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Challenges and Opportunities in the Indian Leather Industry

The Indian leather export industry has experienced significant growth in recent years, driven by a combination of factors such as a skilled workforce, cost competitiveness, and a diverse product range. However, despite this growth, the industry faces several challenges that must be addressed in order to maintain its competitive edge.

Fluctuations in Raw Material Prices- One of the major challenges facing the Indian leather export industry is the fluctuation in raw material prices. The leather industry relies heavily on raw materials such as hides and skins, which can be volatile due to supply chain disruptions and changing demand patterns. This unpredictability makes cost management a critical concern for exporters.

The price of raw hides and skins can fluctuate significantly depending on factors such as the quality of the raw material, the location of the supplier, and the demand for the raw material. This can make it challenging for exporters to maintain a stable pricing strategy and to ensure that they are able to source high-quality raw materials at competitive prices.

According to estimates, the cost of raw materials can account for up to 70% of the total production cost of leather goods. As a result, fluctuations in raw material prices can have a significant impact on the profitability of leather exporters.

Intense Global Competition - Another major challenge facing the Indian leather export industry is intense global competition. India faces stiff competition from other major leather-producing countries such as China, Vietnam, and Italy. These nations often have more advanced technology, lower production costs, and stronger brand recognition in the international market, making it crucial for Indian exporters to differentiate their offerings.

China is the world's largest producer of leather goods, accounting for over 30% of global production. China's leather industry is highly competitive, with many large-scale manufacturers that are able to produce high-quality leather goods at low costs. Similarly, Italy is known for its high-quality leather goods, and many Italian leather manufacturers have a strong reputation for producing luxury leather products.

According to estimates, the global leather market is expected to grow at a CAGR of 5-6% over the next five years, driven by increasing demand for leather goods from emerging markets such as China, India, and Brazil. However, this growth is also expected to attract new entrants into the market, which could increase competition for Indian leather exporters.

Environmental Concerns - The leather industry has long been scrutinized for its environmental impact, particularly concerning water usage, pollution, and waste management. Adhering to stringent environmental regulations can be challenging, but it also provides an opportunity to innovate with sustainable practices, eco-friendly materials, and greener production processes.

The leather industry is a significant user of water, with many tanneries and manufacturing facilities requiring large amounts of water to operate. However, this can lead to water pollution and depletion of water resources, particularly in areas where water is already scarce. Similarly, the leather industry generates significant amounts of waste, including hides and skins, which can be difficult to dispose of in an environmentally friendly manner.

The leather industry is responsible for around 10-15% of global greenhouse gas emissions, primarily due to the use of energy-intensive processes such as tanning and finishing. However, many Indian leather exporters are now adopting more sustainable practices, such as using solar power and implementing waste reduction and recycling programs.

Opportunities for Innovation - The challenges outlined above highlight the potential for Indian leather exporters to innovate. By leveraging import export trade data, businesses can gain insights into global market trends, identify demand shifts, and explore new markets. Innovation in design, technology, and sustainability can help Indian leather products stand out in a crowded market.

Many Indian leather exporters are now using technology such as computer-aided design (CAD) and 3D printing to create innovative and customized leather products. Similarly, some Indian leather exporters are now using sustainable materials such as recycled leather and eco-friendly dyes to create more environmentally friendly leather products.

Differentiation Strategies - To thrive amidst these challenges, Indian leather exporters can focus on building unique selling propositions (USPs) that emphasize quality, sustainability, and craftsmanship. Utilizing import export trade data allows businesses to tailor their strategies based on specific market needs and consumer preferences, enhancing their competitive advantage.

Many Indian leather exporters are now focusing on creating high-quality, luxury leather products that are designed to appeal to discerning consumers in markets such as the United States and Europe. Similarly, some Indian leather exporters are now emphasizing the sustainability and eco-friendliness of their products, which is becoming increasingly important to consumers in many markets.

OUR PROFOUND RESPECT TO THE IMMORTAL SOUL

LATE SMT. KRISHNA KUMARI LUTHRA

OUR BELOVED MOTHER WHO
LEFT US FOR HER
HEAVENLY ABODE
ON 10TH AUGUST 2007
OUR RESPECTFUL HOMAGE ON
HER 18TH DEATH ANNIVERSARY
MAY HER SOUL REST IN PEACE

BEREAVED FAMILY MEMBERS

Leather Auxiliaries – A Review PART – II

NSK Srinivasan[1] & Hasmukh Shah[2]

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(Contd. from May 2025 Issue)

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1. QUALITY ASSURANCE AND CUSTOMER SUPPORT

Quality Assurance and Customer Support are key functions of the organization in Leather Auxiliaries Industry. They have intense interactions with Manufacturing, Marketing, Commercial functions within organization , Customers as well as Industry Organizations, Sustainable Textile Standards and Organizations, Global Corporate Sustainability Organizations and Local Chapters.

They play an important role in providing sustainable products meeting consumer expectations relating to quality- Characteristics, Performance & Fastness Properties, consistency, durability, sustainability and conformance to ecology norms.

Quality control is a procedure/set of procedures carried out to ensure that a manufactured product/performed service adheres to a defined set of criteria/standard values, before, during and after manufacturing, to ensure customer satisfaction and conformance with statutory regulations. The raw materials, manufacturing process and finished products undergo stringent QC checks as per the standard protocols. [1]

Quality is about meeting the needs and expectations of customers with respect to functionality, design, reliability, durability, & price of the product. An organization uses Quality Assurance to ensure that the product is designed and implemented with correct procedures. This helps reduce problems and errors, in the final product.

Reference : 1. A presentation on QUALITY CONTROL IN THE PAINT INDUSTRY By Mrs. Adetoun Tijani Head, Quality Control Laboratory, Portland Paints & Products Nig. Plc.

1.1 . Key functions of Quality Assurance and Customer Support in Leather Auxiliaries Industry

In most of the organizations in Leather Auxiliaries Industry have manufacturing & service centres in more than one location for meeting the Customer need & completing the product range. Growing competition, Meeting the changing expectations, Environmental Challenges and Providing Solutions to User Industry have become key areas requiring more focus for survival, growth and development.

Quality Assurance Table – 1 A

Quality control of inputs, in process controls and Finished Product Testing, Standard Maintenance, Complaint Handling.

Key Role in maintaining Quality Systems – Quality Management System, Environment Management System, Occupational Health & Safety Management System.

Sustainable Chemical Management System – ZDHC(MRSL) , RSL, MSDS, Eco Booklet & others

Customer Support - Table – 1 B

• Trials & Demonstrations at Customer Place for Product performance and Product Differentiation, Technical Discussions for Product Selection and approvals. Organizing Seminar & Customer Awareness Meet.

• Generation of Technical Information. New Product screening and approval. Interactions with Educational Institutions, & Research Organizations.

• Application Research at Factory and at Customer centres with lab and pilot plant facilities for enhancing the Customer Base, product different ion, Dissemination of Technical Information leading to Retaining Customers, and Value Realization.

• In Leather Industry most of the Dyes Chemicals, Auxiliary & Colourant manufacturers have their own Service Centres in key locations of Tanning Centres around the globe.

• Their major activities are – Colour matching including Modeurope fashion shades; Imparting product knowledge; Offering tailor made solutions, leather testing and practical training on specific articles; organizing conference and seminar on various key challenges and industry and trade related requirements; Cleaner production, RSL (Restricted Substance List), MRSL (Material Restricted Substance Lists) and Environmental challenges and related activities.

2. CENTERS OF EXCELLENCE, STAHL

Activities in the areas of Leather Finish, Shoes & Leather Goods, Edge Dyes, Performance Coatings, Powder Coatings, Leather Furniture Upholstery, Apparel & Home Furnishing, Automotive.

2.1 Services – Stahl

Services – Stahl Table – 2 A

Services - Stahl

• A one-stop-shop covering the entire value chain of everyday materials.

• Working directly with leading luxury brands and OEMs.

• Offering global services for our clients: Stahl Campus, Stahl Design Studio, Brand services, Expert services, Centres of Excellence.

• Promoting good practices and transparency

• Going to partners for the newest trends and latest technological possibilities

• Training all kinds of stakeholders

• Training & education- Safety, Health & Environment (SHE) training, Compliance e-training

• International Management Training Program, Stahl Campus.

Reference : Table – 2 A Chemicals for Sustainable Leather Manufacture 53rd LERIG Prasanna Maduri, Campus Manager, 29 January 2020 Stahl

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2.2 Center of Excellence, Stahl

Center of Excellence, Stahl Table – 2 B

Centers of Excellence for leather and performance coatings offer leadership, best practices, research, support and training to our clients and industry partners. We have centers within both our Leather Chemicals and Performance Coatings & Polymers divisions. These meet the demand for high performance products and solutions with a better environmental impact.

Stahl Centers of Excellence and their areas of expertise

A Stahl Center of Excellence is a team, shared facility or entity and focuses on a global industry specialism or serves as a generalist knowledge hub for a region. Every center can draw on the expertise of every other Stahl Center of Excellence.

China, Guangzhou | Leather Finish

Shoe, garment, leather goods and upholstery – internal and external training – collaboration with our

Italian Center – China

China, Suzhou | Performance Coatings

Automotive – packaging film – packaging paper – synthetic materials – coated fabrics – textiles – specialties (medical, supportive gloves) – China

France, Graulhet | Edge Dyes

Customized edge dyes for leather – manufacturing processes – sustainability – customer co-creation – global

Germany, Leinfelden | Leather Furniture Upholstery

Product development – customer trials – application development – showroom for technologies and

trends – global

Italy, Castelfranco di Sotto | Shoes & Leather Goods

Customized solutions for leather production – raw hides to aftercare – technology development – inhouse training – global

Mexico, Léon | Leather Finish

Footwear, fashion, automotive and tanneries – raw leather to finished leather and aftercare – testing laboratory – Americas

Spain, Parets del Vallès | Leather Dyes and Apparel & Home Furnishing

Performance coatings – leather chemicals technology – polymer technologies – tailor-made solutions – research – global

The Netherlands, Waalwijk | Center of Excellence for Automotive

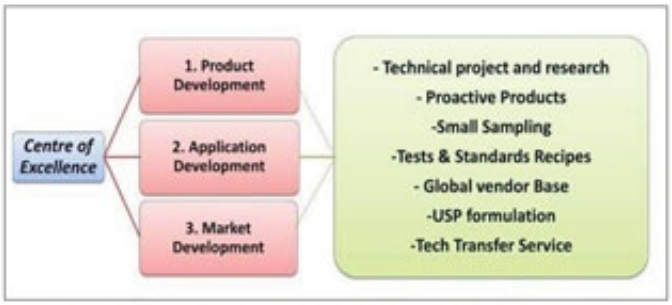
High-performance car interiors – sustainable interiors – smart surfaces – special haptics – customer trials – global

Reference : Table – 2 B www. stahl.com

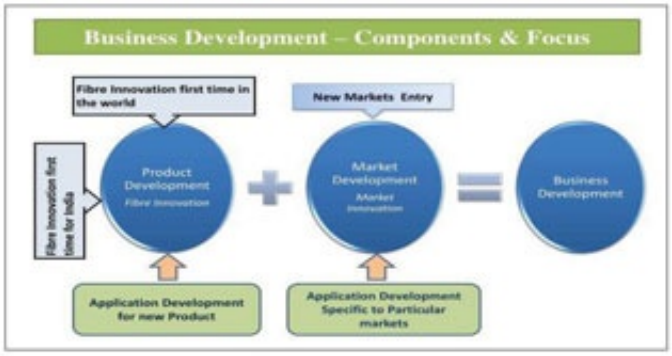
Stahl India opened Global Center of Excellence for Shoe Finish. The Centre had been built within the compound of Stahl India Pvt Ltd's manufacturing complex in Ranipet.

STAHL had opened a Center of Excellence in Kanpur, India. The center focuses on sustainable leather technologies. The mission of the Center of Excellence is to support the introduction of environmentally friendly technologies and processing methods and to train staff in best practices for leather manufacturing. It creates the possibility to demonstrate new technologies, and train tannery staff to apply more sustainable practices. And thus, work together on a cleaner Ganges.

3. ROLE OF CENTRE OF EXCELLENCE FIGURE – 3 A



3.1 Business Development – Components & Focus Figure – 3 B



Reference : Figure – 3 A & 3 B. Raw Materials for Technical Textiles by Manohar Samuel Birla Cellulose, Exhibition cum Conference organized by FICCI + Birla Cellulose

4. WHAT IS A CENTER OF EXCELLENCE (COE) ? [4]

At some point in time, most companies find it beneficial to develop a Center of Excellence (CoE). The priorities of a CoE span several areas, with different sponsors, and are expected to change over time. Nonetheless, the fundamental principles of the CoE group should be clear and consistent, as these are critical to the CoE's continuous success and evolution.

A Center of Excellence is a (typically small) team of dedicated individuals managed from a common central point, separate from the functional areas that it supports within a practice or organization.

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Sometimes referred to as a competency or capability center, the CoE is often the team leading the way in exploring and adopting new technology tools, techniques, or practices.

This group operates across areas within the practice or organization, with a focus on: Providing thought leadership and direction, Establishing and promoting best practices, Research and development, to provide appropriate recommendations, Support and education, Performing other similar functions in specific focus areas considered critical to the success of the overall organization or practice that the CoE supports.

4.1 Keys to a Successful Center of Excellence

Keys to a Successful Center of Excellence Table – 4 A

As a key to success, every Center of Excellence should have a set of clearly and concisely defined guiding principles that will provide its direction and focus. We suggest these five areas as a starting point for establishing and successfully evolving a CoE: 1. Standardization 2. Leveraging assets 3. Measuring performance 4. Guidance and governance 5. Balance and subject matter experts Specific approaches to implementing a Center of Excellence will vary based upon each organization's needs, industry, resources, and level of maturity within their technical or functional space.

Reference : 4.& Table – 4 A .Five Guiding Principles of a Successful Center of Excellence Perficient, PERFICIENT.COM/INSIGHTS

5. APPLICATION AND FASHION CENTRES - TFL

Application and Fashion Centres – TFL Table – 5 A

In order to be close to the customer and provide an optimum service locally, TFL has customer service centres, application centres and laboratories in Italy, India, Brazil and China. All centres are equipped with state-of-the-art machinery. The aim of those training and application centres is two-fold: to ensure that the TFL technicians´ knowledge is always up to date in order to be able to provide the excellent service the company is renowned for to its worldwide customers. The other role is being able to offer tailor-made trainings to customers.

TFL Global Fashion Centre in Italy

The TFL Global Fashion Center Italy covers a 2700 sqm area. It is strategically located in the leather manufacturing hub of Castelfranco/Santa Croce sull'Arno, which is world-famous for the production of vegetable-tanned and fashion leathers, a historical tradition of the Tuscan area, for footwear and for fashion accessories.

TFL Application Centre Italy

The TFL Application Centre Italy covers a 5600 sqm area. It is located in Montebello Vicentino, in the Arzignano area, one of the biggest leather centres in Italy. The ground floor hosts the Beamhouse, wet end and finishing laboratories. The first-floor hosts meeting rooms, offices and our show room, where our guests can see and touch the leathers tanned with TFL products. Close to the show room is the conference room, where workshops for our customers take place.

TFL Application Centre China

On Oct 18th, 2004, the Application Centre China (ACC) started its business. The centre occupies an area of 2000 square meters, provides all the facilities for leather making, and test equipment for leather in common use. The centre supports TFL customers with technical service, scientific R&D, leather testing and practical training on specific articles.

TFL Application Centre Brazil

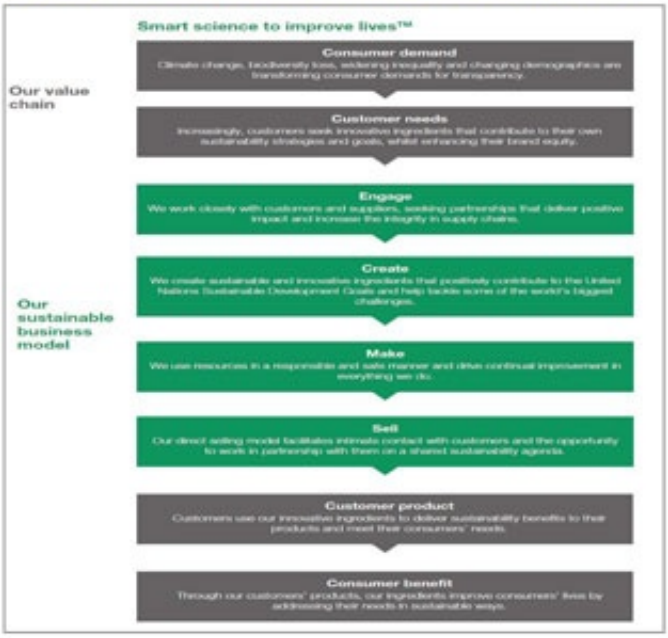
The modern centre, built in 2005, is located in São Leopoldo, south of Brazil; it occupies 1.500 square meters and is fully equipped with state-of-the-art machinery. The ground floor hosts the wetend and finishing laboratories, the physical testing room, the showroom and the conference room; and the first floor hosts the offices of our technical/commercial team.

TFL Application Centre India

The Application Centre India (ACI) has been established in the TFL Quinn India plant in Ranipet, Tamilnadu. The centre is well equipped with modern machinery in both Wet-end and Finishing. Technical workshops are conducted in the Application centre for TFL technicians as well as for the customers regarding technical novelties in all production processes.

Reference : Table – 5 A . Application and Fashion Centres TFL www.tfl.com

6. SMART SCIENCE TO IMPROVE LIVES – CRODA TABLE – 6 A



Reference : Table - 6 A. Smart science to improve lives. Croda International Plc. Sustainability Report 2020.

7. CERTIFICATION, COLLABORATIONS & MEMBERSHIPS

Certification is the formal attestation or confirmation of certain characteristics of an object, person, or organization. This confirmation is often, but not always, provided by some form of external review, education, assessment, or audit. Accreditation is a specific organization's process of certification. [7]

Brands at the end of Leather or Textile value chains increasingly demand that the products they buy display their social or environmental credentials, in the form of certifications or audits. Operational transparency and environmental impact are an important part of purchasing decisions.

Although the fashion industry is recognizing the need for standardized measurement and verification of responsible production, there is currently no single independent certification standard. Many certifications focus primarily on just one step of the production process: either how the raw material was produced, or the environmental management of the mill or tannery where the raw material is transformed into fabric or leather, learning more about the environmental certifications that independently verify that our products were made responsibly, and which stage of the production process that certification aligns with.

Certification can be a useful tool to add credibility, by demonstrating that your product or service meets the expectations of your customers. For some industries, certification is a legal or contractual requirement.

8. CERTIFICATION AND ACCREDITATION [8]

Certification and Accreditation Table - 8A
Certification – the provision by an independent body of written assurance (a certificate) that the product, service or system in question meets specific requirements.
Accreditation – the formal recognition by an independent body, generally known as an accreditation body, that a certification body operates according to international standards

Reference : 8 & Table - 8A . Certification and Conformity , ISO, www.iso.org

In first-party certification, an individual or organization providing the good or service offers assurance that it meets certain claims. In second-party certification, an association to which the individual or organization belongs provides the assurance. Third-party certification involves an independent assessment declaring that specified requirements pertaining to a product, person, process, or management system have been met.

In this respect, a Notified Body is a third-party, accredited body which is entitled by an accreditation body. Upon definition of standards and regulations, the accreditation body may allow a Notified body to provide third-party certification and testing services. All that ensures and assesses compliance to the previously-defined codes but also to provide an official certification mark or a declaration of conformity. [7]

9. WHAT IS ISO? [9]

The International Organization for Standardization is a worldwide autonomous body for setting various global standards for quality management. It comprises of representative standardization organizations from various nations. Established in 1947, the ISO frames and promotes worldwide industrial and commercial standards.

9.1 Broad Categories of ISO Certification Standards [9]

Broad Categories of ISO Certification Standards -Table 9 A
ISO 9001 ensure company product & services meets customer expectations and enhance customer satisfaction. ISO 9001 certification (for Quality) This is the basis for most management systems. Consequently, its main benefits have been identified with the general benefits referred to earlier. It'll also help you continually assess and improve what you do and result in fewer returned products and complaints about your services. The ISO 9000 family of quality management systems (QMS) is a set of standards that helps organizations ensure they meet customer and other stakeholder needs within statutory and regulatory requirements related to a product or service.[1] ISO 9000 deals with the fundamentals of QMS,[2] including the seven quality management principles that underlie the family of standards.[2][3][4] ISO 9001 deals with the requirements that organizations wishing to meet the standard must fulfil.[5]
ISO 14001 maps out a framework that an organization can follow to set up an effective environmental management system. ISO 14001 certification(for the Environment) is a systematic way to discover and control the effects your company has on the environment. It'll help you detect ways to minimise waste and dispose of it more effectively as well as learning how to use energy more efficiently. ISO 14001 verifies that you comply with current legislation and makes insurance cover more accessible.
OHSAS 18001 allows a company to show their customers that company has effective health and safety management system. ISO 22000 allows a company to show their customers that company has effective food safety management. ISO 20000 allows demonstrating excellence and prove best practice in IT & improvement in the delivery of IT services.

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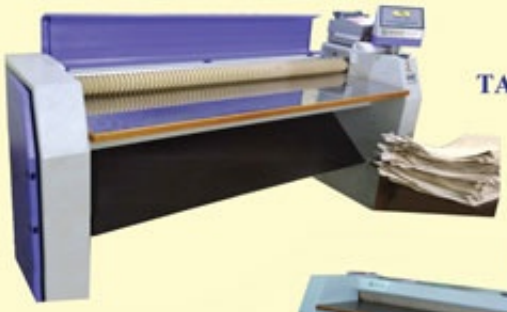

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ISO 27001 describes a best practice of company who involves in the information security management system (ISMS).ISO 27001 certification (for Information Security) demonstrates that you've addressed, implemented and controlled the security of all the important information you need to run your business. It'll help you safeguard your valuable data and intellectual property and avoid the financial penalties and losses associated with data breaches. This provides comfort to your customers, employees, trading partners and stakeholders – in the knowledge that your management information and systems are secure.

CE Marking on any brand is a manufacturer's affirmation that the product has complied with the necessary requirements of the applicable European health, safety, and environmental protection benchmark.

ISO 50001 describes best energy management practices which outline using energy efficiently helps organizations save money as well as helping to conserve resources and tackle climate change.

ISO 45001 certification (for Health & Safety) Will make you more confident about meeting the requirements of Health & Safety legislation. The setting of targets through a Health and Safety policy, together with the ongoing measurement against it, also ensures a process of continual improvement. Downtime due to incidents and ill health will be reduced.

Reference : 9 & Table - 9A . About ISO Certification - start up, start-up India, comodo secure , Dutch Uncle Tech Solutions Private Limited

10. RELEVANT CERTIFICATION AND AUDIT BODIES ACTIVE IN THE LEATHER INDUSTRY [10]

Relevant certification and audit bodies active in the leather industry Table – 10 A

Leather Working Group

The objective of this multi-stakeholder group is to develop and maintain a protocol that assesses the environmental compliance and performance capabilities of leather manufacturers and promotes sustainable and appropriate environmental business practices within the leather industry.

ICEC - Institute of Quality Certification for the Leather Sector

The Code of Conduct and Social Accountability, a tool provided by UNIC Italy, is a basic instrument to widespread the principles regulating business activity. In this document the principles of conduct and social accountability characterizing the leather manufacturers are officially defined.

Brazilian Leather Certification of Sustainability (CSCB)

Brazilian Sustainability certification standard that applies the tripod of sustainability concept in which a tanning industry's results are considered in economic, environmental, and social terms.

Zero Discharge of Hazardous Chemicals (ZDHC)

By managing chemical inputs, ZDHC wants to ensure safer products, cleaner water and fresher air. The initiative focusses on leather and other materials and maintains a Manufacturing Restricted Substance List (MRSL) and Waste Water Guidelines. Chemicals can be approved according to different conformance and are published on the ZHDC

Chemical Gateway

LEATHER STANDARD by OEKO-TEX® LEATHER STANDARD by OEKO-TEX® is an internationally standardised testing and certification system for leather and leather goods at all production levels, including accessory materials. The certification supports companies along the supply chain with the implementation of high human-ecological product safety.

10.1.Certification and audit bodies active in the leather industry Figures – 10 B

Reference: 10. & Table 10 A & Figure 10 B . info@leatherworkinggroup.com/ https://www.leatherworkinggroup.com

icec@icec.it : http://www.icec.it/en/certifications/environmental-sustainability/eco-leathers-certification

CONTACT@CSCB.ORG.BR, : https://cicb.org.br/cscb/en

support@zdhc.org https://www.roadmaptozero.com/?locale=en

info@oeko-tex.com https://www.oeko-tex.com/en/our-standards/leather-standard-by-oeko-tex

SOCIAL & ENVIRONMENTAL REPORT 2020 .THE EUROPEAN LEATHER INDUSTRY. www.euroleather.com

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11. BENEFITS OF STANDARDS [11]

Benefits of Standards Table -11 A
For businesses, the widespread adoption of International Standards means that suppliers can develop and offer products and services meeting specifications that have wide international acceptance in their sectors. Therefore, businesses using International Standards can compete on many more markets around the world. For innovators of new technologies, International Standards on aspects like terminology, compatibility and safety speed up the dissemination of innovations and their development into manufacturable and marketable products.
For customers, the worldwide compatibility of technology which is achieved when products and services are based on International Standards gives them a broad choice of offers. They also benefit from the effects of competition among suppliers. For governments, International Standards provide the technological and scientific bases underpinning health, safety and environmental legislation.
For trade officials, International Standards create guideline for all competitors in the markets. The existence of divergent national or regional standards can create technical barriers to trade. International Standards are the technical means by which political trade agreements can be put into practice. For developing countries, International Standards that represent an international consensus on the state of the art are an important source of technological know-how. By defining the characteristics that products and services will be expected to meet on export markets, International Standards give developing countries a basis for making the right decisions when investing their scarce resources and thus avoid squandering them.

Reference : 11. & Table 11 A . Standardization – COE Approach. DKTE, Center of Excellence in Nonwovens, Prof. Dr. A.I.Wasif

12. CERTIFICATIONS OF MANUFACTURERS OF LEATHER AUXILIARIES

12.1 TFL - Certifications & Memberships [12]

TFL is a globally operating company producing specialty chemicals for the leather industry and related industries. TFL offers its innovative products and solutions to tanneries, leather processing companies and coaters, always striving to introduce fresh ideas to the market.

Our business activities comprise the development, production and marketing of specialty chemicals such as tanning agents, dyestuffs and finishing products, which enable our customers, mainly tanneries, to create an attractive end article such as leather automotive interior.

TFL - Certifications & Memberships Table – 12 A
• ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 • ETAD Membership Certificate 2019
• Leather Working Group LWG • Leather Naturally Membership Certificate • ZDHC
• REACH & GHS Registration, Evaluation, Authorisation and Restricition of Chemicals • Test Methods for the Colour Fastness of Leather
• Declaration, confirmation and/or information about the compliance of TFL chemical products with applicable rules and regulations concerning hazardous and/or restricted substances. • International Material Data System- an electronic form and is integrated into the International Material Data System (IMDS).

Reference : 12 & Table - 12 A . TFL www.tfl.com

13. COLOURTEX - CERTIFICATIONS & MEMBERSHIPS [13]

Colourtex is the largest dyestuff company in the Indian subcontinent, manufacturing various classes of dyestuffs including Leather Dyes & Auxiliaries.

Colourtex - Certifications & Memberships Table - 13 A
• ISO-9001:2015, ISO 14001:2015 and ISO 45001:2018 certified management system. • Member of Ecological and Toxicological Association of Dyestuff Manufacturers (ETAD)
• Products are GOTS approved, Oekotex compliant. • bluesign system partner. • A Responsible Care company.
• IMO- Approved dyestuffs and textile auxiliaries for the global organic textile standard • A technical associate of the BLC • Member of The Leather working group • Commitment to the Zero Discharge of Hazardous Chemicals Restricted Substance List
• ECO BOOKLET - Eco friendly Dyes from Colourtex and related topics on ecology in textile and leather • Provides Material Safety Data sheets

Reference : 13 & Table - 13 A https//Colourtex.co.in/sustainability

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14. CERTIFICATIONS OF QUIMSER- LEATHER AUXILIARIES MANUFACTURER FIGURE – 14 A

Reference : Figure -14 A. Quimser , Spain www.Quimser.com

15. PARTNERSHIPS & CERTIFICATIONS – SMIT & ZOON FIGURE – 15 A

Reference : Figure -15 A. Smit & Zoon www. smitzoon.com

15.1. Industry Associations - Smit & Zoon

Industry Associations - Smit & Zoon Table -15 B
Industry Associations **MVO Nederland, Leather Working Group, Leather Naturally, ZDHC, Textile Exchange, TEGEWA, UNPAC, Federchimica, CLE**
Regular meetings and joint activities with the mentioned organizations - MVO Nederland is the movement of entrepreneurs in the New Economy - Leather Working Group takes an active role in implementing best practices in the Leather value chain: Smit & Zoon takes an active role in the Supplier Subgroup and in the Tannery of the Future Subgroup - Leather Naturally is an industry member association that focuses on education and the promotion of leather. - Smit & Zoon is a financial contributor of the association and the METCHA Leather marketing campaign and provides the Chair
- ZDHC's mission is to protect the planet by reducing the industry's chemical footprint. Smit & Zoon takes an active role in different Task Teams and will have all its products and production facilities in accordance with the highest conformance levels - Textile Exchange's mission is to advance responsibility and continuous improvement in the global Leather value chain through leadership, science, and inclusive multi-stakeholder engagement and collaboration. Smit & Zoon supports the development of the Leather Impact Accelerator - TEGEWA, UNPAC, FEDERCHIMICA, are industry associations for chemical companies focussing on the Leather industry - CLE India: focussing on export promotion activities and development of the Indian Leather industry

Reference : Table -15 B. SmitZoon-CSR-Report-2020-DEF

16. STAHL- CERTIFICATIONS FIGURE – 16 A

Reference : Figure -16 A. stahl-corporate-responsibility-and-sustainability-report-2018

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- **Levocol L-CS**
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- **Coloderm Cat Black CD**
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MEMBER OF LEATHER WORKING GROUP

Member of BLC

17. ARCHROMA – CERTIFICATIONS FIGURE – 17 A

Archroma is a member of the United Nations Global Compact, a voluntary initiative based on CEO commitments to implement universal sustainability principles and to take steps to support the United Nations Sustainable Development Goals. A requirement of this commitment is the annual submission of a "Communication of Progress" (COP). In previous years a separate document was prepared for this purpose – for 2020 onwards we have incorporated the COP within the annual Sustainability Report.

Archroma is a signatory of the International Council of Chemical Associations Responsible Care® Global Charter since 2014. Responsible Care is a commitment to an ethic of safe chemicals management and performance excellence in the chemical industry.

Archroma is an active member of the European Chemical Industry Council (CEFIC), a non-profit organization which represents large chemical companies across Europe. CEFIC is devoted to promoting a thriving European chemical industry that is broadly recognized to provide sustainable, safe and resource efficient solutions to meet the challenges for future generations.

Archroma is a bluesign® technologies system partner, an independent organization that represents the vision and mindset of responsible and sustainable manufacturing of textile consumer products, that acts as an independent verifier to secure trust and transparency. Archroma has over 1000 products which have been bluesign® approved for the use in manufacturing textiles.

Archroma is a member of, and is represented on the board of, the Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD), an independent international association for colorant-producing companies. ETAD provides a voluntary framework within which the member companies and their value chain can promote responsible care principles and product stewardship and cooperate with authorities to harmonize health and environmental regulations.

Archroma is also a member of the Association of Manufacturers of Process and Performance Chemicals TEGEWA (Textil, Gerbstoff u. Waschmittel). TEGEWA is an organization that fosters pre-competitive dialogue and collaboration of manufacturers of process and performance chemicals for industrial users.

As a member of TEGEWA and ETAD Archroma has advised towards the ZDHC Joint Roadmap (Zero Discharge of Hazardous Chemicals) programs.

Archroma is a contributor of the ZDHC (Zero Discharge of Hazardous Chemicals) Foundation, a global multi-stakeholder initiative of more than 160 contributors within the fashion and footwear industry. ZDHC oversees the implementation of sustainable chemical management best practice across the value chain through collaborative engagement, standard setting, and implementation.

TfS is a joint initiative that delivers the de facto global standard for environmental, social and governance performance of chemical supply chains.

Reference : Figure – 17 A . Sustainability report Fiscal year 2020 . THE ARCHROMA WAY TO A SUSTAINABLE WORLD. ARCHROMA. www.archroma.com

18. CERTIFICATIONS – TRUMPLER [18]

WE ARE A MEMBE R OR PARTNER OF THE FOLLOWING ASSOCI ATIONS, INSTITUTES AND WORKING GROUPS. Shaping the future together.

Together we are committed to the sustainable growth of the entire leather industry through a variety of association activities, memberships and individual support of selected institutions. The laws and guidelines developed by these relationships guarantee a subst ant ial improvement in leather production, the environment as well as leat her quality and testing standards.

Our technicians support customers and partners through specially designed workshops, the joint exchange of experiences and the sharing of resources in order to maintain a continuous learning curve and initiate the development of new processes and technologies. In this way, new trends and requirements within the industry are also developed and implemented.

We continue to support the training of future generations with scholarships, special support and exchange programs with several educational institutions, as well as our inhouse training programs.

TRUMPLER - MEMBER OR PARTNER OF THE FOLLOWING ASSOCIATIONS, INSTITUTES AND WORKING GROUPS FIGURE -18 A

Reference : 18. & Figure 18 A. TRUMPLER GmbH & Co. KG info@ trumpler. es

19. DYSTAR – COLLABORATIONS & MEMBERSHIPS

Reference : Integrated Sustainability Report 2020-2021 DyStar

19.1 INDUSTRY ORGANISATIONS FIGURE – 19 A

Industry Organizations

- Asia Dyestuff Industry Federation (ADIF)
- American Association of Textile Chemists and Colorists (AATCC)
- Associação Brasileira das Indústrias Químicas (ABIQUIM), Brazilian Chemical Industry Association
- The Association of Thai Textile Bleaching Dyeing Printing and Finishing Industries (ATDP)
- Basic Chemicals, Cosmetic & Dyes Export Promotion Council, India (CHEMEXCIL)
- China Dyestuff Industry Association (CDIA)
- Disaster Prevention & Management Center (DPMC), Ankleshwar
- German Chemicals Industry Association (VCI)
- Gujarat Dyestuffs Manufacturers Association (GDMA)
- Japan Dyestuff & Industrial Chemical Association (JDICA)
- Society of Dyers and Colourists, United Kingdom (SDC)
- Society of Leather Technologists and Chemists (SLTC)
- South African Dyers & Finishers Association (SADFA)
- Sindicato das Indústrias de Produtos Químicos (SINPROQUIM), Brazilian Chemical Industry Association
- Taiwan Dyestuffs & Pigments Industrial Association
- Association of Manufacturers of Process and Performance Chemicals (TEGEWA)

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19.2 Business Associations Figure – 19 B

Business Associations

- Ankleshwar Industries Association
- Corlu Chamber of Commerce and Industry
- Directorate General of Foreign Trade, India (DGFT)
- Greater Dalton Chamber of Commerce
- Employers' Association of Indonesia (APINDO)
- Importers and Exporters Association of Taipei (IEAT)
- Indian Merchant Chamber of Commerce
- Pietermaritzburg Chamber of Business (PCB)
- Raigad Chamber of Commerce & Industry
- Reidsville Chamber of Commerce (RCCI)
- Singapore Business Federation (SBF)
- National Committee of Responsible Care, Indonesia (KNRCI)
- Responsible Care

19.3 Other Standards and Organisations Figure – 19 C

Other Standards and Organizations

- American Apparel & Footwear Association (AAFA)
- Associação Brasileira da Indústria Têxtil e de Confecção (Abit), Brazilian Textile and Apparel Industry Association
- bluesign®
- Cradle to Cradle Product Innovation Institute®
- Global Organic Textile Standard (GOTS®)
- Oeko-Tex®
- Textile Exchange
- Zero Discharge of Hazardous Chemicals (ZDHC)

Reference : Figure – 19 A & 19 B & 19 C. Integrated Sustainability Report 2020-2021 DyStar www.dystar.com

20. GREENWASHING [20]

Greenwashing is a marketing technique aimed at creating an illusion of ecological responsibility. Green communication doesn't always mean that the company is environmentally responsible. This is why the concept of greenwashing is frequently used by NGOs to denounce companies that claim environmental concerns while their activities and practices prove otherwise. What is greenwashing, what are the main examples of greenwashing by companies and how to spot greenwashing practices?

What is greenwashing? Greenwashing is designed "to make people believe that your company is doing more to protect the environment than it really is." - Cambridge Dictionary

Greenwashing is the practice of marketing a company or organisation so they appear more environmentally friendly or more ecological (more natural, healthier, free of chemicals, recyclable, less wasteful of natural resources...) when in practice its activities pollute the environment. Greenwashing is therefore considered abusive or misleading because the company improperly positions itself as more green than it actually is.

20.1 Greenwashing From Wikipedia [20.1]

Greenwashing (a compound word modelled on "whitewash"), also called "green sheen", is a form of marketing spin in which green PR and green marketing are deceptively used to persuade the public that an organization's products, aims and policies are environmentally friendly.

Critics of the practice suggest the rise of greenwashing, paired with ineffective regulation, contributes to consumer scepticism of all green claims, and diminishes the power of the consumer to drive companies toward greener manufacturing processes and business operations. Many corporations use greenwashing to improve public perception of their brands. Complex corporate structures can further obscure the big picture.

Without external monitoring and verification, greenwashing strategies amount to corporate posturing and deception. When a company decides to behave responsibly and adopts a sustainable development vision, it may have to change its corporate culture deeply, in order to understand and appropriate the concept. It is not enough to integrate sustainable development into communication to persuade the consumer to buy.

While greenwashing is not new, it has increased in recent years to meet consumer demand for environmentally-friendly goods and services. This problem is compounded by lax enforcement by regulatory agencies such as the Federal Trade Commission in the United States, the Competition Bureau in Canada, and the Committee of Advertising Practice and the Broadcast Committee of Advertising Practice in the United Kingdom. New regulations and laws mean to discourage companies from using greenwashing to deceive consumers.

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21. LICENCE TO GREENWASH [21]

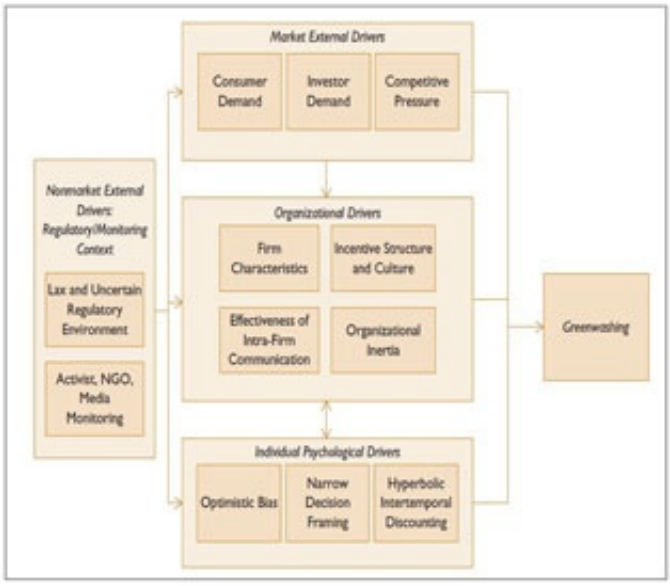
Certification schemes, labels and industry initiatives aimed at steering a greener course for the fashion industry are actually acting as a smokescreen for fashion's continued heavy toll on the planet, according to a new report.

Licence to Greenwash by the Changing Markets Foundation analysed 10 certification labels and industry initiatives used by fashion brands to assess or measure their sustainability, and investigated whether these schemes are fit for purpose in addressing the harms of the modern fashion industry.

The report scrutinised schemes such as the Ellen MacArthur Foundation, The Textile Exchange, WRAP (Waste & Resources Action Programme), Cradle2Cradle and The Higg Index by the Sustainable Apparel Coalition (SAC).

The fashion industry can no longer be left to regulate itself. If we are ever going to see a true systemic shift, regulation and policy must hold brands accountable for their devastating contribution to the global climate, ecological and social crisis and their continued use of fossil fuels. Without this, the industry can never claim to be truly sustainable. [21]

22. DRIVERS OF GREENWASHING FIGURE - 22



Reference : Figure – 22. The Drivers of Greenwashing . Magali A. Delmas Vanessa Cuerel Burbano. UNIVERSITY OF CALIFORNIA, BERKELEY VOL. 54, NO. 1 FALL 2011 CMR.BERKELEY.EDU

23. LICENCE TO GREENWASH [23]

The fashion sector is awash with certification schemes, sustainability labels and multi-stakeholder initiatives all seeking to steer the industry onto a greener course. As public and political awareness of the high environmental and social toll of the fashion industry has climbed the agenda, and scrutiny on brands has intensified, so has the visibility of certification schemes and voluntary initiatives pitched as holding the solutions.

The existence of such schemes serves a dual purpose for the brands. As the fashion industry is one of the least regulated sectors in the world, these schemes partially exist as a genuine attempt to move towards sustainability in the absence of environmental legislation. But they also enable the proliferation of 'greenwashing' on a remarkable scale. Whether it is the use of certification labels on individual products – assuring customers that they can shop guilt free by putting their money where their values lie – or brands proudly communicating their membership of various fashion-related voluntary initiatives, the existence of these schemes and the inherent lack of accountability within them are a key part of the greenwashing machinery of the modern fashion industry.

Moreover, the level of influence exercised by fashion brands in these initiatives and the lack of any independent oversight, inevitably means that they end up promoting industry interests.

Reading the progress or sustainability reports of the majority of initiatives and brands alone would have you believe that we are just one label or initiative away from the total transformation of the fashion industry into a dreamscape of circularity and eco-design. Yet, beyond the greenwash, the unsustainable trajectory of the modern fashion industry is alarming.

Of more than 100 sustainability certification schemes in use in the textile industry and listed in the Ecolabel Index, this report by the Changing Markets Foundation provides a qualitative analysis of the best-known initiatives, with a focus on those that claim to address issues of circularity, overproduction and the rise of fast fashion, end-of-life management and the elimination of toxic chemicals from production or manufacturing.

Of the ten initiatives analysed, several are certification labels (**bluesign®**, **Cradle to Cradle** (C2C), **EU Ecolabel**, **OEKO-TEX®** and **Textile Exchange's Global Recycled Standard** and **Recycled Claim Standard**), others are multi-stakeholder initiatives (the **Ellen MacArthur Foundation** (EMF), **The Microfibre Consortium** (TMC) and **ZDHC**) and others provide a set of self-assessment tools (the **Higg Index** and **WRAP**) for the industry to measure their sustainability.

What these schemes have in common are that they are all voluntary and enjoy high levels of industry buy-in and cross promotion.

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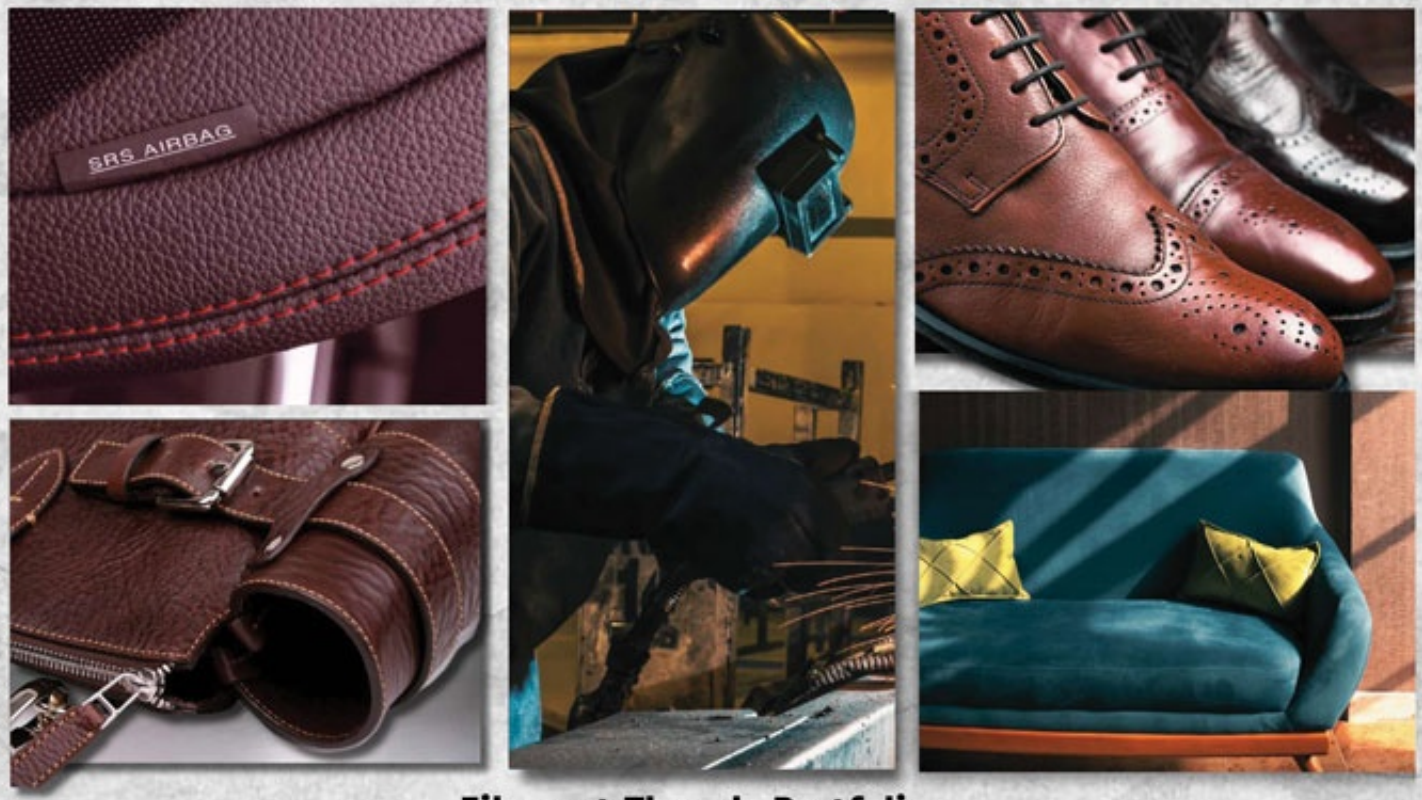

Filament Threads Portfolio

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Bonded & Soft

Anefil Nylon
Nylon 6.6
Bonded & Soft

Anefil Poly ECO100
Recycled
CF Polyester

Anefil Poly
CF Polyester
Bonded Soft

Anebraid
CF Polyester Braid
Lubricated & Waxed

Anebraid ECO100
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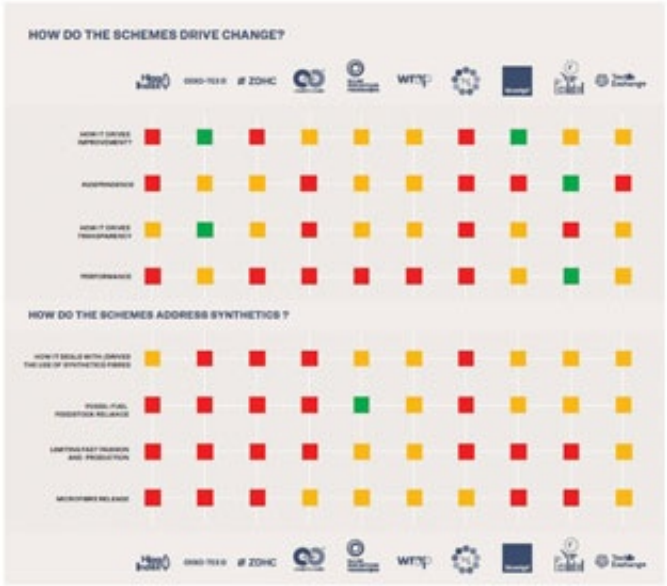
23.1 Certification Labels - Sustainability Certification Schemes

Figure – 23 A

23. 2 Summary of schemes' assessment. HOW DO THE SCHEMES DRIVE CHANGE? HOW DO THE SCHEMES ADDRESS SYNTHETICS ?



COLOURING CRITERIA:

GREEN - addressed through quantitative measures; ORANGE - addressed through ambitions, recommendations, reports, or not yet implemented measures; RED - not addressed in any meaningful way, NO COLOUR: not applicable/unknown.

Reference : 23. & Figure 23 A & 23 B. Licence to Greenwash by Changing Markets Foundation

24. INNOVATION

Innovation is essential for business survival in highly competitive markets where it is increasingly difficult to differentiate products and services.

Innovation is defined simply as a "new idea, device, or method. However, innovation is often also viewed as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs. This is accomplished through more-effective products, processes, services, technologies, or business models that are readily available to markets, governments and society.

Introducing innovation can help you to improve productivity, reduce costs, be more competitive, build the value of your brand, establish new partnerships and relationships, increase turnover and improve profitability. Why Innovation is Important – Reasons are Growth, Stand Out. Meet the Needs of Customers.

24.1 Innovation Trends [24]

Innovation Trends Table -24 A
Three powerful innovation trends that will impact the industry in the coming years are
1. Digitization of products, their design, manufacturing, distribution and retail processes, consumer/end-user interaction, factories, workplaces and supply chains. 2. Sustainability, circularity and resource efficiency of materials, processes and overall business operations; this trend requires transparent supply chains meeting the environmental, health and social legislation standards. 3. New business and consumption models based on the sharing of productive resources and final products, servitisation, pay-per-use or subscription models, all moving us towards collaborative or sharing economy.

Reference : 24.& Table - 24 A CIRCULAR ECONOMY — CHALLENGES FOR THE TEXTILE AND CLOTHING INDUSTRY Ma³gorzata Koszewska Lodz University of Technology, Faculty of Management and Production Engineering, Department of Production Management and Logistics, Wolczanska 215, 90-924 Lodz, Poland malgorzata.koszewska@p.lodz.pl

24.2 Innovations in Strategy

Strategies - Leading players in the global industry including Leather Industry, have adopted various strategies to achieve additional market share. Key strategies adopted by these players include product launch, joint venture, acquisition, partnership, expansion, and investment.

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- Direct Black: 19,155,168
- Mordant Brown: 1,79
- Mordant Black: 11

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24.3 Challenges encountered by Leather Industry

Challenges encountered by Leather Industry
• Leather Alternatives – Synthetic Leather & Lesser extent from Recycled Leather, Bio Leather & Bio Fabricated Leather. Harmonious Living of Global Leather Industry
• Environmental and economic issues – Responsible Manufacturing
• Social pressures – Traceability
• Technological changes – Safe Products & Processes
• Challenges to nations with natural abundance of raw materials:
• Factors driving the future of global leather sector
• Macro changes impacting leather sector
• Review of process chemistry and tanning technologies in leather sector: a demand of the hour
• Negative Publicity done about Leather
• Higgs Index & Leather Industry – Leather Industry Calls for Higg Index Review
• What is the future of (chrome) tanning? Leather manufacture in the new millennium.
• Leather Sustainability • Recycling of Leather • Leather 4.0 and Industry 4.0 to 5.0

As per officially notified DGCI&S monthly export data, the export of Leather and Leather products for the period April 2020 - March 2021 touched US $ 3681.58 Mn as against the performance of US$ 5070.55 Mn in April 2019 - March 2020, recording a decline of 27.39%.

The root cause analysis of this declining performance and strategy for remedial measures including innovations and action plans in the value chain are the need of the hour for growth and development.

Reference: Table - 25 A . COUNCIL FOR LEATHER EXPORTS (CLE), Highlights of Product Segments of Indian Leather and Footwear Industry https://leatherindia.org/indian-leather-industry/

25.1 Remedial measures including innovations and action plans in the value chain [25]

The Indian Leather industry has performed in a downward direction in exports - from $ 6.494 billion in 2014-15 to $ 5.070 billion in 2019-20. Some action plans suggested are presented below.

- Investing in R&D, Building enough scale and skill development of workers.
- Providing value to the product with good branding and differentiation.
- Effective control and implementing action-based strategies for effluent management, non-tariff barriers, quality specifications and cost of compliance to various standards for growth of the Indian leather industry.
- Productive efforts by Industry, Support by Government and Effective Cooperation by related agencies and organizations.

The global leather industry is in the process of shifting its manufacturing base from developed to developing nations. This provides an opportunity for increased flow of foreign direct investment (FDI) into India.

25.2 Highlights of Product Segments of Indian Leather and Footwear Industry [25]

- Tanning Sector - Annual availability of leathers in India is about 3 billion sq.ft. India accounts for 13% of world leather production of leathers. Indian leather trends/colors are continuously being selected at the MODEUROPE Congress
- Footwear Sector - India is Second largest footwear producer after China, with Annual Production of 2.58 billion pairs (2018). India is also the second largest consumer of footwear after China, with a consumption of 2.60 billion pairs. Footwear (leather and non-leather) export accounts for about 46.61% share in Indian leather and footwear industry's export (2019-20).

25. INDIA'S EXPORT OF LEATHER & LEATHER PRODUCTS Value in US $ Mn

INDIA'S EXPORT OF LEATHER & LEATHER PRODUCTS Value in US$ Mn Table – 25 A							
Product	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020- 21**
Finished Leather	1329.05	1046.45	888.39	874.24	721.73	524.15	378.23
Leather Footwear	2278.18	2147.98	2128.87	2193.86	2195.47	2081.64	1485.55
Footwear Components	361.29	284.34	298.69	335.24	319.1	261.67	197.59
Leather Garments	604.35	553.11	518.96	518.96	468.48	429.11	295.56
Leather Goods	1452.83	1370.04	1365.22	1365.79	1434.24	1340.56	944.31
Saddlery & Harness	162.7	146.38	155.88	155.97	159.35	151.44	186.18
Non-Leather Footwear	306.44	306.74	296.68	296.91	392.63	281.97	194.16
Total	**6494.84**	**5855.06**	**5646.79**	**5740.97**	**5691**	**5070.55**	**3681.58**
% Growth	**9.37%**	**- 9.85%**	**- 3.56%**	**1.67%**	**- 0.87%**	**- 10.90%**	**- 27.39%**

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N lac BSG/BCX - Both soluble High solid NC based Glossy lacquor ,Melliable too with high Degree of fastness and smooth silky touch

Sasyol SR - Pure synthetic based light fast versatile fatliquor,can be used for nearly all types of leather made in Different proportions.good softness with spongy feel and excellent exhaution

Sasyol SJB - Polymeric based pure synthetic fatliquor where softness and round feel is required, best suitable for all types of leather processed

Sasyntan MLB Liquid - Advance chemistry syntan with light fastness,recommended for white leathers too, enhances fullness, roundness and spongyness required

N Cryl SB 100 - Non tacky medium soft acrylic binder,can be used in Base coats and intermediate coats for required results,recommended for all types of finish done

NICHOLAS PIGMENTS & INKS

C-105,106,119 & 120 UPSIDC INDL. Area, Rooma, Kanpur (India)
E-mail : nicholas_pigments@rediffmail.com / joshibc1@yahoo.com
Mob : 7839470588 / 8953000588

- Leather Garments Sector - India is the second largest global exporter. Accounts for 8.46% share of India¡¦s total export from leather sector (2019-20).
- Leather Goods & Accessories Sector including Saddlery & Harness - India is the fifth largest global exporter of Leather Goods & Accessories and third largest exporter of Saddlery and Harness items.

25.3 INDIA'S EXPORT OF LEATHER & LEATHER PRODUCTS 2022-23 vis-a-vis 2021-22

(Value in Million US $) Table - 25 B

INDIA'S EXPORT OF LEATHER & LEATHER PRODUCTS 2022-23 vis-a-vis 2021-22
(Value in Million US $)

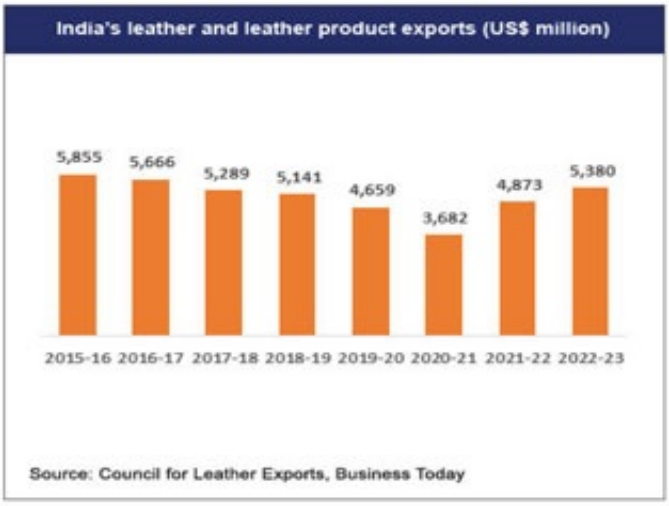
CATEGORY	APR-MAR 2021-2022	APR-MAR 2022-2023	% VARIATION	% Share 2021-22`	% Share 2022-23
FINISHED LEATHER	456.10	430.93	-5.52%	9.36%	8.19%
LEATHER FOOTWEAR	2047.08	2377.23	16.13%	42.01%	45.20%
FOOTWEAR COMPONENTS	249.87	289.81	15.98%	5.13%	5.51%
LEATHER GARMENTS	342.38	353.07	3.12%	7.03%	6.71%
LEATHER GOODS	1287.06	1301.34	1.11%	26.41%	24.74%
SADDLERY AND HARNESS	276.10	222.17	-19.53%	5.67%	4.22%
NON-LEATHER FOOTWEAR	214.11	284.98	33.10%	4.39%	5.42%
TOTAL	4872.70	5259.53	7.94%	100.00%	100.00%

Source : DGCI &S

Reference: Table - 25 B . INDIAN LEATHER INDUSTRY – OVERVIEW, EXPORT PERFORMANCE & PROSPECTS

25.4. EXPORT TREND [25]

India's Leather and Leather Product Exports Table - 25 C



Reference: Table - 25 C . Leather Industry and Exports,Export of leather and leather products stood at US$ 5.26 billion in FY23.Last updated: Nov, 2023

India is the second-largest exporter of leather garments, the third-largest exporter of saddlery & harnesses and the fourth-largest exporter of leather goods in the world. The garments sector accounted for 7% of the country's total leather exports in 2021-22.

Out of the total leather and leather products exported out of India, the footwear segment accounts for the majority of exports, with April-June 2023-24 exports valued at US$ 511.44 million.

Footwear (Leather Footwear, Footwear Components & Non-Leather Footwear) holds the major share of 54.12% in the total export of leather and leather products with an export value of US$ 649.92 million.

25.4 EXPORT DESTINATIONS [25]

India exports leather to more than 50 countries. USA, Germany, the UK, Italy, France, Spain, Netherlands, China, Belgium, UAE, Australia, Poland, Hong Kong, Denmark, Canada, Vietnam and Portugal are among the top importers of leather and leather products from India. The top 15 countries account for about 80% of the total exports.

During April-June 2023-24, the total export of leather products to the USA was valued at US$ 358.67 million, a decrease of 37.18% YoY. During the same period, Germany and the UK imported leather and leather products worth US$ 142.93 million and US$ 98.50 million from India, respectively.

The USA is the largest importer of leather and leather products from India and accounted for 25.83% of the country's total leather exports from April-June 2022-23. Germany and the UK accounted for 10.93% and 9.51% of the exports during the same period.

26. PRODUCT & PROCESS INNOVATION

New materials, molecules and technologies and the production of innovative leather families, both in relation to the manufacturing processes used and to the ability of simultaneously satisfying a series of innovation and sustainability needs.

26.1 Some Potential Innovations in Leather

Some Potential Innovations in Leather Table – 26 A

The following is an almost random selection of some more recent ideas and methods at various stages of research and development

- Application of ultrasound in chrome tanning and retanning

A combination of wringing and ultrasound in a two-step process (penetration and basification tank) is used to accelerate the chrome tanning process based on the mechanical extrusion formation of the micro-vacuum and ultrasonic cavitation effect.

Similarly, the effect of ultrasound (US) has been investigated in improving the penetration and uptake rate of different syntans (phenolic based, melamin resin, acrylic compound) in leather retanning and compared with magnetic stirring (MS). Favourable influence of presonification of both the substrate (leather) and the syntan solution result in a considerable improvement of the diffusion rate, a shorter processing time and better leather quality.

Excellent –
Ultra low to zero BPS/BPF syntans

TANIGAN® MBO Liq, TANIGAN® OSO Liq, TANIGAN® FAO Liq and TANIGAN® VRO Liq. These TFL pioneering syntans address the latest regulatory challenges ahead of time with a BPS content below detection limit and are completely free of BPF. These ultra-low bisphenol syntans remain an essential part of wet-end processing to ensure the required leather tightness, fullness, softness and fastness are attained. You can expect further product launches adding onto these essential "building blocks" shortly.

TFL – Great chemicals. Excellent advice.

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• Inverse chrome tanning with wet-white pretanning

The proposed process sequence is: bating, washing, white pretanning, sammying, shaving, weighing, re-wetting with acidification with formic acid, retanning (synthetic fatliquor/ dispersing syntan / acrylic resin / mimosa, phenolic syntan, melamine resin / formic acid), fatliquoring (synthetic fatliquor, formic acid), drain, followed by the usual chrome tanning with basification (100% fresh float, 14% chrome powder). The main gains should be chrome emissions limited to one process only and reduced by about 50% plus chrome-free shavings. There is no information about other pollutants (BOD,COD, salts etc.).

• Collagen modification and nano technologies

Some R&D establishments, in particular in Xian, China, have been searching for ways to depart from using traditional, chemical- based leather making methods. Instead, they are looking into various options for modifying collagen fibers by nano-size emulsions, clay minerals, nano silicon dioxide or nano silver and nano technologies in general.

• A fresh attempt with Fe tannage

One among many attempts in searching for alternatives to the prevailing tanning methods is tanning with Fe2+-gluconic acid compound, apparently still at the laboratory scale.

• Elimination of free formaldehyde with essential oil

The conclusion of one study is that the release of free formalaldehyde from tetrakis (hydroxymethyl) phosphonium (THP) salts and various syntan leather products can be supressed by using Origanum onites essential oil.

• Bio resistance by application of nanosilver

A combination of the colloidal silver solution (CSS) and poly hydroxiurethanes is used to interact with collagen or keratin from medical leather and sheepskins to induce bio resistance properties against fungi as well as a good antibacterial action.

• The ISO 17075 method for Cr6+ detection

The ISO 17075 method for Cr6+ detection (at pH 8) systematically gives false positive values. Moreover, Solid Phase Extraction (SPE) cartridges absorb about 10% of chromate; thus, the calibration curves should be obtained after filtering each standard with the SPE employed.

• Chromogenic leather

There are already reports on tests with chromogenic leather, i.e., leather that changes colour in response to optical/thermal changes.

• Biochemical degradation and closed cycle dechroming of chrome shavings

There are new investigations into the scope of combined chemical and enzymatic degradation of chrome shavings and protein extraction. Also, Ethylene Diamine

Tetraacetic Acid (EDTA) is used for dechroming chrome shavings during extended processes involving heating, UV light (photocatalysis), chrome precipitation with NaOH and acidification with sulphuric acid. High chrome removal efficiency and preservation of the collagen triple helix are claimed in these mini-lab scale tests.

• Highly biodegradable leather

A success is claimed in developing an aldehyde based tanning system resulting in leather showing biodegradability four times higher than chrome tanned and two times higher than wet-white based leather. Full disintegration of leather under composting conditions according to ISO 20200:2004 was reportedly achieved within 11-14 days as well as of footwear made of biodegradable components and with uppers and linings of leather tanned by the new system within 21 days.

• Composting

A new attempt in composting tannery waste at the industrial scale is underway: dewatered sludge with dry matter content of 20-25%, fleshing and grease residues are mixed with shavings from vegetable tanning, grass and green farm residues. From time to time some quantities of cow and horse dung are added. Composting takes place in twomonths cycles in windrows in a roofed area. It is reported that the Cr content is about 1500 mg/kg calculated on dry weight, which is, after mixing with other organics, reduced to about 1000 mg/kg to be used as a nutrient and soil conditioning agent.

• Probiotics

Some biotech products, marketed as fully biodegradable and non-hazardous probiotics, claim to offer a viable alternative to and ability of replacing some conventional chemicals for most leather manufacturing stages. At the moment it does not appear to be widely implemented.

• Application of nanotechnology

There is apparently no confirmation of successful industrial scale application of nanotechnology that can strengthen sheep skins to be converted into leather for use in shoes and other products reported in 2014 with the potential of applying the same process with deerskins and cattle hides.

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Level 3
MRSL version 3.1
Conformance

• Ionic Liquids as chemicals for leather processing

Ionic liquids (ILs) such as imidazolium, choline and some others have been found to have both stabilising and destabilising effects on collagen - at the molecular level, thermal and dimensional stability at the interfibrillar level and at the fibre structure level. Their properties can be garnered and fine-tuned for various applications in leather processing. ILs, the greener solvent media, are seen as potential advanced "designer" chemicals for making leather processing cleaner and greener

• Analysis of odour compounds in leather by GC-MS and GC-Olfactometry

The volatile compounds in leather are extracted using a solid-phase micro extraction fiber and subsequently identified using a gas chromatography-mass spectrometry (GC-MS) and gas chromatography olfactometry (GC-O), i.e., human assessors. More than 20 volatile compounds have been identified by GC-MS, the main among them being hexanal, heptanal, octanal, nonanal, heptanol, octanol, 2-ethoxyethanol, and 2-buthoxyethanol. Aldehyde such as octanal and alcohol such as octanol were characterized by GC-O.

• Bio-based polyurethanes for leather finishing

Until recently, coating technology for the finishing step of the leather process has largely been based on petroleum feedstock chemicals, like ethylene and propylene. Recent advances in biotechnology have made it possible to develop an entirely new class of aqueous polyurethanes. This class of polyurethanes are bio-based, derived from renewable raw materials and reportedly show superior film performance. Certain polyols (bio-based polyols) , the main building blocks in making polyurethane finishes, can be made using different plant oils such as canola(rapeseed), soy, palm or linseed. The bio-content level achieved so far can range from 10-35%.

Reference : Table -26 A .The framework for sustainable leather manufacture, Second edition - Jakov Buljan, Ivan Kral' - 2019 the United Nations Industrial Development Organization

27. SMIT & ZOON - MILESTONES 2020- REDUCING THE FOOTPRINT & TOWARDS CIRCULARITY

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 A

1. ZEOLOGY, THE SUSTAINABLE TANNING CONCEPT

Objective: Creating a sustainable tanning concept and superior leather performance Zeology is a truly sustainable alternative to existing tanning agents. It is zeolite based and therefore chrome-free, heavy metal-free, and aldehyde-free. It delivers both sustainability benefits and superior leather performance. Zeo White, the Zeologytanned leather intermediate, is unsurpassed in characteristics such as grain tightness, physical leather properties, light fastness, and heat resistance. In addition, its bright white color enables white leather, as well as lighter and brighter colors than were ever possible before.

2. PROVIDING BIO-BASED SOLUTIONS

Objective: Valorisation of bio-based side streams

Through bio-based solutions, implementing a substantial component of the concept of the circular economy around leather chemicals and to support leather manufacturers in reducing their footprint. The current focus is on replacing petroleum-based ingredients with bio-based alternatives. These alternatives should deliver on-par or even better results and help make the leather chemical sector more sustainable, reducingCO_2 emissions from production and reducing non-degradable and toxic substances

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 B

3. LIFE BIOPOL

Objective: Synthesis of a new class of products

LIFE Biopol's main target was the synthesis of a new class of products, named biopolymers, which represent innovative and eco-friendly alternatives to traditional petrochemical products used in the leather production process. These biopolymers are produced using industrial low or no value side streams as raw materials, in order to enhance the circularity across different industrial sectors. These products appeared on the market in 2020 (Biopol range) supporting leather manufacturers to create leathers with a high degree of renewable ingredients.

4. LIGNIN MODIFIED RE-TANNING AGENTS

Objective: Improving the biodegradability

Since 2019 Smit & Zoon has a patent-pending novel process to use lignins to modify re-tanning agents. The aim is to increase the renewable content and improve the biodegradability of phenolic syntans through (partial) replacement of phenol with industrial lignins by modifications of traditional phenolic syntan chemistry.

The first prototypes with this sustainable technology, made in 2020, achieved to be free from phenol and formaldehyde, increased renewability, improved biodegradability, and yielded good leather properties in comparison to traditional fossil-based phenolic syntans.

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 C

5. BIOPOLYMERS BASED ON SUGAR BEET PECTINS

Objective: Creating bio-based ingredients

Working with Wageningen Food & Biobased Research, and with Royal Cosun, a processor of beet pulp, Smit & Zoon has found that pectins from sugar beet pulp are suitable as bio-based ingredients in the production of leather.

These pectins serve as substitutes for non-biodegradable polymers in chemicals for the wet-end production process. They can also influence the characteristics of finished leather, for example, its color intensity. As a direct result of our own research, Smit & Zoon has a patent application on the usage of pectin for leather processing in general.

6. OPTITAN

Objective: Minimizing the environmental impact, while optimizing leather performance Optitan is a premium range of (re-)tanning products with the highest achievable active matter contents with no diluents. Optitan has minimalized free formaldehyde and phenol contents in the product due to upgraded chemistry

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 D

7. PFC-FREE WATER REPELLENT LEATHER COATING

Objective: Eliminating hazardous substances from our product range

In line with our program to eliminate hazardous substances from our product range, we developed and introduced Aguastop W200, the new generation for water repellent finishing products. An interaction between material science technology and special functionalized polysiloxanes allowed us to engineer a completely PFC-free product. This improved, water-based product gives anti-soiling and protection against water in a more sustainable way.

8. RESTRICTED SUBSTANCES

Objective: All products to comply with (M)RSL

Since 2016, Smit & Zoon has its own Restricted Substances List (RSL). This is a list of substances not present in any of our products. A steering group reviews and updates the Smit & Zoon RSL annually, taking into account the following sources and criteria: Candidate List of Substances of Very High Concern (ECHA); Authorization List (Appendix XIV of REACh); List of Restrictions (Appendix XVIII of REACh); Manufacturing Restricted Substances List (MRSL of ZDHC).

The Smit & Zoon RSL remained unchanged, apart from changes in the official EU lists, which were, of course, included. Additionally, we are proactively eliminating unwanted substances that are not (yet) on the list of restricted substances. Substances to be eliminated are selected based on their hazard and on information from the market.

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 E

9. OPERATIONAL EFFICIENCIES

Objective: No negative impact from Smit & Zoon production processes

In 2020 we finalized a 3-year project on "aging". Like many chemical companies in The Netherlands, we have parts in our plants in Weesp and Amersfoort that are relatively old. The Dutch safety authorities require chemical companies to have a clear approach to controlling risks that are related to aging equipment and installations. We have made an extensive assessment of the safety, environment, and business continuity for all storage and process units. Based on this, we have set up multi-year plans for the upgrading of the maintenance programs and the replacements. The execution of the plans started in 2020.With this approach, we are confident that we can keep guaranteeing safe, compliant, and reliable operations in the interest of all stakeholders. Projects were started to finalize that all global production plants are certified for ISO 9001 (quality management), 14001 (environmental management), and 45001 (safety management) in 2021.

Smit & Zoon - Milestones 2020- Reducing the Footprint & TOWARDS CIRCULARITY Table – 27 F

10.PRODUCT PASSPORT

Objective: Reducing waste in the leather value chain

In 2020, we continued to inform customers about the use of the Product Passport. Even though every leather manufacturer represents a unique production process, the Product Passport continues to get positive feedback in optimizing the Wet-End production for the whole industry. Providing these detailed data to a leather manufacturer is crucial in making the right decisions around the most sustainable production, reducing waste while using most suitable chemical products.

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28. CLRI – TECHNOLOGY - LEATHER PROCESSING, LEATHER CHEMICALS, ENZYMATIC PRODUCTS, ENVIRONMENTAL TECHNOLOGY, HEALTH CARE PRODUCTS FIGURE – 28 A

Contents

S.NO	NAME OF THE TECHNOLOGY	CODE NO.
	CATEGORY I - LEATHER PROCESSING TECHNOLOGIES	
1.	WATERLESS CHROME TANNING TECHNOLOGY (WCTT)[C]	LMT01
2.	PRESERVATION-CUM-UNHAIRING (PCU) PROCESS[H]	LMT02
3.	ODOR ABATEMENT SYSTEM FOR TANNERIES[H]	LMT03
4.	EO BASED ZERO WASTEWATER DISCHARGE PROCESS[C]	LMT04
5.	DRY TANNING (DISPERSING AGENT)[C]	LMT05
6.	RAPID FIBRE OPENING BY COCKTAIL OF ENZYMES[H]	LMT06
7.	CHICKEN FEET LEATHER AND LEATHER PRODUCTS[C]	LMT07
	CATEGORY II - LEATHER CHEMICALS	
8.	RETANNING CUM LUBRICANT AGENT - RELUB-17[H]	LCT01
9.	RETANNING AGENT PROTAN KH[H]	LCT02
10.	PROTEIN BASED RETANNING AGENT CROSTAN EA[H]	LCT03
11.	PROTEIN BASED RETANNING AGENT DERMATAN RT[H]	LCT04
12.	CHROME –MELAMINE SYNTAN[C]	LCT05
13.	RETANNING AGENT NANOTAN NP[H]	LCT06
14.	LIGNIN BASED RETANNING AGENT[H]	LCT07
	CATEGORY III – WASTE MANAGEMENT TECHNOLOGIES	
15.	IMMOBILIZED OXIDATION REACTORS (IOR) FOR WASTEWATER TREATMENT[C]	TWM01
16.	SOLE FROM FLESHING'S WASTE[H]	TWM02
17.	SEQUENTIAL OXIC-ANOXIC BIO REACTOR (SOABR) TECHNOLOGY FOR REDUCTION OF PRIMARY CHEMICAL SLUDGE IN WASTEWATER TREATMENT[R]	TWM03
18.	SECURE LANDFILL (SLF)[C]	TWM04
19.	PREPARATION OF COMPOST FROM ANIMAL HAIR WASTE (PROCESS BASED TECHNOLOGY)[C]	TWM05
20.	CO-DIGESTION OF TANNERY SOLID WASTE FOR BIOGAS GENERATION[C]	TWM06
	CATEGORY IV - LEATHER PRODUCT TECHNOLOGIES	
21.	SMART LEATHERS RESPONSIVE TO ELECTRICAL AND MAGNETIC FIELDS[H]	LPT01
22.	SIZING SYSTEM FOR CHILDREN SHOES[H]	LPT02
23.	DIABETIC FOOTWEAR[C]	LPT03
	CATEGORY V - HEALTH CARE PRODUCTS	
24.	HIGH VALUE PRODUCTS FROM TRIMMING WASTE (HVP-T)[C]	HCP01
25.	COLLAGEN SHEET(WOUND CARE)[C]	HCP02
26.	AMIPROJIL-PASTE/POWDER[H]	HCP03

[C] represents already commercialised, [r]represents ready for commercialisation

CSIR-CLRI Technologies are Intellectual Property (IP) Rights protected. Efforts are made to secure appropriate IP Rights like PATENT (in India and abroad) and COPYRIGHT in respect of the new developments.

Reference : Figure -28 A. CLRI – Technology - Leather Processing, Leather Chemicals, Enzymatic Products, Environmental Technology, Health care products ppbd@clri.res.in clriinfo@clri.res.in

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28. Figure -28 A. CLRI – Technology - Leather Processing, Leather Chemicals, Enzymatic Products, Environmental Technology, Health care products ppbd@clri.res.in clriinfo@clri.res.in ■

(Contd. Part-III in next issue)

Shanghai will host the 22nd UITIC International Technical Footwear Congress: AI and Sustainability at the Centre of Innovation

Shanghai is preparing to become the global hub of footwear innovation. **From 31 August to 3 September 2025**, the Chinese metropolis will be the venue for the **22nd UITIC International Technical Footwear Congress**, an unmissable event that promises to redefine the future of footwear under the crucial theme: **"Competitiveness and Sustainability in the Era of Artificial Intelligence"**.

Jointly organised by **UITIC** and **CLIA** (China Leather Industry Association), in collaboration with **Assomac**, the congress aims to explore the profound transformations that Artificial Intelligence and sustainability are bringing to the industry.

Artificial Intelligence: A Turn in Design and Manufacturing

Artificial Intelligence (AI) is emerging as the driving force behind innovation in the industry. UITIC President Sergio Dulio points out: "More than half of the submitted papers are about AI, with mature and exciting projects. This is a breakthrough." This highlights the increasing adoption and experimentation of AI, particularly in the footwear product design phase. Companies are recognising AI as a strategic lever to rethink design processes, opening up unprecedented scenarios for creating innovative and competitive footwear.

Sustainability: From Obligation to Competitive Advantage

Alongside AI, sustainability is emerging as a key pillar. No longer just a regulatory constraint, but a decisive competitive factor for companies in the industry. 'Today, companies recognise sustainability as a strategic element for competitiveness,' says Dulio. This paradigm shift underlines how sustainable footwear production has become an intrinsic value, essential for the long-term prosperity of the industry.

A Programme Rich in Content and Distinguished Speakers

The 22nd UITIC Congress will offer a high-profile programme, divided into four main thematic sessions: **materials and products innovation, sustainability as an opportunity for competitiveness, smart and AI empowered manufacturing and successful industrial stories.**

Among the most eagerly awaited speeches are **Nicoline van Enter's** keynote speech on the application of AI in footwear development and **Liu Wei** of the Li Ning company. The concluding panel will be entirely dedicated to the future of AI in the footwear world, promising food for thought and vision. The quality of the interventions is guaranteed by authoritative speakers, as highlighted by Dulio.

The Growing Chinese Influence in Footwear Innovation

This edition of the congress marks an unprecedented Chinese participation. "There was an important participation of Chinese companies in the Call for Abstract with high quality proposals and briefs," reveals Dulio. This reinforces China's role as a key player in the development of innovative footwear technologies and strategies.

Innovation: The Key to Overcoming Industry Challenges

At a delicate time for the global footwear industry, investment in innovation is more crucial than ever. Emerging technologies, in particular artificial intelligence, represent a keyway to regain competitiveness. This is particularly true for manufacturing companies that can no longer compete on volume but can distinguish themselves through process and product innovation.

An Unmissable Opportunity for the Entire Footwear Production Chain

The 22nd UITIC International Technical Footwear Congress is an essential event for the entire footwear value chain. From conception to production, from R&D to distribution, the event offers a unique opportunity for a fundamental update, constructive discussion and redesign with a view to the future. As Dulio emphasises, it is a crucial moment not only for manufacturers of finished shoes, but also for those who develop and supply the technologies that make them possible.

The Evolution of UITIC and Future Prospects

The congress is not only a point of arrival, but also a springboard for the future of UITIC. With the association wondering about its future evolution, important news can be expected for the next editions.

Don't miss the opportunity to be part of this transformative event. The 22nd UITIC International Technical Footwear Congress in Shanghai is the gateway to understanding and anticipating the profound transformations taking place, exploring how Artificial Intelligence and Sustainability can become the pillars of future competitiveness in the world of footwear. ■

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GLOBALSTAR and GLOBALSTAR-E : Maximizing Production with Gemata's New Generation of Sustainable Machines

Innovation, quality, and long-lasting performance - designed with environmental responsibility in mind - have always been core values at **Gemata**. The company's roller finishing machines are built to retain their value over time, especially when reconditioned to give them a second life and renewed efficiency.

To reduce the environmental impact of used machinery and provide access to cutting-edge technology, **Gemata** has developed **GLOBALSTAR** and **GLOBALSTAR-E** : two advanced solutions that complement the range of new machines, by implementing the latest technical innovations.

These machines are developed by recovering approximately 40% of components from previous MEGASTAR-s and TOPSTAR-s models, which represents a no-compromise sustainable approach. Specifically engineered for reverse processing, they offer outstanding value for money.

GLOBALSTAR-E, equipped with a sturdy stainless-steel feeding table, is ideal for reverse processing of stiff leathers used in footwear and leather goods. It performs especially well with thicker leathers.

GLOBALSTAR, on the other hand, features a spreader and dedicated feeding unit for soft leathers, making it suitable for processing all leather types in reverse mode. Cowhide for footwear and leather goods, or very light clothing sheepskins and goatskins (asthinas 0.4 mm) are well catered for. The system ensures precise application and unmatched coverage of surface defects.

GLOBALSTAR

Both machines are designed to meet a wide variety of application requirements, even on leathers with heavy defects or with high thickness variations, including:

- Stuccos or highly viscous products for defect correction
- Pre-coats, both liquid and foamed, on buffed or full-grain leathers
- Primers and water-based pigmented coatings on leather or splits

GLOBALSTAR-E

- Topcoats and fixatives on smooth or fine-grain embossed leathers
- Impregnation
- Fatliquoring treatments with oils and waxes, bothcold and hot, using the optional cylinder heating system
- Adhesives and resins on the flesh side of the leather

GLOBALSTAR and **GLOBALSTAR-E** are equipped with a large-diameter counter roller and a rubber transport belt, both based on the GREENSTAR-s series. This technical solution ensures that the coating capacities of the engraved rollers on these models match those of the MEGASTAR-s and GREENSTAR-s machines. In addition, the more advanced **GLOBALSTAR** model can be equipped not only with chrome-plated rollers, but also with Long-Life rollers, offering enhanced durability and a low-friction surface treatment for long-lasting performance.

The small-diameter return rollers of the rubber belt facilitate the leather detachment process and eliminate the contamination of the flesh side as the leather can be removed without the need for a transfer conveyor.

Optional dedicated software and hardware packages are available to enable integration with the tannery's company network and the Internet. These allow for production and process data acquisition via the company ERP system and enable remote assistance from **GEMATA** technicians when needed.

www.gemata.com

Finishing of High Performance Leather-Part 5 Finishing of Automotive leather

By
Pulok Mazumder
Technical Consultant,TFL Quinn India Pvt Ltd

(Contd. from January 2025 issue)

Introduction

The characteristics and properties of leather goods and garment leather are largely influenced by changing fashion trends. Automotive leather, however, is a high-tech material whose attributes are shaped by the stringent fastness requirements demanded in the industry. Automotive upholstery typically undergoes 25-30 high-performance test methods to ensure durability and quality.

Regional Differences in Automotive Leather Aesthetics and Specifications

The automotive upholstery market in Asia, particularly in Japan, Korea, and China*, presents a significant growth opportunity. Numerous tanneries in the region have established joint ventures with European and American partners, leveraging their expertise in Original Equipment Manufacturer (OEM) leather production. Meanwhile, tanneries without such partnerships primarily produce leather for the Aftermarket segment.Chinese leather production is diverse, encompassing both Aftermarket and OEM leather. The competition in this sector is intense, especially as many tanneries have relocated to China to reduce costs. Additionally, Chinese tanneries manufacture leather for Korean OEMs, while other countries play a relatively minor role in the global automotive leather market.*

The American automotive leather industry has a long-standing history*, with automotive upholstery used on a much larger scale compared to European and Asian markets. American OEMs remain the largest globally, facing strong competition from Asian and European manufacturers. Comfort is a priority for American car seats, leading to compromises in specifications and leather aesthetics to align more closely with European and Asian preferences-which favor a more leather-like appearance. Traditionally, automotive leather was firm and fully coated with a finish, making it barely distinguishable from PVC materials. However, evolving trends have influenced changes in design and texture.*

European automotive leather is generally softer and more visually appealing *compared to that used in American cars. The finishing process differs significantly, with European leather receiving thin coatings, resulting in a more natural and attractive appearance. In contrast, American automotive leather undergoes heavier coatings with fewer layers, producing a less visually refined finish.*

In his own words, Pulok Mazumder is "a perfectionist, an avid reader, obsessed with plants and nature, and occasionally with leather." An alumnus of the University of Calcutta, Pulok holds a B Tech in Leather Technology. He also counts ISB Hyderabad and IIM Lucknow among his alma maters.

Pulok has extensive experience producing, marketing, and selling chemicals crucial to the leather processing Industry. In addition, he has first-hand knowledge about setting up new businesses and solving operational challenges specific to this industry.

Pulok started his career with production stints at tanneries in Kolkata. He then spent the next 19 years at Sandoz India Ltd and Clariant Chemicals India Ltd , handling different operational and business development responsibilities.

He is currently working with TFL Quinn India Private Ltd for the last 16 years as the General Manager, Head of Sales, Finishing. He is also associated with institutions like Hartcourt Butler Technolgical University. Kanpur, the Northern Chapter of ILTA, and not-profit organizations like Parivartan and Impact & Dialogue Foundation. As part of his job, Pulok has to travel extensively worldwide, which fuels his creative instincts.

Pulok discovered his love for writing during high school. He started by writing poems and essays in local magazines and college newsletters. Pulok was eventually selected as a regular contributor to Sainik Samachar, a Ministry of Defence publication.

After working for over 40 years in the leather industry, he still finds time to read and write regularly. A husband and father of two young adults, Pulok's other interests include innovative terrace gardening and parenting canines.

Today we will discuss In this third Part 4 of High Performance Leather about "Finishing of Furniture Upholstery Leather -Definition, raw material, market, consumer, producer and key Criteria of leather processing of this kind of leather, selection of product, Formulation - Specification and challenges faced by tanners and leather Engineer".

In recent years, many European automotive leathers have adopted characteristics similar to furniture leather-soft, lightly pigmented, and pleasant to the touch-with an expanded color range to meet consumer preferences.

Distinct Aesthetic Differences Across Regions

European automitive leather are some what softer ,attractive than American cars. The finish applied in thin coats compare to American finishing using less coat but heaviur producing a less attractive leather appearance.In europe many automotive leather now look more similar to furniture leather, soft and lightly pigmented, pleasant handle with increased color range.

There is distinct differance in aesthetic values (physical) between three region producing Automotive leather.Automotive leather varies in physical properties based on regional manufacturing preferences:

Asian (especially Japan) : High physical performance requirements

European : Medium-to-high physical performance requirements

American : Low-to-medium-to-high physical performance requirements

Key Physical Test Specifications by Region and Car Brands

The specific physical test requirements for automotive leather depend on the intended end use and brand specifications. A brief overview of the requirements across different regions and automotive brands is outlined below:

Asian secification and requirement.

• Cold Flex (General) • Welt (Tayota) • Rubber Welt • CS10 Gakushin • P C I • Crocking

The physical are all specified by the OEM .The rquired physical for the After Market are not too high ,but have some special physicals. Ingeneral, the trend from the brands is high physicals. but the leather should have a natural aspects.

European secification and requirement.

• Flex (cold/dry/wet)) • Taber CS 10 • Veslic

Besides these requirements high ageing values -Heat ageing 120°C/18h and Adhesion ,non squaking surface combined with high taber test values,water vapour permeability for aniline and semi-aniline leather, soiling resistance surface and last but not leat Hydrolysis resistance.

Optical requirement -dull -very dull surface without grey break, deep black color combined with high dullness, narrow color matching tolarence in all light -DA, DB, DL. These tolarences are also valid for metamerism.

American specification and requirement.

• French Seam • H 18 • Piling • P C I • Fade 488kJ/225kJ • Light fastness • Deck Seam Test

In general, there is a higher differance between the automotive seating and steering wheel leather .Main differance is the **Chemical Test on steering wheel ,which is predominantly displayed by brands -**

- Insect repellant test
- Suntan Lotion Test

The physical requirement varies from manufacture to manufacture but all Automitive for seat require high abrasion resitance:

- Taber H18 by GM
- French Seam Piling by Ford.
- Deck Seam Test by Chrysler.

Flex requirements are lower than European or Asian ,longterm ageing test ,e.g Fade,Desert test ,low to medium aesthetic of the different articles.

Other Key Physical Testing in Automotive Leather Production

Physical tests play a critical role in automotive leather manufacturing, ensuring compliance with high-quality system norms set by the industry. These standards significantly influence test specifications for car upholstery leather. In addition to standard physical performance evaluations, leather must meet stringent finishing-side and end-use tests, including:

- Fogging
- Ageing Tests (Heat and Hydrolysis Resistance)
- VOC-Free Topcoat Requirements
- Anti-soiling and non-squeak prperties
- Odour
- Formaldehyde

There is also growing demand for biodegradable and non-chrome leather, driven by sustainability concerns and regulatory requirements.

Regional Variations in Automotive Leather Testing and Performance Expectations

There is a distinct contrast between **European and American automotive leather standards**. European automotive leather is designed to be soft and elegant, while American automotive leather is engineered for higher wear resistance.

European automotive leather must withstand the CS10 Taber test, ensuring durability while maintaining flexibility and aesthetic appeal.

American automotive leather faces the tougher H18 test, prioritizing abrasion resistance over flexibility.

Asian markets, particularly Japan, combine these requirements-resulting in leather that is soft yet highly resistant to abrasion.

Interestingly, leather that successfully meets **the H-18 Taber or French Seam Pilling test (Ford Spec)** does not necessarily pass the **Toyota Welt Test (High Abrasion Test)**, further illustrating **the complexity of automotive leather formulation**. Achieving compliance across all tests requires multiple formulations and processes rather than a singular approach.

Understanding Fogging in Automotive Interiors

Fogging refers to the evaporation of volatile substances from interior materials-such as plastic, textiles, and leather-caused by heat exposure. These substances condense on the windscreen, leading to visibility and safety concerns.

Effects of Fogging :

- Impaired driver vision
- Safety hazards
- Adhesion of dirt and dust particles
- Hardening of interior materials, especially plastics

To achieve automotive leather with minimal fogging contamination, manufacturers must coordinate the entire leather processing cycle.

The factors contributing to fogging fall into three main categories:

- Raw Materials
- Auxiliaries (Chemicals and treatments)
- Production and Process Management

Efficient degreasing of the wet blue ,the selection of suitable, specially polymers and fatliquoring agents but also intensive, through drying help to optimise the fogging properties of leather.

Addressing these factors effectively ensures high-quality, low-emission leather, meeting both performance and environmental standards.

Fogging Test

Objective: Determines whether evaporated substances from leather affect visibility inside vehicles.

Method: Leather samples are heated, and condensation is measured using Reflectometric and Gravimetric fogging test standards.

Testing Arrangements

The test specimen (leather sample)is heated in a glass beaker,which immersed into an oil bath, and volatile leather ingardients are condensed on a cooled glass plate or aluminum foil .(Reflectometric Test and Graviometric Test respectively)

Reflectometric fogging Test

- The result expressed in %
- Test method and requirement summary -

Test method	Requirement
3 hrs /100*C (DIN75201-A)	>60%

Graviometric fogging Test

- The result expressed in mg
- Test method and requirement summary -

Test method	Requirement
6 hrs /100*C (DIN75201-B)	<3.0 mg resp. < 5.0 mg

Hydrolysis in Automotive Leather

Hydrolysis is the chemical breakdown of materials due to prolonged exposure to moisture and heat. In automotive leather, hydrolysis resistance is crucial to ensure durability and longevity, especially in humid and warm climates. **The hydrolysis, the reaction with water,can influence both the crust leather and the finish. The intensity of reaction is influenced by temparature and by time. The crust is extremely important too.**

Effects of Hydrolysis on Leather

- Degradation of polymer coatings, leading to surface damage
- Loss of mechanical strength, making leather brittle
- Appearance changes, such as discoloration or tackiness
- Reduction in abrasion resistance, impacting performance

Preventing Hydrolysis in Automotive Leather

To enhance hydrolysis resistance, manufacturers focus on: Using high-quality retanning agents to strengthen fiber structure.The crust must have an excellent fixation of fatliquors, dyestuffs, etc.

Applying hydrolysis-resistant finishing chemicals to maintain durability. The chemical stability of Polyacrlics and polyether polyurethane are more suitable for hydrolysis resistant finishes .

The most critical component of hydrolysis resistant finishing films are the polyurethane binders.

Employing optimized tanning processes, such as chrome tanning, which offers superior resistance compared to vegetable tanning.

Hydrolysis Resistance Test

Objective: Assesses how well the VOC-free topcoat withstands moisture and heat degradation.

Method: Samples are subjected to high-temperature and humidity cycling (ISO 1419: Tropical Test Method C). There are different demand for hydrlysis resistance tests on the market starting from low (1000 hours, 7% RH, 38*C, no more further tests to very high 900 hours, 90 % RH,70*C, then Veslic wet rub 300 and Bally flexes 100000. Between these two extreme there are also some other tests where hydrolysis may occur ,like Fade and Fakra tests.

VOC-Free Topcoat in Automotive Leather Finishing

A VOC-free (Volatile Organic Compound-free) topcoat is a specialized finishing layer applied to automotive leather to enhance durability while minimizing harmful emissions. VOCs are chemical compounds that evaporate at room temperature, contributing to air pollution and health risks. Eliminating VOCs from the topcoat aligns with stringent environmental regulations and sustainability goals.

Benefits of VOC-Free Topcoat

- Reduced environmental impact - Lowers emissions, improving air quality
- Compliance with regulations - Meets strict automotive industry and governmental standards
- Safer working conditions - Minimizes exposure to harmful chemicals in manufacturing
- Improved indoor air quality - Reduces volatile emissions inside the vehicle
- Maintains leather aesthetics - Ensures high abrasion resistance, flexibility, and visual appeal

Challenges in Developing VOC-Free Topcoats

- Maintaining durability - Ensuring the leather meets wear and abrasion resistance standards
- Achieving optimal adhesion - Developing coatings that bond effectively without traditional solvents
- Preserving aesthetics - Balancing protection with softness and natural leather appearance
- Finding alternative binders - Using water-based or bio-based polymers to replace solvent-based finishes

Industry Trends & Innovations

- Water-based coatings - Increasingly used as safer alternatives to solvent-based finishes
- Bio-based topcoats - Derived from renewable materials for enhanced sustainability
- Nanotechnology coatings - Improving wear resistance while maintaining breathability

Test Methods for VOC-Free Topcoats in Automotive Leather

To ensure high-performance VOC-free topcoats, automotive leather manufacturers conduct rigorous testing. Below are key test methods used to evaluate these coatings:

1. Volatile Organic Compound (VOC) Emissions Test

Objective : Measures the total VOC emissions released from leather surfaces.

Method : Samples are placed in a sealed chamber, and VOC levels are detected using gas chromatography-mass spectrometry (GC-MS).

Industry Standards: Compliance with ISO 16000-9 and automotive-specific VOC regulations.

Anti-soiling and squeak resistant top coat

In the last few years upholestry and automotive interior designers increasing selected leather in light colours with a very high degree of mattnes.Very often, the prisine look in the show room is lost due to soiling of the leather surfaces. Today, soiling is the main reason for claims regarding upholestry and automoitve leather.

Another property of automotive leather becomes more important during last few years regarding the reduction of by car manufacturer, the noise created by a uneven movement when two surfaces are rubbed against each other. Leather has tendency to produce this effect, but it can be measured by so-called “Sticked-Slip” test.

Development of Anti-soiling topcoat

A new anti-soiling system based on matt water based polyurethane dispersion has been developed by two MNC concentrating on automotive system. Togather with other auxilliaries, it produces asignificantly improved soiling behaviour compared to other systemss based on organic or silica based matting agents.

Soiling means dirt accumulation ,stimulated by the Martindale tests,is mainly limited to the surface of the coating system,there is little absorption into the coating .The porosity and roughly structured surface of the coating provide "anchor points" that allow the dirt to become firmly attache to the article.It is therefor essential to create a surface tha has as few of these anchor points possible.

Odour

Typical leather smell is mixture of many individual components-similar tp purfume. leather smell develop slowly after production and last long. Changes over time ,off odour are caused by technological errors or poor auxilliaries simultaneously influenced by humidity.

Test Methods for Anti-soil Topcoats in Automotive Leather

Test method	Standard topcoat	Anti-soil topcoat	Requirementss
EMPA I 70-7-I 72 (1000 cycles, piling mode)	2/3	4/5	>= 4
EMPA I 04 (300cycles abrasion mode)	2/3	4	>= 4
Dye Ingress Test (1000 cycles,after cleaning)	3/4	4/5	>= 4/5

Thera are 70 types of odour identified. Leather smell is not the primary goal of leather production ,now Asian and European customer rejecting leather due to negative results of odour tests.Expectation of Asian market is -no smell

Typically odour is combinations of vegetable and synthetic retanning agents ,modified fish oils in fatliquoring process ,and volatile components from the finish .

Remedy of odour

By selecting and combining suitable products and drying the leather throughly at the crust stages and after the finishing process ,volatile substances with penetrating odour can be largely removed. Synthetic fragrances can be used to make the smell more acceptable.Rsearch and development work is going on by major che,ical supplier .

Testing Method

Analytical method for identification off -odour availble ,but too expensive and time consuming. Hide powder is used for first preliminary testing. Aroma profile analysis possible ,useful in selected cases ,but limited benefit. Modified odour test conditions of VDA270 LEAD TO LOWER PROBLEMS AND APPROVAL PROCESS BY BRANDS

Formaldehyde

Formaldehyde can be introduced into leather at any stage in manufacturing process ,but mostly applied at the tanning and retanning stages .The situation concerning consealed sources of formaldehyde is more complex and often difficult for tanners to make clear assesment.

Automitive manufacturer generally demanding formaldehyde emmissions do not exceed 10 ppm when the leather istested in gas phase method.

Method of analysis of formaldehyde in Automotive leather

Gas Phase Method followed by automotive brands

Only the formaldehyde that is released from the dry leather into the passenger compartment is relevant. Encompasses "Free" Formaldehyde

Procedure : Leather is suspended in a sealed vessel above water at 0*/3 hours until water/gas phase /leather system reaches equillibrium.

Eliminating formaldehyde from leather

The simplest approach is to avoid using products which contain formaldehyde in formulation.

Modifying mechanical work performed can also reduce formaldehyde content . incorporating formaldehyde scavengers, modifying washing and drying process

Relevent aspects of manufacturing automotive upholestry

- Article including test specification
- Crust
- Location of the tannery
- Machinary and Mechanical operations
- Chemicals and formulations

Article

Before the start of the process one need to check which specifications need to follow. As stated earlier there is big difference between seating leather vs steering wheel leather.

Crust

The crust mainly bovine is buffed or stuccoed ; some big player of USA started using buffalo crust sourced from Kanpur India.

Location of the Tannery

Leon Mexico leads the world in automotive leather production because of all US Car maker established operation there -there are several automtive clusters. The city is close to 0 OEM plants.In order to gain cost -effectiveness and give price concessions to the OEM.

Machinary and Mechanical Operations

Reverse roller coating is now the accepted norm used for base coat and finishing these types of leather with application 2 gm/sq ft .Air less or air assisted air less spray is standard for all spraying.

Intermediate milling if necessary done ,in many cases milling is not done, if milling needed leather will first embossed with require grain on rotative Burgi Super Press with its high out put being the machine of choice.

Staking before embossing is rarely done if the leathee is to be milled as the staking and dedustingafter milling is thought to regain the yield. Erretree milling drums are mainly used for high throughput and ability to add moisture.

If possible topcoating will be limited to one coat with add onas high as 2.0to 2.5 ggms/sq ft dry.Drying equipment is chosen to do the job in the shortes time and infrared dryers are mainly used .

All crosslinking is done with in-line equipment which meters and mixes the crosslinker with the finish in spray lines,thus eliminating pot life concern and operators error.

Summary of Mechanical Operations

Application

- Base coat with new generation roller coater
- Base coat and Topcoat with Airless/air assited airless spray.
- Oversparay and topcoat by HVLP

Procedure

- RRC base ---Airless Overspray--- Airless or HVLP Top --dry--- Stake--- Emboss
- RRC base---Airless Overspray--dry--Emboss --Mill--Stake ---Air less or HVLP Topcoat

Add on

- Basecoat approx. 4-gm sq ft .dry
- Top coat approx. -2 gm sq ft .dry

Viscosity

- HVLP APPROX.25 'FC 4
- Air mix and Reverse roller coater approx. 50 FC 4

Pot life

- In line x-linking is the state of art method now adays.

Drying

- Conventional Steam Heaters
- Infrared Dryers
- Combinations

Embossing

- Rotative enbossing with approx 100 hides per hour

Staking

- Important for yield gain

Chemicals and formulations

- Economic Chemicals Use of Acrylics or compact)
- Abrasion rwsistant base resin and top
- Ageing resitant products
- Chemical resitant products

Formulations and application

All taneries producing automotive leather are depending on the experiences and knowledge from their own technician,from the chemical supplier or consulting people.

- Technician decides which products to use in order to pass the required spec and appearance
- **Viscosity :** Suitable Application viscosity for spraying (HVLP, Airless, Automised Air) or for the roller coater (Syncro or Reverse Jumbo Star) Suitable application viscosity for full grain , corrected grain or split.
- **Moisture Content :** Before Finishing ,Before Embossing,Before Topcoat application.
- **Milling :** Issues like if crust hast to be milled before finishing or not and when it sholud be milled during finishing.

Future challenges

There are many areas for technologicalimprovement in the field of automotive leather manufacture, including:

- finishing system which donot require crosslinking agents.
- Advance and efficient drying methods, radiation drying method proven in textile oating sector.
- Crust leather ith optimum fastness to heat,light and yelloing.
- Bio-degradable leather to enable disposal by composting without releasing harmful substances.
- Automotive leather with a more natural appearance, similar to furniture upholestry leather.

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(Contd. Part- 6 in next issue)

GSC Group S.p.A among the partners of the Arzignano Leather Capital® project, promoting territorial excellence

GSC Group has obtained partnership certification for the registered trademark Arzignano Leather Capital®, an official recognition that attests to adherence to the highest standards of **quality, legality, sustainability** and **innovation** within the **Vicenza tanning district**. The award ceremony took place on Wednesday, May 28, 2025, at the Achille Beltrame Council Chamber in Arzignano, in the presence of **local authorities** and representatives of the project's **Promoting Committee**.

Dr. Caterina Serafini, Chief Financial Officer (CFO) of GSC Group, collected the recognition on behalf of the company, participating in the ceremony alongside other selected enterprises. The certificate was presented by the **Mayor of Arzignano, Alessia Bevilacqua** and by the **Councilor for Strategic Projects Enrico Marcigaglia**, president of the **"Arzignano Leather Capital"** Committee and promoter of the initiative.

"This recognition represents a source of pride for us," declared **Dr. Caterina Serafini,** CFO of GSC Group. "Operating in a territory like **Arzignano**, which has always been synonymous with **industrial excellence**, means being an active part of a **value ecosystem. Sustainability**, for us, is not just a **strategic objective**, but a guiding principle that integrates **innovation**, **social responsibility**, and **environmental respect**. Receiving the right to use this prestigious 'Arzignano Leather Capital' trademark motivates us to continue with even greater determination along a path of shared growth with our territory."

"Arzignano Leather Capital" is a strategic project promoted by the **Municipality of Arzignano** and coordinated by a dedicated Committee chaired by the Councilor for Strategic Projects **Enrico Marcigaglia**. The initiative was created with the objective of enhancing virtuous companies within the **tanning district** through the assignment of a **distinctive trademark**, granted to companies that comply with rigorous **standards** in **ethical, environmental,** and **production** areas.

The concession to use the trademark is subject to compliance with **10 fundamental requirements**, including : **fiscal** and **contributory regularity, workplace safety**, possession of **environmental certifications, legality** and **corporate morality**. The evaluation of applications is entrusted to the **"Arzignano Leather Capital"** Committee, which is responsible for verifying that each partner company fully represents the project's values and contributes to strengthening the **image** and **identity** of the district at **national** and **international** levels.

GSC Group's entry into the **"Arzignano Leather Capital"** project represents recognition of the coherence between the **company's vision** and the founding principles of the initiative. The company actively shares and promotes the values of **quality, innovation** and **environmental sustainability**, placing a **responsible corporate culture** oriented toward the future at the center of its activities.

Being part of this project means strengthening the bond with the **territory** and contributing to the development of an **industrial model** that combines **production excellence, ethics** and **environmental awareness**.

GSC Group wishes to thank the **Municipality of Arzignano** and the **Promoting Committee** for the important recognition received, which represents further confirmation of the company's **constant commitment** to **responsible innovation, process quality** and **environmental respect**.

Being part of **"Arzignano Leather Capital"** means for GSC strengthening its role within the district, actively contributing to the promotion of an **evolved, ethical** and **sustainable industrial model**, capable of enhancing the **territory** and projecting it toward new **growth** opportunities.

Over the years, GSC Group has consolidated its commitment to **quality, sustainability** and **corporate responsibility** through obtaining numerous **internationally recognized certifications**, including:

- **ISO 9001** Certification
- **ISO 14001** Certification
- **OHSAS 18001** Certification
- **ISO 14064-1** greenhouse gas inventory Certification
- **ISO 45001** Certification
- **ISO 14067 : 2018** Certification
- **ZDHC Level 3**

These recognitions testify to GSC Group's constant attention to **quality, transparency** and **sustainability** of its production processes, in line with the objectives of the **"Arzignano Leather Capital"** project.

Together to strengthen the leather and Made in Italy supply chain

The fifth edition of "The States General of Italian Leather Goods", a strategic moment of discussion between companies, institutions and stakeholders in the fashion world, organized by **ASSOPELLETTIERI** in colla-boration with **The European House-Ambrosetti** and **Municipality of Florence (Comune di Firenze)**, has come to an end.

For the occasion, Assomac, which supported the initiative together with **UNIC - Concerie Italiane** and **Assocalzaturifici**, was represented by Vice President **Cristiano Paccagnella** and General Manager **Agostino Apolito**.

As the Association of Machinery and Technology Manufacturers for the Leather Goods, Tanning and Footwear Sectors, we strongly believe in the value of collaboration throughout the supply chain. Only through concrete synergies and strategic investments, oriented towards digitization, the training of new resources and the development of products and processes, can we consolidate the identity of Made in Italy and face global dynamics with determination.

Technologies, also mentioned during the event, represent an essential component of the production process. Combining craftsmanship, industry and strategic capital, without distorting the identity of our companies, is the key to producing distinctive goods, a symbol of internationally recognized excellence.

Our competitiveness is not a given. We need forward-looking industrial policies, support measures for SMEs, tools for generational renewal and a common commitment to technological innovation, green transition and the fight against competition.

The States General confirmed how urgent and necessary it is to "create a system" and work together to build a more integrated, resilient and future-oriented supply chain.

Assomac will continue to bring its vision with responsibility and competence, to strengthen the central role that technology plays in the competitiveness of our manufacturing.

SUPERPRESS 2.4/ 3.0/ 3.2

ABOUT THE NANO PRESS TECHNOLOGY

The Embossing Roller made of special materials give an effect of natural haircell and grain on the leather.
It can realize more natural touch than artificial one on the embossed leathers.

ABOUT THE EFFECT ON THE LEATHER

It can avoid the folding and wrinkle on various kinds of leathers by operating the Feeder and Spread Belts seperately.
The Nano Technology can realize natural effects on all of leathers from Cow, Lamb, Goat and Pig.

ABOUT THE DUST-SUCTION

The simultaneous function of the brushing and suction can eliminate dusts ocurred on Rollers and Belts in the course of embossing leathers.

ABOUT THE HEATING BY THERMAL OIL

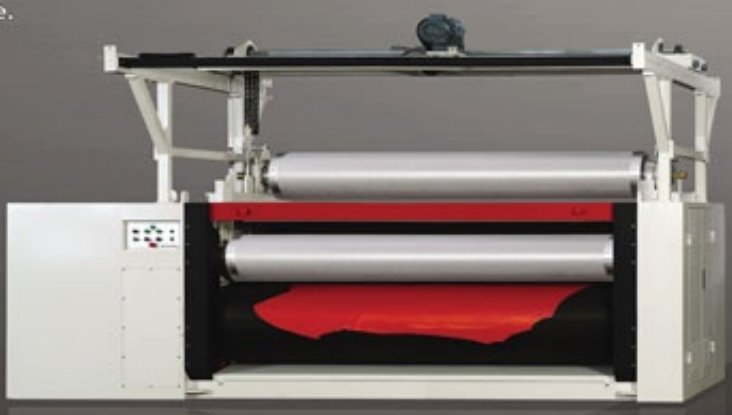
It can preserve the same temperature on the cells of the embossing roller's surface.

ABOUT THE SOLIDITY OF THE PRESSURE ROLLER

The pressure roller is specially made of Rubber, Silicon & Tefron, etc...
So, it can endure the high pressure and temperature.

ABOUT THE PROSPECT

It is possible to print Natural Haircell, Shrunken, Dry Milled Type, etc..
Also, we have been doing efforts to develop many kinds of embossing design in cope with meeting the request from Tanneries around world.



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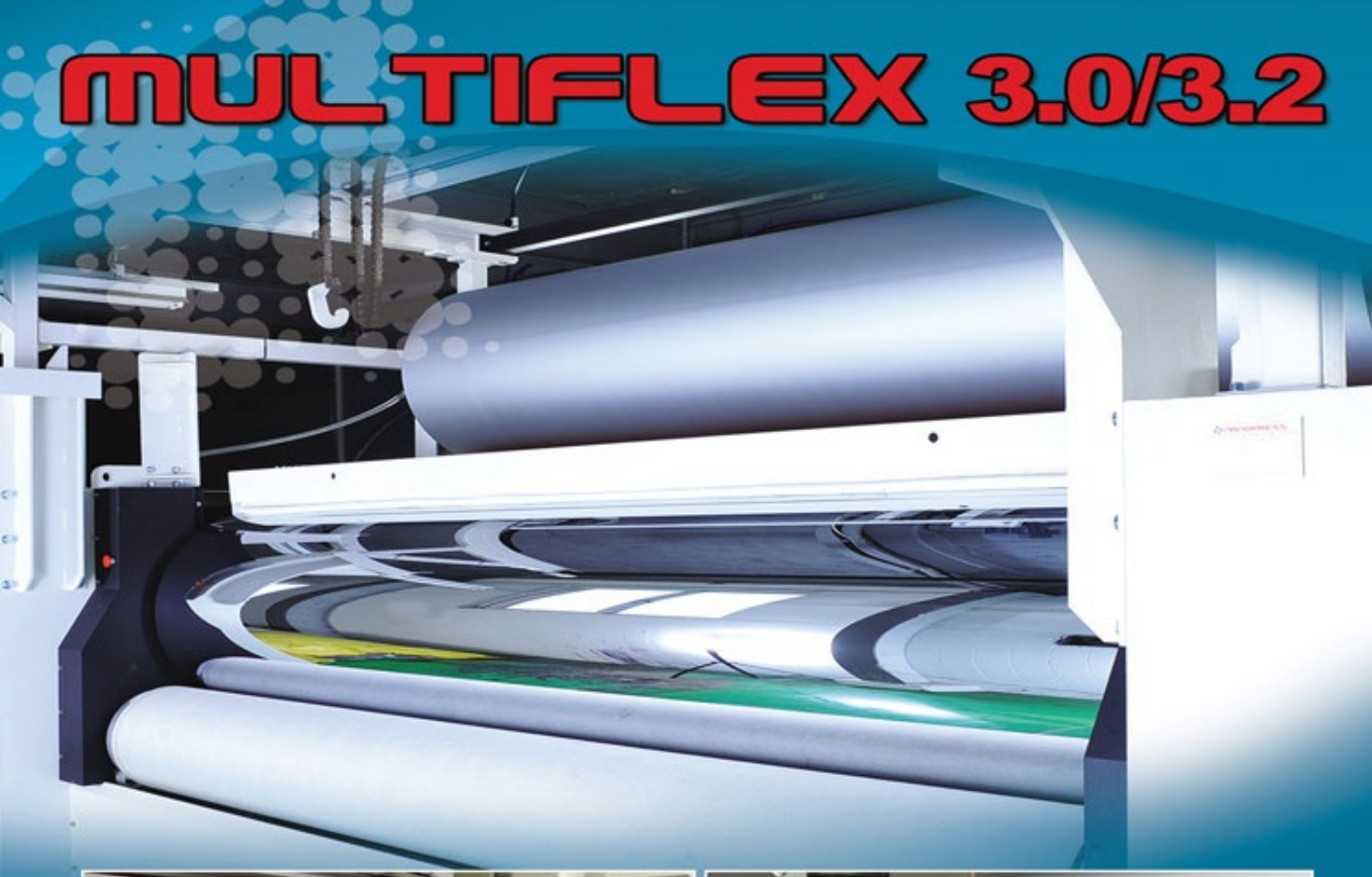

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This system allows the rollers' moving freely and sensitively during working.
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UK Leather & Leather Goods Industry in 2024

UK leather: import and export in 2024

The UK leather industry is comprised of specialist, high end producers of automotive, upholstery, shoe upper and sole, gloving, chamois, equestrian leather and wet blue leather. The UK exports more than 80% of its leather production, with destinations in over 80 countries.

The downward trends witnessed in 2023, continued through 2024 albeit with less marked falls in imports and exports compared to the previous year. Generally, trade was reduced with total export values down by 6.7%. In contrast, total export volumes rose by 2.3% suggesting a stabilisation or even slight increase in demand, albeit at lower overall values, suggesting falling prices for some export groups. Imports fell in both value and volume, down by 8.1% and 16.7%,respectively, suggesting falling demand but rising prices. The lack of consumer confidence, with global conflicts, rising cost of living and falling manufacturing volumes were almost certainly a factor in the ongoing difficulties faced by the industry. The UK was not unique in this current difficult situation with national industry associations across the globe, and Europe in particular, reporting very difficult trading conditions.

Once again, there was a fall in the value of raw material exports. However, export volumes rose slightly, suggesting the decline in the demand for raw materials had levelled off albeit at lower prices. More positively, the value and volume of part-processed leather increased but the larger relative increase in volume versus value again suggested that prices had fallen.

More concerning was the continuation of the downward trend in finished leather exports, down over 30% in volume; this following a fall of nearly 25% fall in 2023. As in the previous year, the fall in export values was smaller, suggesting that higher prices were being achieved but the trend in demand is marked and alarming.

Similar negative trends were seen for imports through 2024, with total imports down over 8% in value and 16% in volume, further illustrating the difficulties faced by the wider UK leather industry. Following large falls in 2022 and 2023, raw material imports were again down, by 21.4% and 10% in value and volume respectively. However, in contrast to previous years, imports of bovine hides were essentially stable, perhaps suggesting a turning point or at least levelling off for bovine leather. The large part of the fall in raw material imports was linked to very large falls in other raw materials (ovine, etc.), continuing the trend seen in 2023 and possibly an ongoing impact of the closure of Pittards.

UK global exports of Hides, Skins and wet blue, crust and finished leather in 2024

EXPORTS (by HS code*)	Trade in 2024		Change (% vs 2023)	
	Value (£m)	Volume (ktonnes)	Value	Volume
Raw materials	70.69	114.51	-1.75	1.62
Part-processed leather	23.53	11.04	11.52	23.22
Finished leather	91.40	3.98	-13.81	-30.48
TOTAL EXPORTS	**185.64**	**129.54**	**-6.77**	**2.37**
Raw Material Exports				
HS4101	53.17	71.14	-5.18	2.09
HS4102	17.10	43.05	11.64	0.58
HS4103	0.41	0.31	-25.14	57.82
Part-processed Leather Exports				
HS4104	22.94	10.90	11.32	23.27
HS4105	0.20	0.12	19.88	17.63
HS4106	0.38	0.007	19.97	63.07
Finished Leather Exports				
HS4107	89.30	2.114499	-10.47	-29.40
HS4112	0.52	0.001	-84.23	-78.40
HS4113	1.19	0.002	-53.63	-54.98
HS4114	0.38	0.001	-1.79	-8.97

UK global imports of Hides, Skins and wet blue, crust and finished leather in 2024

EXPORTS (by HS code*)	Trade in 2024		Change (% vs 2023)	
	Value (£m)	Volume (ktonnes)	Value	Volume
Raw materials	3.61	4.80	-21.42	-10.10
Part-processed leather	7.78	1.78	-32.62	-33.76
Finished leather	100.56	5.075	-4.83	-14.99
TOTAL IMPORTS	**111.96**	**11.664**	**-8.10**	**-16.73**
Raw Material Imports				
HS4101	3.013	4.37	-2.31	-0.03
HS4102	0.07	0.003	-80.50	-90.33
HS4103	0.55	0.42	-54.15	-54.29
Part-processed Imports				
HS4104	6.33	1.68	-38.21	-33.95
HS4105	0.69	0.02	16.87	-52.97
HS4106	0.74	0.08	6.94	-23.78
Finished Leather Imports				
HS4107	94.70	4.91	-2.80	-14.31
HS4112	1.60	0.04	-3.65	3.68
HS4113	1.62	0.05	-36.27	-31.60
HS4114	2.62	0.07	-34.69	-39.97

Volumes of imports of part-processed leather of all categories were markedly down again, following large falls in 2023. The picture for the value of part-processed leather imports leather was more mixed, with values for bovine material down (with volume) but the value of other materials rising against falling volumes. However, bovine leather makes up the bulk of UK imports and imports of finished bovine leather were significantly reduced suggesting a downturn in the trade of leather and/or production of leather goods in the UK.

Trade with the EU

The EU is a significant trade partner for the UK. Although delayed for 12 months at the end of 2024, the imminent introduction of the EU Deforestation Regulation (EUDR) brings a significant risk of extensive disruption to the trade in raw hides and bovine leather between the UK and EU, as does the ongoing issues for the leather goods and automotive manufacturers in both regions. As such, this trade and the potential for losses, driven by regulation and market conditions, merit specific analysis. The EU was the destination for 62% of bovine raw hides, over 90% of partprocessed leather and 26% of finished leather exported by the UK in 2023. Similarly, over 90% of raw hides, 68% of part-processed leather and 89% of finished leather imported into the UK came from the EU. Clearly, any disruption to this would be a challenge for the UK leather and leather goods manufacturers.

Overall trade with the EU fell again, by 14.2%, with exports to the EU representing 38.6% of total exports in value terms, compared to 42.1% in 2023 (45.7% in 2022).

Exports of raw materials decreased by over 17% in value. In contrast, the value and volume of exports of part-processed leather increased. Again, the greater relative change in volume versus value suggested that prices per unit had also fallen. The market for finished leather was less dependent on the EU, with 23% of export value going to the EU (26.8% in 2023). Large falls were seen for all materials and while some of this can be explained by the closure of Pittards, the fall in finished bovine leather exports is more concerning, particularly against the backdrop of falling global exports.

As noted, the EU is even more important as an exporter of raw hides and leather to the UK, accounting for over 86% in value terms of all raw material and leather imports in 2024, up from 84% in 2023. However, this increase may be an artefact of falling imports from the rest of the world as falls were seen in the value and value of nearly material types, indicating an overall decrease in trade with the EU in 2024. The exception was imports of raw bovine hides which remained almost unchanged from 2023 and may suggest a degree of stabilisation in that market.

Nonetheless, the EU remains a very important partner for the UK leather and leather goods industry and as such, the range of emerging regulation and in particular the EUDR, that could significantly and negatively impact on UK businesses, remains a concern.

UK exports to the EU of Hides, Skins and wet blue, crust and finished leather as a proportion of global trade in 2024

Export to the EU	EU trade as proportion of total trade					
	2024 vs.		2023		Proportion of total trade in 2024	
Commodity Code	Value (£)	Volume (Kg)	Value (%)	Volume (%)	Value (%)	Volume (%)
4101	29400444	40050985	-16.32	-8.61	54.52	55.62
4102	1007520	1882220	-32.02	-26.05	5.47	3.70
4103	268837	222243	-34.61	64.54	64.74	69.87
TOTAL RAW	**30676801**	**42155448**	**-17.15**	**-9.35**	**42.16**	**34.22**
4104	19884062	10548934	6.54	23.81	86.65	96.72
4105	15080	469	99.39	322.52	7.50	0.36
4106	101287	818	-42.72	-42.48	26.04	11.20
TOTAL PART-PROCESSED	**20000429**	**10550221**	**6.11**	**23.81**	**94.75**	**117.73**
4107	20691453	462012	-20.74	-36.43	23.17	21.85
4112	82789	2682	-72.53	-54.23	15.68	27.11
4113	160678	2472	-77.97	-79.28	13.49	10.21
4114	138681	4629	-0.01	-26.23	36.20	37.48
TOTAL FINISHED LEATHER	**21073601**	**471795**	**-22.74**	**-37.17**	**23.06**	**21.83**
TOTAL VALUE HS41	**71750831**	**53177464**	**-14.20**	**-36.41**	**38.65**	**41.64**

UK imports to the EU of Hides, Skins and wet blue, crust and finished leather as a proportion of global trade in 2024

Export to the EU	EU trade as proportion of total trade					
	2024 vs.		2023		Proportion of total trade in 2024	
Commodity Code	Value (£)	Volume (Kg)	Value (%)	Volume (%)	Value (%)	Volume (%)
4101	2833164	4341603	1.17	0.23	94.02	99.20
4102	41856	2871	-52.08	-43.86	-39.39	-14.96
4103	10756	4562	-89.56	-71.63	2.02	1.07
TOTAL RAW	**2885776**	**4349036**	**-3.51**	**-0.08**	**79.81**	**90.47**
4104	4310489	991045	-38.45	-26.76	68.00	58.98
4105	422133	7761	177.46	-70.12	60.49	48.78
4106	14944	566	-88.24	-67.90	1.99	0.66
TOTAL PART-PROCESSED	**4747566**	**999372**	**-34.81**	**-27.63**	**60.98**	**56.07**
4107	85349894	4575640	-1.76	-13.58	90.13	93.14
4112	1333954	24926	4.84	-3.41	82.95	74.63
4113	383264	4683	-47.42	-68.91	23.58	9.24
4114	1954618	51593	-39.30	-40.49	74.42	65.95
TOTAL FINISHED LEATHER	**89021730**	**4656842**	**-3.34**	**-14.11**	**88.53**	**91.76**
TOTAL VALUE HS41	**96655072**	**10005250**	**-5.58**	**-10.31**	**86.33**	**85.77**

The UK industry has a market presence across the globe; UK-manufactured finished leather is sold in over 80 countries. However, the majority of trade, in raw hides and skins, wet blue and crust and finished leather, is transacted with five to ten trading partners per category and often dominated by one or two.

UK Trade in Raw Hides and Skins by main countries in 2024

The top four export destinations for raw hides (HS4101) remained unchanged, although China replaced Italy as the largest export destination. India replaced Czechia in fifth place, albeit representing a small proportion of export value. Northern Ireland remained the main exporter of raw hides to the UK by a very large margin, and one which had increased from 2023, with Italy in second place. It is important to note that Northern Ireland will be subject to the requirements of the EUDR and the additional challenges that implies.

As in 2022 and 2023, China and Türkiye were the two main destinations for UK sheepskins (HS4102). However, trade with China more than doubled in value terms compared to 2023, with exports to Türkiye falling dramatically. The fall in trade to Türkiye can probably be linked to the ongoing war in Ukraine and trade restrictions with Russia. However, the jump in demand in China is harder to explain. Unsurprisingly, exports of sheepskin to the UK fell by approximately 80% against 2023, when values were down by over 90% due to the closure of Pittards PLC, reaching essentially trivial levels.

Both exports and imports of materials classified under HS4103 fell compared to 2023. The reasons for this are unclear but France, the major export destination in 2023, did not feature in the top 5 export destinations, and imports from the USA decreased by over 50%. It should be noted that the values were very small and as such, the figures could be heavily influenced by 'one-off' transactions.

Export	Value (£)	% of total (all countries)	Imports	Value (£)	% of total (all countries)
HS4101					
China	21432198	40.30	Northern Ireland	2534791	84.12
Italy	21427025	40.29	Poland	162121	5.38
France	3550598	6.68	Thailand	102155	3.39
Germany	1658537	3.12	Ireland	94263	3.13
India	1067930	2.01	United States	33720	1.12
TOP 5 TOTAL	**49136288**	**92.40**	**TOP 5 TOTAL**	**2927050**	**97.13**
HS4102					
China	13462165	78.71	Romania	23657	34.26
Turkey	2161767	12.64	Brazil	11680	16.91
Spain	435656	2.55	Thailand	11551	16.73
Poland	404150	2.36	Czech Republic	8863	12.83
Pakistan	221064	1.29	Belgium	6083	8.81
TOP 5 TOTAL	**16684802**	**97.55**	**TOP 5 TOTAL**	**61834**	**89.54**
HS4103					
Netherlands	83866	20.20	United States	473573	88.84
United States	83180	20.03	Australia	45592	8.55
Czech Republic	75228	18.12	France	7039	1.32
Ireland	51459	12.39	Germany	1896	0.36
Hong Kong	33793	8.14	Italy	1821	0.34
TOP 5 TOTAL	**327526**	**78.87**	**TOP 5 TOTAL**	**529921**	**99.41**

UK Trade in Wet Blue and Crust Leather by main countries in 2024

Once again, Italy and Belgium remained the top two export destinations for part-processed bovine leather (HS4104), accounting for over 83% of total exports and with exports increasing in absolute value terms compared to 2023. Exports to China also increased significantly, up fourfold compared to 2023. Imports from Denmark were exceeded by those from Italy although import values fell in absolute terms compared to 2023. Again, the major customers and suppliers of the UK market were located in the EU and will be subject to the requirements of the EUDR.

Exports of part-processed sheepskin leather (HS4105) were relatively very small but increased in absolute value from 2023, with Turkey the major destination. The total value of imports of fell slightly with Austria replacing the USA as the main exporter of part-processed sheepskin to the UK.

The value of exports of other part-processed leathers (HS4106) decreased by over 30% compared to 2023, but the value of imports remained stable. As for HS4103 and HS4105, the values were very small and as such, the figures for the year could be heavily influenced by 'one-off' transactions.

Export	Value (£)	% of total (all countries)	Imports	Value (£)	% of total (all countries)
HS4104					
Italy	13601096	59.27	Italy	1929264	30.44
Belgium	5508880	24.01	Denmark	1071137	16.90
China	2230025	9.72	Argentina	832472	13.13
Spain	271779	1.18	Germany	632601	9.98
Japan	259118	1.13	Spain	592392	9.35
TOP 5 TOTAL	21870898	95.30	TOP 5 TOTAL	5057866	79.79
HS4105					
Turkey	138559	68.93	Austria	317065	45.43
Pakistan	19394	9.65	United States	124001	17.77
France	14180	7.05	Turkey	91391	13.10
Canada	12427	6.18	Spain	76942	11.03
China	8067	4.01	China	32330	4.63
TOP 5 TOTAL	**192627**	**95.82**	**TOP 5 TOTAL**	**641729**	**91.96**
HS4106					
United States	72036	18.52	Taiwan	366631	48.94
Germany	33195	8.53	India	100206	13.38
Czech Republic	20141	5.18	Nigeria	94480	12.61
Italy	17550	4.51	China	69058	9.22
Qatar	13375	3.44	New Zealand	33908	4.53
TOP 5 TOTAL	**156297**	**40.19**	**TOP 5 TOTAL**	**664283**	**88.68**

UK Trade in Finished Leather by main countries in 2024

Morocco remained the main export destination for finished bovine leather (HS4107) in 2024, increasing in value terms compared to 2023. The USA remained the second largest export destination for HS4107 but fell again in absolute value terms. The key nations for imports of HS4107 remained unchanged and Italy and Germany continued to dominate. The total value of imports also increased slightly compared to 2023. However, this was largely due to increased import values from Italy while imports from the other countries fell.

Exports of finished sheepskin leather (HS4112) fell by 85% in 2024, following a 63% fall in 2023. As previously noted, this may reflect the loss of Pittards PLC. UK imports of HS4112 increased slightly in value terms for the second year in a row, with Italy and France remaining the key importers.

Exports of finished leather of other animals (HS4113) fell by over 50%, year on year. The USA remained the main destination, accounting for 50% of export value, but falling in absolute value terms from 2023. A complete change in the other main destinations highlighted the inconsistent nature of these markets. In contrast, while imports decreased by approximately 30%, four of the five key importing countries remained unchanged.

Exports of chamois (HS4114) remained very small, but increased against 2023 with India the main destination. Imports fell by a third compared to 2023 with large falls in imports from all importing nations.

Export	Value (£)	% of total (all countries)	Imports	Value (£)	% of total (all countries)
HS4107					
Morocco	25766914	28.85	Italy	60310592	63.69
United States	18042828	20.20	Germany	9603766	10.14
Czech Republic	5568670	6.24	Lithuania	3788769	4.00
United Arab Emirates	4931186	5.52	Spain	3761849	3.97
Portugal	4681189	5.24	United States	3610732	3.81
TOP 5 TOTAL	**58990787**	**66.06**	**TOP 5 TOTAL**	**81075708**	**85.61**
HS4112					
Indonesia	161006	30.50	Italy	986795	61.36
China	87628	3.41	France	255883	15.91
United States	51044	4.29	Turkey	134922	8.39
Hong Kong	45890	11.76	United Kingdom	65852	4.09
Bulgaria	37635	9.82	Germany	52432	3.26
TOP 5 TOTAL	**383203**	**59.79**	**TOP 5 TOTAL**	**1495884**	**93.01**
HS4113					
United States	604088	50.72	China	898765	55.30
Nigeria	163883	13.76	Italy	259495	15.97
Hong Kong	96060	8.07	India	148388	9.13
Mexico	55291	4.64	France	65429	4.03
United Arab Emirates	44858	3.77	South Korea	38072	2.34
TOP 5 TOTAL	**964180**	**80.95**	**TOP 5 TOTAL**	**1410149**	**86.77**
HS4114					
India	79280	20.69	Italy	1744213	66.41
Italy	44115	11.51	Turkey	413073	15.73
Poland	40757	10.64	United States	197858	7.53
United Arab Emirates	31201	8.14	Poland	117104	4.46
Bahrain	28797	7.52	Romania	40060	1.53
TOP 5 TOTAL	**224150**	**58.51**	**TOP 5 TOTAL**	**2512308**	**95.65**

UK Leather goods (excluding footwear): import and export in 2024

UK export and import of leather goods in 2024

The British leather industry has a long history of traditional craftsmanship. The UK is home to some of the finest leather and leather goods in the world. British designers are producing high-end leather products, including bags and apparel, which are sought after throughout the world.

In 2024, the UK was again a net importer of leather goods. The trade deficit increased in 2024, up to £699m, higher than both 2022 and 2023. This was due the value of exports of leather goods by 13.6% compared to 2023. Export volumes also fell and by a greater degree, suggesting an increase in per unit cost of exported items. This decline supports the assertion by The Walpole, the trade association for the UK luxury sector, that Brexit is significantly hampering the trade in UKmanufactured luxury goods. The Walpole has estimated that exports to the EU were 43% lower than they would have been without Brexit. As the EU is the largest market for the UK luxury sector, this is a significant, negative impact and will have implications for the UK leather manufacturers.

Conversely, imports increased in value and volume compared to 2023, reversing the decline seen from 2022, with increases in imports of all product types except apparel (HS4203). The increase in volume exceeded the increase in value, suggesting lower average costs per unit.

	Export				Imports			
HS Code	Value (£)	Volume (kg)	Change vs 2022 (%)		Value (£)	Volume (kg)	Change vs 2022 (%)	
			Value	Volume			Value	Volume
4201	37528162	851733	-9.34	-14.25	115791966	7958768	6.25	17.77
4202	372491705	4669509	-9.98	-14.34	847681022	18644123	16.01	78.51
4203	81144286	796440	-8.53	-20.65	194266637	4661035	-4.18	-3.55
4205	1608801	16541	-88.35	-97.48	46237308	1806427	4.59	6.52
TOTAL	**535527947**	**9756583**	**-13.59**	**-21.42**	**1234579017**	**35328903**	**10.40**	**31.82**

***HS code definitions**

HS4101 - Raw hides and skins of bovine "incl. buffalo" or equine animals, fresh, or salted, dried, limed, pickled or otherwise preserved, whether or not dehaired or split (excluding tanned, parchment-dressed or further prepared)

HS4102 - Raw skins of sheep or lambs, fresh, or salted, dried, limed, pickled or otherwise preserved, whether or not dehaired or split (excluding those with wool on, fleeces of Astrakhan, Caracul, Persian, Broadtail or similar lambs, or of Indian, Chinese, Mongolian or Tibetan lambs and tanned, parchmentdressed or further prepared)

HS4103 - Other raw hides and skins, fresh, or salted, dried, limed, pickled or otherwise preserved, whether or not dehaired or split (excluding those of bovine animals, equine animals, sheep and lambs, those with wool on and those of goats or kids from Yemen, Mongolia or Tibet and tanned, parchment-dressed or further prepared)

HS4104 - Tanned or crust hides and skins of bovine "incl. buffalo" or equine animals, without hair on, whether or not split (excluding further prepared)

HS4105 - Tanned or crust skins of sheep or lambs, without wool on, whether or not split (excluding further prepared)

HS4106 - Tanned or crust hides and skins of goats or kids, pigs, reptiles and other animals, without wool on, and leather of hairless animals, whether or not split (excluding further prepared and leather of bovine and equine animals, sheep and lambs)

HS4107 - Leather further prepared after tanning or crusting "incl. parchment-dressed leather", of bovine "incl. buffalo" or equine animals, without hair on, whether or not split (excluding chamois leather, patent leather and patent laminated leather, and metallised leather)

HS4112 - Leather further prepared after tanning or crusting "incl. parchment-dressed leather", of sheep or lambs, without wool on, whether or not split (excluding chamois leather, patent leather and patent laminated leather, and metallised leather)

HS4113 - Leather further prepared after tanning or crusting "incl. parchment-dressed leather", of goats or kids, pigs, reptiles and other animals, without wool or hair on, and leather of hairless animals, whether or not split (excluding leather of bovine and equine animals, sheep and lambs, and chamois leather, patent leather and patent laminated leather, and metallised leather)

HS4114 - Chamois leather, incl. combination chamois leather (excluding glacé-tanned leather subsequently treated with formaldehyde and leather stuffed with oil only after tanning); patent leather and patent laminated leather; metallised leather (excluding lacquered or metallised reconstituted leather)

HS4201 - Saddlery and harness for any animal, incl. traces, leads, knee pads, muzzles, saddle cloths, saddlebags, dog coats and the like, of any material (excluding harnesses for children and adults, riding whips and other goods of heading 6602)

HS4202 - Trunks, suitcases, vanity cases, executive-cases, briefcases, school satchels and similar containers, with outer surface of leather, composition leather or patent leather

- Handbags, whether or not with shoulder straps, incl. those without handles, with outer surface of leather, composition leather or patent leather

- Wallets, purses, key-pouches, cigarette-cases, tobaccopouches and similar articles carried in the pocket or handbag, with outer surface of leather, composition leather or patent leather

- Travelling-bags, insulated food or beverage bags, toilet bags, rucksacks, shopping-bags, map-cases, tool bags, sports bags, jewellery boxes, cutlery cases, binocular cases, camera cases, musical instrument cases, gun cases, holsters and similar containers, with outer surface of leather, composition leather or patent leather (excluding trunks, briefcases, school satchels and similar containers, handbags and articles normally carried in the pocket or handbag)

HS4203 - Articles of apparel and clothing accessories, of leather or composition leather (excluding footwear and headgear and parts thereof, and goods of chapter 95, e.g. shin guards, fencing masks)

HS4205 - Articles of leather or composition leather (excluding saddlery and harness bags; cases and similar containers; apparel and clothing accessories; whips, riding-crops and similar of heading 6602; furniture; lighting appliances; toys; games; sports articles; buttons and parts thereof; cuff links, bracelets or other imitation jewellery; made-up articles of netting of heading 5608; and articles of plaiting materials) ■

Bata Group Appoints Former ECCO CEO Panos Mytaros as New Global CEO

The Bata Group has announced a major leadership change. Panos Mytaros will take over as the new Global Chief Executive Officer starting 15th September 2025. He will replace Sandeep Kataria, who has been leading the company since 2020.

Sandeep Kataria played a key role in guiding Bata through some tough years. His time as CEO included handling the global pandemic and keeping the company strong during rapid changes in the retail world. He focused on going digital, making operations more efficient, entering new markets, and building a modern future for Bata.

"Bata is much more than a great company - it's a community, a legacy, and a force for good around the world. Leading this powerful team has been one of the great privileges of my life. I will always carry Bata in my heart."

Sandeep Kataria, Former CEO, Bata Group

Now, the company is looking ahead with Panos Mytaros, who has more than 30 years of experience in the global footwear and leather industry. Before joining Bata, he worked at ECCO, where he held several senior roles, including CEO from 2021 to 2024.

"Panos is a proven leader with deep industry knowledge and a passion for footwear craftsmanship. His track record in brand building and developing compelling footwear collections, as well as in leading complex international organizations, made him the ideal candidate to guide Bata through our next phase of growth. We are delighted to welcome Panos to the Bata Group."

Graham Allan, Chairman, Bata Group

Panos also shared his excitement about joining the iconic footwear company.

"Bata is a brand I've known since my earliest days in the footwear industry. I'm thrilled to join this global, family-owned company with 130 years of history, a presence in about 50 countries, more than 30,000 dedicated employees, and millions of loyal consumers. I look forward to connecting with the world of Bata, its people, its partners, and its customers. Together with Bata's teams around the world, I will work tirelessly to deliver modern, comfortable, and affordable shoes that inspire and connect with the whole family."

Panos Mytaros, Incoming Global CEO, Bata Group

In closing, the Bata Group has thanked Sandeep Kataria for his leadership and extended a warm welcome to Panos Mytaros as he begins this new chapter.

TFL RE-ELECTED TO LEATHER WORKING GROUP BOARD FOR A SECOND TERM

TFL, a global leather chemical supplier, has been re-elected to the ***Leather Working Group's*** Board in the Supplier category. This marks the beginning of the company's second term on the Executive Committee.

Representing TFL this time is Dr Volker Rabe, who steps into the role following the first term served by Dietrich Tegtmeyer.

Volker is known in the industry for his strong background in leather chemistry and leadership in sustainable innovations. With more than ten years of experience, he combines scientific knowledge with industry expertise to guide the leather sector forward.

At TFL, Volker currently works in senior research and development, focusing on creating eco-friendly chemical solutions for leather processing.

Before this, he was part of the research team at the FILK Institute, where he worked on material science and new applications for the leather industry.

He is also involved in several leather-related organisations. Volker is an active board or advisory member of the German Tanning Association (VGCT), TEGEWA, and the International Union of Leather Technologists and Chemists Societies (IULTCS).

Through these roles, he helps shape industry policies and encourages responsible and sustainable innovation.

TFL LEDERTECHNIK GMBH EARNS ZDHC MRSL V3.1 LEVEL 3 RECERTIFICATION WITH TOP RATINGS

TFL Ledertechnik GmbH is proud to announce the successful renewal of its ZDHC MRSL V3.1 Level 3 certification, reaffirming its commitment to the Zero Discharge of Hazardous Chemicals (ZDHC) initiative and sustainable chemical management in the leather industry.

This certification, conducted in partnership with Eurofins | BLC Leather Technology Centre Ltd. under the Chem-MAP program, confirms that all TFL Gateway-listed products meet the highest standards of chemical safety. The rigorous biennial process includes comprehensive testing of raw materials and finished goods, along with multi-day audits at manufacturing sites worldwide.

Audits began at TFL Quinn India Private Limited in Hyderabad and Mumbai, followed by TFL China Ltd. in Changzhou. All sites received Grade A ratings, earning TFL the Eurofins | Chem-MAP Leader status-recognizing excellence across its global operations.

"This achievement reflects our team's dedication to continuous improvement and sustainability," said Arunkumar Patil, Director - Operations, Manufacturing & EHS at TFL Quinn India.

"We've embedded compliance throughout our operations, from design to production," added Dr. Hu DongQi, Executive Team, TFL China.

TFL now looks ahead to audit results in France, Brazil, and Italy, continuing its drive for excellence in environmental respon-sibility and product safety which goes in line with our mission to provide "Great Chemicals. Excellent Advice".

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ASSOMAC: THE LEATHER, FOOTWEAR AND LEATHER GOODS TECHNOLOGY SECTOR CLOSES 2024 AT -12%

- **President Mauro Bergozza: "Deep crisis but Made in Italy can become a protagonist again with vision, supply chain and targeted investments".**
- **The current contraction involves both the domestic market - penalised by the slowdown in investments in the fashion supply chain - and exports.**
- **Despite the difficulties, Italy confirms its leadership in the segments with the highest technological value, maintaining a 30% share of world exports in the sector by 2024.**

Quality, skills, technology. It is on these pillars that the Italian footwear, leather goods and tannery machinery sector is called upon to build its relaunch. The occasion to take stock was the **General Assembly of Assomac**, hosted today at the Kilometro Rosso Innovation District in Bergamo, from which a certainly complex picture emerged: according to the 2024 preliminary results, **the sector has recorded a 12% drop in turnover**, with an estimated closure of around 575 million euros.

This is a significant contraction, which involves both the domestic market - penalised by the slowdown in investments in the fashion supply chain - and exports, in a global context characterised by geopolitical instability, inflation, shrinking consumption and tightening trade barriers. *"Our sector is going through a phase of deep, but not irreversible suffering* - said **Mauro Bergozza**, President of Assomac - *The quality of our technologies, the solidity of Italian know-how, and the innovative drive that distinguishes us must once again become a driver of competitiveness. To achieve this, we need investments in digitisation, automation, sustainability and above all a shared vision between companies, institutions and the education and research system. We must be ready to play a system game, otherwise we will remain on the sidelines of the global market."*

Despite the difficulties, **Italy is confirmed as the technological leader in the high-end segment at international level**, maintaining a 30% share of world exports in the sector in 2024. In particular, it holds 52% of the global export of tannery machinery and 35% of that of leather goods machinery. More penalised is the footwear segment, which stands at 12%, in a competitive context dominated by the growing Chinese presence: Beijing has strengthened its industrial role in the Asian region.

The Assembly was also a moment of wide-ranging discussion on the future trajectories of the supply chain. Under the title "Growth, Collaboration and Innovation for the European Fashion Industry", the event was attended by institutional and academic speakers, including **Maurizio Tarquini**, Director General of Confindustria, **Maurizio Forte**, Managing Director Export Promotion Department of Italian Trade Agency, and **Giuliano Noci**, Professor of Strategy and Marketing at the Milan Polytechnic.

At the heart of the debate: the need to ensure technological neutrality in order to preserve and valorise medium technology, a key element to give continuity to the sustainable transition of European fashion; the strengthening of synergies between companies and institutions; and the urgency of joint action at European level to defend and relaunch the manufacturing identity of our continent.

Among the priorities that emerged: greater access to subsidised finance tools - starting with the funds provided by Industry 5.0 - support for exports in key markets such as Africa, India, South-East Asia and South America, investment in technical training and acceleration of digital innovation processes. The competitiveness game, it was emphasised, cannot be played alone: it is necessary to network between players in the supply chain, the fashion system, research bodies and associations, to create a solid industrial ecosystem, with a unified voice in Europe.

"Aggregating to compete is no longer an option, but a necessity - President **Bergozza** concluded - *We have to build a system in which companies are supported not only in terms of technology, but also in terms of infrastructure, industrial policies and international relations. Italy can and must become a protagonist again, but to do so we need cohesion, investment and a long-term vision. The time to act is now".*

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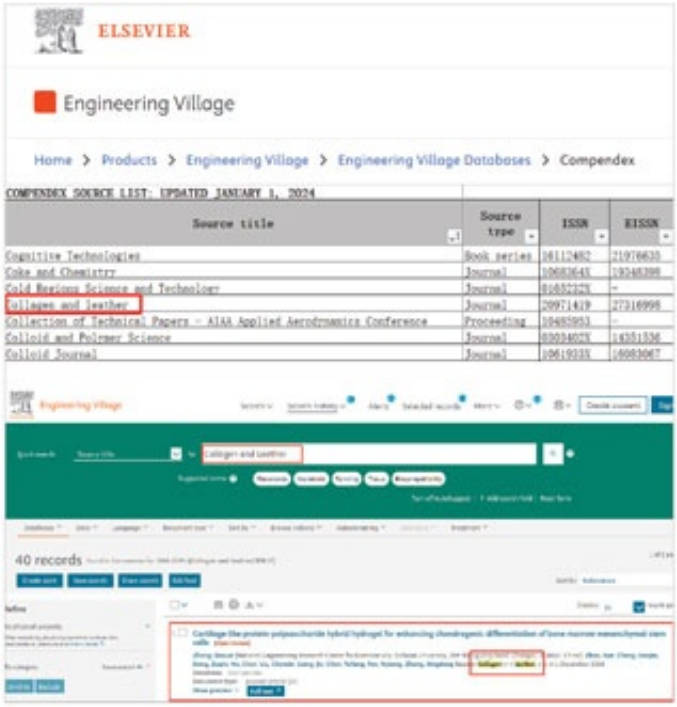
COLLAGEN AND LEATHER HAS BEEN INDEXED BY THE INTERNATIONALLY AUTHORITATIVE DATABASES ESCI AND EI

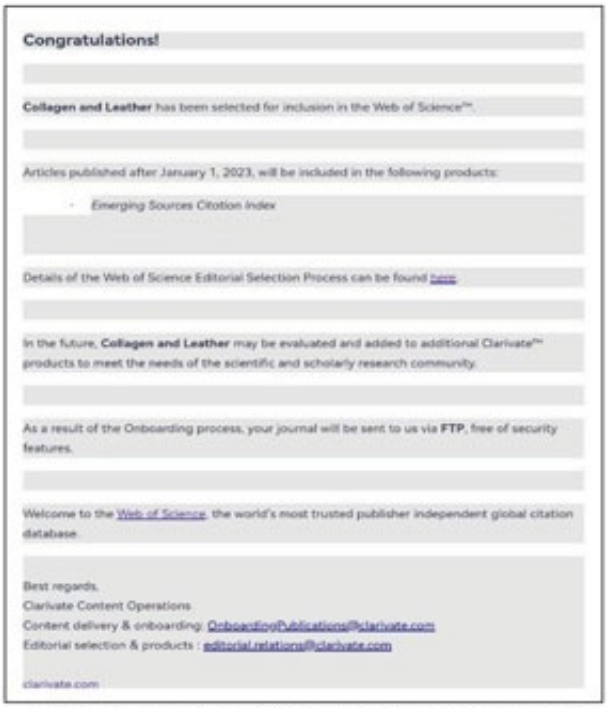
In 2024, Collagen and Leather, the third journal in the global leather field, jointly sponsored by Sichuan University and the China Leather Association, was successively indexed by two internationally authoritative databases, ESCI and EI. It is expected to obtain its first Journal Citation Reports (JCR) and an impact factor (IF, estimated to be between 8.5 and 9.0) in June 2025.

The ESCI (Emerging Sources Citation Index) is a full-text index of high-quality journals selected according to high standards. Together with SCI, SSCI, AHCI, etc., it forms the core collection of the Web of Science and enjoys a high reputation in the global academic community. The JCR released by it every year is widely used to evaluate and compare the influence of academic journals, and its data and indicators have important reference value in the global academic publishing and evaluation fields.



The EI (Engineering Index) is currently the most widely used and comprehensive engineering literature database. Its selection criteria and procedures are strict. The aim of journal selection is academic rigor, strong practicality, and timely publication. The journals indexed by it have been highly recognized by scholars in the global engineering and technology field.

It is hoped that Collagen and Leather can provide a publishing platform for the cutting-edge technologies in the global leather industry, facilitate in-depth exchanges among global leather science and technology workers, and contribute to the advancement of global leather science and technology.



Congratulations!

Collagen and Leather has been selected for inclusion in the Web of Science™.

Articles published after January 1, 2023, will be included in the following products:

- Emerging Sources Citation Index

Details of the Web of Science Editorial Selection Process can be found here.

In the future, **Collagen and Leather** may be evaluated and added to additional Clarivate™ products to meet the needs of the scientific and scholarly research community.

As a result of the Onboarding process, your journal will be sent to us via **FTP**, free of security features.

Welcome to the Web of Science, the world's most trusted publisher independent global citation database.

Best regards,
Clarivate Content Operations
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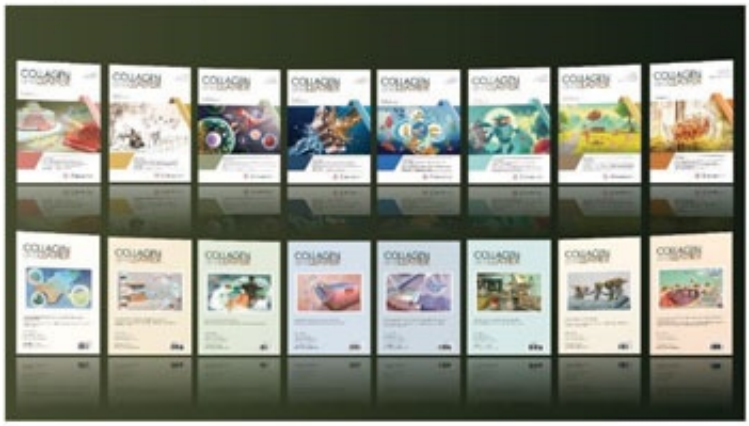
Fig. 1 Notification Letter of Collagen and Leather's Inclusion in ESCI



Thanks for everyone's attention.

Qixian Zhang | Managing Editor of Collagen and Leather

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Balmer Lawrie wins trophy for manufacturing competitiveness

The Strategic Business Unit (SBU): Chemicals of Balmer Lawrie & Co Ltd has been honoured with the Diamond Trophy at the National Awards for Manufacturing Competitiveness (NAMC) 2025 organised by the International Research Institute for Manufacturing (IRIM). SBU : Chemicals was awarded the Gold Medal for the third consecutive year, a distinction that earned the unit the coveted Diamond Trophy. The NAMC Awards recognise manufacturing organisations that demonstrate excellence through innovative strategies and competitive approaches. IRIM, as an independent third party evaluator, conducts a comprehensive audit and assessment based on Manufacturing Competitiveness Index, which benchmarks an organisation's ability to evolve and implement effective manufacturing strategies. The recognition serves as a testament to the Chemicals team's commitment to quality, innovation and operational efficiency.

Burak Uyguner Re-elected As President of Turkish Leather Industrialists Association

During the General Assembly held on May 13, 2025, Burak Uyguner has been re-elected as the President of the Turkish Leather Industrialists Association (TDSD). This marks his third consecutive term in the position.

Mr. Uyguner is the owner of Uyguner Deri Group, a family-owned business active in leather manufacturing, gelatin production and fertilizer production. The company has a long history in the Turkish leather industry and continues its operations with a focus on both domestic and international markets.

In addition to his role at TDSD, Mr. Uyguner also serves as the President of the International Council of Tanners (ICT), which

brings together national leather associations from around the world. He is also Vice President of the Istanbul Leather and Leather Products Exporters' Association (IDMIB).

Founded in 1927, the Turkish Leather Industrialists Association (TDSD) is one of the longest-standing industry organizations in Türkiye. In today's period of transformation centered on sustainability, TDSD continues to support its members through various projects and activities focused on responsible production, innovation, and international cooperation.

The TDSD will continue its efforts to support leather manufacturers in Turkiye under Mr. Uyguner's leadership, whom Leather Insiders team congratulates on renewing this important position.

The 2025 APLF ASEAN Will Take Place in Vietnam

From November 13 to 15, 2025, the Asia Pacific Leather Fair (APLF) ASEAN edition will be held at the Saigon Exhibition and Convention Centre in Ho Chi Minh City, Vietnam.

With events in Hong Kong, Shanghai and Bangkok, APLF is recognized as a leader in industry-specific trade events. APLF ASEAN builds on this success, bringing high-quality sourcing opportunities to Vietnam. APLF in Vietnam connects international suppliers of leather, sustainable materials, components, and manufacturing solutions with ASEAN-based OEMs, manufacturers, and sourcing professionals. Citing Vietnam's involvement in significant trade agreements like the EU-Vietnam Free Trade Agreement (VFTA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Regional Comprehensive Economic Partnership (RCEP), the organizers highlight the country's increasing significance as a sourcing hub.

APLF ASEAN will also feature the Leather Trends Space and Innovation Lab that bring material innovation to life. Visitors can see leather trends for 2026/27 seasons to functional materials and components and discover the trends shaping the future of manufacturing.

India UK Free Trade Agreement to Boost Leather and Footwear Exports and Jobs

India and the United Kingdom have officially signed a historic Free Trade Agreement (FTA) that is expected to transform trade and job opportunities in both countries.

This major deal brings big benefits for Indian exports. Nearly 99% of India's exports to the UK will now enjoy zero-duty access, making Indian goods much cheaper and more competitive in the British market.

Sectors like textiles, leather, footwear, marine products, toys, gems and jewellery, engineering goods, and auto parts are among the biggest winners. This move is expected to increase production and create more jobs, especially in labor-intensive industries.

The agreement also covers services. IT, finance, education, and other professional services will now have smoother access to the UK market. This will open up more opportunities for Indian service providers and skilled professionals.

A big highlight of the deal is a three-year exemption from social security payments in the UK for Indian workers and their employers. This means Indian professionals working in the UK can save a significant amount of money and become more competitive in the global job market.

"In a historic milestone, India and the UK have successfully concluded an ambitious and mutually beneficial Free Trade Agre-ement, along with a Double Contribution Convention. These landmark agreements will further deepen our Comprehensive Strategic Partnership, and catalyse trade, investment, growth, job creation, and inno-vation in both our economies."

Narendra Modi, Prime Minister, Government of India

"This Agreement sets a new benchmark for equitable and ambitious trade between two large economies. It will benefit Indian farmers, fishermen, workers, MSMEs, startups and innovators. It brings us closer to our goal of becoming a global economic powerhouse. This FTA is not only about goods and services, but also about people, possibilities and prosperity."

Piyush Goyal, Union Minister for Commerce and Industry, Government of India

With around USD 60 billion already being traded between India and the UK, this deal aims to double that number by 2030.

The FTA also promises better access for Indian professionals, including business visitors, investors, chefs, yoga teachers, and artists.

India and the UK have also agreed to promote good business practices and improve transparency, aligning with India's ongoing domestic reforms to ease doing business.

Govt of India Removes Port Restrictions & Testing Requirements for Export of Finished Crust Wet Blue and EI Leather

In a significant development for India's leather industry, the Government of India has announced the removal of port restrictions and testing require-ments for the export of Finished Leather, Wet Blue Leather, EI Tanned Leather and Crust Leather.

The Ministry of Commerce & Industry, through the Directorate General of Foreign Trade (DGFT), issued a notification on May 26, 2025 revoking the longstanding Public Notice 23(RE-2013)/2009-14 dated August 13, 2013, as amended over the years.

This decision marks an important milestone for exporters

According to the notification, with immediate effect:

[1] Port restrictions on the export of Finished Leather, Wet Blue Leather and EI Tanned Leather have been removed.

[2] The requirement for testing and certification by the Central Leather Research Institute (CLRI) for Finished Leather, Wet Blue Leather, Crust Leather and EI Tanned Leather has been withdrawn.

The notification complements the Budget 2025 policy measures announced by Finance Minister Nirmala Sitharaman in February, which targeted boosting produc-tivity, quality, and global competitiveness in the leather and footwear sector.

The Budget removed the 20% export duty on crust leather and the 10% import duty on wet blue leather, slashing them to NIL.

This move is expected to ease the export process, boost competiti-veness, and further strengthen India's position as a leading exporter of leather and leather products.

Industry players have long requested the removal of these restrictions, citing their impact on efficiency and global competi-tiveness.

The Director General of Foreign Trade (DGFT), Ajay Bhadoo, announced the changes, signaling a proactive approach to streamline export operations and support industry growth under the Foreign Trade Policy 2023 framework.

Prada: Solid Start to The Year

Italian luxury group Prada reported its revenues reached €1.34 billion in its 1Q2025, an increase of 13% compared to 1Q2024, driven by creative dynamism and high desirability drove positive start to the year, notwithstanding more challenging macro and sector dynamics.

The Retail channel saw continued growth in the period, up 13% YOY, with consistent like-for-like, full price sales; Prada Retail Sales remained stable yoy, a resilient performance against the highest quarterly comps of 2024; Miu Miu confirmed an excellent growth trajectory, +60% yoy, showing continued strength across categories and regions. Miu Miu continued to enjoy remarkable momentum built on a free and unconventional aesthetic. Leather Goods remained the fastest-growing category, supported by impactful initiatives like the SS25 Leathergoods campaign, celebrating the iconic Matelassé. Dynamic creativity fueled the success of Ready-to-Wear and Footwear, shaping a well-diversified product offering. Prada, which announced the purchase of Versace on April 10, confirms that the closing of the operation is expected in the 2H2025, after approval by the competent authorities.

On announcing the results, Andrea Guerra, Group Chief Executive Officer, commented: "The Group had a positive start to the year. Prada showed strong resilience, against the most challenging quarterly comparison of 2024; the comps will ease slightly in the second half of the year but we expect the backdrop to remain complex. Not with standing the head winds, Miu Miu confirmed a remarkable growth trajectory. Looking ahead, our strategy remains centred on our brands, their relevance, creativity and marked sensibility in reading the spirit of the time. Sharp execution will be key in this environment and to continue to deliver on our ambition of solid, sustainable and above-market growth."

EUDR: UNIC Develops A Digital Platform to Support Due Diligence

In view of the entry into force of the EU Regulation against deforestation scheduled for 2026 also for the bovine leather sector, the UNIC Group - Italian Tanneries is developing a digital platform dedicated to the management of due diligence.

A complete solution, created in collaboration with a specialized IT company, to help companies to:

- Geographically track the plants involved in production;
- Manage and evaluate the required documentation;
- Generate automated reports and digital certifications;
- Integrate satellite data for risk analysis (on deforestation / degradation around geolocated points);
- Connect via API to the official European information system for the automatic sending and receiving of due diligence.

The project stems from the synergy with the wood supply chain and from the consolidated experience in the management of these digital flows.

Although cowhide is not a driver of deforestation - as also demonstrated by the Sant' Anna School of Advanced Studies in Pisa - UNIC is preparing to provide companies with a concrete and efficient tool to deal with the new regulatory obligations.

2025: Brazilian Footwear Industry Expected To Grow Between 1.4% And 2.2%

Footwear production is expected to grow between 1.4% and 2.2% in 2025, reaching between 942 million and 949 million pairs. Of these, around 100 million are expected to be exported, representing a projected increase of between 1.2% and 4.1%. The projections were detailed in the Scenario Analysis, an online presentation held recently by the Brazilian Footwear Industry Association (Abicalçados).

Led by Abicalçados' Market Intelligence coordinator, Priscila Linck, and Marcos Lélis, a PhD in Economics, the initiative also highlighted the current economic climate in Brazil and abroad. According to Lélis, in 2025, even in the face of international instability caused by the tariff war between the United States and China, the global economy is expected to grow by around 3%. The IMF projects a 4% increase in China's GDP, while the US GDP is expected to grow by 1.8%. "This is a projection that should fall, taking into account the 0.3% drop in the United States' GDP in the first quarter," predicts Lélis.

However, the Brazilian economy is expected to grow by 2% this year, a figure that, unlike the US projection, should be higher. "We should end up with growth of around 2.5%", forecasts the economist.

The impact of the growth of the Brazilian economy should be felt in the footwear industry, since more than 85% of the sector's sales are in the domestic market. Having grown 4.3% in 2024, with production reaching 929 million pairs, the highest in 11 years, the sector should remain anchored in the domestic market in 2025. "Apparent consumption should grow between 1.8% and 2.5% in 2025. However, unlike last year, when exports fell 17.7%, we should also see an increase in the international market, between 1.2% and 4.1%, reaching more than 100 million pairs exported", predicts Priscila.

expo**riva**schuh
GARD BAGS

Expo Riva Schuh and Gardabags Evolving in a Changing World

With 8,000 attendees from over 100 countries, the 103rd edition of Expo Riva Schuh and Gardabags came to a close. Attendance grew from Poland, the UK, Africa and the USA, while numbers from Germany remained steady. The event, which kicked off the Spring/Summer 2026 season, featured the debut of the renewed Gardabags format - a launch met with excellent success. There was strong participation in the numerous events designed not only to drive business, but also to promote networking and innovation. It was also announced that, over the next three years, the expansion works on the exhibition centre will be completed.

"The big fashion brands understood that the sneaker had to change - and they succeeded in changing it. We now have a sports shoe that's a ballet flat, and a ballet flat that's a sports shoe." This was one of the insights shared by Maria Cristina Rossi, teacher at Arsutoria School, with the large audience attending trend talks in the Highlights Area at Expo Riva Schuh and Gardabags.

Her observation captures, in simple terms, the much broader and more complex transformations affecting not just fashion, but the entire market. But how can we respond to a shifting landscape? The key concept is "Knowing How to Become". "Knowing How to Become" refers to the ability of individuals and organisations to continually learn and adapt to ever-changing contexts, environments and situations.

It is the most fitting way to describe the work carried out by Expo Riva Schuh and Gardabags since the early 2000s: "We began by focusing on internationalising the exhibitor base - the fair that moves the world. More recently, we've evolved the event into a must-attend opportunity for the entire footwear and accessories community. A place for doing business, of course, but also for staying informed and connecting intelligently - through a rich program of events, the Business Scout services, and the app that enables direct contact between exhibitors and buyers," as **Alessandra Albarelli, General Manager of Riva del Garda Fierecongressi**, explained.

DKEY FIGURES FROM THE 103RD EDITION

The **103rd edition of Expo Riva Schuh** and **Gardabags**, held from 14 to 17 June 2025, welcomed 8,000 attendees from over 100 countries, meeting organisers' expectations and reflecting broader market trends.

Roberto Pellegrini, Chairman of Riva del Garda Fierecongressi: "Once again, the summer edition has proven to be stronger than the winter one. Visitor numbers remained largely stable - a solid result considering the many complications currently affecting global markets, as well as the military conflicts that, during the fair itself, escalated and prevented several countries from participating."

Buyer attendance grew from the UK (+5%) and Poland (+15%), with Germany holding steady and Italy showing a slight decline. Non-EU inbound attendance was also positive, with India up by 13.6%, and both Africa and the United States registering a +10% increase.

That buyer quality - often more important than quantity - continues to drive order placements is confirmed by the consistent demand for more exhibition space to welcome new exhibitors and allow existing ones to enlarge their stands. "We will meet these demands by expanding the exhibition centre. Over the next three years, we plan to complete works that will make the fairgrounds even more welcoming: we will add another 20,000 m2, building new halls for a total investment of around €50 million. This will ensure an even greater international reach and exhibitor diversity," revealed Roberto Pellegrini.

This diversity is indeed one of the event's greatest strengths, as confirmed by Antonia Reading of Hotter, a major UK retail chain with its own manufacturing company, who visited the fair for the first time: "I was amazed by the variety of the offering - both in terms of the chance to meet suppliers from literally all over the world and the different levels of quality I could choose from."

THE EVOLUTION OF GARDABAGS... AND BEYOND

Undoubtedly, the most talked-about transformation at the June edition was **the revamp of Gardabags**. Social media lit up with photos of the new halls entirely dedicated to the event, which doubled in both floor space and collection offering. A stylish, fashion-forward atmosphere defined the three new zones designed for interaction between exhibitors and buyers - the pillars of the new Gardabags format: **Sourcing, Sourcing4Bridge** and **Brands**, not to mention the strong presence of exhibitors specialising in travel goods.

Having successfully redefined the Riva event as the essential hub not only for footwear trade, but now also for bags, backpacks and travel accessories, Riva del Garda Fierecongressi is already looking ahead. The next step: the progressive **evolution of Expo Riva Schuh itself**, beginning with the unveiling of a new visual identity - a reflection of the fair's continued innovation, adaptability, connection to its local roots and commitment to networking.

The **new logo** - featuring a clean and immediate design - complements the renewed identity of Gardabags and clearly conveys the message of a modern, functional and service-oriented trade fair. Every detail of the new design has been carefully analysed to communicate Expo Riva Schuh's commitment to keeping pace with the times, while maintaining strong and consistent brand recognition.

INNOVATION

Alberto Mattiello - futurist, author, Head of Innovation Retail Hub, and member of the Scientific Committee of Expo Riva Schuh and Gardabags - also addressed the profound changes shaping the world during his opening speech at the Startup Competition: "Artificial Intelligence remains the central theme when it comes to innovation. After being used to streamline processes and save us time, it has evolved into a wide array of specialised, customisable and controllable tools capable of 'reasoning'. Now, it's reaching a third evolutionary stage. We've entered the era of Massive Automation: within a few months, we may all become programmers - not because we've learned to code, but because machines will do it for us, creating applications tailored to our needs."

The ever-growing panel of judges, composed of leading buyers and industry experts, selected **Irisphera** (Romania) as the best solution among those presented during the June 2025 edition of the **Innovation Village Retail**, an initiative organised in collaboration with Retail Hub, which - across its eight editions - has showcased 68 startups from 19 countries.

Thanks to their win, Irisphera will have the opportunity to exhibit at the next edition of the event, scheduled for January 2026, further strengthening its presence on the international stage.

The company will promote its platform, which uses artificial intelligence and 3D technology to help consumers find clothing tailored to their bodies, offering personalised suggestions on size, colour and style. The result is a significant reduction in returns, an enhanced shopping experience and valuable analytics for retailers.

Other events throughout the four-day fair also drew large crowds: the **Highlights Area**, where attendees explored consumer trends and gathered reliable insights to inform purchasing decisions; the **Market Focus sessions**, a prime opportunity for buyers to discuss their local markets and meet suppliers suited to their specific needs; and the **Expo Riva Nights**, where connections were built beyond business in a festive, relaxed atmosphere.

Once again, the 103rd edition of Expo Riva Schuh and Gardabags demonstrated its ability to truly "Know How to Become" what the industry needs - and it will continue to do so in future editions, starting with the next, which will take place from 10 to 13 January 2026. ■

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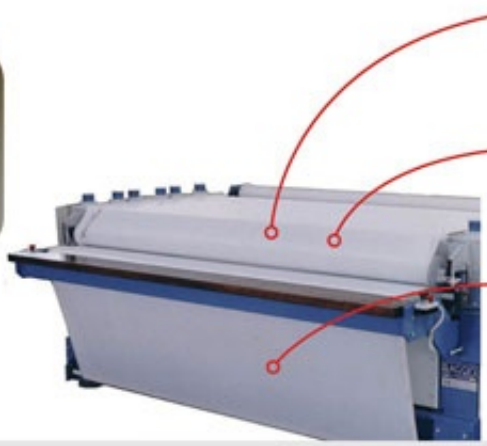

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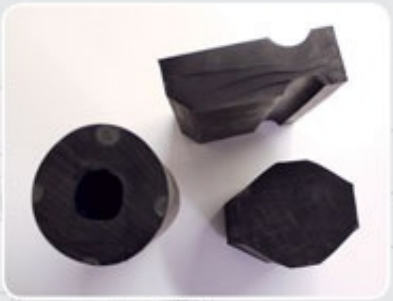

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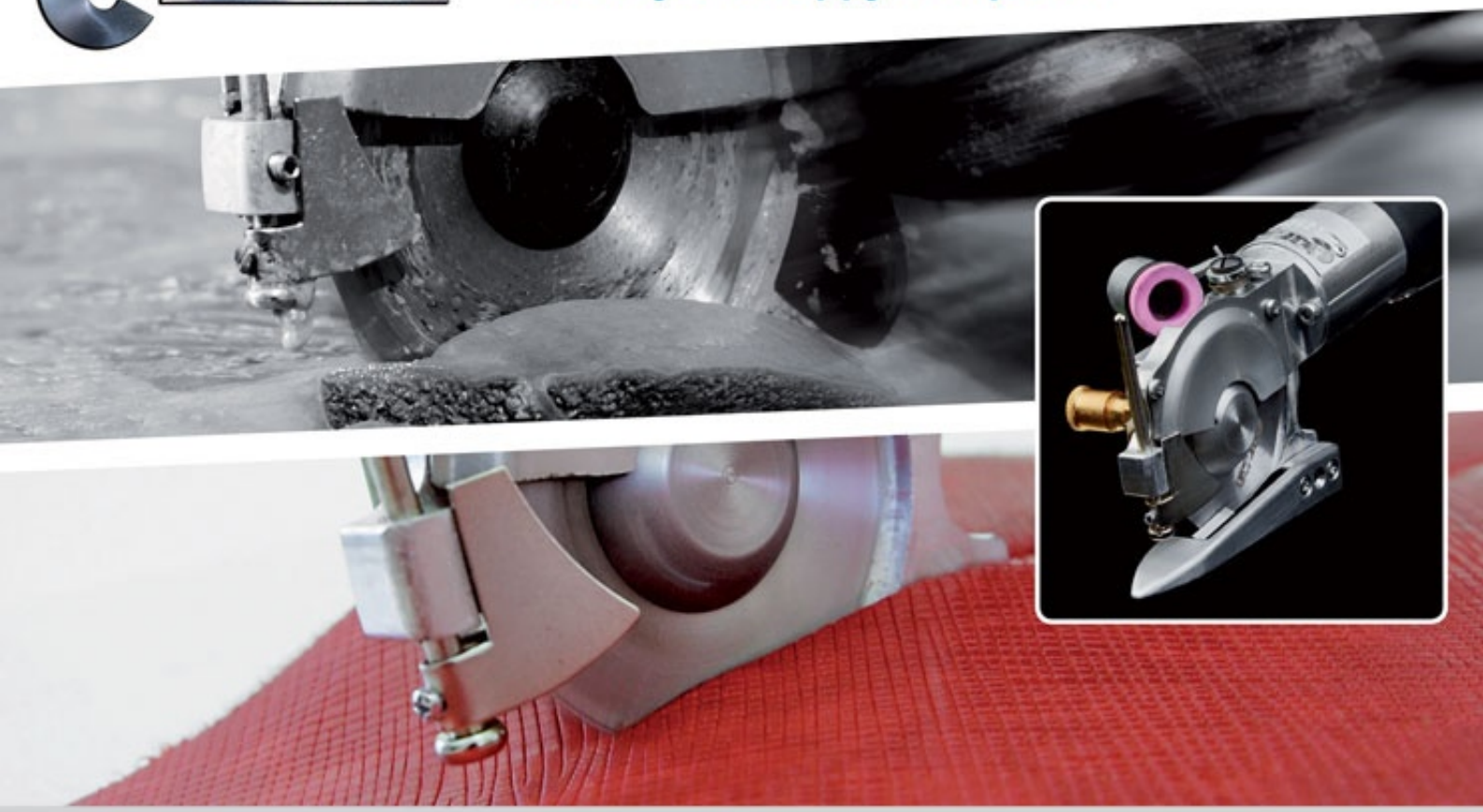

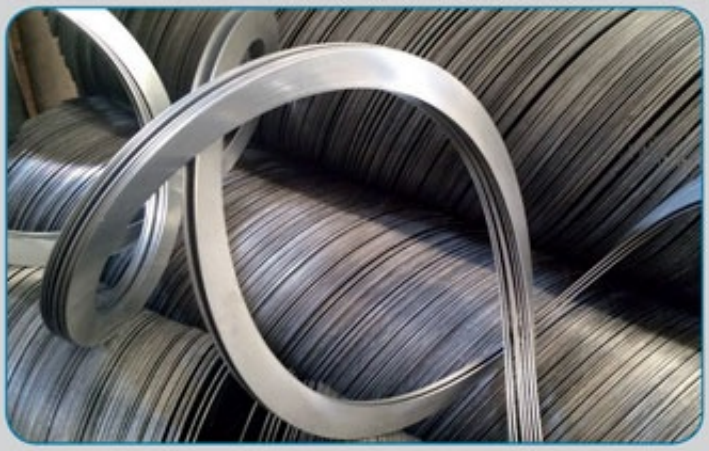

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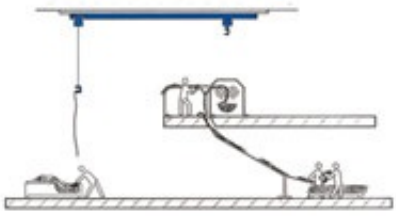

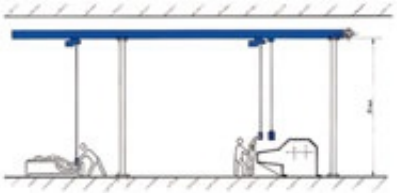

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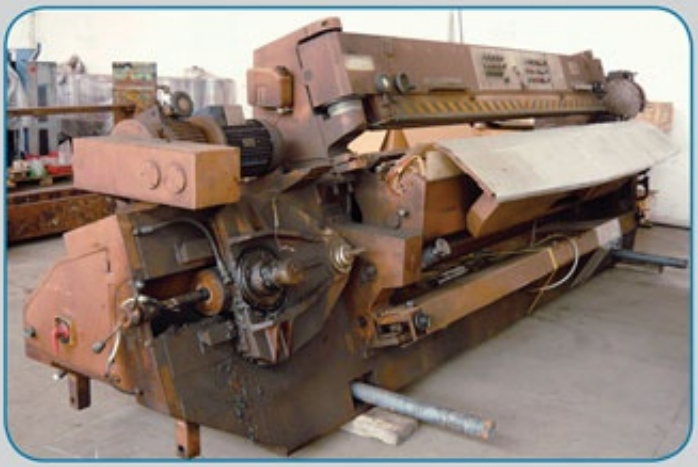

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INDIA'S EXPORT PERFORMANCE OF LEATHER, LEATHER PRODUCTS AND FOOTWEAR DURING APRIL 2025 VIS-À-VIS APRIL 2024

As per officially notified DGCI&S monthly export data, India's export of Leather, Leather Products and Footwear for the period **April 2025 touched US $ 352.45 Million** as against the export performance of **US $ 334.46Million in April 2024**, registeringa positive growth of **5.38%**. In Rupee terms, the export performance touched **Rs.30155.99 million in April 2025** as against **Rs.27895.97million in April 2024**, registering a growth of **8.10%**.

INDIA'S EXPORT OF LEATHER, LEATHER PRODUCTS AND FOOTWEARDURING APRIL 2025 VIS-À-VIS APRIL 2024

(Value in Million Rs)

CATEGORY	APRIL 2024	APRIL 2025	% VARIATION	% SHARE IN 2024	% SHARE IN 2025
FINISHED LEATHER	3310.21	2978.25	-10.03%	11.87%	9.88%
LEATHER FOOTWEAR	11187.37	12410.85	10.94%	40.10%	41.16%
FOOTWEAR COMPONENTS	1454.43	1885.94	29.67%	5.21%	6.25%
LEATHER GARMENTS	1461.46	1820.56	24.57%	5.24%	6.04%
LEATHER GOODS	7884.03	7869.89	-0.18%	28.26%	26.10%
SADDLERY AND HARNESS	1092.01	1437.91	31.68%	3.91%	4.77%
NON-LEATHER FOOTWEAR	1506.46	1752.59	16.34%	5.40%	5.81%
TOTAL	27895.97	30155.99	8.10%	100.00%	100.00%

(Source: DGCI & S)

(Value in Million US$)

CATEGORY	APRIL 2024	APRIL 2025	% VARIATION	% SHARE IN 2024	% SHARE IN 2025
FINISHED LEATHER	39.69	34.81	-12.30%	11.87%	9.88%
LEATHER FOOTWEAR	134.13	145.05	8.14%	40.10%	41.15%
FOOTWEAR COMPONENTS	17.44	22.04	26.38%	5.21%	6.25%
LEATHER GARMENTS	17.52	21.28	21.46%	5.24%	6.04%
LEATHER GOODS	94.53	91.98	-2.70%	28.26%	26.10%
SADDLERY AND HARNESS	13.09	16.81	28.42%	3.91%	4.77%
NON-LEATHER FOOTWEAR	18.06	20.48	13.40%	5.40%	5.81%
TOTAL	334.46	352.45	5.38%	100.00%	100.00%

(Source: DGCI & S)

Export of different categories of Footwear holds a major share of about **53.21%** in India's total leather, leather product and footwear exports with an export value of **US $ 187.57Mn**. This is followed by Leather Goods & Accessories with a share of **26.10%**, Finished Leather **9.88%**, Leather Garments **6.04%** and Saddlery & Harness **4.77%**.

Malack Mohamed Hashim Chairman of KH Group Passes Away

The Indian leather industry is mourning the loss of Malack Mohamed Hashim, Chairman of KH Group and one of its most respected leaders. He passed away after dedicating over six decades to the sector.

Known for his deep expertise across tanning, manufacturing, and exports, Mr. Hashim was instrumental in shaping India's leather industry.

In 2018, he was honoured with the Lifetime Achievement Award by the Council for Leather Exports (CLE) and was widely referred to as the "Doyen of the Leather Industry."

His legacy leaves behind a stronger, more visionary leather industry.

LEATHER AGE, extends its sincere condolences to his family & colleagues.

ANALYSIS - COUNTRY WISE EXPORT PERFORMANCE OF LEATHER, LEATHER PRODUCTS & FOOTWEAR FROM INDIA DURING APRIL 2025 VIS-A-VIS APRIL 2024

Value in Million US$

COUNTRY	EXPORT		% Change 2025	Shara in total export APR 2024	Shara in total export APR 2025
	APR 2024	APR 2025			
U.S.A.	70.72	68.09	-3.72%	21.14%	19.32%
GERMANY	33.97	39.29	15.66%	10.16%	11.15%
U.K.	31.02	30.62	-1.29%	9.27%	8.69%
ITALY	23.36	26.16	11.99%	6.98%	7.42%
FRANCE	14.98	17.75	18.49%	4.48%	5.04%
SPAIN	12.94	13.43	3.79%	3.87%	3.81%
U.A.E.	7.43	9.87	32.84%	2.22%	2.80%
NETHERLANDS	10.10	21.25	110.40%	3.02%	6.03%
HONG KONG	5.79	2.68	-53.71%	1.73%	0.76%
CHINA	12.86	7.79	-39.42%	3.85%	2.21%
POLAND	6.73	5.58	-17.09%	2.01%	1.58%
BELGIUM	12.97	6.53	-49.65%	3.88%	1.85%
SOMALIA	2.31	3.17	37.23%	0.69%	0.90%
VIETNAM	7.12	8.50	19.38%	2.13%	2.41%
AUSTRALIA	4.50	6.02	33.78%	1.35%	1.71%
PORTUGAL	3.71	5.48	47.71%	1.11%	1.55%
DENMARK	3.11	4.43	42.44%	0.93%	1.26%
KOREA REP.	2.71	3.11	14.76%	0.81%	0.88%
JAPAN	4.14	4.99	20.53%	1.24%	1.42%
RUSSIA	3.75	4.61	22.93%	1.12%	1.31%
S. AFRICA	2.11	3.08	45.97%	0.63%	0.87%
CHILE	3.41	3.71	8.80%	1.02%	1.05%
MALAYSIA	2.40	1.86	-22.50%	0.72%	0.53%
AUSTRIA	2.77	2.71	-2.17%	0.83%	0.77%
CANADA	3.82	4.48	17.28%	1.14%	1.27%
SWEDEN	1.69	1.84	8.88%	0.51%	0.52%
NIGERIA	0.83	1.11	33.73%	0.25%	0.31%
INDONESIA	1.65	2.96	79.39%	0.49%	0.84%
MEXICO	4.49	2.49	-44.54%	1.34%	0.71%
SAUDI ARABIA	2.70	2.88	6.67%	0.81%	0.82%
KENYA	0.40	0.52	30.00%	0.12%	0.15%
SWITZERLAND	0.96	1.10	14.58%	0.29%	0.31%
SLOVAK REP	0.39	0.19	-51.28%	0.12%	0.05%
HUNGARY	1.72	2.25	30.81%	0.51%	0.64%
THAILAND	1.30	1.72	32.31%	0.39%	0.49%
BANGLADESH	1.73	1.67	-3.47%	0.52%	0.47%
FINLAND	0.81	0.65	-19.75%	0.24%	0.18%
TURKEY	1.96	2.04	4.08%	0.59%	0.58%

Value in Million US$

COUNTRY	EXPORT		% Change 2024-25	Shara in total export APR 2024	Shara in total export APR 2025
	APR 2024	APR 2025			
ISRAEL	1.51	1.26	-16.56%	0.45%	0.36%
CAMBODIA	1.21	0.84	-30.58%	0.36%	0.24%
CZECH REPUBLIC	1.13	1.24	9.73%	0.34%	0.35%
GREECE	0.82	0.93	13.41%	0.25%	0.26%
NEW ZEALAND	0.46	0.51	10.87%	0.14%	0.14%
OMAN	0.60	0.33	-45.00%	0.18%	0.09%
SRI LANKA DES	0.95	0.83	-12.63%	0.28%	0.24%
SINGAPORE	1.15	0.90	-21.74%	0.34%	0.26%
SUDAN	0.01	0.02	100.00%	0.00%	0.01%
TAIWAN	0.64	0.40	-37.50%	0.19%	0.11%
NORWAY	0.68	1.68	147.06%	0.20%	0.48%
DJIBOUTI	0.18	0.28	55.56%	0.05%	0.08%
OTHERS	15.76	16.62	5.46%	4.71%	4.72%
TOTAL	**334.46**	**352.45**	**5.38%**	**100.00%**	**100.00%**

(Source: DGCI & S)

The **Top 15 countries** together account about **77%** of India's total leather & leather products export during April 2025 with export value of **US $ 271.35 Million**.

ASSOMAC MOURNS MARIO PUCCI

The funeral of Mario Pucci, former Head of Communication and international Activities at Assomac,took place on June 4, 2025 at the Church of Santa Maria di Ricorboli in Florence.

A respected figure across the global leather, footwear and tanning machinery industry, Pucci dedicated over three decades to promoting Italian mechanical engineering excellence around the world.

Mario Pucci began his career with Italian leather machinery association Assomac in the 1980s, shortly after the association's founding. Over the years, he became a central figure in shaping and expanding the organisation's international relations.

Known for his commitment to "business diplomacy" - a term he coined to describe the strategic and human-centric approach he brought to international outreach - Pucci played a crucial role in building networks across public and private institutions worldwide.

"It is with emotion that we wish to remember and pay tribute to the countless activities carried out by our colleague Mario Pucci, a key figure in the development of Assomac's international relations," said Assomac President Mauro Bergozza. "His passion for authentic communication and his calm, pragmatic approach always reassured colleagues, even in the most challenging circumstances."

His tenure at Assomac culminated in a special recognition in 2015, when then-President Gabriella Marchioni Bocca presented him with a certificate marking "32 years of tireless commitment" to the international promotion of Italy's leather and footwear machinery sector.

In recent years, Pucci had settled in Florence, where he lived with his wife Antonella. Assomac said: "His humanity, dedication and international spirit will forever remain part of our history. Our heartfelt thanks go out to Mario."

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