‘CSIR-CLRI FOR SEES TO BE THE GLOBAL HUB THAT WOULD TRANSFORM THE INDIAN LEATHER INDUSTRY INTO ONE, WHICH IS TECHNOLOGY AND INNOVATION DRIVEN, THUS STEERING INDIA TO BE THE GLOBAL LEADER IN LEATHER’.

Dr B Chandrasekaran, Director, CSIR-CLRI
“One-year of successful completion in Office as Director, CSIR-CLRI”
Dear Doyens and Members of the Indian Leather Fraternity; Mentors and Teachers, Colleagues and Friends!

It gives us great pleasure in sending you our February 2017 edition of The LEATHER POST.

As you read this edition of The Leather Post, I would have completed one revolution as Director of CSIR-CLRI for which I remain indebted to all of you for your unstinted support and kind co-operation. A remarkable journey together!

We witnessed a number of events associated with INDIA LEATHER WEEK 2017. There was an air of positivity and optimism. There are priorities and many of them are very urgent in nature. CSIR-CLRI is parallelly handling them with kid gloves.

On the home front, infrastructure development is TOP PRIORITY and we hope to change the face of CSIR-CLRI quickly. We will strive to make this magazine informative and interesting and welcome your feedback for improvement.

Dr B Chandrasekaran,
Director, CSIR-CLRI

24th February 2017
market. I hope that with all our efforts and the support of the Government, we will be able to achieve the envisaged sustainable growth levels and targets under Make in India.

“Momentous journey shaping the most prestigious event of the industry over the last three decades.” Smt. Shubra Singh, Executive Director, ITPO.

A high potential market that makes Tamil Nadu a great destination for investment under ‘Make in India’ programme. Shared that good news ITPO Board has approved the expansion of Chennai Trade Centre.

‘Opportunity to share New Developments in Leather’ Thru K.C. Karupanan Honorable minister of Environment and Pollution Control In his very dynamic speech at the inauguration of IILF 2017, the Honorable Minister stated that with the blessings of the former Chief Minister Late J. Jayalalitha Amma, the government would continue to support the 200 year old industry here in Tamil Nadu.

A highly employment oriented industry, the Leather Industry of Tamil Nadu was ahead of other regions, he said.He urged the Industry to be a responsible industry and take continued measures to make it a green industry.

Enabling LEATHER
Theme Pavilion at IILF 2017
A joint endeavour of ITPO | CLE | CSIR-CLRI

Partners in Progress: Alina Private Limited; AV Thomas Leather & Allied Products Limited; AXA Leather Group; Arkay Leathers Pvt Ltd., Ayappa Enterprises; C Kalyanam & Co., Chennai Leather Fashions; Drish Shoes Limited; Forward Group; Good Leather Group; Genuine Leathers; KH Exports India Pvt Ltd., Mathi Leathers; PA Footwear; Pakkar Leathers; Ramjee Leather Fashions; Shafeeq Shameel Group; Shoeberry; Sura Leathers; Tata International Limited.

“Enabling Leather” traces the growth of the unique partnership between ITPO, CLE and CSIR-CLRI required for the sustainable development of the Indian Leather Industry.

That the Leather Industry has grown from exporting about Rs 800 lakh worth of raw hides/ skins and semifinished leather in 1944-45 to US$ 5854 million in 2015-16 has to be attributed to the technologies imbibed by this Industry. The transition to an industry manufacturing high quality leather and customer-desired products has not been easy.

Several paradigm changes had to be adopted bringing in sustainability and value addition. The trinity partnership between ITPO, CLE and CSIR-CLRI has enabled sustainable development of the leather industry. India International Leather Fair (IILF) plays an important role in these linkages.

Enabling Leather: Theme Pavilion at IILF 2017 focuses on
1.Shift towards Sports Footwear: To “strengthen India’s Sports footwear segment technologically and otherwise such that the vision of Hon’ble Prime Minister of India in sporting Nation could be realized sooner than later”.

2.New Dimensions in Children’s Shoes: The Children’s feet grow at a rapid rate thus necessitating a frequent change in footwear to accommodate this foot growth. In order to provide correct fitting shoes for them it is essential to gather reliable foot dimensions of children which was done through a ‘digital capture’ of the foot images.

3.Bringing paradigm shift from Don’t to Do Ecology: Technologies for reduction or elimination of chrome discharge in tannery waste waters. Demonstration of Waterless Chrome Tanning Technology.

CSIR-CLRI at 2nd Designers Fair 2017

CSIR-CLRI wins CLE’s ‘Best Shoe Design Award for Year 2017 jointly with KETHINI for its range of Ladies Comfort Sandals
Shri K Dayalan, India Fashion Studio, CSIR-CLRI receives the Award

“India’s footprints into European Fashion”: A “Made in India” achievement!
CSIR-CLRI presented the Leathers & Colours for MODEUROP Spring Summer 2018 season
MODEUROP has chosen titles for the three colour groupings that already allude to the materials and their character.
- ORIGINAL: Colours inspired by Nature and Life!
- ARTIFICIAL: Fashion Colours made for the Future!
- MAGICAL: Welcome to Planet FANTASY!
The 34th IULTCS Congress was inaugurated on 6th February, 2017 with the ceremonial parade at the Rajendra Hall, ITC Grand Chola, Chennai. As the IULTCS anthem began playing, Dr Dietrich Tegtmeyer (President-IULTCS), carrying the IULTCS flag led, the procession of celebrities comprising Dr. T. Ramasami (Congress President), Shri M Rafeeqe Ahmed (Chief Patron), Shri Mukhtarul Amin, Shri P R Aqeel Ahmed, Shri N Shafeeq Ahmed, Shri M Israr Ahmed (Guests of Honor), Dr B Chandrasekaran, Director CSIR-CLRI, Shri Arnab Jha, Working President, 34th IULTCS, Shri NR Jagannathan, Working President, 34th IULTCS and Dr N K Chandrababu, Congress Convenor, 34th IULTCS, into the Hall amidst a rousing ovation. As the excitement subsided and the delegates settled down in their seats, Dr. B. Chandrasekaran, greeted the gathering. His warm words of welcome were followed by the lighting of the ‘Kuthuvilakku’ (Indian traditional lamp) by the dignitaries on the dais. This set the pace for the events to begin. The first was the play-back of the video recordings, the inspiring messages about the Congress by each of the above dignitaries. Dr. Dietrich Tegtmeyer, Dr Campbell Page and Shri Ramesh Kumar, IAS added great value and thrust with their live speeches. Dr. Dietrich Tegtmeyer later introduced Dr. Mariliz Gutterres, IULTCS merit awardee followed by the latter’s acceptance speech. Finally, Shri Arnab Jha proposed vote of thanks. The event concluded with the national anthem.
Nature’s Marvel
Leather lives longer than the skin does and imbues the characteristics of the nature’s architectural marvel. Leather manufacturing is one of the earliest activities of mankind and yet it is one of the most traded commodities in the world today, commanding a global annual turnover of about 200 billion US$. Leather and leather products sector are people-intensive and therefore it provides significant employment that facilitates inclusive growth. The theme of this 54th IULTCS being ‘Science and Technology for Sustainability of Leather’, this article attempts to prognosticate the future of leather industry and trade that aspires to attain sustainability.

Environmental Footprint
Though leather industry is known to be one of the key sectors boosting the development, it is also recognized as a major polluting industry. The importers of finished leathers in the past had been concerned much about the quality of the leathers. The requirements and expectations have been inflated. In the recent past the consumers have been concerned about how friendly the leather would be to the user. Today, they are not only concerned how the leathers they buy are, and whether these would be precarious or not, but the way they are made. The consumers of the future will certainly prefer the leather products that would be manufactured with a minimum damage to the environment and adhering to the social norms. In a way, Indian tanners are forerunners in the pursuit of environmental protection. In this part of the country (Tamilnadu), Zero wastewater discharge has been mandated by the court of law. The other parts of the country have also been exploring the possibilities of attaining zero wastewater discharge through different means. They have taken a position that without the practice of all possible in-process pollution reduction measures, it would seldom be possible to attain sustainability solely through end-of-pipe treatment. The future course will be the preparation of ‘cluster-specific sustainability road map’. And sustainability programs will be developed and implemented as per the roadmap. It is envisaged that it would not only happen in India but also in all the developing countries in the coming decade.

New Age Tannery
Mahatma Gandhi in 1908 recognized the untapped opportunity for value addition and employment generation because of the export of raw hides and skins. Today, Mahatma Gandhi’s dream of tapping the opportunity and value addition is being realized. Nevertheless, the value addition has been happening, the question, ‘Has the value addition reached the ultimatum?’ needs to be answered. There are so many avenues that could be explored for still enhancing the proportion of value addition. One of such avenues could be an integrated approach of utilization of skin and hide. The ‘New Age Tannery’ may not be akin to what it is today. The tannery of the future, either by self or through collaboration would explore all the possibilities to generate revenue from all the components of the raw hides and skins. The establishment of new age tanneries should be geared up in utilizing the proteins from hides and skins to the fullest. The new age tannery in a nutshell shall produce various products along with leather putting to use all the skin components. This will result in reaping increased financial returns while minimizing the inputs. Starting from trimming of raw materials (hides/skins), one of the first steps in leather manufacture, to the buffing dust, valuable proteins are lost in the form of solid wastes. Presently, not only these valuable materials are wastes but resources are further spent upon these ensuring secured disposal. There is a greater opportunity in tapping these solid wastes to promote high-value products such as collagen, gelatin and moderate-value product hydrolysates for poultry feed, fertilizers and protein fillers. These value generation opportunities can offset the costs associated with the sustainable environmental management.

Is it Leather or not?
Over the decades, there has been a tremendous raise in the use of non-leather materials for the manufacturing of footwear and other lifestyle products. The advancement in the area of non-leather materials is such that it has become hard even for leather technologists, to distinguish non-leather from leather. Whether non-leather materials are competing with or complementing leather? We need to recognize that the increasing global demand cannot be met solely by leather. Therefore, use of non-leather materials is inevitable to fill the gap, and eventually leather will find a way to niche segments with greater scope for higher value realization. Already there has been a shift from leather being used extensively for footwear manufacturing to the manufacturing of high-end products such as upholstery. Therefore, leather will become a material for the manufacture of niche products of higher value. Hence, there will not be much demand for leather made from low-grade hides and skins. The low-grade hides and skins may not be used for leather production but will be used for the production of high-value protein based materials. This trend may break the millennium old scenario of ‘one product - one raw material’ to a possibility of ‘many products - one raw material’ case.

Smart Leather Products
Leather has the imminent need to break the convention and come out from the classical tag, both leather and its products have to become functionally smart and need to fit in for newer applications. Newer design and technology interventions in leather products might pave way for fulfilling value added requirements such as ‘footcare’ for healthy living instead of ‘footwear’. This article is written jointly by Dr B Madhan, Principal Scientist and Dr B Chandralekha, Director, CLRI.

Heidemann Lecture 2017: Probing collagen structure and function
John A M Ramshaw, Melbourne, Australia

Fundamentals of leather science
Anthony Covington, Northampton, United Kingdom

Tanning strategies for sustainable leather production
Heinz-Peter Germann, Reutlingen, Germany

Waste to wealth approach: Adhesive from the unused goat head skin
Md. Abulhshem, Khulna, Bangladesh

Fabrication of Antibacterial Casein-based ZnO Nanocomposite for Leather Finishes through in situ Route
Wang Yanan*, Ma Jianzhong, Xu Qunna Xi’an, China

Ionic Liquids: New age “designer” chemicals for leather processing
N Nisha Fathima, Chennai, India

A New Age Chromium-Melamine Syntan Towards Quality Upgradation of Lower-end Raw Materials
M Sathish, Chennai, India

Novel surfactants – in Leather Processing
V Vijayabaskar, Chennai, India

Tanning with a Gallic extract in combination with a catalonic ester for the production of high performance leathers
Eric Poles, San Michele Mondovì (CN) Italy

Study of the variation of chromium VI content inside the leather
Jean-Claude Cannot, Villeurbanne, France

Intelligent real time leather defect detection system using image processing technique
Malathy Jawahar, Chennai, India

Probiotic solutions for sustainable leather
Juan-Carlos Castell, Kansas City, USA

Formaldehyde and Aceldehyde on Leather: Similarities and Discrepancies
Jochen Ammerm{"u}ller, Ludwigshafen, German

Redefining Chrome Tanning: A waterless approach
P Thanikavelan, Chennai, India

Concept of Sustainability: Looking Forward
Anne Lama Northampton, United Kingdom

The elimination of effluent from liming,acid /salt pickling, and chromium tanning,verified by five years high-volume wet blue leather manufacture
Richard Daniels, Shangpu City,China

Bio-based Polyurethanes for leather
Joseph Hoefler, Collegeville, USA

Quality Upgradation of Lower-end Raw Materials
N Nishad Fathima, Chennai, India

Tannery strategies for sustainable leather production
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Different pre-treatments of chrome tanned leather waste and their use in the biogas production
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Chroma-free Tannage: Suede Garment Leathers from Rural/ Vegetable Sheep Crust Leathers
Ali Elaime Musa, Khartoum, Sudan

Effect of binder selection on topcoat property retention after accelerated weathering
Joseph Hoefler, Collegeville, USA

Advances in Bio-based Polyurethanes for leather finishing
Michael Costello, Director of Sustainability at Stahl

Enzymatic unhairing: Permeability assay of bovine skin epidermis with fungal enzyme extracts
Galarza Belina, Ganinel, Argentina

Preparation and characteristics of surface modified PAN fiber by collagen protein
Ding Zhiwen, Beijing, China

Study on the Recycling Technology of Unharring-Liming and Tanning Wastewater
Li-qiang Jin Shangqui, China

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Probiotic solutions for sustainable leather
Juan-Carlos Castell, Kansas City, USA

Green bio-polymers for eco-friendly leather
Dr. Valentina Beghetti

Controlling emission in leather production: How can we make a difference?
Jürgen Christner, Basel, Switzerland
Clean Salt recovery and water recycling using Nanofiltration and Reverse Osmosis
Wolfram Scholz, Vienna, Austria

Biodecolorization and biodecoration of leather dyes from aqueous solution and dyecontaining effluents by native white-rot fungi strains
Santiago Ortiz-Monsalve, Porto Alegre-RS, Brazil

Novel formaldehyde scavenger containing active methylene for efficient removal of formaldehyde in leather
Ting Zhang, Xi’an, Shaanxi, China

Analysis of flow and energy aspects of zero liquid discharge (ZLD) technology in treatment of tannery effluents in Tamil Nadu
Jakov Buljan

Studies on simultaneous removal of nitrogen and organic carbon from tannery wastewater using Airlift sequencing batch reactor
Aysanew Gorems Melesse, Addis Ababa Ethiopia

Microbial fuel cell a novel technology for effluent treatment and electrical energy generation
P Divyalakshmi, Chennai, India

Technological developments for total dissolved solids (TDS) management and environmental sustainability in asian leather sector
S Rajamani, Chennai, India

New Dimensions in Children’s Shoes
Md Sadiq, Chennai, INDIA

Dynamic plantar pressure analysis of persons with diabetes: an approach to improve the design of therapeutic footwear
G Sathish Babu, Chennai, India

Reduction of skin disorders by HCHO in leather products
Daisuke Murai, Osaka, JAPAN

Comparison of Visual Asorting Process and Spectral Photo meter Usage in Leather Apparel Production
Mehmet Mete Mutlu, Izmir, Turkey

E-learning and Blended Training in the Leather Professional Education
Ivan Kláš, Vienna, Austria

Coopetition in leather engineering education - a strategy for a win-win situation for concerned stakeholders
Sayeed Sadulla, Chennai-600020 India

Role of CSIR-CLRI in Skill India initiative: enriching primary level human resource through artisanal skill development
B Kanimozhi, Chennai, India

Indo-Ethiopian Alliance for Transformation of Ethiopian Leather Sector
Wondu Legesse, Addis Ababa, Ethiopia

Development of an International Proficiency Testing by Inter laboratory Comparison Applied to Physical and Chemical Test Methods for Mineral Tanned Leather
Carlos Amador Meza Moya, Guanajuato. MÉXICO

For more information on XXXIV IULTCS Congress, video clips and photos, please visit http://iultcs2017.org/
Dr. Md. Sayem Alam, Scientist, CSIR-Central Leather Research Institute, Chennai, India

For the prestigious Young Scientist Award for 2017
Chemical Sciences (Saraswathy Srinivasan Prize)
The Academy of Sciences, Chennai

Dr. Md. Sayem Alam is a Scientist in Polymer Science & Technology, CSIR-Central Leather Research Institute (CSIR-CLRI), Chennai, India. He received Ph.D. in Chemistry from Aligarh Muslim University, Aligarh, India. He has made several important contributions to the understanding of micellar systems. He has a broad range of scientific interest right from R&D and Industrial Developments. His contributions to surface and colloid sciences are valuable and noteworthy. He is a scientist with a strong commitment to the cause of his profession, particularly in the field of Colloids & Surface Sciences/Physical Chemistry/Biophysical Chemistry. He is author of over 50 publications in refereed journals, which have attracted more than 1200 citations (h-index = 25). He has 2 patents to his credit. He is an Honorary Assistant Professor of Academy of Scientific and Innovative Research (AcSIR), New Delhi, Anna University, and University of Madras, Chennai, India. He is a member of several professional, scientific and academic bodies.

“There are many new avenues such as specialty polymers with respect to Leather applications”

Dr N Somanathan
Senior Principal Scientist, Polymer Laboratory, CSIR-CLRI who retires on 28th February 2017 after almost four decades of service, says that the “Legacy that has been created in the Polymer Lab has to be continued for country’s development. He added that there are many new avenues such as specialty polymers with respect to leather applications.”

His colleague, Dr N Jaishankar stated that the Polymer Lab colleagues have enjoyed some of his experiences. Dr Somanathan is a very motivating person, he said.
Training Program on Science Technology and Innovation Policy for SAARC countries jointly organized by UNESCO, DST & Zaheer Science Foundation

13-17 February, 2017

A training program cum workshop on Science and Technology Policy was held from 13th-17th February, 2017 organized by Zaheer Science Foundation in collaboration with UNESCO for SAARC countries. The program was held at Indian National Science Academy (INSA), New Delhi. The program was supported by Department of Science and Technology, (DST) and UNESCO. The program covered large gamut of Science, Technology and Innovation Policy; Economics of Industrial Innovation; National Innovation System; International Technology Transfer; R&D Management; Technology Forecasting and Assessment; Information and Communication Technology (ICT); and Climate Change and Environment Issues. A large number of resource persons from South Asia, Southeast Asia, Europe and America gave lectures and interacted with the participants. Indian Faculty also made their contribution on different topics related to Science and Technology Policy.

Director’s Blog

19 February 2017! It looks like yesterday but it’s one year! 365 Days! I wanted to take stock of what has happened in this last one year ever since I have assumed office. But one thing is sure “miles to go before I can take leave.”

Transfer of some milestone technologies including waterless chrome tanning, dry tanning, bio glue, Hi grade collagen for wound healing, Chrome-Melamine syntan and many more has put CLRI into next level. Recently concluded 34th IULTCS has been acclaimed one of the best ever conducted seminar. My heartiest congratulations to team-CLRI for making this happen.

I am looking forward to more rewarding outcomes in the coming days. I am able to see that industry is looking forward to CLRI to deliver towards sustainability of the sector. Kanpur sector will be our focus along with other regions as well.

I am expecting a business plan for the next two years from every area where I expect to improve our productivity and deliverables.

CSIR has drawn clear mandates for all of us. Social and industry relevance are the order of the day. I shall soon convene meeting of all the area leaders. I am expecting a business plan for the next two years from every area where I expect defined deliverables for every one in the group. Performance appraisal would be purely based on those deliverables.

While R&D remains our major priority, infrastructure development also gain significance. It is imperative that our campus and all the facilities are given a facelift to match International standards. Coming April we will be entering into 70th year of our establishment. There is a strong need to strengthen our RECDs also to meet the growing demands of the sector. Every group, Admin and Scientific, need to work together for realising the organisational goals. Let’s join hands to make CLRI as No. 1 laboratory of CSIR.

Dr Mandal’s current work is in the area of water purification by using Nano Materials | Ceramic Glass. His long cherished dream even as a Task Force Committee Member of CSIR-CCGRI, he said. Dr Mandal is extremely happy that he could now take up this work. High temperatures are not essential for nano materials is the current finding of his work. Some part of this work has also been supported by CSIR-CLRI Scientists said Dr Mandal. He was hoping for positive results.

The work has also been published in a recent Times of India article. The mix of silicon, glass and a lubricant gives excellent result that is best suited for manufacture of CONTACT LENS.

He also mentioned about his future work that would cover shoe soles as well as for Tanning purposes. Dr Mandal expressed joy over the fine organization of XXXIV IULTCS 2017 as well as the quality of papers presented. He exhorted younger colleagues in CSIR-CLRI to keep the flag of CSIR-CLRI flying high!

Dr B Chandrasekaran, Director CSIR-CLRI presented at Workshop on Science, Technology and Innovation Policy for SAARC countries organized jointly by Zaheer Science Foundation and UNESCO at INSA, New Delhi on 14th Feb 2017
Mr Darren Knight of the Quality Services team at SATRA in CSIR-CLRI on 16th & 17th February 2017 to begin the arrangements for the annual audit of the CSIR-CLRI Physical Testing laboratory for 2017.

For details of Testing Charges, please visit http://www.clri.org/Admin/TestingCharges-CATERS.pdf
CLRI’s Experiences in Africa

A Case Study
Presented by Dr B Chandrasekaran,
Director, CSIR-CLRI

At the one-day Workshop on “Indo African Trade Cooperation in the Leather Sector” organized by Council for Leather Exports in Hotel Shangrila-La, New Delhi on 14th February, 2017.

In order to promote export of leather and leather products (with focus on footwear segment) to the African Countries, Council for Leather Exports organized a one-day Workshop in New Delhi with the diplomats and counselors of the Missions of African Countries in India on 14th February, 2017. CLE also organized ‘display of products’ by around 25-30 Indian exporters of leather and leather products at the meeting venue. Even though India is exporting leather and leather products to most of the 51 African Countries in the leather sector is very high.” …Shri Mukhtarul Amin, Chairman, Council for Leather Exports

“...We are aware of the fact that CLRI has been working with a few African Countries, including Ethiopia, South Africa, Kenya etc. on various Projects. It is a matter pride for all of us that the African Countries are acknowledging our technical expertise for further developing their value added product segments. It is also very interesting that a few Indian companies had already established their own tanneries for sourcing leather from the Countries like Ethiopia. Keeping in view all these developments, the prospects for increased cooperation with African Countries in the leather sector is very high.”

Objectives of Benchmarking

Transforming the Ethiopian Leather Sector through
•Implementation of technology up gradation program (Benchmarking) in the selected tanneries to achieve global competitiveness in the production of finished leathers
•Development of systems in the respective tanneries for continual improvement and sustaining the growth.

Objectives of Twinning

Creating and providing intellectual and skilled manpower to cater to the requirements of the Institute and industry
•Providing technical support in all the spheres of leather and leather product sectors
•Providing services to the industry such as testing, certification and establishing norms or standards
•Forecasting the global market dynamics and preparing the Ethiopian leather and leather products sectors to meet the changing requirements
•Creating functional tripartite linkage among the Academy, R&D/laboratories and industry to start real time activities in research and training during the twinning period.

Significant outcomes of Twinning

•Establishing QMS system with organisational restructuring of LIDI
•Strengthening of academic programs of LIDI with AAIT through a tripartite agreement for B.Sc., M.Sc. and Ph.D.
•Training of about 100 technical personnel from LIDI for various short, medium and long term programs in select areas including M.Sc. and Ph.D. programs (35 Nos.)
•Modernising TVET curriculum for leather, footwear, goods & garments and preparation of detailed learning outcomes for Level 1 to 4. CLRI & FDDI have jointly contributed to this important exercise, which would pave way for generating quality manpower for the manufacturing sector.
•Joint R & D initiatives to enhance the capabilities of LIDI carrying out developmental activities for leather and environment.
•Enabling organisational functions of LIDI through interventions in IT and Management activities.
•Joint industrial consultancy programs in leather and products area in solving problems of the leather sector and enabling the sector through value addition and employment generation leading to increased export realisation.
•Success stories of this endeavour have resulted in making this as a model program for the country so that other industries such textile, metal, food, pharma & chemical also take up similar initiatives

Preparation of Master Plan for the Development of Leather Sector of Kenya

Scope of Work

•Preparation of Master Plan for the Development of Leather Sector of Kenya
•Detailed report for the establishment of Integrated Leather Park comprising Leather and Product Sector with ETP
•Establishment of Leather product Training Centre covering Footwear, Leather Goods and Garments
•Providing Policy Direction for driving the growth of Kenyan Leather Sector
•Revamping Curriculum and Syllabus for Academic Programs
•Assistance in carrying out survey for collection of baseline data
•Live stock population, Raw Material production & Availability, Leather & products- production & consumption

CLRI for PAN AFRICA

•Ethiopia: Technology upgradation of tanneries and institutional capacity building
•Kenya: Institution building and policy directions for the leather sector
•Botswana: Undertaking validation study on the viability of leather Industry Park
•South Africa/Sudan/Tanzania: Technology upgradation and institutional building

CLRI Vision 2020

•B.Sc. Program in leather technology
•Ph.D. for LIDI personnel
•M.Sc. program in leather technology
•Collaborative Research in Leather technology and Materials
•Technology Development & Transfer
•Environment Engineering and Technology
•Consultancy and Skill Development

**INDO-AFRICAN TRADE IN FOOTWEAR LEATHER SECTOR**
Just how bespoke can luxe leather get?

So customised, that even a 1.5 mm difference in fit means we start all over again!

Our hi-tech Foot Scanner, from Italy is a first in India. Once you place your feet in the scanner, it generates a 3D image of your feet and a mould is made. A pair of shoes that fits your feet perfectly will then be ready. Not just size and fit, but you also have a choice of designs and styles that you can customise.

A single sole, goes through 40 processes before it even touches your feet and out of 50 shoes designed by our world-class designers, only a handful are picked to reach our shelves!

Naturally, we source only the very best leather from around the world and hand-stain each shoe individually to achieve natural, aesthetic tonal highs and lows.

We do all this while always keeping the environment in mind. Ours is one of Asia’s largest tanneries and we’ve been around for 75 years. Our massive green initiatives including Reverse Osmosis and harnessing of Solar Energy, are an extension of our philosophy that we rise by lifting others.

Shoes | Bags | Belts | Wallets

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