **Professor Mike Redwood Sustainability/Environmental Grant** sponsored by Leather Naturally (1000 €)

- Innovative environmental techniques e.g., wastewater treatment, solid waste and emissions
- Studies on sustainability leather processing
- New chemicals for leather processing improving environmental impact e.g., carbon footprint and/or water management.

INTERNATIONAL UNION OF LEATHER TECHNOLOGISTS AND CHEMISTS SOCIETIES
(www.iultcs.org)

3) Leather Machinery/Equipment Grant sponsored by Italprogetti (1000 €)

- Innovative new machinery for leather processing
- Simplification and/or rationalization of leather production
- Increased efficiency through e.g., energy savings

Admission requirements for applicants

- Not older than 35 years (date of submission)
- Student or Scientist on a university or a leather school
- Having an advisor at his/her institution

Application Procedure :

The Document Form must be completed and saved as one PDF file only and identified as: *YLSG_year_applicantname*.

- ❖ Leave one empty page between the documents.
- ❖ Applications must be assigned to one of the categories.

The complete application form to be submitted to the IUR chair Dr. Volker Rabe (Volker.rabe@tfl.com) must have the following parts :

1) Application Form
2) Research Project Plan. Include Title, Introduction, Objectives, Methods, Hypothesis / Expected results, benefit for the local and/or global leather industry in one sentence and Literature. Maximum 3 pages.
3) Curriculum Vitae of the applicant (one page)
4) Curriculum Vitae of the advisor (one page)
5) Letter of recommendation from the advisor (one page)

Note : Applicants that do not follow the above rules will have their submission rejected.

Award criteria & Selection :

The application will be evaluated and ranked based on the following criteria :

1) Clear aim of the research
2) Methods
3) Expected results
4) Originality of the research

INTERNATIONAL UNION OF LEATHER TECHNOLOGISTS AND CHEMISTS SOCIETIES
(www.iultcs.org)

5) Correct citation
6) Global or local benefit of the research

The qualifications of the researcher and the advisor will also be evaluated. The Selection Committee has not been established; it will be made by renowned scientists on the field.

Timeline :

- September 2, 2024, launch the YLSG 2025, with rules on the IULTCS web site and press release
- November 30, 2024, deadline for submissions
- January 30, 2025, winner selected and press release
- February 15, 2025, payment of the award and sending the IUR/IULTCS certificate

Report :

The winners must complete a final project report which has to be submitted to the IUR Commission Chair by February 28, 2026.

The report should be accompanied by a one-page review of the project by the advisor and will be posted on the IULTCS/IUR web page.

(Email from Julian Osgood - 10/09/2024)

ANNOUNCEMENT

ILTA LAUNCHED HEALTH CARE BENEFIT FOR ITS MEMBERS

Indian Leather Technologists' Association (ILTA), a member society of IULTCS and a pioneer organization in the field of leather industry, has now tied up itself with the hospital the Narayana group for Eastern India with a view to giving Indoor, Outdoor and Medical testing services to all of its registered (both life and ordinary) members at concessional rates.

Offer & Discount :

1. **OPD Service:** 10% discount on Doctor's Consultation, Prevailing Health Check-ups available at hospital, day care procedures, Investigations except outsourced tests.
2. **IPD:** 5% on total IPD billing as per prevailing hospital tariff excluding medicine / consumable / implant / outsource & blood bank services. (Not applicable on insurance cases/ Govt scheme / ESIC and any other schemes & promotional package or offers & discounts).
3. **Ambulance:** As per Availability & as per Narayana Health ambulance policy & charges.
4. **Payment Terms:** Payment should be only in Cash Mode, Debit Card, Credit Card, NEFT/RTGS/ IMPS. No cheques shall be accepted.

These facilities will be extended to its existing members (both Life & Ordinary) only. Six family members including spouse, two children (below 25 years) and dependent parents will be entitled to avail these facilities. The persons concerned may contact Mr. Bibhas Chandra Paul, OSD, ILTA (Mob. No. 9432553949) and / or Mr. Subha Paul, Assistant Manager - Payor Relation, Narayana Health (Mob. No. 8334847000) for further details.

ILTA will issue a Health Card in favour of each Member. Thus, Members are requested to collect the prescribed application format to avail this facility either from ILTA Office or through email.

ILTA IS NOW ON DIGITAL PLATFORM

Indian Leather Technologists' Association is now set for digitalization of its all publications. The members and non-members alike are eligible for this facility. The association has been publishing number of books on leather & footwear technology since inception. Also, the Association has a great collection of number of articles from renowned personalities & scientists of leather fraternity worldwide which has been publishing in our only technical journal namely "Journal of Indian Leather Technologists' Association (JILTA)".

All the above facilities will be available to all the interested peoples on digital platform through the official website of the Association very soon.

****

Classification of Footwear

Debabrata Chakraborty

Footwear Technologist, Hosur, Tamil Nadu & Consultant, International Marketing, Tata International, Ranipet, Chennai

FOOTWEAR

Before we go to classifying Footwear, it is essential to understand footwear. Thus, a protective covering either fully or partially around the human feet and essentially fully covering the soles of the human feet in the form of slippers, sandals, shoes, boots etc. for the purpose of dressing or specific performances is known as footwear. It is pertinent to mention that Shoes or Slippers are just a respective category of footwear and not a general "synonym" for the term "Footwear". While all types of footwear are protective against extremes of temperature and natural/ chemical/ electrical hazards partially or fully, they are functional, therapeutic, decorative and/or a combination meant to be used as an essential part of uniform or a general dressing and sometimes in fashion styling as a costume accessory as shoes, boots, sandals etc. These are made from various types of material such as leather, rubber, synthetics, textile, Canvas, wood, chemical or a combination of one or more of these materials.

TYPES OF FOOTWEAR

They are of two types :

1. Open type – slippers, sandals, mules, wedges, clogs etc.

2. Closed types – shoes and boots

PURPOSE OF FOOTWEAR

1. Protection of feet soles from the extreme roughness of the ground, extreme heat or cold that may cause burns or frost bite respectively, wetness, dirt and various abnormal situations.
2. Protection from slip agents (oil, chemicals, grease etc.) and hazardous corrosive materials (lime, acid) providing grip on the ground/floor while standing, walking or working in non-stable posture. They also protect our feet as a whole against various types of contaminants and pollutants.
3. Protection of the upper part of the foot and sometime the leg from extreme weather conditions, dirt, insect/ other bites, dampness etc.

Corresponding author E-mail : sumiinternational36@gmail.com

4. They provide comfort, stability and support to the feet with a small volume of cushioning effect while we are on rough surfaces ensuring feet injuries are minimized in abnormal situations/accidental cases.
5. They not only complement our dressing but are style quotient too if used wisely.
6. They do indicate rank when worn with uniform mainly in defense services.
7. Special purpose shoes and boots satisfy critical and specific purposes and are commonly known “safety” shoe/ boot.
8. The various types of shoes used for various sports are also special purpose shoes but are not termed as safety shoes, instead they are commonly called as “sports shoes”. Their nomenclature goes by the name of the game. In this variety falls the athletic shoes.

Sports shoes; we have the following :

a. Field event shoes :

- ❖ Walking
- ❖ Jogging
- ❖ Running

b. Court game shoes :

- ❖ Basket ball
- ❖ Volley ball
- ❖ Tennis
- ❖ Badminton
- ❖ Boxing

c. Field game shoes :

- ❖ Cricket
- ❖ Football
- ❖ Hockey
- ❖ Cycling
- ❖ Biking
- ❖ Mountaineering

Now let us learn the classification of footwear, as we have learnt above about the footwear, their purpose and types to have sufficiently become popular with footwear. The basic styles of footwear are from the traditional nomenclature and are as follows :

Open Footwear

Chappal – Popular in the Indian context and are often associated with majorly open-foot footwear secured by 2-3 straps on the upper portion of the foot with a soft sole protecting the soles of the feet. All types of indoor footwear such as bathroom slippers, flip-flops, etc. and they are also used outdoors. They are made of leather, rubber, PVC etc., They may or may not have an instep support.

Slippers - are generally more enclosed footwear covering the major portion of the foot in the fore part such us the Mule and Clogs. Slippers are mostly closed at the toe (though not essentially) whiles slide is always open at the toe. They mostly have instep support.

Sandal – All the above category with support around the ankle with a simple strap or designed straps generally held together with fasteners such as elastic, Velcro, buckle and button. The ankle support provides better support to the foot and makes walking easier than flip-flop. They essentially have instep support.

Women’s Chappal

Men’s Chappal

Slipper

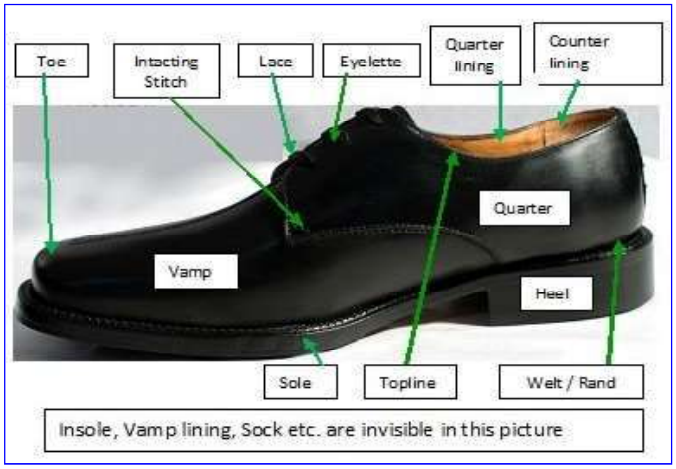
Bathroom Slipper

Flip-flop / Slide

Sandal

Closed Footwear

Derby - Quarters Overlapping the Vamp. This is also called Gibson. It has an in attracting stitch. The quarter opening at the lacing opens widely. It may have either integrated or separate tongue (a component used to safeguard the feet on the top are from the discomfort the laces may cause while tied up). This is a unisex design.



Oxford - Vamp Overlapping the Quarters. Very popularly used as formal (without brogue) and semiformal (with brogue). Since the intacting locks the quarter at the vamp point the quarter opening is limited. The tongue is independent always. This is unisex design.

Moccasin – Tubular vamp and Apron are the two major components. It can also be modified into a laced one. This is the traditional Red Indian Shoe or the first shoe ever invented. This shoe was a wraparound type tied with straps and fully made of leather.

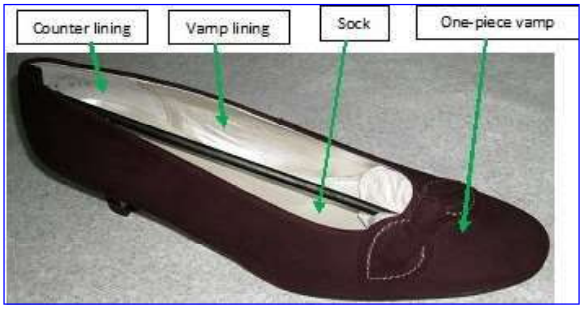
In this case the UPPER consists of a Vamp and an Apron. The Apron is joined to the Vamp on the top portion by hand sewing through pre perforated punches in the apron and vamp. This hand stitching is called moccasin stitch. In present time there are many types of hand stitching done to enhance the esthetics.

Moccasin

Slip-on – A pair of shoes which is a modified oxford with the Vamp over the quarter with Integrated and enlarged tongue called Apron. These are also popularly known as Loafer. These may or may not have hidden or visible elastic fasteners, with or without a saddle bar. We can easily slide our feet in/out to wear them or to open them respectively.

The above shoes discussed so far are Men's shoes. Let's understand a basic women's shoe.

Women's shoe – This is normally called a Ballerina when the heel is flat or very low and court shoe when the heel height is raised (1.5" to 2"). A further rise in heel height of the shoe will convert it into a high heel shoe.



Basic Women's Shoe

Ballerina

Court Shoe

High Heel

These are cut in four different ways :

a. Cut as one piece – Whole Vamp
b. Cut in two half pieces
c. Cut as 3/4the Vamp and Quarter
d. Cut as Vamp and 2 Quarters

(a)

(b)

(c)

(d)

Various types of Boots

Boots - are meant for men's as well as women's accordingly made per their respective fittings and sizes. In general ankle boot, calf boot (half boot) and knee boots are worn by both men and women but long boots are mostly worn by women (with short skirts and middies). Long boots for men are essentially functional and not style/fashion wear.

These Long boots are generally used in winter season to protect from extreme cold and frost bite with middies and skirt by young womenfolk for fashion. The other three types are used for horse riding, bike racing, mountaineering and as a style or fashion too. Horse riding shoes used by the Mexican or the cowboys have various high-end elements that enhances the looks attractively.

AN ENIGMATIC LEATHER JACKET-CLAD CEO STRIKES ALL THE RIGHT CORDS TO WOO INDIA : MEET NVIDIA'S JENSEN HUANG

Jensen Huang, the co-founder and CEO of Nvidia, is not your typical big-tech executive. Known for his signature leather jackets and casual polo shirts, Huang has transformed the landscape of artificial intelligence and computing, as we know the technologies today.

It was at the Nvidia Artificial Intelligence (AI) Summit in Mumbai that Huang made his stage debut in India, giving tech enthusiasts and industry leaders including Reliance's Mukesh Ambani, a look at his foresight into the country's potential in AI.

"Why not manufacture the intelligence here and export the intelligence you own, the data you own? The energy, the infrastructure…you have the critical ingredients here in your country," Huang said.

Born in Tainan, Taiwan, in 1963, Huang's life began with a set of challenges that included a war and immigration to the United States.

It should be noted that Huang's roots in Taiwan have played a crucial role in his career trajectory. Before founding Nvidia in 1993, he worked with prominent tech companies like LSI Logic and AMD, where he honed his skills in chip design and manufacturing.

However, according to his LinkedIn profile, Huang worked as a 'waiter' for five years before the birth of Nvidia.

Huang once said that Nvidia had a "roughly 0% chance of success." Despite this, he is said to have taken bold risks on experimental products that have since revolutionised the industry.

He has been a driving force behind Nvidia's ascent to becoming a trillion-dollar company and its unique identity of being known for its cutting-edge hardware and software technologies.

Behind Nvidia's cutting-edge tech

Under Huang's leadership, Nvidia has been at the forefront of the AI revolution. The company is now integral to the development of AI technologies, including ChatGPT, with Huang personally delivering the first AI supercomputer to OpenAI in 2016. It was this occasion that brought a surge in demand for Nvidia's hardware, which remains unmatched in the market, eight years down the line.

According to a report by Quartr, Nvidia's members and employees have called him "absolutely brilliant" and "completely irreplaceable." During his visit to India, Huang expressed a keen interest in the country's potential to contribute to the global AI landscape. He pointed out that India possesses the necessary resources and talent to become a hub for data and AI intelligence.

As Nvidia continues to expand its reach and influence, Huang's insights and strategic vision could help India leverage its strengths to become a major player in the global tech arena.

(economictimes.indiatimes.com – 25/10/2024)

TATA INTERNATIONAL TO BOOST PRODUCTION OF SUSTAINABLE LEATHER TO 50% IN FOUR YEARS

Tata International, the global trading and distribution arm of the diversified conglomerate Tata Group, has reaffirmed its commitment to boost production of sustainable leather to 50 per cent in four years.

The company has launched eco-friendly Phoenix Leather using a patented technology in association with the Central Leather Research Institute, Chennai.

"Tata International's Earth care Leather range aims to lead the sustainable development of the leather industry. Despite lower demand post-Covid, we are now witnessing promising recovery with increased interest from key markets such as the USA, China and Europe.

Tata International is one of the largest exporters of leather and leather products in India," the company's Finished Leather Business - Business Head P Rajasekaran said. "We are optimistic about sustainable and bio-based leather. The percentage share of Earth care leather in financial year 2023-24 accounted for 27 per cent of our total production and we plan to increase this to 50 per cent in the next four years," he said in a release.

The Earth care Leather range, featuring Phoenix Leather alongside bio-based and chrome-free options, underscores Tata International's commitment to sustainability in the leather industry, the release said.

Phoenix Leather stands out for its eco-friendly production process and high-quality, meeting the stringent requirements of leather product manufacturers, the release added.

(telegraphindia.com – 30/07/2024)

TÜRKIYE'S LEATHER EXCELLENCE : COMPETITION FOSTERS NEXT-GEN DESIGNERS

When thinking of Türkiye, one of the first associations is its renowned leather quality. Türkiye's leather quality often surpasses that of even the notable Italian and Spanish leather industries, establishing the country as a formidable player in the global leather market.

To further enhance this reputation and foster the next generation of talented designers in the footwear and leather sector, the Istanbul Leather and Leather Products Exporters' Association (IDMIB) hosts a prestigious annual competition aimed at encouraging new talent.

Leather is more than just a material; it represents a significant sector in Türkiye, which boasts a leather export market worth $1.5 billion. IDMIB members are responsible for 70% of this total export. Given this context, the competition organized by IDMIB is of substantial importance for the industry, catalyzing innovation and growth. Last year, the focus was on shoe design, whereas this year's competition revolved around leather apparel and accessories.

In a recent meeting, we spoke with fashion designer Gamze Saraço□lu, the creative director of the competition, and Emel Güven Bard□z, a board member of IDMIB, to delve deeper into the details of this year's event.

This year's competition, aptly named "Detail," features two categories: apparel design and bag design. Bard□z emphasized that the competition not only rewards innovative designs but also plays a critical role in nurturing emerging talents who show promise for the industry. The association's primary goal is to focus on design while simultaneously strengthening exports.

Sustainability

Sustainability is a hot topic in today's world, with discussions surrounding vegan and synthetic leathers gaining traction. When asked about these issues, Bard□z highlighted that finding a material as durable as leather is challenging. Unlike synthetic materials, which can be harmful to the environment and difficult to decompose, leather ages gracefully and can be used for years without losing appeal. While acknowledging her position as an animal lover, she explained that using leather from animals raised for food is a natural byproduct of that industry. The conversation on sustainability, however, could evolve if society moves toward a vegetarian future, potentially influencing demand and design trends.

Bard□z also addressed the perception of leather products as expensive. She noted that many designs utilizing leather tend to be classic and timeless, standing the test of fashion trends. Unlike fast fashion brands that frequently cycle through trendy items, leather products are typically created to last a lifetime, reflecting a different kind of consumption pattern.

Role of education

Gamze Saraçoglu, a seasoned fashion educator at Mimar Sinan University, spoke about the challenges faced by students who often gravitate toward textiles due to their lower cost. Despite leather being an integral part of the textile industry, it remains a pricier option. Saraçoglu emphasized the need for more specialized programs dedicated to leather design, noting the limited number of successful brands focused on leather in Türkiye. She expressed hope that this competition would elevate the profile of leather design and encourage more students to explore it.

Encouraging young creatives

Both Saraçoglu and Bardlz conveyed their confidence in the creativity of young designers, believing they will drive the growth of Türkiye's export sector and fashion industry. The competition aims to provide these young talents with the opportunity to showcase their innovative ideas, contributing to the evolution of new brands and initiatives within the sector.

The jury members are tasked with evaluating entries based on several criteria, including innovation, aesthetics, manufacturability and functionality. Additionally, the competition stipulates that submitted designs must be original, not previously awarded in any other contest, and not yet produced or sold. This meticulous assessment process ensures that only the most promising designs are recognized.

(dailysabah.com – 30/10/2024)

LEATHER DEVOID OF MARKETING – MIKE REDWOOD

When politicians struggle, they regularly blame the lack of voter understanding and demand better "education". For most of the last century this was the leather industry's position.

There were two problems. It was not the lack of education but the message that was wrong plus the leather sector never tried to get any collective message out anyway. Apart from one or two great tanneries the whole idea of marketing communications and branding of companies or leathers was ignored. Leathermaking was devoid of marketing; it has not changed.

Marketing involves the whole mix of macro environment studies, consumer attitudes, company skills, competitive environment, market segmentation and targeting; only then aspects of product, price and communications. For leather that communication is complicated by leather's role as a component. Effectively this involves consideration of push or pull marketing with big implications for resources and costs.

There are other marketing decisions involving communications with local community and governments who have the power to interfere with operations through legislation. Tanners usually address this via trade associations but increasingly wider, more global, campaigns are needed.

Rare for tanners to communicate properly

In my experience tanners have rarely considered this, although they have become better at complaining through social media – or via some vocal individuals. Social Media was itself thought to be the solution by offering a cheap shortcut to get leather's voice heard avoiding the thinking, planning and investment of proper marketing.

Initially the various platforms had different audiences and skilled practitioners could target designers with one, consumers and press with another and so on. Now they have homogenised into money earning organisations, it is now paid media, and useless if not funded into a much larger plan, which will likely require work on selected print media and other older outlets.

We have a better message

The leather industry rightly celebrates now having a coherent narrative backed by researched evidence. It knows that if leather responsibly made has a good story. Having a better, believable, message does not excuse the tanner from doing a proper job in marketing. Sticking a post on LinkedIn is fine for talking to the leather trade, might seep out into the wider world but is not marketing communications never mind marketing in the round.

Over the last two decades a few tanners have begun to do interesting work on places such as Instagram and have raised their profile, but few give evidence of this being part of a wider campaign. The number of tanneries seriously investing in what might be considered as marketing and branding appears to have declined compared with the 1990s rather than increased.

We have some top countries and individual organisations such as Consorzio Vera Pelle, which are a group of vegetable leather tanners from Italy with a long-standing record of pushing out beyond the immediate horizons with a variety promotional activity. Add One4Leather who target the auto industry and people such as Yusuf Osman, the Leather Craftsman turned showman we have most of the total of leather marketing outside of the valiant work of Leather Naturally.

In an industry producing over 20 billion square feet per annum why does the primary industry marketing body gets so little support compared to what we have seen in wool, cotton and milk? Equally why have the national and international organisations such as the International Council of Tanners' still got big gaps in membership: they must be resourced to do their work properly. How can it be that after almost twenty years of leading the way as an outstanding third-party auditing body LWG gold rated tanneries do not have consumer hang tags throughout the world for their top tanners. It is much more than an expensive self-congratulatory industry exercise, but it does not always feel that way.

Share of voice

The battleground for leather communications involves fighting for share of voice with a well-financed, fanatical, anti-leather lobby mixing animal rights with vegan fundamentalists who attract committed funding from rich and poor individuals and organisations. They have hundreds of millions of dollars to leathers tens of thousands.

Also taking share of voice are competitive materials. By comparison to leather they have a business strategy that links research, product development and marketing in ways that are sometimes hard to explain to tanners.

I continue to support those forward-thinking tanners who have been willing to seek out relationships with the best of these materials. They look at technical and commercial cooperation to help push the pure fossil fuel material out of this space. Both sides are learning, and we will see much better new and hybrid materials with which to replace plastics.

Meanwhile much of the leather industry activity on social media and elsewhere seems to be a campaign of despair and hatred, which debases the narrative that the industry has worked so hard to develop. Often this also complains about yesterday's materials as competitors hurry forward faster than leather with products.

The future

Glimpses of what might be possibly come from the occasional individual such as Junaid Vohra – aka The Leather Dude – from Pakistan who does excellent work educating schoolchildren, largely using the material prepared by Leather Naturally for his underlying narrative. I have never met him, but he does create opportunities to speak with politicians who would not normally interface with an industry like leather. Our recently published COP29 Manifesto needs more like him to push the word out to such influential people who will not see it online.

The initial subscription plan for Leather Naturally matched one intercontinental trip by a leather executive. Enough tanners supported this to make an outstanding body of freely available material to underpin and promote the true leather story that we all, including Junaid, now use. It's new register of repairers is outstanding. Leather Naturally has since simplified subscrip-tions so that companies with turnover below US$10 million pay much less.

The leather industry has overcapacity. A few tanners are doing very well, but most are struggling. A small investment in a thorough strategic marketing approach plus support for our institutions to give the industry a proper share of voice is badly needed for everyone to prosper.

(ILM – 23/10/2024)

Valorisation of Invasive Species For Leather, Fur, Bristle, Meat and By-Products *(Part - 22)*

Subrata Das, M.Tech, Leather Technology

Freelance Leather Technologist & Consultant, Chennai

European Hare

Native to much of continental Europe and some countries of Asia, the range of the European hare emerges from Siberia and northern regions of Central and western Asia in the east to Eastern Europe, southern Scandinavia and the Iberian peninsula in the west. Self-regulated, free-ranging populations now flourish all the way to the south Pacific coast of Russia in the east, and across most of Europe to the west and south, including parts of the Middle East and the Central Asian Republics.

To enhance and ameliorate the income and pastime of hunters and trappers as coveted game animals, the obligate herbivores were introduced and successfully naturalized, establishing stable numbers in places as disparate as the Falkland Islands, Reunion Islands, Islands under British governance in the North Sea, Ireland, New Zealand, Australia, Chile, Argentina, Uruguay, Paraguay, Southern Brazil, Barbados, North Eastern United States and Eastern Canada.

Apart from commercial considerations, the objective of liberating non-native hares in new lands being colonized by settlers was to "re-create" a sentimental panorama of "a home away from home", with a familiar fauna.

The leporids thrive on flat, free and open terrain with sporadic patches of hedges and shrubs for cover. Endowed with exceptional rusticity and resiliency, the adaptable quadrupeds have permeated through vast tracts of land, across international frontiers to establish colonies far away from the site of their original release or dwelling. Oftentimes, this dispersal has been facilitated by human mediation. The movement and dispersion of the cleft lipped, buck toothed winsome animals, have flourished into populations of high densities on mixed farmlands under intensive agriculture, particularly in Denmark, Germany and Poland, with appreciable presence in Sweden and Norway.

Corresponding author E-mail : katasraj@rediffmail.com

Surviving in a varied range of habitats, the hopping herbivores have been spotted, in both native and introduced ranges, inhabiting diverse and disparate topography and almost all vegetation zones of the earth –forests, volcanoes, riparian areas, grasslands, tundra and taiga. Other habitation ranges include alpine biomes, salt marshes, sand dunes and tidal zones. Hares navigate feeding grounds along predetermined pathways, for ease of traversing ground.

The generalist feeders have an eclectic diet consisting of soft greens, woody plants, root and grain crops, short grass and shrubs, forest plants, tussock and hay.

Hares display significant differences in physiology from rabbits, principal among which is a kinetic skull, which facilitates appreciable movement of skull bones, relative to each other, in addition to movement at the temporomandibular joint between the lower and upper jaws. This attribute is exclusive to hares, among all mammals – permitting an immovable junction between parts of the animal's brain case to remain open, facilitating their movement and thereby functioning as shock absorbers to cushion the impact of the impulse caused by the long legs of the animals when bolting at high speed, clocking up to 72 km/hr for short bursts, when imperilled. This is comparable to the speeds achieved by downhill skiers in Winter Olympic events. At times, hares jumping 2.5 -3 m high, have also been reported and registered.

A light kinetic skull ,unsubstantial in weight - even lighter than a rabbit's, large-sized hearts, myoglobin enriched dark skeletal and cardiac muscles - facilitating oxygen diffusion and increasing oxygen diffusion gradient from the capillaries to the bloodstream, low density endoskeleton and wide nostrils for facile air passage, the hare's physiological adaptations for sustained running and staying power – speed and inimitable agility in every paw print – are its characteristic features of self-defence.

Built substantially bigger than rabbits, hares are solitary, shy and skittish animals, communicating with one other by twitching their noses, thumping with their feet and signalling with their ears. Vocalization is seldom a dominant form of communication, except in case of physical attack or assault. Instead, the amber eyed herbivores are well known for, yet another dimension of their leggy purposefulness. Their keen and sharp eyesight is 800% more powerful than human vision.

Hares strike the ground forcefully with their front paws during territorial or mating challenges from a rival or while intimidating a conspecific, pelvic limbs are employed to strike the ground, mostly to communicate predatory threat or mortal danger, or when traumatized, stressed or panicked. They not only run faster, but also, in doing so, take fewer, longer strides with their powerful legs making them fabulously efficient biological machines.

The most noticeable and prominent features, making a significant contribution to the overall appearance of a hare are its long, stretched out ears, which facilitate homeostasis by thermoregulation, especially in arid and desert environments and when cannoning at top speed, usually in a zigzag manner, to escape peril to life and limb. Its oversized ears, twice the length of the mammal's head, are not only the organs of hearing and balance, but also radiate body heat through a large number of blood vessels, crisscrossing each other under the thin skin, to keep the herbivore cool, in heat as well as in the event of physical exertion. In cooler weather, the ears are slanted backward over its haunches, to preserve body heat.

A natural, supremely talented and hyper vigilant athlete, at terminal speed, the speedsters are supremely manoeuvrable, effortlessly effecting rapid changes in acceleration and direction. There is negligible steady-state, symmetrical movement. The mercurial furbearers have the skill and dexterity to actuate unexpected flips, hairpin jinks and sudden U-turns, making them very difficult to pin down. The galloping gait is at times interrupted by its additional repertoire of jumping or large leaps sideways, to obfuscate chemical cues and break olfactory trails, perceptible to other animals. They possess the ability to jump in mid stride, when running at top speed.

The versatile and multi-faceted locomotion repertory of the enigmatic animals, and their predator evasion strategy, endow them with a formidable reputation in weaving, darting, running, jumping and redoubtable cursorial locomotion. Some tough Jacks have been known to run some distance even with a heart or lung shot before buckling and dropping.

The species which inhabit region of greater latitude usually bear a solitary annual litter of 6-7 leverets. Hares living in temperate climate zones require an extended reproductive timeline, consisting of 3–4 litters of 2–5 leverets each. In equatorial regions, the reproductive period remains uninterrupted, with annual averages of 8-litters each with 1–2 young.

The neonates come into the world with fur and open eyes, and are left by their mother shortly afterwards. Once a day for the first four weeks of their lives, leverets are fed by the female, known as a Jill, but otherwise receive no parental care.

They are camouflaged in low lying depressions, and shallow scrapes called “forms”, surrounded by shrubs or tall grass, hunkering down to blend with the heath, thus eluding detection and predation by canids, felids and raptors. From an early age, all survival skills of the leporine are hardwired to be supremely primed at all times.

The Jill visits and suckles the offspring briefly, usually, once each evening. The precocial leverets are able leave the hole and explore their environs discreetly, within 48-72 hours, while waiting for their mother, to nurse them with the daily evening suckle, they crouch and hide, or nibble on their first green herbs.

On occasions, pregnant Jills were seen to prefer abandoned old roosts and nests of ground nesting field birds to beget their young , which is accepted as the genesis of the fallacious idea among early Saxons, that hares were oviparous mammals - leading to the custom of depicting bunnies (in some parts of Eastern Europe, hares) with Easter eggs. Gradually the belief and custom became established among European societies, and are followed to this day.

Accustomed to feeding by a persistent gnawing action , delivering sunken angular cuts, with their strong incisors, hares injure and destroy seedlings, vines, ornamental trees and plants, crops, shrubs, nurseries and orchards by stripping the bark, over browsing and girdling. The usefulness and value of meadows, landscapes and gardens are often adversely affected by their competing with other native herbivores or livestock for food.

The consequence of hare feeding can be seen on the trunks of trees which have grown to adulthood. These are evident as large, oblique tooth marks – small areas on the surface having a different colour from the surrounding bark.

Since perpetually hungry hares are known to show a greater partiality towards some fruits and vegetables over others, devastation caused by hares can be significant in alfalfa, sugar beet, melons, sunflowers, parsley, cabbage, fruit trees, cereals, lucerne, vineyards, and in young oak, beach and maple plantations. The generalist and adaptable feeders thrive on a wide range of flora.

Though they are not known to affect the physical and structural stability of houses or their foundations, hare damage due to nibbling and surface scraping on the edges of trims and wooden sidings have been seen, in instances, to adversely affect balance and stability of installations.

Apart from adverse consequences due to hares affecting large fields of low value crops, even modest damage to high-cost produce, such as dwarf and runner beans, radish, spinach, rutabaga, brassica and peas, grown in a more concentrated area, like kitchen and market gardens, can be devastating. Faint of heart, and easily frightened, the obligate herbivores, though not directly malignant to other animals, are known vectors of parasites and afflictions, which may be transmitted to domestic pets and livestock, if in close proximity. External parasites such as lice, mite and tick are common in European hares. Liver flukes, four species of nematodes, two species of dog tapeworms and six species of coccidian are internal parasites associated with European hares.

Eco-hostile hare impact is particularly discernible when it comes to sensitive indigenous vegetation in areas of low density. The verdure is unable to regenerate following intensive hare browsing. Since hares do not hibernate or store fat in their bodies, they require steady food supply across the year, which is only possible to obtain from landscapes rich in biodiversity. Therefore, even at low densities, hares are known to accelerate declines in plant numbers – it has been established forty-one hares consume as much foliage as one cow, while eight hares can devour the fodder of a single sheep.

In naturalized ranges of their new habitats, the exogenous European hares have been found to alter the genetic integrity of native mountain hares by mating with them and begetting fertile hybrids.

The only saving grace is that in small instances, hares have been found to feed on exotic and invasive grasses and weeds, suppressing their growth and indirectly preserving the biodiversity of native plants. They also assist in supporting small plants, by providing open patches through their foraging and transporting seeds, pollen and burr, entrapped in their fur.

The phenomenal fecundity of European hares was illustrated in Scotland in 1840 by Reverend B Daniel, who released a Jack with a pregnant Jill in a lush, large walled garden, containing diverse trees, shrubs, grasses and plants, permitting the brace

to fight, forage and frolic unhindered for a year. At the turn of the twelfth month, as many as 57 animals were counted, capering and cavorting in the enclosure.

It is this extraordinary virility and fertility, of the animals, which have been the primary cause of their assuming plague proportions, as an exogenous species, in countries and territories outside their native range, in which they had been liberated by well-meaning but ignorant voyagers, settlers, hunters and trappers.

South America

In 1888, certain Mrs Engelbert , through the office of Woltje Tieljen (the then German Consul in Rosario) is said to have imported 36 hares from Hamburg ,Germany, for sport hunting. The animals were liberated at La Hansa Ranch (property of Mr Nelson Tilgen), near the town of Canada de Gomez, Santa Fe Province, Argentina.

Nine years later, in 1897, an independent introduction with animals from France was accomplished by Mr Emilio Delpech / Mr Sulpicio Gomez in a ranch near Tandil, Buenos Aires Province. When the naturalization effort was ineffective, another clutch, from Austria or France, was released the following year, at a ranch Las Isletas, San Luis Province.

By 1897, it was discovered that hares in unusually high numbers, had traversed 340 km, from Canada de Gomez to Cordoba City. Soon thereafter the heightened leporine densities assumed intimidating proportions. In central Argentina, they were declared as pests by the federal government.

In 1921, a brace was released in the largest island in Aculeo Lagoon, to the south of Santiago Metropolitan Region, with the intention of establishing a free ranging husbandry. The pair breached the watery barrier by paddling against the tranquil water, with their powerful legs to reach the mainland, to establish stable, non-captive colonies, reaching all the way to Concepcion, 1250km away.

The current geographical distribution and dominance of the European hare, extends of Argentina, Chile and Uruguay, southwest Bolivia, southeast Peru southeast Paraguay, and southern Brazil. During the process of establishing ascendency in new territories, across international frontiers, the hare has occupied very disparate and unrelated environments, from Paraguayan Chaco, Brazilian Pantanal, Chilean deserts, grasslands, shrub lands, and temperate and tropical forests, Uruguayan lowlands and coastal plains Argentinean pampas, Bolivian Altiplano and semi-arid, subtropical deserts of Peru - including a substantial number of urban areas in all the countries. The European hare's non-identical habitation landscape across the southern Cone explains the widely different annual dispersal rates of 10-37 km.

In 1896, hares were translocated from Germany to Chile and introduced into the area of Ultima Esperanza Province, Magallanes. Following subsequent releases in Osorno and Valdivia, the energetic, ambulatory herbivore, exhibiting striking ecological plasticity, diffused "sans frontiers", across various South American countries, to become naturalized, threatening to do in the native and valuable flora and fauna by their invasive action.

In 1931, following a drought in Argentina, in the antipodean summer, hares negotiated the Andes, on their own, without human facilitation, covering as much as 120 km in less than 1000 days. Two-way migration of the energetic and peripatetic quadrupeds, traversing low Andean passes, between Argentina and Chile is now a regular occurrence. Hares have been observed dissipating further and further, towards the north of the continent. Currently, European hares are found throughout the mainland Chile all the way to the continent's terminus, with their greatest abundance recorded in the centre of the country.

The exogenous invasive lagomorphs have interfered with an adversely changed the structure and function of native bioregions, posing potential danger to horticulture, agriculture, dairy development and livestock husbandry, viniculture and forestry. Herbivorous pressure exerted by the voracious Lepus europaeus resulted in saplings and seedlings of unbalanced apical and intercalary growth, prevented shrub and tree regeneration and affected the desirable shape of trees by deforming them, thereby harming the structural complexity of both herbaceous and fabaceous plants.

Furthermore, the prolifically breeding hares have catalysed an invasive meltdown by introduced invasive canids and felids as well as by native carnivores and raptors, upsetting the natural checks and balances of the ecosystem.

Australia

A significant number of Australia's pest species can be traced directly back to the three English ships - the Lincolnshire, Sarah

Curling and the Bright Star which sailed from Portsmouth in the British Isles to Botany Bay, Australia in the 1860s. The three vessels carried a menagerie of mammals (deer, hares, and alpacas), an impressive collection of birds and game fish such as salmon and trout.

The British imports, requested for and received by the Acclimatization Society of Victoria, were intended to transform the newly colonized Australia, into a veritable garden of Eden, containing the finest species from the length and breadth of the Empire – not only to recreate Britain in Australia but also to make the land Down Under a veritable jewel in the British Crown.

The society, founded and registered in 1861, wound up eleven years later. However, by that time almost unquantifiable damage had been done to the country's ecosystem.

In Australia, the first wild colonies of European hares were established in 1862, on the shores of Victoria's Westernport Bay. A year on, another hare commune, for "hare coursing" (the sport of chasing, catching and killing hares with hounds) was positioned on Phillip Island by the Acclimatisation Society of Victoria.

In 1863, the most notable insertion of the European Hare to Victoria occurred when the Acclimatisation Society of Victoria founded a breeding facility on Phillip Island in Westernport, about 80 km south-east of Melbourne. The cuniculture project was an emphatic bellwether. Before long, numbers were considerably self-sustaining for hares to be released onto the mainland for the sport of coursing.

Although hare coursing in England was widespread at and popular with all strata of society but in the state of Victoria, the sport was an exclusive domain of the upper classes of society.

The affluent Chirnside family established and managed the Victorian Coursing Club, among whose committee members were the governors of South Australia, NSW and Tasmania. The free-time distraction of the Australian gentry was hardly adequate at reining in the fast-growing hare numbers. By 1900, the foraging and fecund "fiends" soon overwhelmed Victorian agriculturalists, becoming a far-reaching agricultural problem.

By 1870, European hares were widespread and thick on the ground, to a great extent across south-east Australia. They progressed in all directions, 60 kilometres annually. By 1875, the "speed merchants" had crossed the River Murray to entrench themselves along the tablelands and western gradients of New South Wales.

By 1900, hares metastasized to the frontier with Queensland border and assumed the role of major agricultural pests in western and northern Victoria, reaching high concentrations in many areas.

Although the European hare is naturalized all over Australia, nowhere are they more ubiquitous than in the "Garden state", Victoria - consolidating themselves in agricultural and urban areas, open grasslands and woodlands across Victoria. Their maximum density, at times beyond carrying capacity, is at present in Victoria and eastern regions of South Australia.

Today, the lagomorphs are considered, in the country, as petty vermin, though the scientific community remains alert to their pest potential.

New Zealand

Historical records suggest that the earliest hares on New Zealand soil, broke free from the British cargo vessel "The Eagle" in 1851, to swim ashore at Lyttelton, Canterbury, but failed to establish numbers. It is assumed that a vast majority of the hares in New Zealand today, are the descendants of English origin, which arrived in the colony, by way of Phillip Island, off Melbourne.

The Canterbury and North Canterbury Acclimatisation Societies released an unspecified number of animals between 1867 -72 around Auckland, to provide food, pelt and pastime for the early settlers. Subsequently, the animals spread rapidly and reached peak numbers around 1903, by which time they had expanded their domain from Cook to Foveaux Strait , flourishing due to a virtual lack of natural enemies, abundant food supply, salubrious climate and favourable topography.

Presently the leporine population in NZ is found in both North and South islands from sea level to elevations of 2000m, except in Fjord land. Urban populations are common in the northern suburbs of Auckland, in stable but low densities. Areas with dry, agreeable climate such as North Otago, Hawke's Bay, Marlboro and Canterbury, have been found to be sustaining greater hare densities than other areas of the country.

Adult hares in New Zealand are unusually free from predator threat, although occasionally preyed on by feral cats, stoats, harrier hawks, ferrets and weasels. As with most mammalian species, the neonates, juveniles and adolescents are susceptible to such predators. Hares are also fairly unaffected by parasites. Many of the diseases that affect or can be transmitted by hares in Europe – myxomatosis, tularaemia, plague, brucellosis, rabies and European brown hare syndrome - are absent in New Zealand populations.

After their initial abundance, hares have now reached a more or less stable position in New Zealand. Their numbers have settled into all suitable habitats. The species is now subject only to inherent fluctuations, and to changes brought about by control measures.

UK and Ireland

Apart from being one of the most important small game species in Europe, the European hare is the continent's smallest mammalian species, dwelling above ground or without shelter throughout the year as well as the fastest British terrestrial mammal. It is presumed to have been naturalized in the British Isles, after having been carried on board ships, across the north Sea, by invading Romans, around 43 BC.

Today, their presence is significantly broad in extent throughout England, Scotland and Wales. Small self-regulating pockets thrive on Ireland, the main island of Orkney and the Isle of Man.

From a peak of four million leporine population across Britain, the numbers are presently estimated to be less than half a million, with continuing decline, placing them at second position among British mammals to have suffered the biggest downfall in the last century, after the water vole. With 400,000 of the iconic lagomorphs shot each year, it is the animal's prodigious generative capacity, which is saving it from extinction.

An unthinkable 88% decline in numbers over a century, would have driven any other species to the brink of extirpation, but in Britain the tenacious leporid is just about hanging on. However, in many parts of the country, where they were endemic earlier, hares have become locally extinct. Adapted to open temperate country, in Britain, hares can be observed in grassland habitats, on farmlands and edges of woodland, preferring a mix of grasses hedgerows and arable fields. Dwindling farmland biodiversity due to agricultural intensification and mechanisation, with concomitant loss of heterogeneous habitats offering sufficient and secure shelter and varied food, supply have calamitously affected this iconic exogenous but naturalized species in Britain.

Despite its southward slide, the hare is the only game species in UK, which is not protected by a "shooting close season". Using high and medium calibre firearms to massacre hares, at large scale organized shoots, during the mating season in February and March each years, is celebrated as competitive sport, with the participants vying with one another for cash awards. On one occasion, the number of hares killed, totalled 40% of the national hare population! The ramifications of such blood sport are enormous for the hare population of Britain, and their future looks gloomy.

The sole redeeming feature is the Hare Prevention Act 1892 which forbids sales of leverets or hares between 1 March and 31 July of each year. Restaurants are prohibited from serving hare during the menu. However, the legislation is applicable only to local animals and not imported ones.

Introduced in the mid-1800s into Northern Ireland, to enrich the pastime of the aristocracy, the numbers of the exogenous European hare but had more or less petered out in most areas by the early 1900s. A small number survives in mid-Ulster and County Tyrone. They have however alarmed conservationists because of its tendency to interbreed with the native Irish hare, thereby diluting the gene pool and also due to its high reproductive potential, both in its species and with the Irish hare.

North America

European hares were brought into the USA purely for coursing and sport shooting. The first recorded liberations were in a game preserve, in New York State. Unfortunately, the large expanse of land dedicated for the purpose, complete with a 9-mile fencing to secure the easily excitable and timid creatures, was unpopular with coursers, due to which the denizens were set free.

In 1893, the most successful subsequent importation, in terms of diffusion and proliferation, among five or more, which followed the maiden venture, occurred at Millbrook, Dutchess County, New York, when a wealthy resident purchased, through a New York importing company, several hundred leporine from Hungary, under state permit.

Thereafter at 4–5-year intervals, the last one in 1910-11, the prosperous urbanite imported more hares, some consignments comprised of as many as 500 animals. Since European hares suffer high mortality when stressed, traumatised or panicked, voyage fatalities were very high, amounting to $10 per lagomorph.

In 1888 three more consignments, consisting of European hares of English origin received at Jobstown, N. J., Bethlehem, Pennsylvania and White Plains, New York, failed to replicate the Millbrook, N. Y. numbers.

It was said that an unspecified number of breeding pairs were imported from Germany to North America by a farm at Bradford, Ontario, Canada in 1912. Escapees, successfully colonized woodland edges and fields and soon became a common sight in New York State and New England and southern Ontario

The present range of the European hares – known as Eastern jackrabbit or Brown hare extends from central New Jersey to southern Vermont - eastward into Connecticut and Massachusetts, and westward into extreme eastern Pennsylvania, across the Delaware and Hudson Rivers.

Wild hares possess thin, light, gracile skins, lacking in substance, with an outer coat of long guard hairs of fairly consistent colour. The non-seamless nature of the fur and pelt render its thickness uneven from segment to segment and even between adjoining areas of the same pelt. Though hares have been hunted for thousands of years, the texture and character of their flesh and pelts have defined and determined usage and applications, which have become more and more rarefied over passage of time.

Before the Russian revolution of 1917, estimated six million hare skins were collected, sourced, purchased, sold and auctioned annually by hunters and trappers. Immediately prior to WWI, European hare pelt enjoyed 5.6% of the market volume for furs. The animal's pre-eminent position continued for another quarter of a century, until 1939, when WWII broke out. In 1932, the total sale of European hare skins was in excess of three million.

Following the conflict, involving virtually every part of the world, the demand for hare pelt and fur declined to negligible levels. By 1975 priced stagnated altogether. By 2020 the drop was cataclysmic.

Hares have been trapped and hunted to be eaten as food by the human race since time immemorial. The primordial feel, warmth and comfort of plush pelts harvested from the non-ruminant herbivores played an important role in assisting early man survive the vagaries of nature, which he achieved by adjusting the layers and volumes of the skins in conjunction with the skins of other animals. Ancient hominids are thought to have understood that hares by virtue of their thick fur enjoy a low surface area to volume ratio that conserves body heat, which could be advantageously harnessed for physical and outdoor comfort.

The art, craft and trade of dressing and preparing furs into attire such as hats, stoles, wraps and coats is known as furriery. Quality attributes of hare pelts necessitate that much of the fabrication be hand crafted in ateliers. Skill and experience of the cutters are paramount in importance, as they affect the final product quality decisively.

Pelts are matched with utmost care and thoroughness according to texture and colour, after which patterns are cut according to design requirement. Subsequently individual panels are moistened, stretched and nailed to wooden boards for drying and conditioning before they can be stitched together on power driven machines to make the final product.

However, the fragile attachment between the fur and the dermal layers, and their weak adhesion, limits the utility of fur-on hare pelts, mainly to trims. They are not preferred or recommended for making rugs and blankets as the skins are thin due to which they rip easily.

In spite of inherent limitations, hare pelts and fur have been harnessed for and adapted to myriad uses, such as:

a) Mounted on and attached to mannequins or retrieving blocks to train gun and coursing dogs which accompany coursers and hunters to retrieve game.

b) Air dried fur on hare pelts (45 - 60 cm) are made into nutritious and delicious pet chews, with the additional benefit of providing an organic de-worming regime.

c) Felt of outstanding quality, commanding robust demand from hat makers, has been traditionally made from hare fur. Its felting properties are practically unsurpassed by any other material man-made or natural.

d) Beaten industrial felt is required for paper making machines.

e) Felt from the quadruped's fur is used in insulating and polishing industrial machines, as baize on billiard tables and dampers on piano keys.

f) Interim, temporary electric seals, made of hare fur, were periodically used in the mid-20th Century to prevent unauthorized access to electric meters or their tampering.

g) Modest non industrial use of hare fur includes shaping into spiral strips, to be sewn together to make traditional garments and tassels for embellishment

h) In the manufacture of nymphs, fishing flies and fly-tying material, dubbings and artificial hackles.

i) Zonkers - machine –cut thin strips of tanned animal skin, of varying width, both narrow and broad, used in the manufacture of fake flies of different dimensions for fishing hooks of various sizes. The incapacious ribbons extending outside of the fly hooks remain tantalizingly suspended in water, to entice fish to take the bait. The remaining detritus of Zonker fur is good for making effective dubbing. Hare skin is widely used in making zonkers for the recreational fishing industry.

j) Emerger fly patterns-lightweight flies designed to be supremely buoyant and remain suspended just below the water surface. Ersatz hare emergers are fashioned from the skins of the legomorph. Hackles are made from waterproof guard hair, which are also resistant to serial fish nibble. Dry and wet flies, acquire additional floatation, when secured with guard hair from European hares.

k) In addition to the use of hare derivatives for traditional healing, its skin has been purposed as book covers and book marks. In the middle ages, parchment was made from the skins of a diverse group of animals including hares.

l) Some medieval manuscripts, written on hare skin were tinged and touched–up with brushes made from its fur. Traditional goldsmiths used similar brushes.

m) Small piece of hare skin was carried on person by a wide spectrum of society, for their alleged flea-repelling property.

n) "Hare Masks" (skin and fur pulled from dead hare heads) were employed for making flies for fly fishing.

o) In 1960, the US military built up stock of tularemia (a lagomorph disease) for use as bioweapon.

p) Hare Materia – blood, the womb, faeces, unborn leverets to boost male virility, to induce fertility in menopausal women, and to conceive male children – were widely used by quacks and traditional healers in faunal drugstores.

q) Virtually every part of the hare was believed to have healing and curative power – for treatment of everything from bladder stone, epilepsy, baldness, kidney stones, memory loss, ruptured bowels and deafness, bites from venomous spiders or wounds from poisoned arrows.

r) Medicinal uses of the hare continued beyond the 17th century – brains of hare when roasted and marinated in wine could strengthen the memory.

s) Since hares have been eulogized in fairy tales, folklore as well as in scientific research, both for their lasciviousness, libidinousness and fecundity, proto medicinal uses of the animals by products centred mainly on pleasure and performance enhancers, boosters, vitalizers, aphrodisiacs, stimulants, erogenous adjuvant, excitants, energizers and antidotes for sexual dysfunction and disorder. Hares were peerlessly pre-eminent in pre-modern medicine.

t) After taxidermy, hares make impressive ornamental pieces on trophy walls, den rooms and lounges.

u) Small hare bones are used for needles, other bones are used for kitchen cutlery and all sorts of tool handles.

Although there is hardly a creature that did not feature in some way in pre-modern medicine, hares are pre-eminent among them.

The hare, without being inimical to any is preyed upon by many. It is the most harried, persecuted and timorous of all creatures, whose fleetness, elusiveness and hyper fertility have, till date protected it from extinction.

As for their use as food, hares have been eaten in most parts of the world, both as a staple as well as a white linen dish.
In Kama Volga region of the 1960s, it was estimated that meat from all hares caught, weighed as much as 50,000 cows, providing more than half of the animal protein eaten.

Huge number of hare is still shot annually throughout Europe and North America, though there are no figures detailing how many are killed purely for sport.

Many opportunities exist, as enumerated above, to harness, pelt, fur and body parts of the invasive species of European hare in multitudinous uses.

However, with hare pelts commanding abysmally low prices in the fur industry, the viable way forward appears to be their utilization as Deep Minnow Flies, zonkers, "hare masks", emerger fly patterns, lures and streamers for both saltwater and freshwater game fishing, to create a rippling, pulsating move-ment in the water, to attract fish.

Such pelts can be easily recovered from hare harvested for the table through coursing, hunting, trapping and when used profitably in the recreational fishing industry, would be a wonderful example of putting to use what otherwise would go to waste.

References :

1) https://sites.rootsweb.com/~nzlscant/hares.htm

2) https://www.channel4.com/news/action-urged-to-protect-brown-hares-from-further-decline

3) https://www.storm-crow.co.uk/animals/european_hare.html

4) http://hare-preservation-trust.com/species-status/brown-hare-history-status/

5) https://teara.govt.nz/en/1966/mammals-introduced/page-9

6) https://www.jungledragon.com/specie/874/european_hare.html

7) https://www.jstor.org/stable/1380771

8) https://www.iris.unina.it/retrieve/c8d8f346-92d0-470f-a56d-4c36917ff3a3/Eating%20in%20an%20extreme%20environment%20diet%20of%20the%20European%20hare%20Lepus%20europaeus%20on%20Vesuvius.pdf

9) https://agriculture.vic.gov.au/biosecurity/pest-animals/priority-pest-animals/european-hare#:~:text=By%201870%2C%20European%20hares%20were,tablelands%20of%20New%20South%20Wales.

10) https://ri.conicet.gov.ar/handle/11336/194199

11) https://science.jrank.org/pages/3785/Lagomorphs-Rabbits-hares-North-America.html#:~:text=The%20most%20widespread%20hare%20in,a%20camouflaged%20white%20in%20winter.

12) https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0134278

13) https://www.countrylife.co.uk/nature/the-magical-mythology-of-mad-march-hares-174713

14) https://www.proquest.com/openview/e5463ee7c828f3c5ccaf36fc01067e19/1?pq-origsite=gscholar&cbl=27999

15) https://www.nationalgeographic.com/animals/article/141219-rabbits-hares-animals-science-mating-courtship

16) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2100287/#:~:text=Hares%2C%20however%2C%20rarely%20perform%20steady,in%20direction%20and%20maximum%20acceleration.

17) https://icwdm.org/species/other-mammals/hares/hare-damage-identification/

18) https://enfo.hu/en/node/10929

CORRIGENDUM

Due to oversight, there was a typographical mistake in the Title of the article (Part-21) published in October, 2024 issue of JILTA in the Portfolio section (Page No. 5).

Kindly read it as **"European Rabbit"** instead of **"North American Raccoon"**.

Inconvenience caused is regretted.

This article was originaly published in Vol.- 46 No.- 11 November' 1996 issue of JILTA.

ELEMENTARY KNOWLEDGE ON FOOTWEAR MANUFACTURE

METHOD OF FOOTWEAR MANUFACTURE—PART-VIII

SOMENATH GANGULY

College of Leather Technology, Calcutta

CLOSING :

Closing is one of the three important department of a footwear factory. Some time people think closing means stitching but it is not true. Closing is the name given to the total operation of closing department comprising of preparation, fitting together and ultimately stitching various components of the upper to make a complete CLOSED UPPER. Eyeletting of the shoe upper is also comes under closing operation. Day by day the function and importance of upper closing section is increasing in the modern shoe industry. Now a days the shoes are not worn only to protect the feet but it has also become an important part of dress material. The fashion changes very fast from time to time and in a shoe the major changes takes place in upper making. To cope up with the trend of fashion change some time the cost of the upper making is so high that it covers even 50% of the total labour cost of a shoe.

PREPARATION :

It is the preparation of various cut components before ultimate stitching. The importance of this department is very great and it is very much necessary to make a constant checking at all points. The components received from the clicking department must be checked before it is passed for the closing operation. To avoid defects in a closed upper we should detect the bad component and reject the same on the spot. Finally all the components required for the particular upper are put in a tray (5 to 10 pairs per tray) and passed for the operation.

After preparing the upper components it is essential to check and prepare the sewing machines for the work.

(a) Right kind of needle must be used. It should insert and fix with the needle bar. Thickness of the needle system and point must be adequate to the sewn materials.

(b) Type, colour and thickness of the thread are to be selected precisely depending upon the needle and material re-quirements. Thickness of the upper thread and bottom thread are not identically same. The thickness of the upper thread is about 40% of the needle thickness while the bottom thread's thickness is 10 number less than upper thread.

(c) Operator must thread the needle correctly.

(d) To regulate the tension both the thread (needle and bobbin) to be checked. The tension of needle thread is adjusted by the thumb nut while the tension of the bobbin thread is regulated by means of the screw nearest to the centre of the tension spring on the outside of the bobbin case.

(Continued from Page 436-443 of the previous issue)

(e) The right stitch length must be checked and adjusted correctly.

Function of the sewing machine

The fundamental function of a swing machine is to join various parts of an upper. It is a production which can produce seams with the help of a needle and thread. Feeding and guiding the material to the machine may be done by human. It must always be considered that sewing process components, loop and stitch formation as well as transporting and guiding of material.

Constant research and development on sewing machine during last 200 years enables to develop machines with high degreee of efficiency, including sophisticated automation. Now a days there are plenty of sewing machines available in the market for footwear trade.

Classification of stitching (sewing) machine

Following are the essential criteria for classification of stitching machine.

i. General shape of the head
ii. Type of the stitch formation
iii. Number of needles
iv. Direction of the needle bar movements
v. Type of construction

i. General shape of the head

The sewing machines are divided in the four main categories according to the shape of the head.

a) Flat bed :

A machine mainly used for stitching on a flat surface. Simple components joining are done in this machine. (fig 158a)

b) Post bed :

A machine having a small working area raised to allow easier fitting and stitching on the particular area of a closed upper or leather goods where flal bed machine fails to give the results. (fig. 158 b)

c) Cylinder arm :

This machine has a horizon-

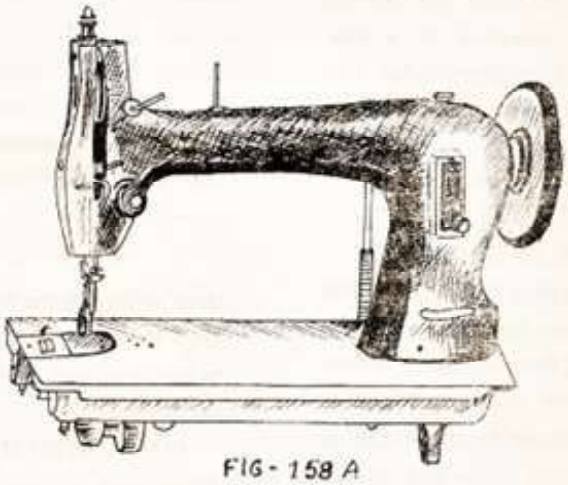


FIG - 158 A

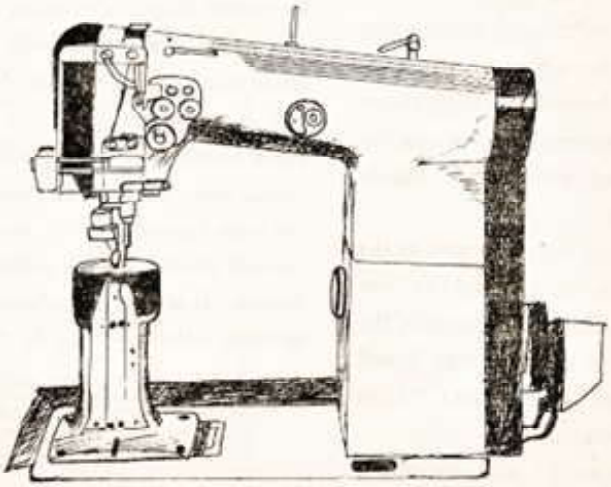


FIG - 158 B

tal cylinder arm or post which allows free movements around the working areas for stitching particular position of the closed upper, leather goods and leather gloves. This machine is also known as Bamboo machine in the industry. (fig. 158 c)

d) Automatic :

Thesa types of machines are developed to carry out specific stitching operation in a pre-determined complete cycle, e.g., stitch vees, attach buckles, barring etc. etc.

ii) TYPE OF THE STITCH FORMATION

LOCK STITCH :-

This stitch is formed by two threads. One thread coming from the top of the machine and feed through the needles. The other thread coming from the bobbin which is kept in the bed of the machine. (fig. 159)

A complete lock stitch forms in the following way.

1) The descending needle pierce the material and carries the thread below the needle plate.
2) A small loop is formed as the needle commensed to rise and the rotating hook of the bobbin goes through it and thereby interlocks the bobbin threads.
3) The needle still ascending and arsisted by the take up lever draws up the loop and slack thread causing the lock to position itself centrally in the material.

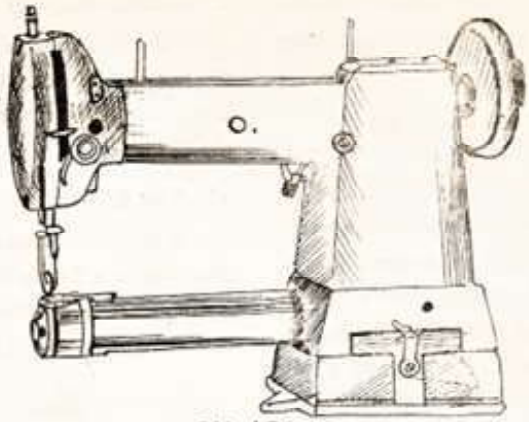


FIG-158-C

FIG-159

CHAIN STITCH

Chain stitch is being formed by several ways. Generally it is formed by one thread only but chain stitch can also be made by two or more threads. Since for chain stitching creation bottom thread must he shuttled through the loop formed by the needle, threads should be of unlimited length. It is the big advantage of chain stitch sewing. (fig. 160)

The action of chain stitch formed by one thread is as follows.

1) The needle pierces the material and leaves a loop of thread below.
2) After the needle ascends the material feeds to the next stitch position.
3) The needle again descends to pierce the material and also the loop left from the previous stitch.

In chain stitch if one stitch is broken the whole line of seams to weaken and disinteg-

FIG-160

rate. Under no circumstances the chain stitch should be used where a little abrasive action may occur.

iii) Number of Needless

In footwear various types of sewing machine are available according to the suitability of the production. Number of needles tell you the number of row of stich to be formed. Though most of the machines are equipped with single needle but Double needles, tripple needles and four needles sewing maceines are also avaiable in the market. The concern machines are known as "Doule needle machine", "tripple needle machine" as so on.

iv) Direction of Needle Bar Movement :

Needles are attached to the needle bar which generally moves in vertical direction. To form the loop of the stitch the movement of needle bar is very much essential. Some time this needle bar are movable in other direction also. In case of zig zag stitching the same bar is moved in horizontal & perpendicular direction. Now it is understood how the function of n edle bar differentiate the type of stitching.

v) Type of Construction of Machine :

Sewing machines are used now-a-days in every sphere of work. But it is not the same type of machines required to stitch a shirt and to stitch an ammunition boot upper. As per demand of the specific sector of the industry the sewing machine is again subdivided in the following three category.

i) Light sewing machine
ii) Medium sewing machine
iii) Heavy sewing machine

Most of the footwear upper are made by medium type of machine while some time heavy machine is also used.

Specification of a Sewing Machine

A sewing machine is specified by the following characteristics

1. Type of stitch—Chain or lock stich
2. Stitch length adjustment—Variable of fixed length
3. Stitch pattern—Straight or zig zag
4. Control—Manual or automatic
5. Type of pressure resting on top of the work—Foot, idler roller or driven top roller
6. Number of needles—Single, double, tripple etc. etc.
7. Type of bed—Flat, cylinder or post bed.
8. Attachments—Air cording, binding, or under edge trimming

Various Types of Seams

(A) Closed Seam :

This seam is produced by facing to-gether the two section of upper and then stitching approximately at a distance of 1.5 to 2 m/m from the edge. The seam is then opened and rubbed down. (fig. 161 a)

(B) Open seam :

This seam is the reverse of a closed seam. Reverse side of the upper are joined together keeping face to face and then stitching at a distance of 1.5 to 2m.m from the edge. (fig. 161 b)

(C) Silked seam :

The original closed seam is

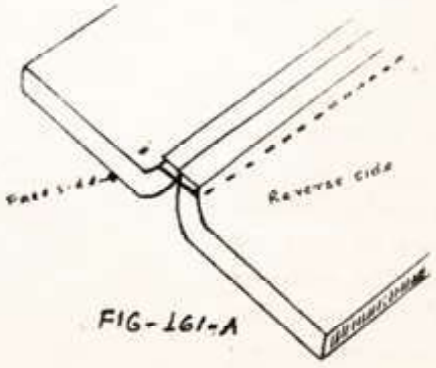


FIG-161-A

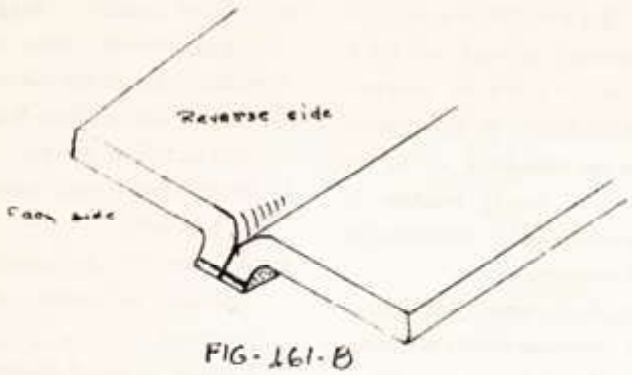


FIG-161-B

opened, rubbed and a woven tape is being attached to the reverse side of the seam by another two rows of stitching. To secure a good result a twin needle machine equipped with a guide for the tape is used. The guide keeps the seam in position a roll of tape being fed under the leather, the stitching being automatically on the margin of the tape. The final stitching is parallel to the original seam. (fig. 161c)

(D) Brooklyn Seam :

A closed seam is made. It is opened and rubbed down. Now a specially made paper tape or fabric tape is stuck over the seam. (fig. 161d)

(E) Lapped Seam :

Vamp and quarter joining is an example of lapped seam. The edge of the quarter is placed over the edge of the vamp and then stitched. The under lay allowance of the vamp is first skived. The under lapping allwances varies for different types of lapped joining and it is in between 6-12 m/m. One or two row of stitching is being provided. (fig. 161e)

(F) Butted Seam :

Back joining of a closed upper is done by butted seam. Two joining edges of the quarter butted together and stitched by a zig zag stithing machine. In leather goods small pieces are often joined in this way to make a big piece. (fig. 161 f)

(G) Wetted Seam :

This is also basically a closed seam, but an extra stripe of material is inserted in between the two components. This is generally used for heavy material stitching. In hand gloves stitching while joining the fingers this types of extra material is inserted in between. (fig. 161 g)

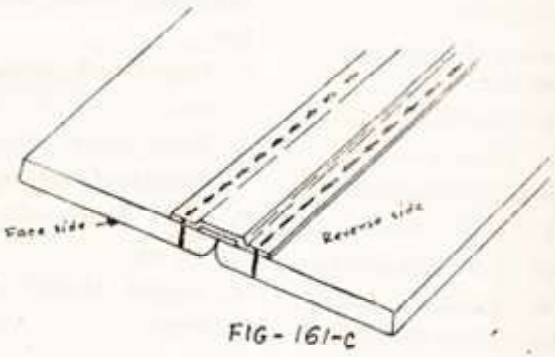


FIG-161-C

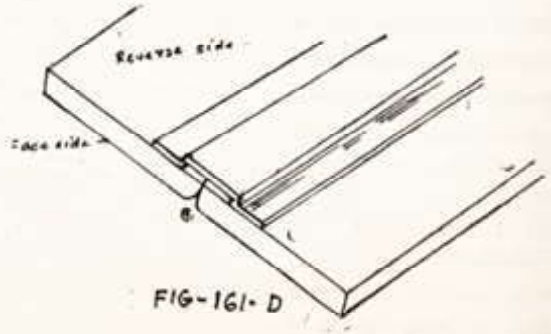


FIG-161-D

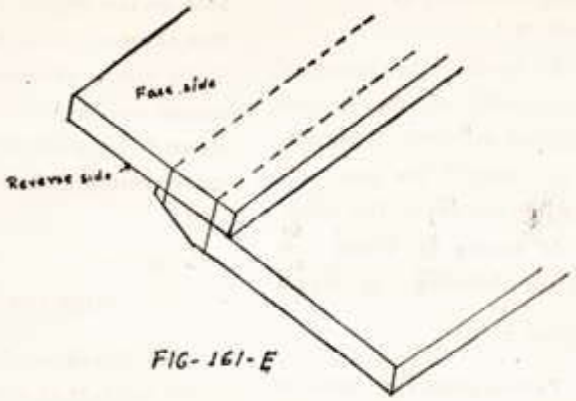


FIG- 161-E

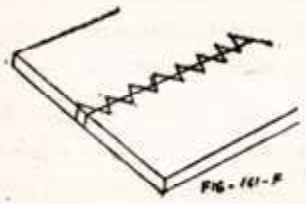


FIG- 161-F

(H) Piped Seam :

At first the pipe is made with a cord covered by leather keeping 4-5 m/m leather extra which ultimately inserted between two components. The corded portion remains visible on the edge of the products. This is widely used by the leather goods industry. (fig. 161 h)

(I) Bonded Seam :

This is not done with stitching by thread. Particular edges to be bonded are applied with adhesives either in liquid or in film form. The edges are stuck with help of conventional heat and pressure.

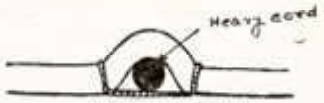


FIG - 161- H

(J) Welded Seam :

The edges of the synthetic components (P. V. C or P. U coated clothes) are now widely used by the footwear industry. A welded seam is formed when two or more components are placed in a jig and fused together using high frequency of heat.

(K) Moccasin Seam :

Basically moccasin seam is same with the Open seam. This may be made by hand or by Machine. Here in India we are doing it by hand. The object is to present a bold, decorative look on the edges. Appron and vamp of a moccasin shoe upper are joined by this seam. Tubelar moccasin which more popular in construction and provides better water proofing effect are shown. (fig. 162 a, & 162 b)

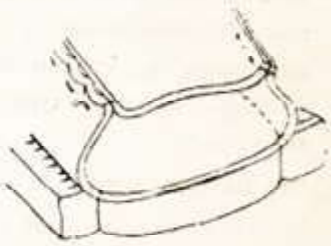


FIG- 162-A

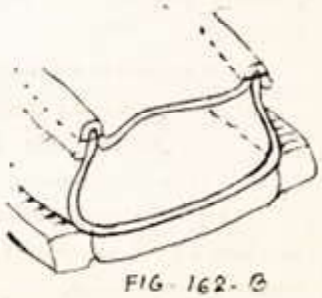


FIG- 162-B

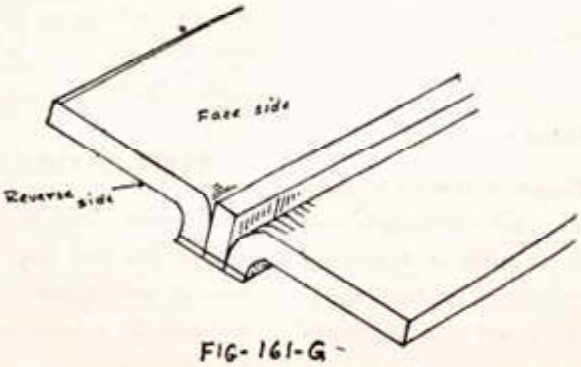


FIG- 161-G

Various Decorative Stitches Fancy and Mock Stitching :

The fundamental difference between two stitching is performs stitching function (fancy) while the other is being present only for a show effect. You can say false stiething.

Cable Stitching :

This stitching is resembles with bulky cable like appearance. The stitches are much bigger (6 to 8 stitches/inch) in comparison to the normal stitching.

Glove Stitching :

A special type of machine is there for this purpose. The machine is equipped with twin needles but uses only one bottom thread. A heavy cord is being used to run in between two rows of stitching to support the raised material. Vamp is also decorated with this type of stitching.

Top line Stitching :

The stitching is around the top line of a closed upper which normally performs two major functions:

a) It stitches in the lining
b) It stitches the binding or folding into the permannent position

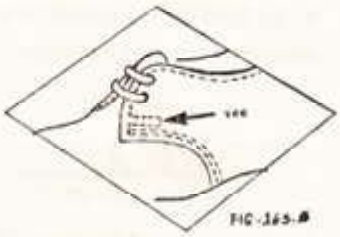
The machine used here may also have a knife attachment to trim to excess of lining.

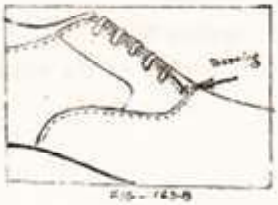
Veeing or Boxing or Intacting :

To reinforce the joining of front corner of the quarter additional two rows of stitching (4 to 5 stitch) are given for Derby type of upper. This stitching is known as Veeing or Boxing or Intacting (fig. 163 a)

Barring :

To strengthen the corner of quarter of oxford shoe or for attaching buckless a double row of stitching is provided which is known as Barring. (fig. 163 b)





Eyeletting :

Though it is not a stitching operation but eyeletting is done only in the stitching department as soon as the stitching operation of a closed upper is completed. The main job is to make holes on the quarter edge, insertion of eyelet on the whole, and finally setting of eyelet on the quarter with the help of a eyelet setter. In a machine total operation is performed by one stroke only.

THREADS

The thread, needle and of course the type of the machine plays the most vital role in the ultimate appenrance and durability of of the seam.

The thread is made by combing and twisting together several yarns. In the strict sense of the word, yarn is the product of spinning together originally loose fibres. Twisting of threads is carried out either in the twisting direction of the yarns or opposite to it. Formerly it was indicated as left twist and right twist but it often create confusing among the users. As such now it has changed and the term left twist is know as 'Z' twist and the right twist is as 'S' twist. (fig. 164)

TYPES OF THREADS

Threads may be broadly divided into two main groups Natural and synthetic which may again be sub-divided as per the following list.

THREAD

- **Natural**
  - **Vegetable fibre**
    - a) Cotton
    - b) Jute
    - c) Sisal (leaf)
  - **Animal fibre**
    - a) Wool (sheep)
    - b) Hair (goat horse)
    - c) Silk (silk worm)
- **Synthetic**
  - **Organic Chemical fibre**
    - a) Acetate (rayon)
    - b) Polyamides (nylon)
    - c) P.U. (spandex)
  - **Inorganic fibres**
    - a) Glass fibre
    - b) Asbestos
    - c) Metal (gold copper fibre)

Cotton threads are inferior to linen threads and linen threads are inferior to nylon threads in quality and durability. Synthetic threads are better than linen threads. So synthetic threads are now-a-days challenging the market for them. Vital madket for them. Vital factors for selecting threads are the types of machines, machine speed, thickness of the material, use of lubricant and ofcourse needle.

CHARACTERISTICS OF THREADS

(A) COTTON THREAD

1) Soft cotton threads are made from yarn by spinning with minimum sizing material.
2) Glace cotton threads are made from yarn by spinning with sufficient quantity of sizing material.
3) Mercerised cotton threads are made from yarn by spinning and causticised it in solution under tension.

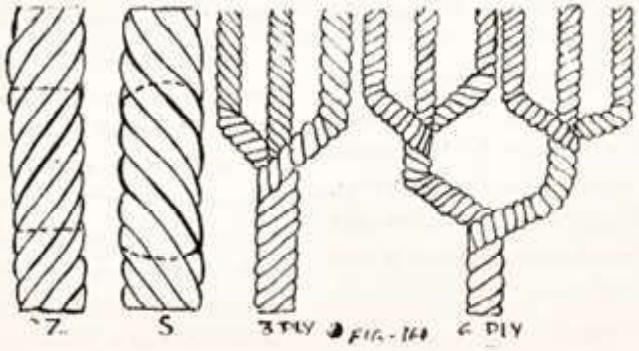
(B) SILK THREAD

Silk threads are made from the cotton by treatment with artificial silk and from natural product it., silk worm.

(C) LINEN THREAD

Linen threads are made from the fibre of the plant.

(D) Rayon, Nylon, Lycra, Vyrene, Perlon, Terelene threads are all originated from chemically prepared threads. On the above range of chemical threads Lycra, Vyrene and Perlon are based on Poly urethane nylon is based on polyamide and terylene is based on polyester.



Strength of thread

i) Chemically prepared threads among all of the thdeads among all of the threads we discussed before.

ii) Linen threads are next to nylon threads so far the strength of the threads are concerned.

iii) Silk and mercerised threads are nearer to linen threads

iv) Cotton threads (glace and soft) are weaker than linen threads.

NUMBERING OF YARN AND THREAD

The number of thread indicates first the size of the yarn and then the number of the yarn twisted to compose the thread. This mean a cotton thread 60/3 cord consists of three yarn of size 60. There are two basic system of size numbering.

i) Length numbering (fixed weight system)

ii) Weight numbering (fixed length system)

For length numbering the weight is assumed to be constant, while the length of yarn is variable. The size designation is found by the formula.

$$\text{Length number} = \frac{\text{Length}}{\text{Weight}}$$

Therefore the smaller number the length the coarser the yarn.

There are various methods of length numbering, the metric length number (Nm) is used for all yarn except silk and rayon. The metric number (Nm) indicates how many kilo metre of yarn weight one kilogram.

Example :

A piece of yarn, 1 KM long weighing 1 Kg, has Nm 1.

A piece of yarn, 60 KM long weighing 1 Kg, has Nm 60.

A piece of yarn, 150 Km long weighing 1 Kg, has Nm 150.

For weight numbering the length of yarn is assumed to be constant, the weight varies. The size designation is found by the formula given below.

$$\text{Weight number} = \frac{\text{Weight}}{\text{Length}}$$

therefore the smaller the weight number the finer the yarn.

The size of natural silk fibres, rayon and synthetic fibres has so far been determined by the Denier System. Denier (den) indicates the weight in grammes of a yarn 9000 metre long.

Example :

A piece of yarn, weighing 1 gramm, being 9000 metre long, is 1 den.

A piece of yarn, weighing 40 gram, being 9000 metre long, is 40 den.

Metric weight number (tx) has been introduced after Denier System. It indicates the weight in grams of 1 Km of yarn.

Example :

1 piece of yarn weight 1 gram and being 1 Km long has tx 1

1 piece of yarn weight 15 grams and being 1 Km long has tx 15.

Tension and Heat Resistance of Threads

Tension on thread of a sewing machine is one of the key factor for maintaining smooth stitching. Improper tension with any thread may cause weak, unsightly and irregular stitching. Tension of the thread must be adjusted properly before commencing the actual stitching.

One specially made nylon thread trade mark **Nomex**, retains almost all its physical and mechanical characteristic even upto 700°F. As such this thread is used where long or short-term exposure to heat is required. Nomex is specified as a thermoplastic material it does not soften

and melt. If the temperature is sufficiently high and sustained, it will then char.

Quality required for a good thread

The ideal thread will

a) Of good twist (ie., should not be more twist per inch)

b) Free from imperfection (ie., faulty spinning or twisting)

c) Of good lubricative properties ie., easy going through needles at high speed of stitching machine.

d) Not create any smoke or smell at the time of of operation in the sewing machine.

e) not break at the time of operation in the sewing machine.

f) have to sustain any kind of stress, strain, design, zig zag operation etc. in the shoe industry.

Physical and other Qualities of the Thread

Particulars	Synthetic Thread	Natural Thread	
		Cotton	Linen fibre
1) Tensile strength	Very good	Fair	Good
2) Resistance to abrasion	Very good	Fair	Good
3) Durability	Excellent	Medium	Good
4) Welability ie, water proofness	Excellent	Not water proof	Tolerable
5) Milded or fungus proof with water and mud	Very good	Not mildew proof	Not mildew proof
6) Resistance to mild acid and mild alkali	Resistance to mild alkali & acid	Resistance to mild alkali but not to mild acid	Resistance to alkali but not to acid
7) Ageing to atmospheric	Good	Decaying after six months	Decaying after six months
8) Stretchability ie., elongation	20-70% (usual)	8-12% (usual)	3-5% (usual)
9) Colour bleading at atmospheric condition and with water	Good	Good in atmosphere but not so in water	Good ih atmosphere but no so in water

SEWING MACHINE NEEDLES

Needles perhaps the first developed tools of man kind. During the last centuries it developed a lot. Originally it was a simple tool for joining more than one pieces of fabric. But now-a-days it is used for most sophisticated high speed machine. The first "needle" already had the two features still characteristical to-day for sewing needle ; the eye on one end and tapering point at the other end. At that time people used to make it from bones and antler.

Basic Construction Features of Needles

The sewing machine needle consists of shank, blade with the required groove, needle eye and point. (fig. 165)

Length

From "butt to top of eye" measurements are taken as a needle length. The dimension of a needle is most important in connection with the stitch formation and mechanical performance of the sewing machine. Previously "butt" to centre of "eye" measurements were taken as a length of needle of sewing machine in which shuttle or looper travelled in a horizontal direction.

Shank :

The shank is secured to

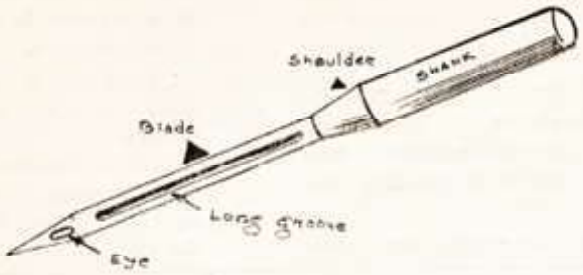


FIG- 165

the needle bar of the machine by a clamp or by a screw arrangement. Diameter, shape, length and other features of the shank of various needles have been determined by overall design of the needle themselves and more particularly by the requirement of the machines with which the needles are used.

The main function of shank

1. The shank determines the location of the needle blade in relation to the point of the hook shuttle or looper and other parts of the machines directly affecting stitch formation and to the centre of the throat plate needle hole.
2. To strengthen the upper part of the needle blade.
3. It provides a section of the needle for mounting in the machine.

SHOULDER :

Shoulder is the portion of the needle where the shank is reduced to join the blade. The angle and length of the shoulder have been designed so that it does not penetrate the material. Now-a-days needles are available in the market with supplementary shoulder which extend down to the eye of the needle for extra strength.

BLADE :

The blade has two grooves existed opposite to each other. One is short and the other is long groove. This part of the needle penetrates into the material.

The long groove which starts from the shoulder and and continues upto the eye has the following two purposes.

i) It helps guide the thread to the eye of the needle
ii) It protects the thread which lies in this groove.

The short groove is located at the back or thread loop side slightly above and below the eye. It provides extra protection of thread.

Eye :

To form a stitch the thread has to pass backward and forwards through the eye a considerable number of times. As such it is essential that the needles should be polished to a high degree of smoothness to prevent fraying and breaking. The size must be correct for the thread size to prevent undue movement, but at the same time it must not obstruct the free movement. The size of the eye is in direct relation to the shank and the thread should be choosen accordingly.

Point :

The function of the needle point is to piece the leather or fabric with the minimum friction and provides the shape of the punctures so that the stitch will have the desired appearance. The cuting edges on the points of the needles are therefore set at various angles to meet the requirements of each class of work.

Points are classified in four main category.

a) Round point

b) Wedge point
c) Twist point
d) Cross point

Round Point :

This round point of the needle is designed to stitch cloth. It is also used for sewing lighter leather. It is not recommended for leather work where high speed or heavy sewing is involved. The needle makes a round penetration, enlarging the needle hole without cutting the material. It therefore used for stitching fabric lining of shoes. (fig. 166a). The stitch produced lies flat and straight in the direction of the seam.

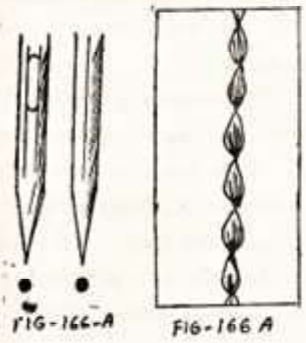


FIG-166-A FIG-166 A

Wedge Point :

Wedge point needles are most commonly used needle for the shoe industry because of its shape. It cuts across the line of stitching. The cutting edge is particularly suited for stitching leather shoe upper. This results perferation in the leather and allows the stitches to be brought to closer to-gether. (fig. 166b)

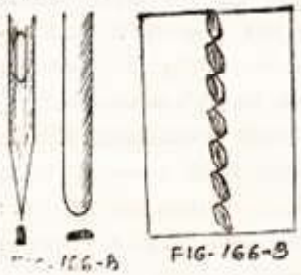


FIG-166-B FIG-166-B

Twist Point :

The twist point needle perforates the leather at an angle to the seam. This point makes the stitch straight at slightly set into the material. The reverse twist point is the variation of this needle point. This needles makes a well raised stitch which is suitable for fancy work. (fig 166C)

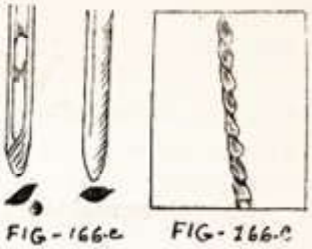


FIG-166-C FIG-166-C

cross Point :

This needle is considered just opposite to the wedge point needle. It has also two sides, almost flat, but the the cutting edges formed by this lies at right angle to the line of the eye. Due to the straight cuts made by this style of point follow the line of stitchhing, it is obvious that the cross point needle cannot be used for very short stitch. (166d)

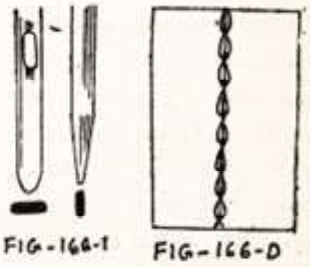


FIG-166-1 FIG-166-D

(To be continued)

INDIA TO SEE UPTICK IN IMPORTED INFLATION

(Pic courtsey :- Vajiram & Ravi)

Besides pharmaceuticals, other export-oriented sectors, such as textiles, may face challenges due to potential increases in tariffs and a more protectionist stance from the Trump administration.

India's economy is expected to face the short-term heat of Donald Trump's second presidency, with a further weakening of rupee as investors flock to the dollar, a string of imported inflation and a dent to good shipments to the US, analysts feel.

Foreign portfolio inflows (FPIs) to the domestic equity markets may slow further, if the slogans rooted in protectionism heard during Trump's electoral campaign is indeed acted upon, as these could cause a delay in monetary easing by the US Federal Reserve and other developed country central banks. Rate cuts in India may also be delayed as strengthening of the dollar against the rupee would add to inflationary pressures.

"India's imported inflation is positive now and any further rupee weakness will add to inflation," Dhiraj Nim, economist, ANZ Research, said, adding, "this means, India's rate cuts will be delayed."

The Reserve Bank of India (RBI) has projected CPI inflation to reduce to 4.5% in FY25, from 5.4% in FY24. But food price pressures still persist and core inflation has lately shown some signs of firming up, which may keep inflation above the central bank's project, say economists.

Nitin Aggarwal, director of investment research and advisory, Client Associates, said with the RBI already facing slowing economic growth, any delay in rate cuts could deepen the challenges of boosting investment sentiments.

At an event on Wednesday, RBI governor Shaktikanta Das said that although the Monetary Policy Committee (MPC) had shifted towards a neutral stance to spur growth, this did not mean that an interest rate cut would happen immediately. "A change in stance doesn't mean there will be a rate cut in the very next monetary policy meeting," said Das. He pointed out there are still significant upside risks to inflation and a rate cut at this stage would be "very risky".

India's GDP growth in FY25, on the other hand, is expected to be much lower than the 7.2% projection of the RBI, on account of moderate urban consumption, lower manufacturing activity and slowing exports. Economists have pegged the full year's growth to be around 6.7-6.8% (FY24 was 8.2%).

"Trump has batted for a 10% universal tariff, which is bad news for all emerging markets, including India," said Nim. "The country's exports are already faring worse than its peers, because it doesn't have a significant tech component…the tariff hikes could hurt the export cycle further," he added. Most analysts expect merchandise exports growth to be mere 3-4% in FY25, but higher tariffs may further dent this estimate.

Meanwhile, on capital flows, analysts say that the Trump presidency may initially boost investor sentiment, leading to a short-term uptick in Indian markets, but the long-term effects could be less favourable. "Trump's policies are expected to favour a stronger dollar and higher interest rates, which may divert investments back to the US, aggravating FPI outflows from India," said Rajesh Sinha, senior research analyst, Bonanza Portfolio. So far in 2024, equity foreign portfolio inflows have been (-)$660 million, against $11.73 billion in the previous year.

"Additionally, his inclination towards protectionism could impose tariffs on Indian exports, particularly in sectors like pharmaceuticals, further straining trade relations," noted Sinha. Besides pharmaceuticals, other export-oriented sectors, such as textiles, may face challenges due to potential increases in tariffs and a more protectionist stance from the Trump administration. However, sectors such as defence and manufacturing could benefit from strengthened US-India ties and increased demand for alternative suppliers to China, say analysts.

Commodity stocks, in particular, may experience volatility as the Trump presidency could increase tariffs on Chinese goods, negatively impacting metals and oil prices due to concerns over global demand, they say.

Moreover, if China sees a greater threat to its growth due to Trump policies, it may announce further stimuli while also allowing its currency to depreciate by 10-15%. "This would allow for dumping of Chinese products in Indian markets. Sectors are solar, pharma, chemicals, electricals, plastic, textiles are vulnerable to this," said Radhika Piplani, chief economist, DAM Capital.

Manish Bhandari, founder, Vallum Capital Advisors, said that potential discretionary consumption tax cuts lead to more money in the hands of consumers, and may benefit Indian exporters of such discretionary consumption. "A cut in corporate tax by Trump is likely to bring more businesses for the Indian tech companies," said Bhandari.

During Trump's previous presidency, IT companies had grown at a CAGR of 13% in 2016-2020 and the IT index had generated a return of 45% despite challenges on visa and offshoring, he added. On Wednesday, Indian IT stocks rallied, with the Nifty IT index rising over 3%, and major players such as Infosys, TCS, and HCL Technologies seeing gains of 1% to 4%.

Aggarwal said that the economic outlook for India, in a Trump administration, will depend significantly on the global trade environment and how quickly the US economy adjusts to the policy changes that are likely to follow Trump's victory. According to an estimate by Bloomberg Economics, starting 2025, if the US imposes 60% tariffs on Chinese goods and 20% tariffs on all other imports, India's GDP will be 0.1% lower by 2028.

However, India could mitigate the effects of Trump's trade barriers by increasing manufacturing subsidies and lowering average import tariffs. Bloomberg estimates that a combination of a 4% production incentive and a 1 percentage-point reduction in import tariffs could boost GDP by 0.5% above the baseline.

(Financial Express – 07/11/2024)

INDIA BETTER PLACED THAN CHINA IN TRADE WITH US: EXPERTS

Donald Trump's Presidency of the United States will open new opportunities for India though certain sectors, especially pharma and IT, may face the heat if the incoming president decides to impose restrictions on imports and H1B visa regulations, experts said on Wednesday.

Prime Minister Narendra Modi's friendly relationship with Trump will have a positive bearing on Indo-US relations but India may have to adapt its strategies to maintain cooperation in areas of mutual interest. Former Niti Aayog vice chairman Rajiv Kumar said: "Trump's presidency can be a new opportunity for India.

"Trump will impose tariffs and import restrictions on countries that he thinks are not friendly to the US, like China and even some European countries, and this can open markets for Indian exports." Barclays, in a research report on Wednesday, said trade policy is where Trump is likely to be "most consequential" for emerging Asia, which includes India and China.

"We estimate Trump's tariff proposals would subtract 2 per cent from China's GDP – and greater pain on the more open economies in the rest of the region," Barclays said. The more domestically oriented economies, including India, Indonesia and the Philippines, would be less vulnerable to higher tariffs, it added.

Kumar said Trump will see India as a friendly country, and it can expect larger investments by US firms into India. "...overall, Trump's victory is a very positive development for the Indian economy," he added.

Madras School of Economics Director NR Bhanumurthy said: "I doubt, Trump will impose tariff on Indian products because my own feeling is that the concern for the US is not much of India, but more of China. "So, maybe there would be little difference in the way they are going to deal with India when compared to the way they deal with China."

However, some experts feel that his trade protectionist views could have some negative impact on India's exports and might exert some pressure on the rupee in the short term. Since Trump's protectionism philosophy of economics is well known, the process of globalisation may become more strategic and less fair to emerging economies, including India, NIPFP visiting Professor Pinaki Chakraborty said.

The Trump administration is likely to bring renewed trade tensions, with potential adverse effects on India's key export sectors and capital inflows, said Client Associates director (investment, research and advisory) Nitin Aggarwal. The economic outlook for India will depend on how quickly the US economy adjusts to the policy changes coming after the Trump administration takes charge.

"For India, the consequences of such a policy shift could be two-fold. "First, certain sectors like pharmaceuticals and IT may experience challenges. "Indian generic drug manufacturers could face increased tariffs on their exports to the US... Meanwhile, India's IT sector might also see a slowdown in demand, as a trade war and its economic impact could reduce discretionary spending in the US," Aggarwal said.

(Rediff.com – 06/11/2024)

FOREIGN INVESTORS TO INCREASE PARTICIPATION IN NSE IX

Trading turnover on NSE IX has been witnessing an uptrend and this momentum is likely to continue thanks to the growing global interest in the overall India growth trajectory, MD & CEO of NSE International Clearing Neeraj Kulshrestha has said. Speaking at the Singapore Fintech Festival (SFF) on Monday Kulshrestha said foreign investors are likely to further increase their participation in GIFT City NIFTY.

The concerns relating to the relocation of NSE Nifty to NSE IX in GIFT City in July 2023, have been overcome as the volumes have continued to grow post the transition from $60 billion with Open interest trade of $9 billion in July 2023, to $100 billion and Open interest of $20 billion-plus in October 2024, reflecting a strong confidence in the India growth story, Kulshrestha said. "The potential of continuous volume growth 'is bound to happen'," he said, adding that more than 140 funds are now registered in the dollar-denominated investment flow in the duty-free zone. NSE IX is an International multi-assets exchange set up at GIFT City in June 2017 and recognised by the International Financial Services Centre Authority (IFSCA).

The access to invest and trade in GIFT City is much easier, he added. "People are investing in NIFTY which is an aggregation of 50 large companies of the country and this is the best way to participate in the India Growth story," he said on the sidelines of the ongoing SFF week which began on Monday.

More and more products are being planned for listing on the GIFT City, including Equity, Sovereign Green bonds and derivatives on other key indices for building GIFT City into an ecosystem of international repute. "An aggressive pace of product development is underway, specially building on the boost in volume seen for NIFTY," said a trader on condition of anonymity.

(PTI – 05/11/2024)

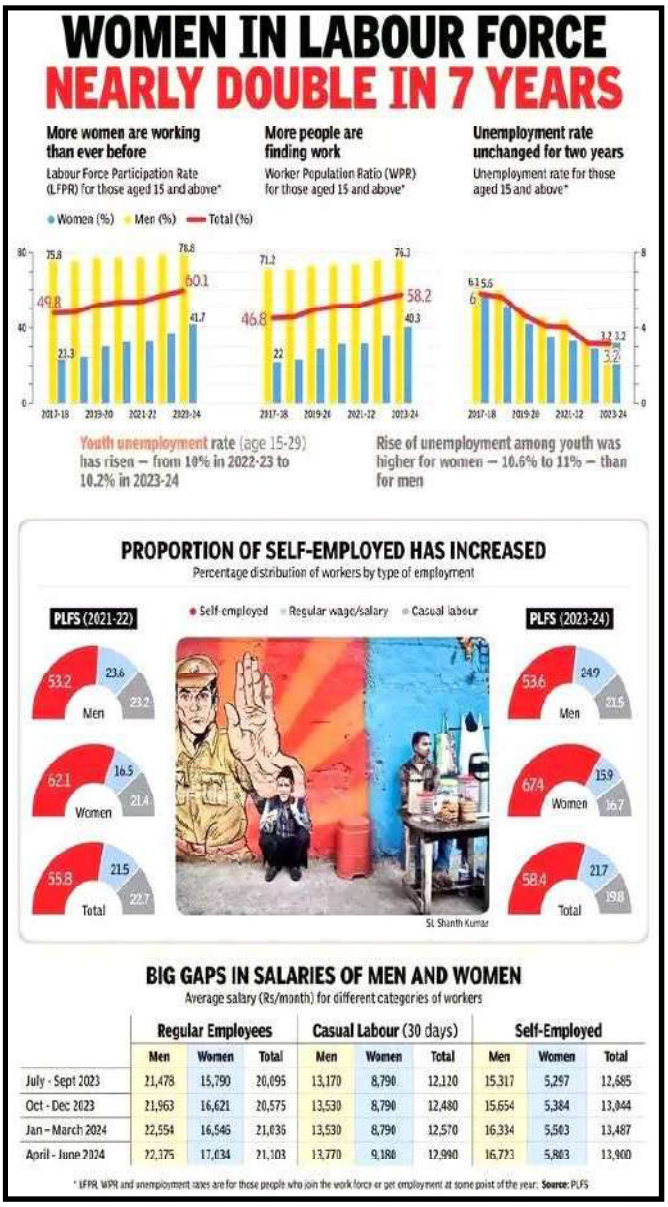
RATE OF UNEMPLOYMENT UNCHANGED AT 3.2% IN YEAR ENDING JUNE 2024: GOVT DATA

The unemployment rate in the country for those in the 15 years and above category remained unchanged at 3.2% in 2023-24, while joblessness rate for women inched up to 3.2% from 2.9% in the previous year, official data showed on Monday. The Periodic Labour Force Survey (PLFS) annual report for July 2023 to June 2024 released by National Sample Survey Office also showed that the labour force participation rate (LFPR) for both females and males rose to a seven-year high during 2023-24. The LFPR is defined as percentage of persons working or seeking or available for work in the population.

The PLFS annual report, which covers both rural and urban areas, showed LFPR for women rose to 41.7% in 2023-24, up from 37% in previous year.

Rate of joblessness down from 5.3% in 2017-18 to 2.5% in 2023-25 in rural areas. For males, the LFPR rose to 78.8% from 78.5% in 2022-23. Overall, the rate rose to 60.1% in 2023-24 from 57.9% in the previous year. Youth unemployment rate for those in the 15-29 years age group rose to 10.2% in 2023-24 from 10% in 2022-23. For females, it rose from 10.6% in 2022-23 to 11% in 2023-24 while for males it inched up to 9.8% in 2023-24 from 9.7% in 2022-23, the Periodic Labour Force (PLFS) data showed.

Unemployment has emerged as a major issue in recent years and the rate soared during the Covid -19 pandemic prompting calls for measures to create jobs. Govt in its 2024-25 budget announced a series of measures to create jobs, including incentives for internships.



The PLFS data showed that the joblessness rate for males in the 15 years and above category dipped marginally to 3.2% in 2023-24 from 3.3% in 2022-24. The rate has declined from 6.1% in 2017-18 to 3.2% in 2023-24. In rural areas, the joblessness rate rose from 1.8% in 2022-23 to 2.1% in 2023-24 while for males it remained unchanged at 2.7%. For all persons, the rate in rural areas inched up a tad to 2.5% in 2023-24 from 2.4% in the previous year.

In rural areas, the joblessness rate has decreased from 5.3% in 2017-18 to 2.5% in 2023-24 while for urban areas it decreased from 7.7% to 5.1%, the data showed.

The workers population ratio (WPR) for those in the 15 years and above category rose to 58.2% from 56%. For males it inched

up to 76.3 in 2023-24 from 76% in the previous year while for females it rose to 40.3% from 35.9% in 2022-23, according to the data. The WPR is defined as the percentage of employed persons in the population.

The PLFS was launched in 2017 to estimate employment and unemployment indicators. The quarterly report covers urban areas while the annual report is for both urban and rural areas. This is the seventh annual report released by the NSSO. The PLFS was designed to provide timely jobs data covering all aspects of employment and unemployment.

(The Times of India – 24/09/2024)

INDIA'S Q2 GDP GROWTH MAY SLOW DOWN TO 6.5%; FY25 GROWTH SEEN CLOSER TO 7%: SBI

Economists at the country's largest lender SBI on Wednesday said they see Q2 real GDP growth slowing down further to 6.5 per cent in the September quarter of this fiscal year. Amid concerns over the country's economic growth rate and if it is slowing down, the analysts said they expect FY25 growth to come "closer to" 7 per cent.

It can be noted that the April-June period saw the real GDP expanding by 6.7 per cent, the lowest in 15 quarters. This led to a slew of analysts revising their expectations on growth to below 7 per cent for the fiscal and some also wonder if India is in a cyclical growth slowdown.

"There is some incipient pressure evident on the domestic economy. Basis our analysis of 50 meaningful leading indicators (both consumption as also demand centric), a dip looks plausible across select cohorts of agri, industry and services in Q2," the SBI economists said.

It said aggregate demand continued to grow albeit with a slower momentum than in the preceding quarters and painting a somewhat mixed picture.Stating that it tracks 50 indicators to gauge economic activity, the note said the proportion of indicators showing acceleration declined to 69 per cent in Q2FY25, as against 80 per cent in Q2FY24, and 78 per cent in Q1FY25.

It, however, was quick to add that this is a "temporary impasse" and the "narrative might change completely" from the ongoing December quarter onwards.

However, they said Q2 with a 6.5 per cent growth would be a blip and an impasse when it comes to growth, and added that tailwinds of recovery are now reinvigorated by a surge in rural demand. Domestic tractor sales showed a jump in growth in October, while domestic 2-wheeler and 3-wheeler sales are showing consistency in growth, it said, adding that rural agri wage growth also accelerated in August this year.

Addressing concerns on urban demand, it explained that the same can be indicative of shifting contours of urban demographics and marked preferences to quick commerce, which is not being mapped properly. The regulatory tightening on unsecured lending and roadblocks hindering roll over/ refinancing of debt through unsecured credit is punctuating the unwarranted exuberance built up post pandemic, more in urban ecosystem, it added.

The SBI economists pitched for avoidance of policy mistakes of the past like farm loan waivers which end up distorting credit culture or having minimum support prices-driven agricultural growth which is "fiscally extravagant and results in extreme ground water depletion".

(The Economic Times – 07/11/2024)

-: JILTA : -

***Owner**: Indian Leather Technologists' Association, **Publisher & Printer**: Mr. S. D. Set, **Published From**: 'Sanjoy Bhavan', (3rd floor), 44, Shanti Pally, Kasba, Kolkata - 700107, West Bengal, INDIA and **Printed From**: M/s TAS Associate, 11, Priya Nath Dey Lane, Kolkata- 700036, West Bengal, INDIA*

History and Activities of Indian Leather Technologists' Association #1

The Indian Leather Technologists' Association (ILTA) was founded by Late Prof. B. M. Das, the originator of Das-Stiasny theory and father of Indian Leather Science on 14th August' 1950. ILTA is the Member Society of IULTCS (International Union of Leather Technologists & Chemists Societies) representing India.

The primary objectives of the oldest Leather Technologists' Association which celebrated its Diamond Jubilee year in 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 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.

ILTA also organizes Prof. B. M. Das Memorial Lecture every year during the Foundation Day Celebrations on 14th August, Sanjoy Sen Memorial Lecture on 14th January, the birthday of our late President for several decades, Prof. Moni Banerjee Memorial Lecture on 15th March, the birthday of our late Founder-General Secretary of our Association and Prof. S. S. Dutta Memorial Lecture on 2nd February every year during IILF at Chennai. 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.

ILTA have published the following books :

1. An Introduction to the Principles of Physical Testing of Leather by Prof. S.S. Dutta
2. Practical Aspects of Manufacture of Upper Leathers by J. M. Dey
3. An Introduction to the Principles of Leather Manufacture by Prof. S .S .Dutta
4. Analytical Chemistry of Leather Manufacture by P. K. Sarkar
5. Comprehensive Footwear Technology by Mr. Somnath Ganguly
6. Treatise on Fatliquors and Fatliquoring of Leather by Dr. Samir Dasgupta
7. Synthetic Tanning Agents by Dr. Samir Dasgupta
8. Hand Book of Tanning by Prof. B. M. Das

ILTA presents awards in the name of Prof. B. M. Das Memorial, Sanjoy Sen Memorial, Prof. J. M. Dey Memorial, Prof. Moni Banerjee Memorial and Prof. S. S. Dutta Memorial Medals to the top rankers at the University Graduate and post graduate levels. Prof. 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). From the year 2023, ILTA has started to present a Scholarship namely Prof. Moni Banerjee Memorial Scholarship to a student of B.Tech / M.Tech in Leather Technology who is meritorious but financially crippled.

contd.

History and Activities of Indian Leather Technologists' Association #2

Registration No. KOL RMS/074/2022-24

The International Congress of IULTCS used to held in different locations of the world once in two years. In its 125 years long history, for the first time the Congress was held in January 1999 outside the developed countries and that too in India at CLRI, Chennai. Indian Leather Technologists' Association organized the Congress under the able leadership and guidance of Late Sanjoy Sen, the then President of ILTA and IULTCS and Dr. T. Ramasami, the then Vice-President of ILTA and Director, CLRI, Chennai. In 2017 IULTCS Congress was successfully held again at Chennai, India for the second time.

In order 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 and Durgapur, ILTA have organized LEXPO at Bhubaneswar, Gangtok, Guwahati, Jamshedpur and Ranchi. It commensurate with the time, demand and new perspective of the modern-day leather users. ILTA has started to organize LEXPO at Kolkata from 2022 in a new shape with the Manufacturers and Exporters of Leather Goods from all over India.

ILTA celebrated its Golden Jubilee with a year long programme from 14th August' 2000 to 13th August' 2011 along with the first conference of South East Asian Countries at Netaji Indoor Stadium, Kolkata.

The Association's present (as on 31.03.2024) strength of members is around 550 from all over India and abroad. Primarily the members are leather technologists passed out from Govt. College of Engineering & Leather Technology, Kolkata, Anna University, Chennai, Scientists from Central Leather Research Institute (CLRI), Harcourt Butler Technical University, Kanpur, Govt. Institute of Leather Technology, Jalandhar, Central Footwear Training Institute, Agra, Central Footwear Training Centre, Budge Budge, Footwear Design & Development Institute, Kolkata, National Institute of Fashion Technology, Kolkata etc.

In order to strengthen its activities, ILTA have constructed its own six storied building at 44, Shanti Pally, Kasba, Kolkata – 700107 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] (IULTCS)]
'Sanjoy Bhavan', 3rdFloor, 44, Shanti Pally, Kolkata- 700 107, WB, India
Phone : 91-33-2441-3429 / 3459 WhatsApp +91 94325 53949
E-mail : admin@iltaonleather.org; mailtoilta@rediffmail.com
Website : www.iltaonleather.org