



ILTA
Since 1950

Registration No. KOL RMS/074/2019-21

Date of Publication: 6th

JILTA

Journal of Indian Leather Technologists Association

₹ 50.00

Vol. No. LXIX No. 12

Regd. No. ISSN 0019-5738

RNI No. 2839/57

December 2019





ILTA
Since 1950



**INDUSTRIAL
PRODUCTS**

ACROLINE DYE SOLUTIONS

Metal Complex Dye Solutions for Leather Finishing

P

SERIES

ACROLINE P SERIES

- High concentrated dyes, originally synthesized in liquid form.
- Excellent light fastness and resistance to spotting by water droplets.
- Free from:
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- Available shades:
Black PR, Black PS, Orange PR, Yellow PG, Red Brown PR, Rubine PB, Cherry Red PG, Yellow PR, Light Brown PG, Royal Blue PR, Dark Brown PR, Brown PB

DP

SERIES

ACROLINE DP SERIES

- Dyes originally synthesized in liquid form.
- Excellent Light Fastness and resistance to spotting by water droplets.
- Free from:
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- Available shades:
Black DPR, Black DPS, Orange DPR, Yellow PG, Red Brown DPR, Rubine DPB, Yellow DPR, Cherry Red DPG, Light Brown DPG, Royal Blue DPR, Dark Brown DPR, Brown DPB,

Pidilite Industries Ltd.

IP Division - Ramkrishna Mandir Road, Andheri (E), Mumbai 400 059 INDIA

T: +91 22 2835 7136 • F: +91 22 2836 7165 • E: leatherchem@pidilite.com • www.pidiliteindustrialproducts.com



ILTA
Since 1950



**INDUSTRIAL
PRODUCTS**

PIDITHANE POLYURETHANE BINDERS

PIDITHANE A 350

- High Solids Polyurethane binder
- Good covering property
- Excellent emboss retention

PIDITHANE A 201

- Soft and Micro fine polyurethane binder
- Can be used as adhesion promoter binder

PIDITHANE NIPU

- Non-Ionic Soft polyurethane binder
- Can be used as adhesion promoter binder
- Can be used in polishable coats along with protein binder

PIDITHANE A 101

- Medium Hard in nature
- Very good polishability

PIDITHANE 115SB

- Soft aromatic PU
- Very good adhesion promoter

Pidilite Industries Ltd.

IP Division - Ramkrishna Mandir Road, Andheri (E), Mumbai 400 059 INDIA

T: +91 22 2835 7136 • F: +91 22 2836 7165 • E: leatherchem@pidilite.com • www.pidiliteindustrialproducts.com



ILTA
Since 1950



**INDUSTRIAL
PRODUCTS**

ACROLINE DYE SOLUTIONS

Metal Complex Dye Solutions for Leather Finishing



ACROLINE P SERIES

- High concentrated dyes, originally synthesized in liquid form.
- Excellent light fastness and resistance to spotting by water droplets.
- **Free from:**
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- **Available shades:**
Black PR, Black PS, Orange PR, Yellow PG, Red Brown PR, Rubine PB, Cherry Red PG, Yellow PR, Light Brown PG, Royal Blue PR, Dark Brown PR, Brown PB



ACROLINE DP SERIES

- Dyes originally synthesized in liquid form.
- Excellent Light Fastness and resistance to spotting by water droplets.
- **Free from:**
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- **Available shades:**
Black DPR, Black DPS, Orange DPR, Yellow PG, Red Brown DPR, Rubine DPB, Yellow DPR, Cherry Red DPG, Light Brown DPG, Royal Blue DPR, Dark Brown DPR, Brown DPB,

Pidilite Industries Ltd.

IP Division - Ramkrishna Mandir Road, Andheri (E), Mumbai 400 059 INDIA

T: +91 22 2835 7136 • F: +91 22 2836 7165 • E: leatherchem@pidilite.com • www.pidiliteindustrialproducts.com

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

DECEMBER, 2019

VOL.: LXIX

NO.: 12

RNI NO.: 2839/57

REGD.NO.: ISSN 0019-5738

Contents

Pidilite Corner.....	03 - 04
Portfolio	05 - 08
Editorial.....	09 - 09
Balmer Lawrie Corner.....	11 - 12
ILTA News.....	13 - 14
STAHL Corner.....	15 - 16
Article -"Upper Manipulation in Industrial Shoe Making Process " by Moumita Mukherjee, Arijit Chakraborty, Arup Poddar.....	17 - 19
Students Corner.....	20 - 22
CLCTA Corner.....	23 - 24
News Corner.....	25 - 26
Solidaridad Corner.....	27 - 30
Down Memory Lane.....	31 - 42
ILPA Corner.....	43 - 44
Economic Corner.....	45 - 46

Hony. Editor : Dr. Goutam Mukherjee

Communications to Editor through E-mail :
admin@iltaonleather.org; jiltaeditor@gmail.com

Cover Designed & Printed by :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Published & Printed by :

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

Published from :

Regd. Office : 'Sanjoy Bhavan', 3rd Floor,
44, Shanti Pally, Kasba, Kolkata - 700 107

Printed at :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Subscription :

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

All other business communications should be sent to :

Indian Leather Technologists' Association

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

Kasba, Kolkata - 700 107, WB, India

Phone : 91-33-2441-3429

91-33-2441-3459

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

Web site : www.iltaonleather.org

Opinions expressed by the authors of contributions published in the Journal are not necessarily those of the Association

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

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

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

Advertisement Tariff

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

Full Page / per anum

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

Mechanical Specification

Overall size	: 27 cm X 21 cm
Print area	: 25 cm X 17 cm

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

Indian Leather Technologists' Association
and Payable at Kolkata

Send your enquiries to :

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

INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION
(Member Society of International Union of Leather Technologists and Chemists Societies)

Executive Committee (2019-2021)

Central Committee

President : Mr. Arnab Jha

Vice-Presidents : Mr. Asit Baran Kanungo
Dr. K. J. Sreeram
Mr. P. K. Bhattacharyya

General Secretary : Mr. Susanta Mallick

Joint Secretaries : Mr. Shiladitya Deb Choudhury
Mr. Bibhas Chandra Jana

Treasurer : Mr. Kaushik Bhuiyan

Committee Members :

Mr. Jayanta Chaudhury
Mr. Pradipta Konar
Mr. Subir Datta
Mr. Aniruddha De
Mr. Ratan Chowdhury
Mr. Kunal Naskar
Mr. Alokesh Ray
Mr. Sudagar Lal
(Secretary - Northern Region)
Dr. R. Mohan
(Secretary - Southern Region)

Ex-Officio Member : Dr. Goutam Mukherjee

Regional Committees

Southern Region :

President : Mr. N. R. Jagannathan

Vice-President : Dr. J. Raghava Rao

Secretary : Dr. R. Mohan

Treasurer : Dr. Swarna V Kanth

Committee Members :

Dr. N. Nishad Fathima
Dr. P. Thanikaivelan
Dr. Subhendu Chakrabarti
Dr. S. V. Srinivasan

Northern / Western Region :

President : Mr. Jai Prakash Saraswat

Vice-President : Mr. Rajeev Mehta

Secretary : Mr. Sudagar Lal

Treasurer : Mr. Jaswinder Singh Saini

Committee Members:

Mr. Kamal Sharma
Mr. Mohinder Lal
Mr. Rajveer Verma
Mrs. Sunita Devi Parmar
Mr. Y. D. Mahajan

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

EDITORIAL BOARD OF JILTA

Chief Patron	:	Dr. T. Ramasami
Advisers	:	Prof. Dr. A. B. Mandal Mrs. Antara Kumar Dr. Bi Shi Dr. B. N. Das Dr. Buddhadeb Chattopadhyay Dr. Campbell Page Dr. Carlo Milone Dr. Chandan Rajkhowa Mr. E. Devender Dr. Pisi Dr. Roberto Vago Dr. Samir Dasgupta Prof. Swapan Kumar Basu Mr. Suparno Moitra Dr. Subha Ganguly Dr. Tim Amos Dr. Tapas Gupta
Peer Reviewing Committee :		Prof. A. K. Mishra Mr. Abhijit Dutta Mr. Animesh Chatterjee Dr. B. Chandrasekharan Mr. Diganta Ghosh Dr. J. Raghava Rao Mr. Jayanta Chaudhuri Dr. N. K. Chandrababu Mr. Prasanta Kumar Bhattacharyya Dr. Subhendu Chakrabarti Mr. Satya Narayan Maitra
Hony Editor	:	Dr. Goutam Mukherjee
Joint Editors	:	Dr. Sanjoy Chakraborty Dr. Anjan Biswas

Status of Consumerism in India



Consumer prices did 1.09% compared to October 2019 in India, up from the 0.55% increase from those in September. The increase was largely due to more expensive food and beverages, which, as a category, account for over half of the weight of India's consumer price basket. Consumer price inflation accelerated to 4.6% in October from 4.0% in September. As a result, inflation surpassed the 4.0% midpoint of the Reserve Bank of India's (RBI) target range of 2.0%–6.0%. Wholesale prices decreased 0.74% in October compared to the previous month, down from the 0.08% fall in September. Wholesale price inflation, meanwhile, slowed to 0.2% in October from 0.3% in September. Focus Economics Consensus Forecast panellists do expect consumer price inflation to average 3.5% in FY 2019, which is down 0.1 percentage points from last month's forecast. In FY 2020, the panel expects consumer price inflation to average 4.0%. Meanwhile, our panel projects wholesale inflation of 2.3% for FY 2019, down 0.3 percentage points from last month's report. In FY 2020, our panel foresees wholesale inflation averaging 2.4%.

India Inflation Chart



Note: Annual and monthly variation of wholesale price index (WPI) and annual variation of consumer price index (CPI) in %.

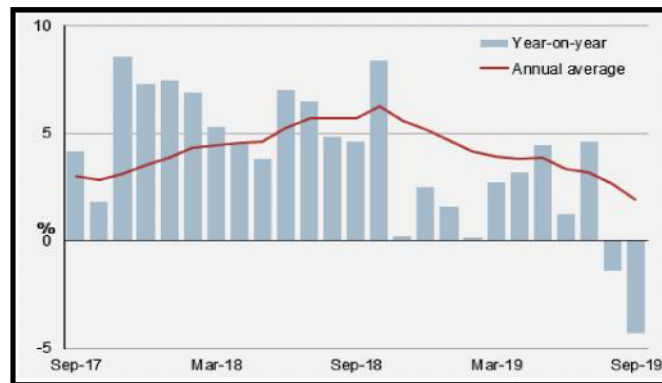
Source: Ministry of Commerce and Industry and Focus Economics calculations.

Industrial production fell 4.3% in September compared to the same month a year earlier i.e. 2018, down from August's revised 1.4% decrease (previously reported: -1.1% year-on-year).

Most industrial sectors contributed to the slump in September, with output in the mining sector dropping the most, followed by that of the manufacturing sector and electricity sector, respectively. By use, production of capital goods collapsed by over one fifth in September, while output of consumer durable, construction and primary goods also dropped notably. Meanwhile, production of consumer non-durable goods decreased only slightly in September, while output of intermediate goods increased. Annual average growth in industrial production moderated to 2.0% in September from 2.7% in August.

Focus Economics panellists expect industrial production to increase 4.3% in FY 2019, which is down 0.1 percentage points from last month's projection. For FY 2020, the panel expect industrial output to expand 5.5%.

India Industry Chart



Note: Year-on-year and annual average variation of industrial production index in %.

Source: Ministry of Statistics and Programme Implementation (MOSPI) and Focus Economics calculations.

Union Government of India is trying to render boost to industry at its best. Still, overall global shadow of recession is having its strong presence in Indian economy. We do hope India will overcome this period of crisis in no time.

Goutam Mukherjee

Dr. Goutam Mukherjee





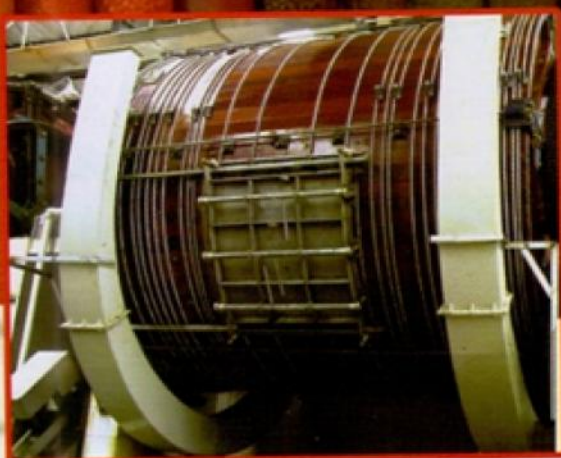
Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)

SBU: Leather Chemicals



Green Chemicals for Eco Friendly Leather Process



- ❖ Eco-friendly Products
- ❖ Products comply With REACH norms
- ❖ High performance Fatliquors, Syntans & Beam House Chemicals
- ❖ ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified
- ❖ State of the art Zero Liquid Discharge plant
- ❖ Member of Leather Working Group





ILTA
Since 1950



Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)

SBU: Leather Chemicals



- ❖ Eco-friendly Products
- ❖ Products comply with REACH norms
- ❖ High performance Fatliquors, Syntans & Beam House Chemicals
- ❖ ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified
- ❖ State of the art Zero Liquid Discharge plant
- ❖ Member of Leather Working Group



*Technology Fuelled
by Research*

From the desk of **General Secretary**



LEXPO Siliguri – XXVI

Inaugural Ceremony of LEXPO Siliguri-XXVI is scheduled to be held at 05.00 PM on Friday 20th December, 2019 at Kanchanjungha Stadium adjacent ground. The fair will last up to 5th January, 2020.

18th Sanjoy Sen Memorial Lecture

Above is scheduled to be held at 03.00 PM on Tuesday the 14th January, 2020 at the Auditorium of Freya Design Studio, Calcutta Leather Complex, Bantala. Individual

invitation cards giving further details of the programme will be posted in due course.

2nd Prof. S. S. Dutta Memorial Lecture

Above is scheduled to be held at 10.00 AM on Sunday the 2nd February' 2020 at the Seminar 'Hall A' of Chennai Trade Center, during the 35th edition of India International Leather Fair (IILF), Chennai. Application for hall booking has been sent to the competent authority. Details of the programme will be intimated nearer to the programme.

Read and Let Read :-

JILTA

BEREAVEMENT

With profound grief and a heavy heart we announce the sad demise of Sunil Kumar Bhadra on 18th November, 2019 & of Uday Sankar Paul on 24th November, 2019. Both were life members of our Association.

Mr. Bhadra was a Life Member of ILTA besides having served the Association as General Secretary for two successive terms - 1970-1971 & 1971-1972.

Mr. Paul was a Life Member of ILTA

May their souls rest in peace and May God give strength to the members of the bereaved families to bear the irreparable loss.

You are requested to :-

- a) Kindly inform us your 'E-Mail ID', 'Mobile No', 'Land Line No', through E-Mail ID: admin@iltaonleather.org or over Telephone Nos. : 24413429 / 3459. This will help us to communicate you directly without help of any outsiders like Postal Department / Courier etc.
- b) Kindly mention your Membership No. (If any) against your each and every communication, so that we can locate you easily in our record.



(Susanta Mallick)
General Secretary

Read and Let Read :-

JILTA

Executive Committee Members meet
every Thursday at 18-30 hrs. at ILTA Office.
Members willing to participate are most welcome.



We imagine high-quality shoe & leather care to be customizable to every customer's demand

Leather is a fascinating product that needs regular care to reach and maintain its optimum condition. General use causes cracking, delamination and discoloration, all of which can be prevented by proper cleaning and protection. Stahl's range of Shoe & Leather Aftercare products brings out the best of your leather items and makes them more durable at the same time.

Enhanced resistance and easy cleaning

Whether it's for automotive upholstery, footwear, garments, leather goods or upholstered furniture, our products are shielding leather by creating an invisible, breathable barrier that enhances stain resistance and easy cleaning.

The range includes products for cleaning, protecting, refinishing and repairing. We even have solutions to upgrade your leather product so that it fits the latest fashion trends.

There is no such thing as one size fits all, so all of our solutions are available in endless and customizable variations in order to meet all your requirements. Curious what our Shoe & Leather Aftercare solutions can do for your business? Please visit www.stahl.com or contact us at stahl.india@stahl.com.

If it can be imagined, it can be created.

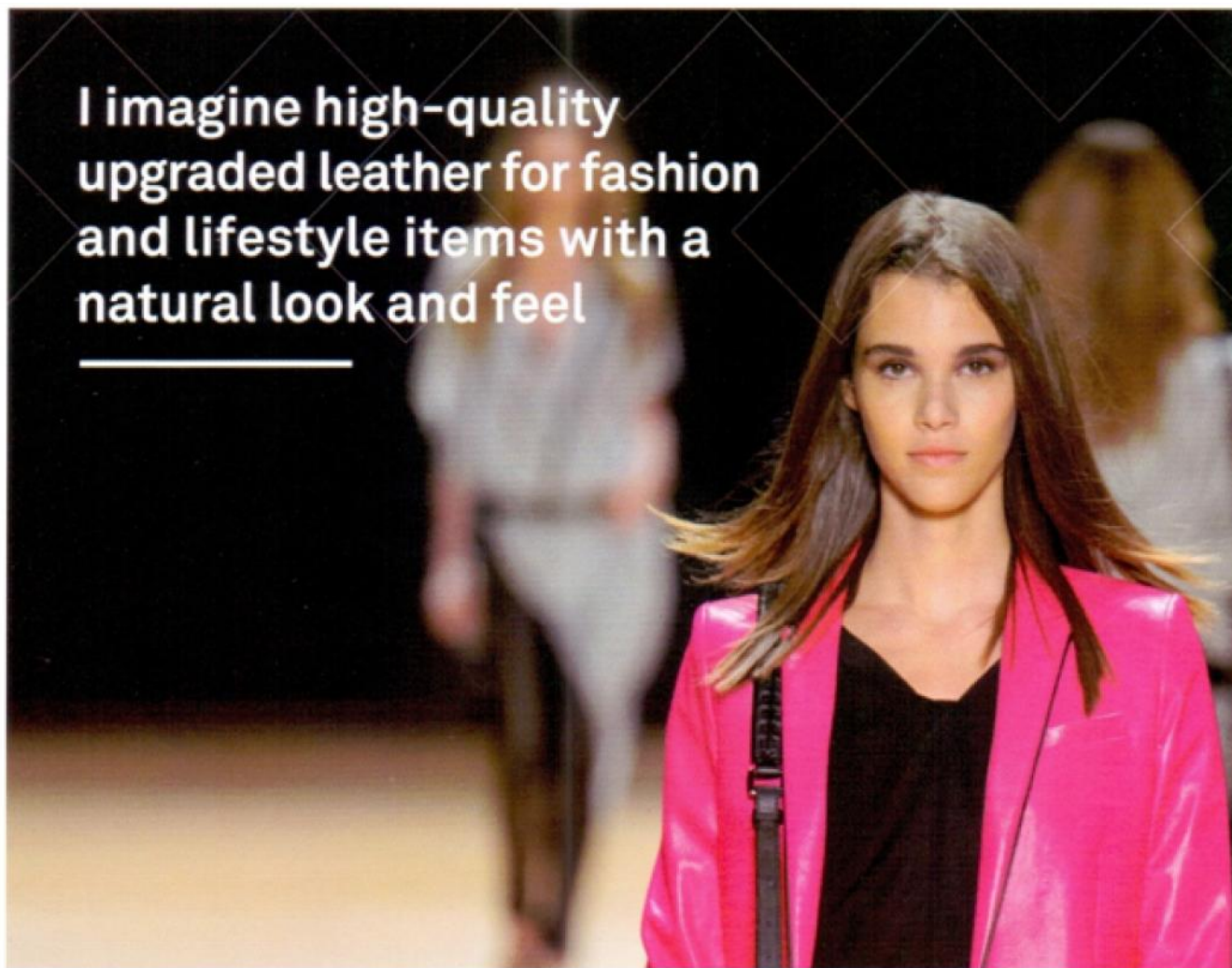
www.stahl.com





ILTA
Since 1950

**I imagine high-quality
upgraded leather for fashion
and lifestyle items with a
natural look and feel**



At Stahl, we love high-quality leather with a natural look and outstanding credentials. We want leather to be soft on the skin and both a pleasure to wear and to look at. To increase the availability of such leather we developed Stahl Easy-KAT: an easy-to-use, water-based leather upgrading product range for hides with small to medium grain defects.

Effective upgrading for high-quality leather

Easy-KAT enables tanners to widen their horizon by producing more leather that retains its luxurious appearance over time. Small imperfections in a hide, such as scratches and insect damage, are eliminated without affecting the suppleness, appearance or feel of the finished leather. The secret of

Easy-KAT is its natural affinity to anionic substrates and great sealing and levelling power, resulting in soft and flexible leather with all its natural aspects preserved. From high gloss to matt leather – anything is possible.

Easy-KAT is suitable for any type of crust. The finished leather is perfect for high-end fashion items, such as shoes, bags, garments, and jackets. Leather items tanned with Easy-KAT are the items consumers love to wear or carry. Curious what Easy-KAT can do for your business? Please visit www.stahl.com or contact us at stahl.india@stahl.com.

If it can be imagined, it can be created.

www.stahl.com



Upper Manipulation in Industrial Shoe Making Process

Moumita Mukherjee ¹, Arijit Chakraborty ², Arup Podder ³

¹ Junior Works Manager, Ordinance Factory Board, Ayudh Bhawan, Kolkata

² Govt. College of Engineering & Leather Technology, Kolkata

³ Bata India Limited, Palpara, Batanagar, Kolkata



INTRODUCTION :

Upper manipulation in shoe production as it is the first step of shoe preparation which involves the expensive raw materials. In this article the cutting department of the Bata Shoe Pvt. Ltd. is been highlighted. The upper manipulation process including skiving, cutting and capacity of cutting machine as per the oxford style has been discussed briefly. This article helps in basic understanding of the upper manipulation process, its need and effects in an industrial shoe making process.

RULES FOLLOW TO CUT THE UPPER :

- Leather is drawn from the stock as per the article requirement against plan division.
- Loading of cutter is organized as per the size requirement.
- Best possible cutting is done by interlocking the pattern (Vamp, toe cap, tongue, quarter & counter etc) to minimize the wastage.
- More important part of the shoe (Vamp, toe cap, apron, quarter etc) is cut from the best portion of the leather.
- Cutting should be done row wise to maintain the stress strain direction of the leather & also to minimize the wastage.
- During cutting need understanding of the defects & blemishes otherwise it will affect the final shoe.

PROCESSES THAT ARE RUNNING IN THE UPPER MANIPULATION DEPARTMENT

Operation	Machine Name	No of Machine	Purpose of the Operation
Cutting	Cutting Machine	55	To cut the leather according to the pattern using proper knife.
Skiving	Skiving Machine	17	To reduce the thickness for folding, lasting, raw edge, underlay etc.

Operation	Machine Name	No of Machine	Purpose of the Operation
Splitting	Splitting Machine	1	To split the leather to the required thickness as per the final product.
Stamping	Stamping Machine	2	Size no & brand is stamp using gold foil in leather.
Conveyor	Pre-fitting Conveyor	4	For cutting operation. It's one way conveyor double sided.
Conveyor	Belt Drive Conveyor	6	For stitching operation. Its two way conveyor.it is also double sided.

CUTTING MACHINE :

It is manufactured by Bata India Limited on 1970 – 1971.

The machine may be supplied with cast steel or cast aluminum (alloyed) cutting arm. Aluminium cutting arm is recommended for cutting with cold bent steel units.

The press is used for cutting various types of material sole leather, card boards, folded textiles etc.

The machine is provided with electromagnetic tripping arrangement. The height of the cutting arm over the table is adjusted by means of a hand wheel with locking device which ensures such adjustment remains intact during working operation.

MACHINE SPECIFICATION :

- R.P.M of the Machine: 1430.
- Volt of the Machine: 400~440 V.
- Power: 1.5 H.P, 1.1 KW.
- Pressure: 8TN.

Corresponding author E-mail : moumita.bubu@gmail.com

- Height: 1640x1840x1850cm.
- Cutting table working surface: 30x60cm.
- Cutting arm working surface: 30x60cm.
- Poly propylene Board is used to cut the material.
- Cutting Bed is generally 18inch. But for cutting the piping it is thinner.
- Module knife is generally use for cutting purpose.
- Its operation should follow the specific rules to avoid the accident.

SAFETY :

- All belts and pulleys are covered with a wire mesh guard which should not be removed except when adjustments are required.
- There is no emergency switch for safety purpose.
- The machine should be operated according to the manual properly.
- Need to operate the cutting arm left and right very carefully according to the machine manual.
- Need to wear apron.

CUTTING KNIFE / MODULE KNIFE :

Three types of knife are available –

Sl No.	Types	Purpose	Made By	Capacity	Knife edge
1	19 mm	For uppers and Leathers lining.	Cold Steel	It can click one single piece.	Single Edge
2	32 mm	For foam, cloth etc	Cold Steel	According to thickness For 3mm tricot - 8 pcs / layer. For 6mm tricot - 4 pcs / layer. For 6mm cloth - 8 pcs / layer.	Single Edge
3	140 mm	For rubbers	Hard Steel	According to thickness. Maximum 24 pcs	Double Edge

MAKING PROCESS :

- ❖ Moulded steel knife.
- ❖ Casted steel knife.
- ❖ Casted steel knife has strength low so it is not using any more.

MECHANISM & SOME IMPORTANT PARTS OF THE MACHINE :

- Cutting Arm :
 - Ñ With aluminium plate - for leather upper.
 - Ñ 111 Without aluminium plate - for lining.
- Tripping Handle
- Push Switch
- Fly wheel
- Pressing
- Working table
- Side manipulation tables
- Hand Wheel

ADJUSTMENT OF THE CUTTING ARM

The position of the arm is adjusted according to the height of the cutting block and the cutting knife being used. Unlock and turn the hand wheel to raise or lower the cutting knife being used. Unlock and turn the hand wheel to raise or lower the arm too much as it will force the die through the material. Do not lower the arms too much as it will then cause the die to stick in the cutting block. Lock the hand wheel (you may have to reset the tripping arm in the tripping ring, loosen screw, adjust tripping lever so that the tripping handle can move freely; tighten screw, manual tripping only).

If the cutting die is exchanged with one of a different height or the cutting block is changed (when planed), adjust the arm to proper height as explained above.

TRIPPING THE CUTTING ARM

To trip the arm, simply press the button on top of the arm which actuates the solenoid.

PROCESS :

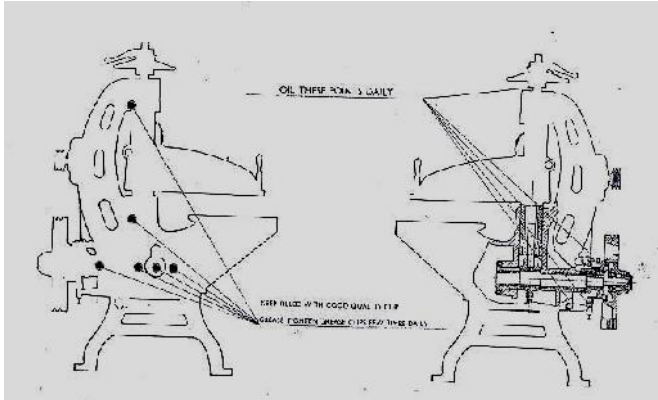
Pressing the arm or handle will connect /fixed the crank shaft then down the cutting arm will create the pressure and cut out the material.

Arm will generate a magnetic field which will help to attach the plunger will controller key lever clutch.
Key lock will initiate the function.

One pressure hand by which pressure is giving by hand is attached to aluminium plate the height between the cutting board and ram is adjusted by a key in the head of the machine.

There is a handle key to adjust the height of the handle.

The ram is movable left and right manner over the polypropylene board to cut and to release the material from cutting bed.



CAPACITY OF THE CUTTING MACHINES :

OXFORD SHOE :

Serial no (each content 1 min / 60sec)	No of Stroke (times)
1	6
2	8
3	5
4	6
5	4
6	9
7	6
8	7
9	6
10	5
TOTAL 10 Minute	62
In 1 Minute (Average)	62/10= 6.2 times
In 60Minute	6.2x60= 372 times
In 1 shift= 8 hour	372x8= 2976
1 person 8hour cutting capacity as per no of stroke	2976 times

According to the above calculation the capacity of a cutter will depend on the number of components per pair to be cut for a particular article.

For example: If number of components is 5. That is for an oxford shoe - Toe cap, Vamp, Tongue, Quarter, and counter.

For a pair number of component is $5 \times 2 = 10$.

As the number of stroke for 8 hr is 2976 times,
Then the capacity of the cutter for 8 hr in a day is $2976 / (5 \times 2)$
= 298 pair (round of).

So, the capacity per will depend upon on the number of components per pair need to be cut for a particular article.

The average total capacity of cutting per week is – 20000 pairs.

Total head count for cutting upper materials /lining materials/ skiving /perforation/ arranging - 75.

Checking / Inspection :

Each of cut pieces is then inspected thoroughly to ensure good quality upper materials. Followed by the inspection the cut pieces are bundled by mentioning pieces with white pencils.

Wastage Calculation:

The total sqft of the leather will transfer in to currency how much money one cutter is saving from their cutting will be calculated.

Reference

1.Comprehensive Footwear Technology by Somnath Ganguly ;

Disclaimer :-

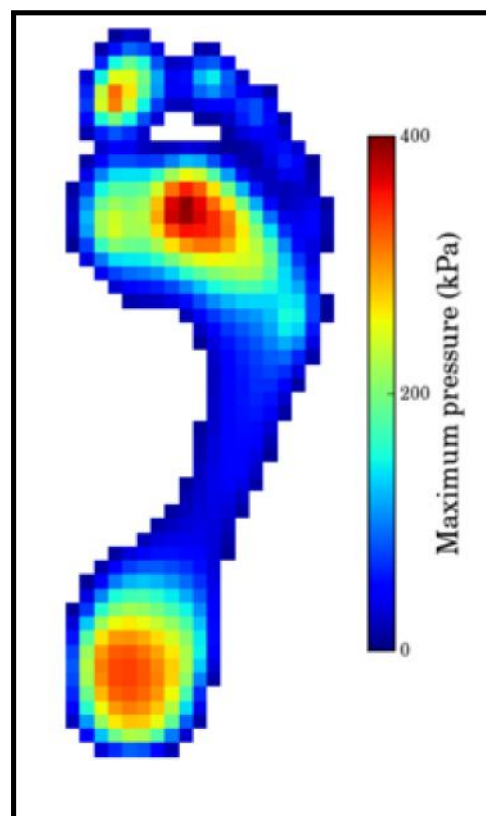
Opinion expressed in the article is absolutely that of the author.

BARE FOOT SHOE Part - 1

Mr. Shome Nath Ganguly
Former Principal, Karnataka Institute of Leather Technology



Runner without a Shoe



Example of Foot Pressure (kilopascal)

Barefoot running is also called “natural running”. This is the act of running without wearing a footwear. In India till date nearly 30% of our people walk bare foot. Mainly the farmer community of our country cannot afford to buy a pair of shoe, as such they work in their field bare footed. It is normal in India to walk naked foot in the rural sector. Even our football players till 1950-56 play without their football boot which affects their performances in the international arena.

But here we are discussing about runners who are participating in the various events with or without shoe. Development of

running shoe promises better feeling while participating with a “running shoe”. But we have found that it is not always corrects. To compete with traditional running shoe, a modern running shoe is developed with five individual fingers & with a very thin flat sole. This shoe is known as **5-Finger Shoe**.

Though it is a modern development of footwear but running with **5-Finger Shoe** has not yet get popularity in most parts of the world. It is still practiced in parts of Africa and Latin America. In some Western countries, barefoot running has grown in popularity due to perceived health benefits.



Scientific research & developments of running barefoot has not reached a clear consensus regarding its risks or its benefits. The traditional footwear is providing protection from cuts, bruises, impact and from weather. Developer argue that running barefoot reduces the risk of chronic injuries (notably repetitive stress injuries) caused by heel striking in padded running shoes. The barefoot movement has prompted some manufacturers to introduce thin-soled and flexible shoes such as traditional **Moccasins** and **Huaraches** for **minimalist running**.

I am mentioning some names below who were renowned runners perform without wearing a shoe (bare foot).

During 1944 **Dr. Charles Robbins** who won 11 U.S. National Championships & Yonkers Marathon. He finished the Boston Marathon 20 times, with a third place in 1944, and was an alternate to the marathon team at the 1948 London Olympics often ran races barefoot.

During Summer Olympic in 1960 at Rome **Mr. Abebe Bikila of Ethiopia** won the Olympic marathon in barefoot setting a new world record. He was in pain because he had received shoes that were too small so he decided to simply run barefoot. Bikila had trained running barefoot prior to the Olympics. He prepared himself to defend his Olympic title four years later in Tokyo with wearing shoes. He was very successful in setting a new world record wearing a shoe.

During 1960s **British runner Mr. Bruce Tulloh** competed in many races in barefoot and also won the Gold medal in the 1962 European Games in 5,000 metre race.

In the 1970s, Shri Shivnath Singh, one of India's greatest long distance runners, was known for always running barefoot. **Shivnath Singh** (July 11, 1946 – June 6, 2003) was one of the few great long-distance runners that India has produced. Singh represented India twice in the Asian games and twice at the Summer Olympics (1976 and 1980).

During the 1980s, a **South African runner, Zola Budd**, became known for her barefoot running style as well as training and racing barefoot. She won the 1985 and 1986 IAAF World Cross Country Championships and competed in the 1984 Olympic Games in Los Angeles.

Kenyan runner Tegla Loroupe began running barefoot 10 km (6.2 miles) to and from school every day at the age of seven. She was the first African woman to win the New York City Marathon in 1994. She contested bare foot as well as with shoe (shod) in several international marathons & half marathons. One barefoot runner **Mr. Rick Roeber**, has been running barefoot since 2003 and has run more than 50 marathons, 2 ultra-marathons of 40 miles, and over 17,000 miles (27,000 km) all barefoot.

HEALTH AND MEDICAL IMPLICATIONS.

Since the latter half of the 20th century, there has been scientific and medical interest in the benefits and harm involved in barefoot running. The 1970s, in particular, saw a resurgent interest in Jogging in western countries and modern running shoes were developed and marketed.

Since then, running shoes have been blamed for the increased incidence of running injuries and this has prompted some runners to go barefoot. However, the American Podiatric Medical Association has stated that there is not enough evidence to support such claims and has urged would-be barefoot runners to consult a podiatrist before doing so. The American Diabetes Association has urged diabetics and other people with reduced sensation in their feet not to run barefoot citing an increased likelihood of foot injury.

The structure of the human foot and lower leg is very efficient at absorbing the shock of landing and turning the energy of the fall into forward motion, through the springing action of the foot's natural arch. Scientists studying runners' foot motions have observed striking differences between habitually shod runners (wearing shoes) and barefoot runners. The foot of habitually runners who wears shoe typically lands with an initial heel strike, while the foot of a barefoot runner lands with a step on the middle, or on the ball girth of the foot. In addition, the strike is shorter in duration and the step rate is higher. When looking at the muscle activity (electromyography), studies have shown a higher pre-activation of the plantar flexor muscles when running barefoot. "By landing on the middle or front of the foot, barefoot runners have **almost no impact collision**, much less than most shod runners generate when they heel-strike."



ILTA
Since 1950

However, when comparing different populations of habitually barefoot runners, not all of them favor the forefoot strike. A 2012 study by Mr. Hatala focusing on 38 runners of the Daasanach tribe in Kenya found that a majority of runners favored a heel strike instead of a forefoot strike. Presently, Hatala and Lieberman are comparing their data, but Lieberman did note that his study, which focused on the Kalenjin people, also found some barefoot runners favoring a heel strike as well. He also said that the Daasanach people were primarily, “tall, lanky goat-herders who don’t run nearly as much as the Kalenjin, who own many of the world’s distance running records.”

Running in shoes also appears to increase the risk of ankle sprains, plantar fasciitis, as well as other chronic injuries of the lower limb. However, running shoes also provide several advantages, including protection of the runner from puncture wounds, bruising, thermal injuries from extreme weather conditions, and overuse injuries.

One 1991 study found that wearers of expensive running shoes that are promoted as having special features, such as added cushioning or pronation correction, were injured significantly more frequently than runners wearing inexpensive shoes.

One study suggests that there is no evidence that cushioning or pronation control in shoes reduces injury rates or reduces performance. It was also found that the belief that one’s shoes have increased cushioning had no effect on increasing or decreasing ground reaction forces during walking. Some study even suggests that running in high heels (not like ladies high heel) might be better than modern running shoes. Improperly fitting shoes may also result in injuries.

(Ref : [//en.wikipedia.org/bare foot running](http://en.wikipedia.org/bare%20foot%20running))

Read and Let Read :-

JILTA

We care for the environment

CLC TANNERS ASSOCIATION

Think Leather, Think Bengal

Asia's largest & most integrated leather complex with state of the art Common Effluent Treatment Plant (C.E.T.P.)

Over 400 Plus Tannery Units.

Manufacturers & Exporters of finished & leather articles.



www.calcuttaleathercomplex.in



ILTA
Since 1950



SPONSORED BY:



We care for the environment

CALCUTTA LEATHER COMPLEX TANNERS ASSOCIATION

AN ISO CERTIFIED COMPANY

Think Leather, Think Bengal

100 KANPUR UNITS TO JOIN LEATHER HUB

Kolkata : More than 100 leather units from Kanpur are waiting in the wings to come to Bengal, said state finance and industries minister Amit Mitra at an expo organized by leather industry. Thirty units from Kanpur have already shifted their base to the state in the last two years.

The minister also set a target of Rs 30,000 crores revenue at the leather complex in the next five years from the current level of 13,500 crores. Currently, in Bantala, there are 430 units taken together tanneries and footwear units. "Another 400 units will come," he added.

(Times of India – 28/09/2019)

LEATHER EXPORTS DIP 4.90% IN q1

Chennai : Exports of leather, leather products and footwear from India declined by 4.90% in the first quarter of the current fiscal to \$1.3 billion following recessionary trends and fierce price competition.

In rupee terms, the exports touched Rs 9,071 crores against Rs 9,159 crores for the corresponding period last year, according to the figures released by the Directorate General of Commercial Intelligence and Statistics.

Export of finished leather products dropped by 30% in dollar terms. "We have been facing challenges on the export front due to a combination of factors such as recessionary trends and fierce price competition.

Consequently, exports from the sector declined during the first quarter," said Panaruna Aqeel, Chairman, Council for Leather Exports.

"But this is only a temporary phenomenon and the sector has the potential to achieve double digit growth levels in the coming months," he added. Referring to the recent announcement of the Union Finance Minister about the new scheme of Remission of Duties or Taxes on Export Products (RODTEP), he said it would be introduced by January 2020.

Till then, MEIS (Merchandise Exports from India Scheme) would be in force. RODTEP would more than adequately incentivize exporters than the existing schemes put together. "This would help enhance our price competitiveness," he said.

(Hindu – 18/09/2019)

BATA TO ADD 500 MORE STORES IN NEXT FIVE YEARS

Footwear major Bata India on Thursday said it will strengthen its presence in the domestic market by adding 500 stores in next five years, focusing mainly on smaller markets. The company has identified tier II, III and IV cities where it has plans to broaden its sales network through the franchise model, Bata India said in a statement.

Bata has already identified 180 such markets in smaller cities pan-India, where the company is seeking franchise partners to expand its presence beyond metro cities. "The company is betting big on franchising and already has over 150 franchise stores across the country. Bata plans to open 500 stores in the next 5 years," the statement added.

According to the latest annual report, Bata India has pan-India retail presence with 1,415 stores across cities with 3.07 mn sq ft of retail space. Over the last two years, Bata has increased presence in smaller towns and reinvigorated its portfolio to offer more contemporary, fashion and casual styles for the younger generation.

"India is one of the most important market for Bata globally and we aim to make Bata accessible to the fashion forward customers in tier II-IV smaller cities via the franchise stores," said Bata India CEO Sandeep Kataria. He further said, "We have seen strong demand for the new products, which is driven by multiple campaigns featuring celebrities from Bollywood and cricket world."

Bata India had revenue of Rs 2,928.44 crores in FY 2018-19 and had recorded a net profit of Rs 329.66 crores in the said period. Established in 1931, Bata India is a part of the Bata Shoe Organization. It is the largest retailer and manufacturer of footwear in the country and has sold 47.25 million footwear pairs in the last fiscal.

LIVESTOCK COUNT TOUCHES 140M, 6% LOWER THAN LAST CENSUS

Cow population up 18 per cent in seven years but number of oxen plunges 30 per cent

The population of cows in the country has risen by 18 per cent in the last seven years, while that of oxen dipped by 30 per cent, according to the latest census of livestock. The total number for livestock was pegged at around 536 million.

The provisional data of the 20th Livestock Census released by the Department of Animal Husbandry and Dairying on Wednes-



ILTA
Since 1950

day showed that the livestock population increased by 4.6 per cent, from 512.06 million in 2012.

Besides, there was a spectacular 16.8 per cent increase in the poultry population in the country to 851.81 million, mainly on account of a 46 per cent rise in backyard poultry birds, whose numbers have gone up to 317 million.

The number of female cattle is 145.12 million, which is 18 per cent over the 122.98 million in 2012. The number of male cattle, on the other hand, dropped to 47.4 million as against 67.92 million in 2012. Significantly the male to female cattle ratio in the 2019 survey dropped to 1:3 from 1:1.8 in the 2012 livestock survey.

Interestingly, there is a 6 per cent decline in the total number of indigenous cattle over the previous census. On the contrary, the population of total exotic/crossbred cattle has increased by 26.9 per cent in 2019 as compared to previous census.

Among the States, Uttar Pradesh has the highest number of livestock of 67.8 million (68.7 million in 2012), followed by Rajasthan 56.8 million (57.7 million), Madhya Pradesh: 40.6 million (36.3 million) and West Bengal: 37.4 million (30.3 million). While cattle accounted for 35.94 per cent of total livestock in the country, goats accounted for 27.80 per cent, buffaloes: 20.45 per cent, sheep: 13.87 per cent and pigs: 1.69 per cent.

As compared to the previous census, the percentage of sheep and goats has increased whereas the percentage of cattle, buffaloes and pigs has marginally declined. The total number of milch animals (in-milk and dry) in cows and buffaloes is 125.34 million, an increase of 6 per cent over the previous census.

The country now has a total of 109.85 million buffaloes as compared to 108.70 million in the 2012 census. The goat population, on the other hand, went up to 148.88 million showing an increase of 10.1 per cent over the previous census. The total number of sheep in the country is 74.26 million in 2019, an increase of 14.1 per cent over the previous enumeration.

For the latest round of census, more than 80,000 personnel were in the field collecting data from more than 27 crores households and non-households using tablets. According to the official statement, this was a unique attempt to digitize household level data transmitted directed from the field.

RS 540 CRORES FOR BANTALA LEATHER HUB INFRA BOOST

State Commerce and Industry minister Amit Mitra said the state

government is spending Rs 540 crores for developing infrastructure at the leather hub at Bantala where around 100 tanneries from Kanpur will be shifting in the years to come.

“The present turnover of Calcutta Leather Complex (CLC) stands at Rs 13,500 crores. We are targeting to take it upto Rs 30,000 crores in the next five years,” Mitra said at the inauguration ceremony of two day India, Leather and Accessories Fair at ITC Royal Bengal hotel on Friday.

The fair is being organized by India Trade Promotion Organization (ITPO) with active support from CLC Tanneries Association, India Footwear and Components Manufacture Association, Central Leather Research Institute, India Leather Chemical Promotion Association and state Commerce and Industry department.

Thirty seven international buyers from countries such as USA, Korea, Italy, Spain, Portugal, Poland, Kenya, Sri Lanka, Germany to name a few are taking part in the two day fair. “The organizers had received order of Rs 2,000 crores last year. I would like to see orders worth Rs 3,000 crores from this exhibition this year,” Mitra said.

It was on July 18, when Chief Minister Mamata Banerjee inaugurated a slew of new projects and laid the foundation stone of many others at Asia's first “Integrated Leather Complex” at Bantala, the completion of which would generate 5 lakh employments in near future.

(Millenium Post – 28/09/2019)

INDIA INTERNATIONAL LEATHER FAIR – 2020

“International Fashion Accessories & Leather Industry Products” will be displayed in the forthcoming India International Leather Fair at Chennai Trade Center, Chennai from 1st to 3rd February’ 2020.

It will have on display the entire range of products relating to leather industry from raw material to finished products and auxiliary products such as finished leather, shoes, shoe components - uppers, soles, heels, counters, lasts, leather garments, fashion accessories, leather goods, machinery & equipment and chemicals. IILF has all along been a vivid presentation of the leather industry. Latest expressions of the trends, styles, designs, and colors in world fashion are shown in this mega event.

(Source - <https://10times.com/iilf>)

Solidaridad ASIA

Solidaridad Network is a global civil society organization providing efficient, scalable and economically effective and innovative sustainability solutions in various agricultural and industrial commodities such as:



Solidaridad Asia has more than 320 sustainability experts operating from 26 offices in 9 countries and has also pioneered development and implementation of national sustainability standards in the region.

Solidaridad initiated its efforts in the leather cluster in late 2017 with the Kanpur-Unnao leather cluster. Within 2 years of inception, we have started our efforts in Kolkata and Bangladesh Leather clusters. Through tailor-made programs, Solidaridad has tried to address the following components:

KEY COMPONENTS



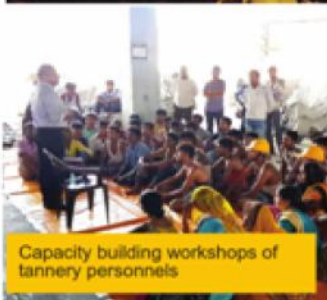
SUSTAINABLE WAY FORWARD IN THE LEATHER CLUSTERS ACROSS INDIA



Solidaridad ASIA



Solidaridad celebrating its 50th year anniversary in The Netherlands



Capacity building workshops of tannery personnels



Tannery workers using desalting machine to remove salt from hides



OHS workshop conducted by experts for awareness creation and risk mitigation of toxic H₂S gases



Ministry of The Netherlands acknowledged Solidaridad's contribution to leather sector in India at Indo-Dutch forum



Launch Meeting of Solidaridad's project for pollution prevention in tanneries in Kanpur

Tatheer Raza Zaidi, Senior Program Manager- Leather: tatheer.zaidi@solidaridadnetwork.org
Solidaridad Network Asia Limited
 A-5, 1st Floor, Shankar Garden, Main Najafgarh Road, Vikas Puri, New Delhi – 110018
 Contact: 011-45134500, +91-9818311450

NMCG PARTNERS WITH SOLIDARIDAD TO LAUNCH THE MULTI STAKEHOLDER PLATFORM FOR SUSTAINABLE GROWTH OF KANPUR-UNNAO LEATHER SECTOR

Solidaridad convened a Multi-Stakeholder Platform, a unique public-private partnership on 19 November 2019 in Lucknow, Uttar Pradesh. This was chaired by Shri D.P Mathuria, Executive Director, National Mission for Clean Ganga, Government of India and Mr Ashish Tiwari, Member Secretary- Uttar Pradesh Pollution Control Board, Government of Uttar Pradesh also gave the consent to be the co-chair of the platform.

Solidaridad, under its flagship programme of pollution prevention in the mid-Ganga landscape, has formulated the Platform to bring together a diverse group of representatives from policy institutions, technical agencies and experts, industry representatives and CSOs to collaboratively address the central theme of the platform: '**Sustainable Way Forward of Kanpur-Unnao Leather Cluster**'. The programme leverages its success factors from its Indo-Dutch expertise to conduct pilot demonstrations of proven eco-friendly and commercially viable technologies and introduce scalable technical interventions to address issues of effluent discharge, solid waste generation and promotes optimization of water usage in the industries. Solidaridad along with its technical partners viz. Central Leather Research Institute, Stahl has already established a number of pilot demonstrations to minimise total dissolved solids, total suspended solids, Chromium, water consumption and encourage measures for Occupational Health and Safety in the industries and utilization of solid wastes generated by tanneries into value added products (lime sludge into paver tiles, leather trimmings into belts, fleshings into tallow etc. The project is also working for the livelihood improvement of downstream farmers through improvement in the quality of waste water through bio remediation measures and capacity building of the farmers on Good Agricultural practices. This programme is currently working with around 100 tanneries in the Kanpur-Unnao Leather Cluster and will be soon expanding to the other important leather geography of India and adjoining countries. Though a great deal of attention is paid to finding the right technologies and practices to comply to the environmental norms, an often overlooked area in sustainability is the journey of ideating, scoping, evaluating and strategizing to invest in techno-commercial options which are feasible for the small and medium tanning industries too. Thus, having consensus building among all key players will enable in jointly working towards the common goal.

The Platform will meet on a quarterly basis to plan and design the roadmap for requisite initiatives in the leather cluster and monitor the status and discuss challenges at the ground level with the stakeholders. Pollution prevention is an area that can't be tackled with agencies working in silos but requires multiple stakeholders with complimentary areas of competence. Primarily, the platform will encourage and mobilize the key players in the sector to pool in their capacities, knowledge and resources, thus aligning their strategic interests.



The event witnessed a proactive discussion among representatives from National Mission for Clean Ganga, Uttar Pradesh Pollution Control Board, Department of MSME, Kanpur, Embassy of Kingdom of the Netherlands, CSIR-CLRI, Council for Leather Exports, and Industry Associations, etc. The stakeholders exchanged best practices regarding the techno-commercial viable solutions to minimize pollution at source, reduce overall water use and optimize the effluent water treatment. The Platform will complement the larger objectives of National Mission for Clean Ganga.



At the launch event, Shri Mathuria said “It is encouraging to see such a broad group of stakeholders coming together to jointly address the issue of pollution in the Ganga Basin. The exchange of information is a promising start and will hopefully reap us positive impact in the coming future”.

Mr Tatheer Zaidi, Program Head- Leather, Solidaridad Asia in his address apprised that Solidaridad has received encouraging support and responses from tannery stakeholders after demonstration of pilot units to address the key effluents viz. total dissolved solids, total suspended solids, Chromium etc. The multi stakeholder platform will be instrumental in upscaling the efforts which will enable the holistic growth of the cluster. He also thanked NMCG for chairing the platform and UP PCB for co-chairing the same.

Ms. Maya, Acharya, Senior Advisor from Embassy of the Netherlands mentioned “PPP model is a successful approach and has proven effective in other Dutch programmes. It was time that this model be used for resolving the issue of pollution in the river basin wherein multiple stakeholders are present”. Mr. Mukhtarul Amin, Former CLE Chairman representing the industry stated “We are thankful for the platform wherein our concerns can be voiced in front of the policy stakeholders and concrete solutions can be provided”

Mr. Prasanna Maduri from Stahl India presented flagship technological interventions under the ongoing project to

address TDS, BoD and CoD; water reduction etc in an effective manner. He also stated about the Centre of Excellence coming under the project which will ensure the long term sustainability of the initiative.

Dr Sarvanan Palanivel; Chief Scientist; CSIR-CLRI delivered a presentation on the techno- commercial viable interventions to address the effluent load significantly from the tanning processes through practices like Water Less Chrome Tanning; Low Sulphide Enzyme Assisted unhairing; Electro Oxidation etc.

Mr Anwarul Haq, President- UP Leather Industries Association delivered the welcome note and flagged the concerns Kanpur-Unnao Leather Cluster is facing to sustain in the global market. Mr S M Shahid highlighted important concerns of the Industry and opened the floor for the comments of the Industry stakeholders.

Mr D P Mathuria addressed the points flagged by Industry and assured the platform established today will be indeed instrumental to address such kind of issues and concluded that successful PPP model is likely to fulfil the vision of National Mission for Clean Ganga, Government of India and will serve as a blueprint for other industries along the Ganga Basin.

Lastly, Mr S M Shahid tanked Chair; Solidaridad and other consortium partners to launch this meaningful platform and assured all support on behalf of Industry.

Solidaridad





This Article was published in Vol.-26, No. - 04, April' 1978 of JILTA (Concliding part)

increase the oxygen demand of the effluent, they do become significant in such cases where effluents without dilution with household waste water have to be clarified, for instance, in a tannery's own clarification plant. The stronger aeration that will then become necessary may oxidize ammonium salts to form nitrites which impair the biology. This caused the recent demand for nitrogen-free deliming agents.

Pickling and Tannage

The pickling and tanning effluents are acid and contain little protein but larger amounts of neutral salts, acids and chromium salts. Particularly the chromium salts are a critical factor in the assessment of the effluents, because the strict requirement imposed on the chromium content of effluents necessitates revision of almost all processing methods.

Since various^{22, 23, 24} authors have proved that biological clarification plants with neutral mixed effluents can tolerate up to 100 mg Cr/l without harmful effects and that fertilizing experiments have shown that no excess chromium accumulation occurs in food circulation^{25, 26} it is positive today that the maximum allowable amounts of 4 mg Cr/l in effluents imposed in Europe and the USA are too strict. According to our knowledge, however, there are no indications that these limits will be changed, so that it will continue to be necessary for the leather factories to work towards obtaining residual liquors with as low a chromium content as possible. In Europe, there are tanneries whose existence depends on the almost complete elimination of chromium in their effluents.

In recent years, a series of processing methods have been suggested which can be roughly divided into the following groups: precipitation of the chrome tanning agent in the residual liquors as chromium hydroxide; direct re-use of residual liquors; improvement of exhaustion by optimizing processing and use of auxiliaries; partial replacement of the chrome tanning agent by other tanning material.

In the first two systems, the chrome-containing liquors have to be collected before they can be re-used. This means that their efficiency with regard to reduction of the chromium oxide content in effluents is dependent on the available facilities rather than on the chemical conditions on which the other two systems are based.

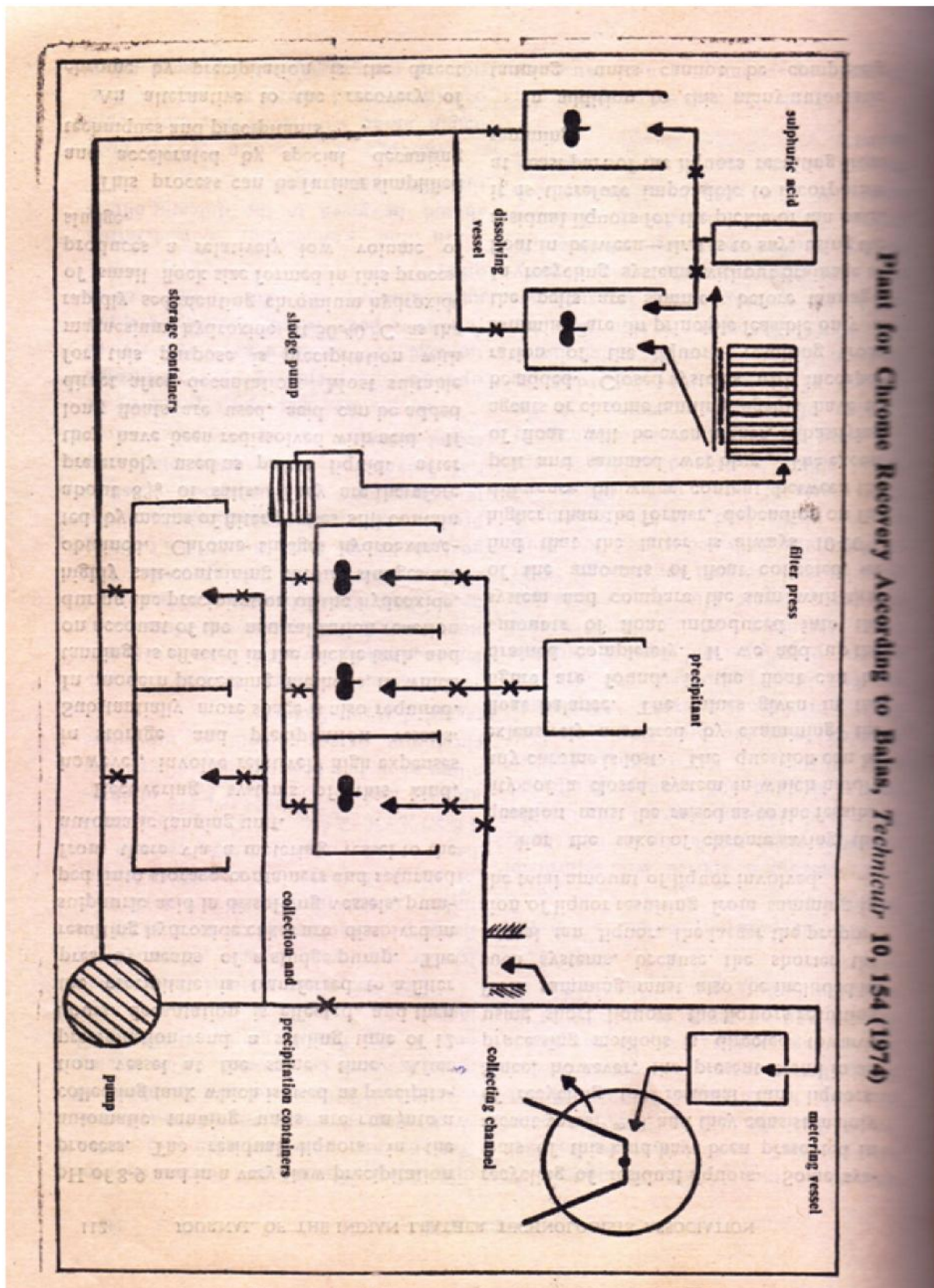
Precipitation of chromium compounds in the residual liquors is one of the most effective measures for eliminating the chrome problem. In order to be able to take advantage of all the possibilities offered by this measure, all chrome-containing residual liquors obtained have to be collected—that is to say, not only the residual liquors from the tanning process, but also the liquors resulting from the draining and samming of the leathers.

The diagram on the facing page shows the schematic representation of a chrome recovery unit²⁷.

Precipitation should preferably be effected with alkalis which form soluble sulphates, i.e., with soda, ammonia, caustic soda solution or magnesium oxide. It is important that a rapidly settling chromium hydroxide is obtained. This is generally accomplished only at a



ILTA
Since 1950



pH of 8-9 and in a very slow precipitation process. The residual liquors in the automatic tanning units are run into a collecting tank which is used as precipitation vessel at the same time. After precipitation and a settling time of 12 hours, decantation is effected, and then the precipitate is transferred to a filter press by means of a sludge pump. The resulting hydroxide cakes are dissolved in sulphuric acid in dissolving vessels, pumped into storage containers and returned from there via a metering vessel to the automatic tanning unit.

Recovering systems of this kind, however, involve relatively high expenses in storage and precipitation vessels. Substantially more space is also required. In modern processing methods, in which tanning is effected in the pickle bath, and on account of the neutralization reaction during the precipitation of the hydroxide, highly salt-containing chrome sludges are obtained. Chrome sludges hydroextracted by means of filter presses still contain about 8% of salts. They are therefore preferably used as pickle liquid, after they have been redissolved with acid. If long floats are used, acid can be added direct after decantation. Most suitable for this purpose is precipitation with magnesium hydroxide at 30.40 °C, as the rapidly sedimenting chromium hydroxide of small flock size formed in this process produces a relatively low volume of sludge.

This process can be further simplified and accelerated by special decanting techniques and precipitants^{28, 29}.

An alternative to the recovery of chrome by precipitation is the direct

recycling of residual liquors. Some systems of this kind have been presented in recent years^{30 to 37}, and they consist mainly of recycling the residual tan liquors. Since, however, the present trend in all processing methods is directed towards using short liquors, the liquors resulting from samming must also be included in such systems, because the shorter the actual tan liquor, the larger the proportion of liquor resulting from samming in the total amount of liquor involved.

For the sake of chrome saving, the question must be raised as to the feasibility of a closed system in which hardly any chrome is lost. The question can be extensively answered by examining the float balance. The values given in the figure are found, if the float can be drained completely. If we add up the amounts of float introduced into the system and compare the sum with that of the amounts of float collected, we find that the latter is always 10-20% higher than the former, depending on the difference in water content between the pelt and sammed wet blue. The excess of float will be even higher, if basifying agents or chrome tanning agents have to be added. Closed systems with incorporation of the liquors resulting from samming are in principle feasible only if the pelts are sammed before tannage. In recycling systems without drainage of float in between—that is to say, using the residual liquors for the pickle or tan bath, it is therefore impossible to incorporate at least part of the liquors resulting from samming.

In addition to this, many automatic tanning units cannot be completely



APRIL, 1978

113

drained so that 15-20% of liquor is lost after tannage. In such systems, it is then found that about 2 kg Cr_2O_3 per ton of raw hide is discharged into the effluent. Much better results are obtained when the tanning vessels can be completely drained and as much as possible of the summing liquors can be included in the process.

The diagram overleaf shows a system of this kind.

Processing is started with a formate/sulphuric acid pickle in a short float. After a drumming time of 2 hours, the float is drained and tannage is effected with 40-50% of the residual liquors resulting from the preceding cycle plus 1.8-2% of chromium oxide. After tannage has been completed, the residual liquors, drippings and liquors resulting from summing are collected passed through a coarse filter to separate skin particles and re-used for tannage. Part of the liquors collected is used for diluting the pickle acid. In this system, a slight excess of liquor up to 10% is obtained which is either discarded or used for other purposes, such as retannage or tannage of splits. Depending on the amount of excess liquor discarded, the load on the effluent in this system lies at 0.7-1.4 kg Cr_2O_3 per ton of skin. Suitable as chrome tanning agents for such systems are primarily 50% basic, slightly masked tanning agents with which basification becomes superfluous. Tanning agents of this kind have already been brought on the market by the auxiliary industry.

As regards the processing technique, the recycling systems no longer cause any

difficulties. The salt and chrome concentrations are constant after 2-3 cycles. With short floats, a rise of the salt concentrations with increasing numbers of cycles is not to be expected. This occurs only if the float length lies at 100% and more.

In all recycling systems the resulting leather quality is normal. Often a finer, flatter grain is obtained on account of the milder initial tannage in the pickle bath or the pretannage. The resulting leather has a chromium oxide content of 4.8-5.1% if 2.4% of Cr_2O_3 has been applied and of 3.9-4.2% if 1.5% of chromium oxide has been applied. The latter chromium oxide content is nowadays regarded as satisfactory.

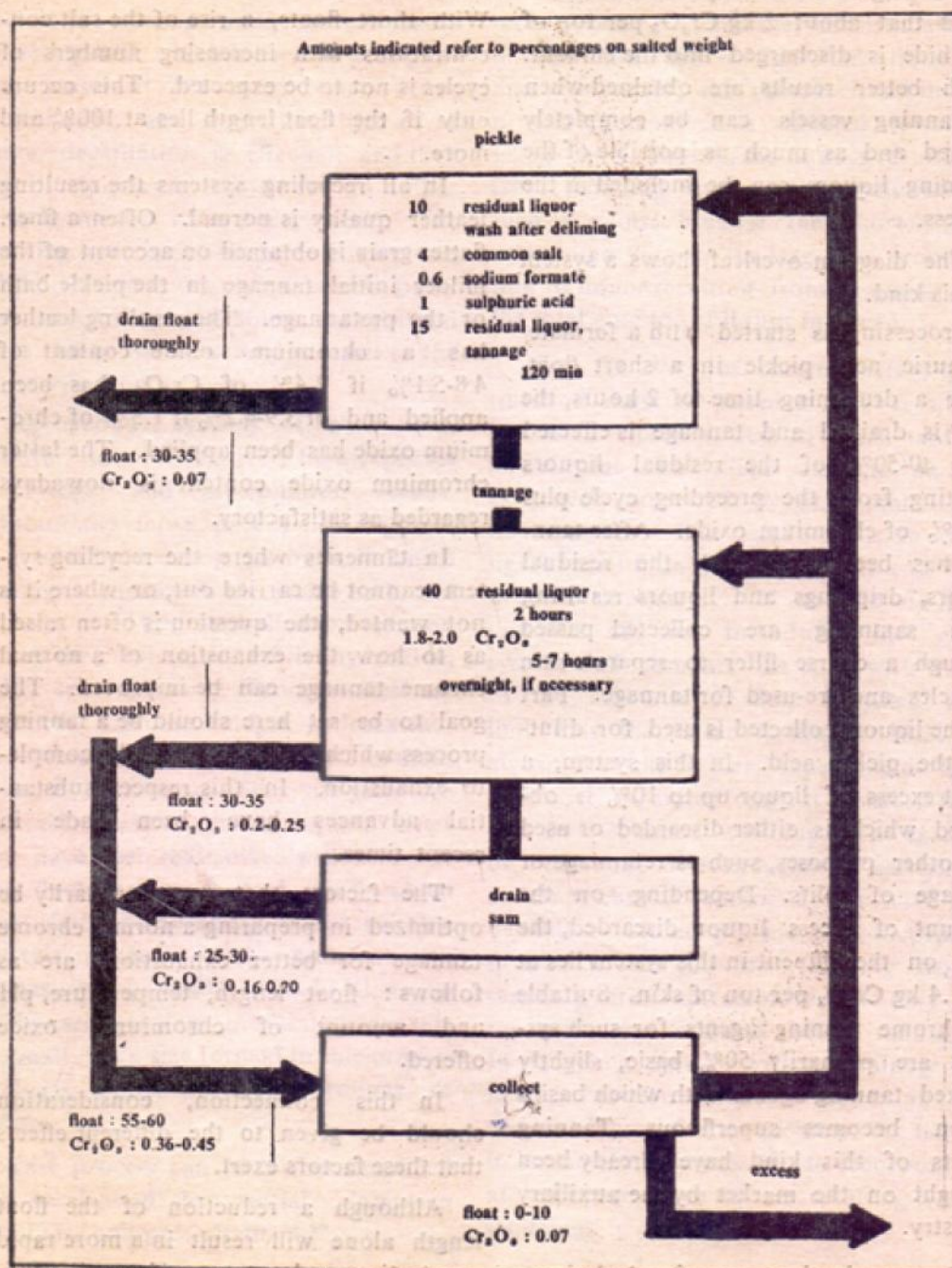
In tanneries where the recycling system cannot be carried out, or where it is not wanted, the question is often raised as to how the exhaustion of a normal chrome tannage can be improved. The goal to be set here should be a tanning process which enables practically complete exhaustion. In this respect, substantial advances have been made in recent times.

The factors that must primarily be optimized in preparing a normal chrome tannage for better exhaustion are as follows: float length, temperature, pH and amount of chromium oxide offered.

In this connection, consideration should be given to the different effects that these factors exert.

Although a reduction of the float length alone will result in a more rapid penetration and more uniform distribution of the chrome tanning agent taken

Recycling System Incorporating Samming Liquors





APRIL 1978

115

up, this measure is not effective enough for itself. Elevated temperatures, however, have a beneficial effect in any case. Both the degree of exhaustion and the proportion of firmly fixed chromium oxide can be increased by 10% when the temperature is raised from normal to 40°C.

The residual liquors will then contain only about half of the amount of chromium oxide found at normal temperature.

A beneficial effect regarding the residual liquors is also obtained by reducing the amount of chromium oxide applied, because the chromium oxide content of the leather and that of the residual liquors do not decrease proportionally with the amount of chromium oxide applied,

The control of the pH during tannage has a very great influence on both the leather quality and the chrome exhaustion. Although increasingly better up to complete chrome exhaustion can be obtained with rising end pH during tannage, the highly basic chrome tanning agents formed during the process do not penetrate deeply enough into the fibre and are unsatisfactorily fixed there.

A proved method of promoting the exhaustion of chrome tanning agents is to apply masking agents,^{38 to 40} which have a cross-linking effect on chrome tanning agents. The principle of their mode of action is shown in the diagram overleaf.

The figure shows the degrees of exhaustion in relation to the amount of chromium oxide and masking additives applied.

Curve 1 shows the conditions of a normal process in a formic acid/sulphuric acid pickle.

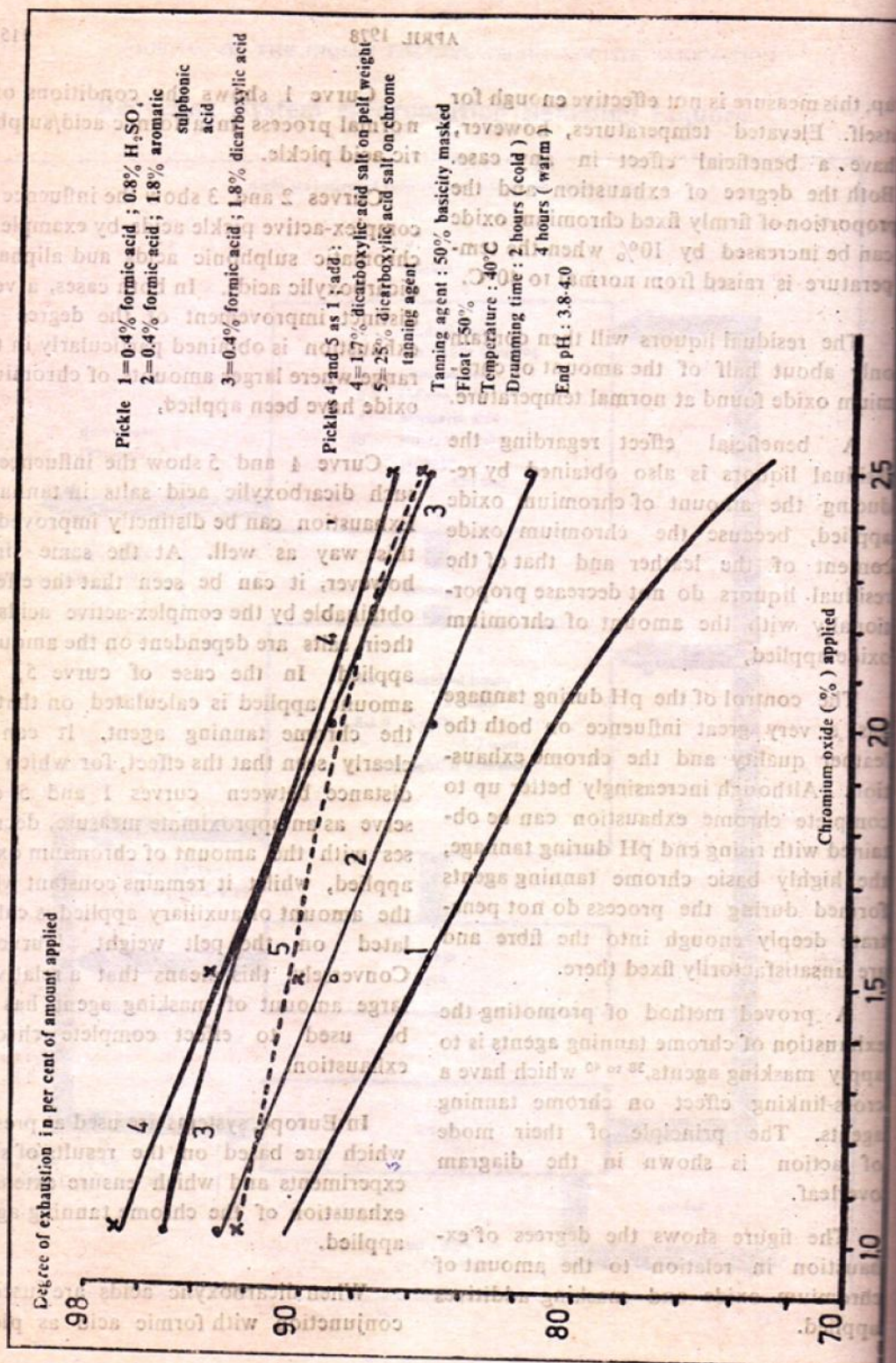
Curves 2 and 3 show the influence of complex-active pickle acids by example of chromatic sulphonic acids and aliphatic dicarboxylic acids. In both cases, a very distinct improvement of the degree of exhaustion is obtained particularly in the range where larger amounts of chromium oxide have been applied,

Curve 4 and 5 show the influence of such dicarboxylic acid salts in tannage. Exhaustion can be distinctly improved in this way as well. At the same time, however, it can be seen that the effects obtainable by the complex-active acids or their salts are dependent on the amounts applied. In the case of curve 5, the amount applied is calculated on that of the chrome tanning agent. It can be clearly seen that this effect, for which the distance between curves 1 and 5 can serve as an approximate measure, decreases with the amount of chromium oxide applied, whilst it remains constant when the amount of auxiliary applied is calculated on the pelt weight (curve 4). Conversely, this means that a relatively large amount of masking agent has to be used to effect complete chrome exhaustion.

In Europe, systems are used at present which are based on the results of such experiments and which ensure extensive exhaustion of the chrome tanning agent applied.

When dicarboxylic acids are used in conjunction with formic acid as pickle

Degrees of Exhaustion in Various Pickle Systems





APRIL 1978

117

acids in short floats or in floatless processes,⁴¹ about 85% of the chrome tanning agent applied is fixed to the leather in a form irremovable by washing. Still higher degrees of exhaustion and chromium compounds are obtained when dicarboxylic and polycarboxylic acids salts are used.

A chrome uptake of 98-99 per cent is achieved. The chrome tanning agent taken up is so firmly fixed that it is no longer extracted by synthetic tanning agents in the retannage.

As already mentioned, the processes described are based on the masking of the chrome tanning agents with auxiliaries that have a cross-linking effect. In these systems, it is therefore important that the enlargement of the tan molecules is brought about so slowly that their diffusion into the cross-section of the skin is not substantially obstructed. In processing unsplit hides, the masking agent is added in several portions and not until penetration of the whole cross-section is attained.

It may be regarded as a certain drawback, however, that these processing methods have to be suited to the different conditions in the individual tanneries and that the requirements with regard to amounts of chemicals applied, temperature and pH control have to be strictly adhered to, if leather of good quality and a very high degree of exhaustion are to be obtained.

In systems where replacement of part of the chrome tanning agent by other tanning materials is recommended, attempts are made to reduce the chromium oxide content of the residual

liquors not by optimizing the degree of exhaustion but by extensive reduction of the amount of chrome applied and by processing in the normal way. In these methods, only so much chrome is added as required to produce the necessary chrome leather character, whilst the filling effect is produced with other tanning materials. For this purpose, mainly glutaraldehyde has been used lately⁴². It has been found, however, that leathers containing little chrome and large amounts of glutaraldehyde are too spongy and that their cationic charge is too low. Retannage and fatliquoring have to be carried out accordingly to eliminate these deficiencies. Better results are obtained when small amounts of aluminium tanning agent are incorporated. The resulting leather has a largely chrome tanned character and can be aftertreated accordingly⁴³. Moreover, its pale colour allows production of leather with good dyeing properties and an almost white leather with good fastness to perspiration.

Effluent Clarification

When they are used in a suitable combination with one another, the liming and chrome tanning processes described may help to reduce the amount of effluents and that of the pollutants substantially. The question as to the specific processes to be applied, of course, depends on local conditions, the technical equipment of the leather factory concerned and the type of leather to be produced. By modifying the processes alone, it is not yet possible today to obtain effluents that can be discharged untreated directly into the drain. In

Chrome tannage incorporating dicarboxylic acid salts

Cattle pelts split to about 3 mm, thoroughly delimed.

Percentages on the pelt weight

Pickle :	40%	water
	5%	common salt
	0.6%	sulphuric acid, diluted 1 : 10
	0.4%	formic acid, diluted 1 : 5

Drum for 60-90 minutes,

pH bath : 3.4-3.6.

Tannage	+	6%	chrome tanning agent, 33% basicity (= 1.5% chromium oxide)
---------	---	----	---

Drum for 60-120 minutes,

bath pH 3-3.3,

penetrated throughout cross-section,

	+	0.5-0.8%	sodium bicarbonate
--	---	----------	--------------------

Drum for 30 minutes,

	+	1.5-2%	dicarboxylic acid salt
--	---	--------	------------------------

pH immediately after addition

max. 4.5 ; after 60 minutes pH 4.1-4.3.

Drum for 2-4 hours at 40°C,

end pH 4.1.

Chromium oxide content of residual liquor : 0.3-0.5 g/l

Chromium oxide content of leather : 3.5-3.8%

Main processing steps :

(1) Thorough deliming

(2) Cross-section must be uniformly penetrated by chrome and acid before addition of dicarboxylic acid salts

(3) Addition of dicarboxylic acid salts at temperatures below 30°C.

most cases, efforts should be made to connect the drain to a municipal clarification plant where somewhat higher concentrations of pollutants are permissible. If, for example, a sulphide-free liming system is used in combination with a chrome tanning process that gives a high degree of exhaustion, it is only necessary to mix the acid and alkaline

effluents and free them from coarse contaminations before they are run into a municipal clarification plant.

It is seldom found today that tanneries build their own clarification plant as an alternative solution, because this is worthwhile only to large tanneries and requires considerable space. Tannery effluents can be clarified chemically or



biologically according to the active sludge process. Compared to biological clarification, chemical clarification has the advantage that it requires less space and is more readily adaptable to load variations, but it involves higher costs on account of the use of flue gas, iron salts and aluminium salts as precipitants for lime, sulphides and proteins. Trials in practice have shown that biological clarification of tannery effluents is feasible, because the decomposing bacteria adapt themselves to the effluent medium, but compared to municipal clarification plants the dwell time is longer⁴⁴.

Before they are mixed together, the acid effluents from the chrome tannage and the alkaline lime and wash liquors have to be destroyed chemically by iron sulphide or by catalytical oxidation using manganese-II-salts as catalyst in an oxidation ditch^{45, 46}. The sludges resulting from the purification process contain only about 5% of solids and have to be hydroextracted by filter presses or centrifuged before they can be disposed of. Efforts are also often made to incinerate them to reduce the waste volume drastically. It is obvious that the disposal of these sludges involves considerable costs. For this reason future developments will include processes which allow direct recovery of proteins from residual lime liquors to reduce the amount of resulting clarification sludge substantially and the use of processed sludge as fertilizer, provided that its chrome content lies below the harmful limits. The chromium-III-content of sludges used as fertilizer is now regarded not as critical as it was some years ago, because in the meantime

fertilizer experiments have shown^{47, 48} that even acid soils will tolerate up to 50 mg Cr/kg soil without reduction of the crops. Nevertheless, the question of the general use of these products has not been clarified yet with the official authorities.

Solid Wastes

Similar disposal problems are caused by the solid tannery wastes, such as hide cuttings, glue stock, chrome shavings and buffing dust. Hide shavings and glue stock are processed into glues, and in contrast to splits and unlined hide wastes, however, glue stock has a low yield and the load on the effluent is relatively high. Disposal by dumping or incineration calls for hydroextraction beforehand and additional material. For the production of fertilizers, the solid wastes have to be degreased, in order to counteract greasiness of the soil. The most beneficial utilization method that offers itself today is to process the material by acid thermal hydrolysis without resulting waste water into meat flour, fat, gelatine and polypeptides⁴⁹. Chrome shavings can be used for the same purpose after they have been dechromed or they can be incorporated in the production of leather-fibre board.

The waste materials can also be utilized in the same way as the proteins recovered from the residual lime liquors, viz. as feed additives, fertilizers or after further processing as detergents or for cosmetic purposes.

It can be seen that the waste products of the leather industry can be utilized for a great variety of purposes, but that advantage is taken of the utilization to

only a limited extent. The leather industry itself is not in a position to push such utilization processes, as they require relatively high equipment costs and facilities that by far exceed the capacity of individual tanneries. These questions can, therefore, be solved only centrally.

Summarizing the facts, we can state that up to now it has been possible to reduce the effluent problems extensively without affecting the leather quality and rationalization measures or necessitating modification of proven technologies. With the aid of the various optimized processes, systems of recovery or recycling residual liquors and effluent clarification methods, it will be possible to find a solution suited to the local and technological conditions of the individual leather factories. This also means, however, that a generally valid solution of these problems does not exist. The change-over to processes that meet environmental protection requirements, therefore, involves time and considerable expenses for experiments. For this reason, it is necessary to start dealing with these problems as early as possible.

The final solution of the effluent problems by effluentless processes is not in sight yet, but various institutes are concerned with these questions. In principle, highly concentrated solutions are used in which each individual hide is thoroughly soaked. The appliances used are roller systems^{50,51} operating on the padder principle and special apparatuses specially developed for liming^{52,53}. The developments are still in the experimental stage and no practical assessment can be given yet. It is, however, a welcome attempt to look for and try out new technologies.

References

1. A. Zissel, *Leder-und Hautemarkt* 28, G+P, 102 (1975)
2. J. Bohm und P. Smykal, *Kozarstvi* 20, 295 (1970)
3. B. Vulliermet, *Technicuir* 6, 156 (1972)
4. J. B. Sladen, *J. Soc. Leather Techn. and Chem.* 61, 17 (1977)
5. M. A. Haffner, B. M. Haines *J. SLTC* 59, 114 (1975)
6. W. J. Hopkins, D. G. Bailey, *JALCA* 70, 248 (1975)
7. D. G. Bailey, W. J. Hopkins, H. H. Taylor, E. M. Filachione und R. G. Koeppen, *JALCA* 71, 400 (1976)
8. W. Fendrup, *JSLTC* 58, 9 (1974)
9. P. J. van Vlimmeren, R. C. Koopmann, H. H. A. Peickmans, *Das Leder* 25, 61 (1974)
10. R. Monsheimer, *Kongreßbericht JULTCS*, Wien 1973, S. 461
11. G. Mayer, *The Leather Manufacturer* 1975, 14
12. E. Pfeleiderer, *Leder-und Hautemarkt* 24, 275-278 (1977)
13. F. Knaflitz, *Das Leder* 23, 157 (1972)
14. C. A. Money and U. Adminis, *JSLTC* 58, 35 (1974)
15. A. Folachier, *Technicuir* 9, 66 (1975)
16. B. Schubert and W. Pauckner, *Leder-und Hautemarkt* 30, G+P 218 (1977)
17. A. Blazej, A. Galatik, L. Minarik, Vortrag 12. Kongreß IULTCS, Prag, 1971
18. J. E. Cooper, N. T. Happich, E. H. Bitcover, E. F. Mellan, F. M. Filachione, *JALCA* 70, 18 (1975)
19. G. Franke, *Leder-und Hautemarkt* 28, G+P 129 (1976)
20. A. Simonciri, L. Da Pezzo, G. de Simone, *Cuo Pelli Materio Concianti*, 311, (1971)
21. P. J. van Vlimmeren, *Leder-und Hautemarkt* G+P 26 (1976)
22. D. A. Bailey, J. J. Dassel, K. S. Robinson, *J. Soc. Leather Techn. Chem.* 54, 91 (1970)
23. G. Konigsfeld, *Das Leder* 24, 1 (1973)



ILTA
Since 1950

APRIL 1978		121
24. J. Gauglhofer, <i>Das Leder</i> 26 101 (1975)	40. B. Magerkurth, <i>Das Leder</i> 28, 155 (1977)	
25. E. W. Alther, <i>Das Leder</i> 26, 175 (1975)	41. A. Zissel, H. Lidle und S. Horig, <i>Das Leder</i> 23, 174 (1972)	
26. H. Herfeld, <i>Das Leder</i> 25, 134 (1974)	42. O. E. Gatewood, <i>Leather Manufacturer</i> 41 12 (1974)	
27. J. Balas, <i>Technicuir</i> 10 154 (1974)	43. A. Zissel, <i>Rev. Techn. Ind. Cuir</i> 67, 114 (1975)	
28. O. Harenberg, E. Heidemann, S. A. Allam, <i>Das Leder</i> 25, 219 (1974)	44. W. v. d. Emde und W. Stelzer, <i>Das Leder</i> 26, 169 (1976)	
29. J. W. Robinson, J. H. Heward, <i>The Leather Manufacturer</i> 1976, 12	45. P. J. van Vlimmeren, <i>Das Leder</i> 23, 201 (1972)	
30. M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 57, 33 (1973)	46. J. Gauglhofer, <i>Leder-und Hautemarkt</i> 24, 31 1G+P 84 (1977)	
31. M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 57, 173 (1973)	47. F. W. Alther, <i>Das Leder</i> 26, 175 (1975)	
32. J. E. Burns, D. E. Colquitt, M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 60, 106 (1976)	48. Moulinier und Mazoyer, <i>Technicuir</i> 3. 75, (1969)	
33. J. R. Barlow, <i>JLSTC</i> 61, 29 (1977)	49. F. Naumann, <i>Leder und Hautemarkt</i> 29, G+P 114 (1977)	
34. H. G. France, <i>JALCA</i> 70, 206 (1975)	50. W. Kess'ler, <i>Das Leder</i> 25, 124 (1974)	
35. A. Folachier, U. S. Auroousseau, <i>Technicuir</i> 9, 76 (1975)	51. H. Herfeld und K. Schmidt, <i>Leder-und Hautemarkt</i> 26, 50, 326 (1974)	
36. R. Pierce, <i>JALCA</i> 71, 161 (1976)	52. E. Heidemann, O. Harenberg, J. Cosp, <i>JALCA</i> 68 520 (1973)	
37. B. Schubert und H. Herfeld, <i>Das Leder</i> 26, 21 (1975)	53. J. Sogala, R. Dorstewitz, E. Heidemann, <i>Das Leder</i> 28, 166 (1977)	
38. J. Gauglhofer, <i>Revue Technique des Industries du Cuir</i> 68, 412 (1976)		
39. K. Backer, H. Heinze, W. Luck und H. Spahrkas, <i>Das Leder</i> 28, 57 (1977)		

Read and Let Read :-

JILTA

INDIAN LEATHER PRODUCTS ASSOCIATION

The Indian Leather Products Association (ILPA), established in 1987, is a premiere representative body of manufacturer-exporters of superior quality leather and leather products with head office in Kolkata and a regional office in Chennai.

IMPORTANT ACTIVITIES OF ILPA :

- Brings together manufacturer & merchant exporters on a common platform.
- Stimulates growth & development of the industry as a whole.
- Promotes export of leather & leather products.
- Develops & maintains symbiotic liaison with international trade bodies & Chambers of Commerce.
- Organises trade delegations to international fairs & seminars.
- Organises various Seminars/workshops both the benefit of its members and industry.
- Promotes International Fairs and RBSMs like IILF Kolkata, ILPA Buyer Seller Summit.
- Organises the ILPA SHOW : Leather on the Ramp , one of the most prestigious and sought after Fashion event in Eastern India.
- Closely involved in setting up the Calcutta Leather Complex(CLC).
- Runs and manages the Freya Design Studio : a CLE award winning Design Studio both for leather goods and footwear.
- Runs and manages the ILPA INFRASTRUCTURE DEVELOPMENT FOUNDATION (IIDF) – a state of the art Common Facility Centre.
- Imparts Skill Development Training through ILPA Technical School.



Common Facility Center



Design Studio



CAD CAM Center



ILPA Technical School



Indian Leather Products Association
Plot no 1647, Zone 9, Calcutta Leather Complex,
Karaidanga, West Bengal, Pin Code: 743502
Mobile: +91 7605855567 / +91 9007881474
E-Mail : mail@ilpaindia.org
Web: www.ilpaindia.org





ILTA
Since 1950

**Come and visit
the world's best
leather goods
sourcing platform
in India**

**ILPA
BSS**
BUYER SELLER SUMMIT
KOLKATA

28th & 29th January 2020
in a centrally located
world class luxury hotel – ITC Sonar.

Reasons to visit:

- 42 major leather goods companies displaying their latest & best quality International collections under one roof!
- This part of India is the world's most competitively priced leather goods production hub!
- Golden chance to source premium best priced leather goods at one go!

Special Offers for Visitors:

- Facility to stay in the same hotel at discounted rate if confirmed before 30th September 2019
- Pick up & Drop facility from Airport
- Complimentary Language interpretation service
- Complimentary lunch & refreshments
- Option for factory visit of participant companies

Products on Display:

Ladies Hand Bags, & Purses, Men's Bag & Wallets, Belts, Hand Gloves (Fashion & Industrial), Garments, Luggage & Hold alls, Portfolio, laptop bags, iPod Covers, small leather goods & Accessories



BSS
**ILPA BUYER SELLER SUMMIT
KOLKATA**
28th & 29th January 2020



A highly focused B2B event
featuring leather goods
that brings together international
Buyers & Sellers.

Indian Leather Products Association
www.ilpaIndia.org

BSS **Indian Leather Products Association**
BUYER SELLER SUMMIT 2020, KOLKATA

GDP growth seen slipping under 5% in Sep quarter; may be in 4.2-4.7% range



A look at six indicators shows all of them have collapsed from positive growth in April to contraction in Sept

Finance minister Nirmala Sitharaman told the Rajya Sabha on Wednesday the country was not in recession yet, and won't ever be.

A set of data arriving in a day may qualify the statement to some extent. The Ministry of Statistics and Programme Implementation (MoSPI) will release the data on gross domestic product (GDP) for the July to September quarter of the fiscal year 2019-20 (Q2FY20) on Friday.

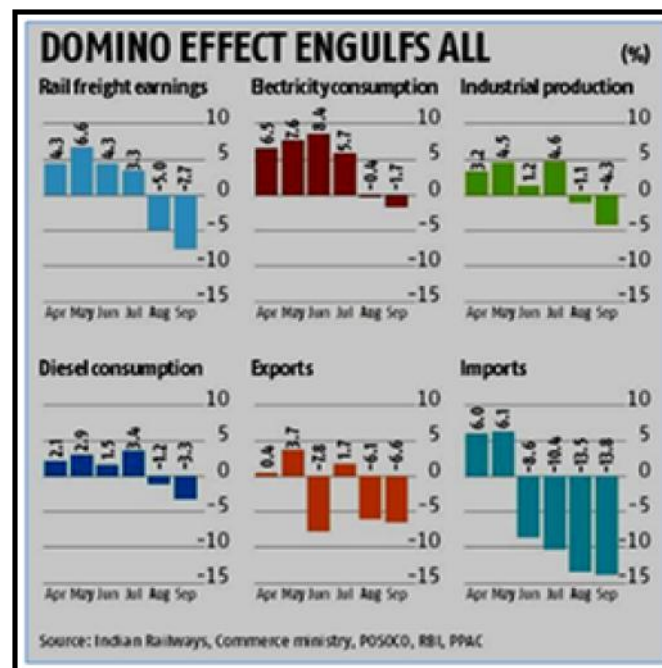
Raising slowdown concerns, economists whom Business Standard earlier spoke to have concurred on one thing: The growth in GDP in Q2 would be between 4.2 and 4.7 per cent, slower than the 5 per cent achieved in Q1.

The actual data could be more serious as the lowest-ever quarterly growth clocked since 2012-13 (when the new GDP series began) was 4.3 per cent, in the March quarter of FY13, when India was battling high inflation and political turmoil, in addition to pressures from the global economy.

Representative data for the July-September quarter proves their point to a great extent. A look at six indicators — imports, exports, rail freight earnings, electricity and diesel consumption, and overall industrial production — shows that all of them have collapsed from positive growth in April to contraction in September.

These indicators are a collage of manufacturing and services sector indicators in the country, encompassing a substantial part of the economy.

While the growth in Q1 was 5 per cent with positive leading indicators, Q2 has been characterized by all indicators in red. Port traffic too has stagnated, growing 0.4 per cent in the April–October period, entirely brought down by a severe contraction in coal imports.



Consumption of fast-moving consumer goods, such as shampoo sachets and coconut oil, has weakened to 2 per cent in Q2FY20, with the stress concentrated in north Indian states.

Shubhada Rao, chief economist at YES Bank, told Business Standard that except services propelled by the government's budgetary funding, all the sectors of the economy are a drag on growth in the September quarter.

But she also said that the Indian economy is going through a transition phase, and some near-term impact was expected.

Meanwhile, Sitharaman reiterated in the Rajya Sabha that the efforts to recapitalize public sector banks have paid off, and it is evident in the good liquidity available to finance needy micro, small and medium enterprises.

However, bank credit growth, which had reached 12.2 per cent at the end of FY19, has now fallen back to 8.2 per cent at the end of September.

The GDP growth numbers, due on Friday, would also show how investments in the economy have fared this quarter. Data

from the Centre for Monitoring Indian Economy has shown that India has seen new investments worth only Rs 1.2 trillion in April-September, lowest in absolute terms in the past seven years.

While observers maintain that the slowdown is mainly cyclical in nature, they admit that there are structural reasons too.

(Business Standard – 28/11/2019)

EXPORTS DIP NEARLY 7 PC IN SEPTEMBER



Merchandise exports from the country declined in September for the third time in the current financial year, while imports dropped for the fourth consecutive month.

Data released by the Commerce Ministry showed India's merchandise exports declined 6.57 per cent to \$26.03 billion

in September 2019 from \$27.87 billion in September 2018 while imports in the month dropped 13.85 per cent to \$36.89 billion from \$42.82 billion in September 2018.

The latest figures signal rising protectionism and continuing trade tensions between the US and China along with the spectre of a global slowdown are impacting India's trade prospects as well.

Despite the overall sluggish export performance, sectors such as electronic goods, spices, minerals and ores, ceramic products, drug and pharmaceuticals recorded positive growth in September.

Shipments of gems and jewellery, engineering goods, petroleum products, handloom and leather goods, cereals, meat and dairy products recorded negative growth, according to the data.

"Declining trend in exports does not augur well for the overall growth of the economy. Escalating trade tensions that have unsettled the slowing world economy have also led WTO to sharply cut their trade forecasts for both 2019 and 2020 to 1.2 and 2.7 respectively. The downside risks still remain high in the global economy and the projection for 2020 depends on a return to more normal trade relations," said FIEO President Sharad Kumar Saraf.

The problem for India's exports has assumed serious proportions as only eight out of 30 major product groups showed positive growth in September 2019. All major sectors including almost all labour-intensive sector of exports besides petroleum were in the negative, showing such a decelerating trend.

Read and Let Read :-

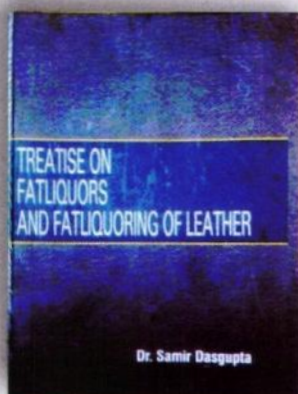
JILTA

-: JILTA :-

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

ILTA PUBLICATION

Now available



Title of the Book
Treatise on Fatliquors and
Fatliquoring of Leather

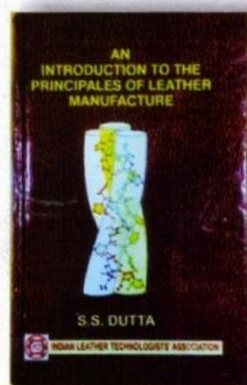
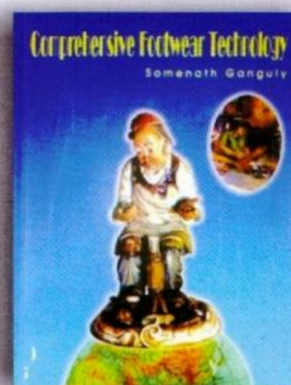
Author
Dr. Samir Dasgupta

Price per copy*
₹ 1500.00 / \$ 60.00

Title of the Book
Comprehensive
Footwear Technology

Author
Mr. Somenath Ganguly

Price per copy*
₹ 500.00 / \$ 50.00



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

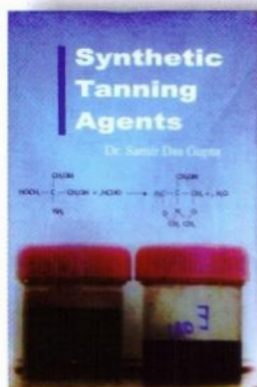
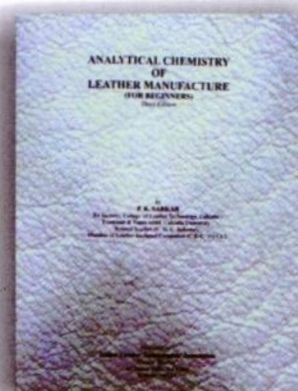
Author
Prof. S. S. Dutta

Price per copy*
₹ 800.00 / \$ 50.00

Title of the Book
Analytical Chemistry of
Leather Manufacture

Author
Mr. P. K. Sarkar

Price per copy*
₹ 300.00 / \$ 10.00



Title of the Book
Synthetic Tanning
Agents

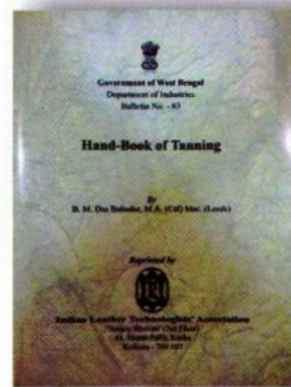
Author
Dr. Samir Dasgupta

Price per copy*
₹ 900.00 / \$ 30.00

Title of the Book
Hand- Book of Tanning

Author
Prof. B. M. Das

Price per copy*
₹ 750.00 / \$ 25.00



**Packing and forwarding charge extra*

Send your enquiries to :

Indian Leather Technologists' Association

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

Phone : 91-33-2441-3429 / 3459 Telefax : 91-33-2441-7320

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

Website : www.iltaonleather.org

History and Activities of Indian Leather Technologists' Association

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

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

- ❖ To bring all concerned with the broad spectrum of the leather industry under one umbrella.
- ❖ To organize seminar, symposium, workshop in order to create information, knowledge and latest development for the benefit of all concerned. To offer a common platform for all to interact with each other in order to understand each other's problems and prospects.
- ❖ To publish monthly journal as a supplement to those above objectives. The monthly journal of ILTA is known as journal of Indian Leather Technologists' Association and is the most widely circulated technical journal concerning leather technology.
- ❖ To publish text books for the benefit of students at various levels of study, for the researchers and industry.
- ❖ To have interface between urban and rural sector.
- ❖ To assist Planning Commission, various Government Institutions, Ministry and autonomous bodies to formulate appropriate policies acceptable and adoptable to the industry.
- ❖ To organize practical training and to provide skilled manpower and to motivate good students for study.
- ❖ To conduct activities related to the growth of the export of leather and leather goods from India.
- ❖ As the part of many social activities ILTA has donated Rs. 1 lac to Consul General of Nepal towards relief of earthquake effected of Nepal on 15th Sept, 2015.

INTERNATIONAL & NATIONAL SEMINAR

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

SEMINAR & SYMPOSIUM

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

- ❖ Prof. B. M. Das Memorial Lecture every year during the Foundation Day Celebrations on 14th August every year.
- ❖ Sanjoy Sen Memorial Lecture on 14th January every year, the birthday of our late President for several decades.
- ❖ Prof. Moni Banerjee Memorial Lecture on 15th March every year, the birthday of this iconic personality.
- ❖ Seminar on the occasion of India International Leather Fair (IILF) at Chennai in February every year.

It has also organized:

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

PUBLICATION

ILTA have published the following books:

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

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

AWARDS OF EXCELLENCE

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

LEXPOs

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

MEMBERS

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

ESTABLISHMENTS

In order to strengthen its activities, ILTA have constructed its own six storied building at 44, Shanti Pally, Kasba, Kolkata - 700 107 and have named it "Sanjoy Bhavan". This Association is managed by an Executive Committee duly elected by the members of the Association. It is absolutely a voluntary organization working for the betterment of the Leather Industry. None of the Executive Committee members gets any remuneration for the services rendered but they get the satisfaction of being a part of this esteemed organization.



68 YEARS OF SERVICE TO THE INTERNATIONAL LEATHER FRATERNITY



Indian Leather Technologists' Association

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

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

Phone : 91-33-2441-3429 / 3459 Telefax : 91-33-2441-7320

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

Website : www.iltaonleather.org



ILTA
Since 1950



**INDUSTRIAL
PRODUCTS**

PIDITHANE POLYURETHANE BINDERS

PIDITHANE A 350

- High Solids Polyurethane binder
- Good covering property
- Excellent emboss retention

PIDITHANE A 201

- Soft and Micro fine polyurethane binder
- Can be used as adhesion promoter binder

PIDITHANE NIPU

- Non-Ionic Soft polyurethane binder
- Can be used as adhesion promoter binder
- Can be used in polishable coats along with protein binder

PIDITHANE A 101

- Medium Hard in nature
- Very good polishability

PIDITHANE 115SB

- Soft aromatic PU
- Very good adhesion promoter

Pidilite Industries Ltd.

IP Division - Ramkrishna Mandir Road, Andheri (E), Mumbai 400 059 INDIA

T: +91 22 2835 7136 • F: +91 22 2836 7165 • E: leatherchem@pidilite.com • www.pidiliteindustrialproducts.com



ILTA
Since 1950



**INDUSTRIAL
PRODUCTS**

ACROLINE DYE SOLUTIONS

Metal Complex Dye Solutions for Leather Finishing



ACROLINE P SERIES

- High concentrated dyes, originally synthesized in liquid form.
- Excellent light fastness and resistance to spotting by water droplets.
- **Free from:**
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- **Available shades:**
Black PR, Black PS, Orange PR, Yellow PG, Red Brown PR, Rubine PB, Cherry Red PG, Yellow PR, Light Brown PG, Royal Blue PR, Dark Brown PR, Brown PB



ACROLINE DP SERIES

- Dyes originally synthesized in liquid form.
- Excellent Light Fastness and resistance to spotting by water droplets.
- **Free from:**
Formaldehyde, Benzidine, PCP/TCP/OPP, NMP, APEO/OPEO, Phthalates, Restricted Azo Amines, Banned Solvents
- **Available shades:**
Black DPR, Black DPS, Orange DPR, Yellow PG, Red Brown DPR, Rubine DPB, Yellow DPR, Cherry Red DPG, Light Brown DPG, Royal Blue DPR, Dark Brown DPR, Brown DPB,

Pidilite Industries Ltd.

IP Division - Ramkrishna Mandir Road, Andheri (E), Mumbai 400 059 INDIA

T: +91 22 2835 7136 • F: +91 22 2836 7165 • E: leatherchem@pidilite.com • www.pidiliteindustrialproducts.com

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

DECEMBER, 2019

VOL.: LXIX

NO.: 12

RNI NO.: 2839/57

REGD.NO.: ISSN 0019-5738

Contents

Pidilite Corner.....	03 - 04
Portfolio	05 - 08
Editorial.....	09 - 09
Balmer Lawrie Corner.....	11 - 12
ILTA News.....	13 - 14
STAHL Corner.....	15 - 16
Article - "Upper Manipulation in Industrial Shoe Making Process " by Moumita Mukherjee, Arijit Chakraborty, Arup Poddar.....	17 - 19
Students Corner.....	20 - 22
CLCTA Corner.....	23 - 24
News Corner.....	25 - 26
Solidaridad Corner.....	27 - 30
Down Memory Lane.....	31 - 42
ILPA Corner.....	43 - 44
Economic Corner.....	45 - 46

Hony. Editor : Dr. Goutam Mukherjee

Communications to Editor through E-mail :
admin@iltaonleather.org; jiltaeditor@gmail.com

Cover Designed & Printed by :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Published & Printed by :

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

Published from :

Regd. Office : 'Sanjoy Bhavan', 3rd Floor,
44, Shanti Pally, Kasba, Kolkata - 700 107

Printed at :

M/s TAS Associate

11, Priya Nath Dey Lane, Kolkata - 700 036

Subscription :

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

All other business communications should be sent to :

Indian Leather Technologists' Association

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

Kasba, Kolkata - 700 107, WB, India

Phone : 91-33-2441-3429

91-33-2441-3459

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

Web site : www.iltaonleather.org

Opinions expressed by the authors of contributions published in the Journal are not necessarily those of the Association

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

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

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

Advertisement Tariff

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

Full Page / per anum

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

Mechanical Specification

Overall size	: 27 cm X 21 cm
Print area	: 25 cm X 17 cm

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

Indian Leather Technologists' Association
and Payable at Kolkata

Send your enquiries to :

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

INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION
(Member Society of International Union of Leather Technologists and Chemists Societies)

Executive Committee (2019-2021)

Central Committee

President : Mr. Arnab Jha

Vice-Presidents : Mr. Asit Baran Kanungo
Dr. K. J. Sreeram
Mr. P. K. Bhattacharyya

General Secretary : Mr. Susanta Mallick

Joint Secretaries : Mr. Shiladitya Deb Choudhury
Mr. Bibhas Chandra Jana

Treasurer : Mr. Kaushik Bhuiyan

Committee Members :

Mr. Jayanta Chaudhury
Mr. Pradipta Konar
Mr. Subir Datta
Mr. Aniruddha De
Mr. Ratan Chowdhury
Mr. Kunal Naskar
Mr. Alokesh Ray
Mr. Sudagar Lal
(Secretary - Northern Region)
Dr. R. Mohan
(Secretary - Southern Region)

Ex-Officio Member : Dr. Goutam Mukherjee

Regional Committees

Southern Region :

President : Mr. N. R. Jagannathan

Vice-President : Dr. J. Raghava Rao

Secretary : Dr. R. Mohan

Treasurer : Dr. Swarna V Kanth

Committee Members :

Dr. N. Nishad Fathima
Dr. P. Thanikaivelan
Dr. Subhendu Chakrabarti
Dr. S. V. Srinivasan

Northern / Western Region :

President : Mr. Jai Prakash Saraswat

Vice-President : Mr. Rajeev Mehta

Secretary : Mr. Sudagar Lal

Treasurer : Mr. Jaswinder Singh Saini

Committee Members:

Mr. Kamal Sharma
Mr. Mohinder Lal
Mr. Rajveer Verma
Mrs. Sunita Devi Parmar
Mr. Y. D. Mahajan

JOURNAL OF INDIAN LEATHER TECHNOLOGISTS' ASSOCIATION (JILTA)

EDITORIAL BOARD OF JILTA

Chief Patron	:	Dr. T. Ramasami
Advisers	:	Prof. Dr. A. B. Mandal Mrs. Antara Kumar Dr. Bi Shi Dr. B. N. Das Dr. Buddhadeb Chattopadhyay Dr. Campbell Page Dr. Carlo Milone Dr. Chandan Rajkhowa Mr. E. Devender Dr. Pisi Dr. Roberto Vago Dr. Samir Dasgupta Prof. Swapan Kumar Basu Mr. Suparno Moitra Dr. Subha Ganguly Dr. Tim Amos Dr. Tapas Gupta
Peer Reviewing Committee :		Prof. A. K. Mishra Mr. Abhijit Dutta Mr. Animesh Chatterjee Dr. B. Chandrasekharan Mr. Diganta Ghosh Dr. J. Raghava Rao Mr. Jayanta Chaudhuri Dr. N. K. Chandrababu Mr. Prasanta Kumar Bhattacharyya Dr. Subhendu Chakrabarti Mr. Satya Narayan Maitra
Hony Editor	:	Dr. Goutam Mukherjee
Joint Editors	:	Dr. Sanjoy Chakraborty Dr. Anjan Biswas

Status of Consumerism in India



Consumer prices did 1.09% compared to October 2019 in India, up from the 0.55% increase from those in September. The increase was largely due to more expensive food and beverages, which, as a category, account for over half of the weight of India's consumer price basket. Consumer price inflation accelerated to 4.6% in October from 4.0% in September. As a result, inflation surpassed the 4.0% midpoint of the Reserve Bank of India's (RBI) target range of 2.0%–6.0%. Wholesale prices decreased 0.74% in October compared to the previous month, down from the 0.08% fall in September. Wholesale price inflation, meanwhile, slowed to 0.2% in October from 0.3% in September. Focus Economics Consensus Forecast panellists do expect consumer price inflation to average 3.5% in FY 2019, which is down 0.1 percentage points from last month's forecast. In FY 2020, the panel expects consumer price inflation to average 4.0%. Meanwhile, our panel projects wholesale inflation of 2.3% for FY 2019, down 0.3 percentage points from last month's report. In FY 2020, our panel foresees wholesale inflation averaging 2.4%.

India Inflation Chart



Note: Annual and monthly variation of wholesale price index (WPI) and annual variation of consumer price index (CPI) in %.

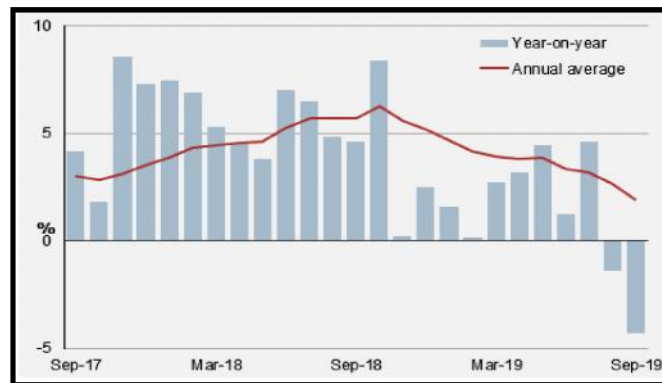
Source: Ministry of Commerce and Industry and Focus Economics calculations.

Industrial production fell 4.3% in September compared to the same month a year earlier i.e. 2018, down from August's revised 1.4% decrease (previously reported: -1.1% year-on-year).

Most industrial sectors contributed to the slump in September, with output in the mining sector dropping the most, followed by that of the manufacturing sector and electricity sector, respectively. By use, production of capital goods collapsed by over one fifth in September, while output of consumer durable, construction and primary goods also dropped notably. Meanwhile, production of consumer non-durable goods decreased only slightly in September, while output of intermediate goods increased. Annual average growth in industrial production moderated to 2.0% in September from 2.7% in August.

Focus Economics panellists expect industrial production to increase 4.3% in FY 2019, which is down 0.1 percentage points from last month's projection. For FY 2020, the panel expect industrial output to expand 5.5%.

India Industry Chart



Note: Year-on-year and annual average variation of industrial production index in %.

Source: Ministry of Statistics and Programme Implementation (MOSPI) and Focus Economics calculations.

Union Government of India is trying to render boost to industry at its best. Still, overall global shadow of recession is having its strong presence in Indian economy. We do hope India will overcome this period of crisis in no time.

Goutam Mukherjee

Dr. Goutam Mukherjee





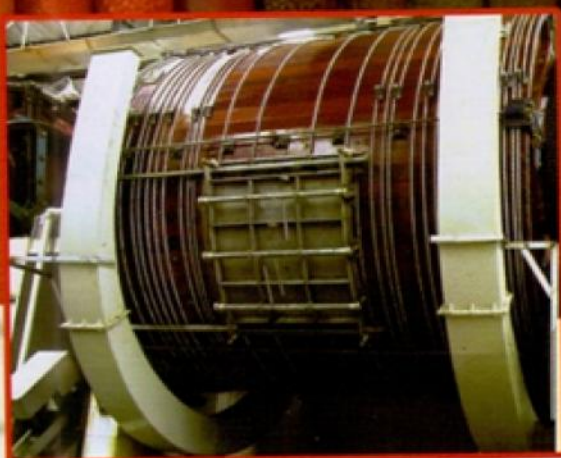
Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)

SBU: Leather Chemicals



Green Chemicals for Eco Friendly Leather Process



- ❖ Eco-friendly Products
- ❖ Products comply With REACH norms
- ❖ High performance Fatliquors, Syntans & Beam House Chemicals
- ❖ ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified
- ❖ State of the art Zero Liquid Discharge plant
- ❖ Member of Leather Working Group





ILTA
Since 1950



Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)

SBU: Leather Chemicals



- ❖ Eco-friendly Products
- ❖ Products comply with REACH norms
- ❖ High performance Fatliquors, Syntans & Beam House Chemicals
- ❖ ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 Certified
- ❖ State of the art Zero Liquid Discharge plant
- ❖ Member of Leather Working Group



*Technology Fuelled
by Research*

From the desk of **General Secretary**



LEXPO Siliguri – XXVI

Inaugural Ceremony of LEXPO Siliguri-XXVI is scheduled to be held at 05.00 PM on Friday 20th December, 2019 at Kanchanjungha Stadium adjacent ground. The fair will last up to 5th January, 2020.

18th Sanjoy Sen Memorial Lecture

Above is scheduled to be held at 03.00 PM on Tuesday the 14th January, 2020 at the Auditorium of Freya Design Studio, Calcutta Leather Complex, Bantala. Individual

invitation cards giving further details of the programme will be posted in due course.

2nd Prof. S. S. Dutta Memorial Lecture

Above is scheduled to be held at 10.00 AM on Sunday the 2nd February' 2020 at the Seminar 'Hall A' of Chennai Trade Center, during the 35th edition of India International Leather Fair (IILF), Chennai. Application for hall booking has been sent to the competent authority. Details of the programme will be intimated nearer to the programme.

Read and Let Read :-

JILTA

BEREAVEMENT

With profound grief and a heavy heart we announce the sad demise of Sunil Kumar Bhadra on 18th November, 2019 & of Uday Sankar Paul on 24th November, 2019. Both were life members of our Association.

Mr. Bhadra was a Life Member of ILTA besides having served the Association as General Secretary for two successive terms - 1970-1971 & 1971-1972.

Mr. Paul was a Life Member of ILTA

May their souls rest in peace and May God give strength to the members of the bereaved families to bear the irreparable loss.

You are requested to :-

- a) Kindly inform us your 'E-Mail ID', 'Mobile No', 'Land Line No', through E-Mail ID: admin@iltaonleather.org or over Telephone Nos. : 24413429 / 3459. This will help us to communicate you directly without help of any outsiders like Postal Department / Courier etc.
- b) Kindly mention your Membership No. (If any) against your each and every communication, so that we can locate you easily in our record.



(Susanta Mallick)
General Secretary

Read and Let Read :-

JILTA

Executive Committee Members meet
every Thursday at 18-30 hrs. at ILTA Office.
Members willing to participate are most welcome.



We imagine high-quality shoe & leather care to be customizable to every customer's demand

Leather is a fascinating product that needs regular care to reach and maintain its optimum condition. General use causes cracking, delamination and discoloration, all of which can be prevented by proper cleaning and protection. Stahl's range of Shoe & Leather Aftercare products brings out the best of your leather items and makes them more durable at the same time.

Enhanced resistance and easy cleaning

Whether it's for automotive upholstery, footwear, garments, leather goods or upholstered furniture, our products are shielding leather by creating an invisible, breathable barrier that enhances stain resistance and easy cleaning.

The range includes products for cleaning, protecting, refinishing and repairing. We even have solutions to upgrade your leather product so that it fits the latest fashion trends.

There is no such thing as one size fits all, so all of our solutions are available in endless and customizable variations in order to meet all your requirements. Curious what our Shoe & Leather Aftercare solutions can do for your business? Please visit www.stahl.com or contact us at stahl.india@stahl.com.

If it can be imagined, it can be created.

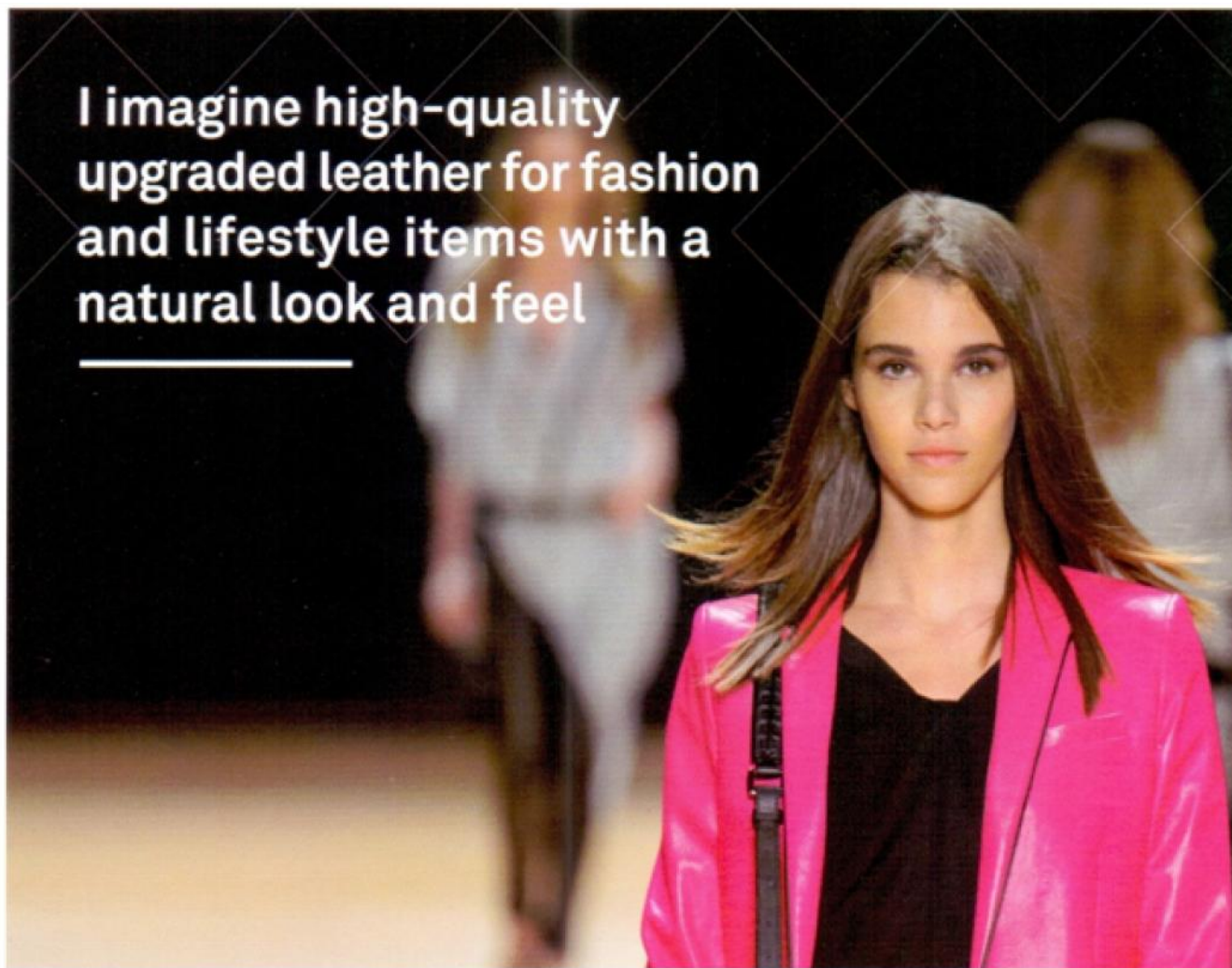
www.stahl.com





ILTA
Since 1950

**I imagine high-quality
upgraded leather for fashion
and lifestyle items with a
natural look and feel**



At Stahl, we love high-quality leather with a natural look and outstanding credentials. We want leather to be soft on the skin and both a pleasure to wear and to look at. To increase the availability of such leather we developed Stahl Easy-KAT: an easy-to-use, water-based leather upgrading product range for hides with small to medium grain defects.

Effective upgrading for high-quality leather

Easy-KAT enables tanners to widen their horizon by producing more leather that retains its luxurious appearance over time. Small imperfections in a hide, such as scratches and insect damage, are eliminated without affecting the suppleness, appearance or feel of the finished leather. The secret of

Easy-KAT is its natural affinity to anionic substrates and great sealing and levelling power, resulting in soft and flexible leather with all its natural aspects preserved. From high gloss to matt leather – anything is possible.

Easy-KAT is suitable for any type of crust. The finished leather is perfect for high-end fashion items, such as shoes, bags, garments, and jackets. Leather items tanned with Easy-KAT are the items consumers love to wear or carry. Curious what Easy-KAT can do for your business? Please visit www.stahl.com or contact us at stahl.india@stahl.com.

If it can be imagined, it can be created.

www.stahl.com



Upper Manipulation in Industrial Shoe Making Process

Moumita Mukherjee ¹, Arijit Chakraborty ², Arup Podder ³

¹ Junior Works Manager, Ordinance Factory Board, Ayudh Bhawan, Kolkata

² Govt. College of Engineering & Leather Technology, Kolkata

³ Bata India Limited, Palpara, Batanagar, Kolkata



INTRODUCTION :

Upper manipulation in shoe production as it is the first step of shoe preparation which involves the expensive raw materials. In this article the cutting department of the Bata Shoe Pvt. Ltd. is been highlighted. The upper manipulation process including skiving, cutting and capacity of cutting machine as per the oxford style has been discussed briefly. This article helps in basic understanding of the upper manipulation process, its need and effects in an industrial shoe making process.

RULES FOLLOW TO CUT THE UPPER :

- Leather is drawn from the stock as per the article requirement against plan division.
- Loading of cutter is organized as per the size requirement.
- Best possible cutting is done by interlocking the pattern (Vamp, toe cap, tongue, quarter & counter etc) to minimize the wastage.
- More important part of the shoe (Vamp, toe cap, apron, quarter etc) is cut from the best portion of the leather.
- Cutting should be done row wise to maintain the stress strain direction of the leather & also to minimize the wastage.
- During cutting need understanding of the defects & blemishes otherwise it will affect the final shoe.

PROCESSES THAT ARE RUNNING IN THE UPPER MANIPULATION DEPARTMENT

Operation	Machine Name	No of Machine	Purpose of the Operation
Cutting	Cutting Machine	55	To cut the leather according to the pattern using proper knife.
Skiving	Skiving Machine	17	To reduce the thickness for folding, lasting, raw edge, underlay etc.

Operation	Machine Name	No of Machine	Purpose of the Operation
Splitting	Splitting Machine	1	To split the leather to the required thickness as per the final product.
Stamping	Stamping Machine	2	Size no & brand is stamp using gold foil in leather.
Conveyor	Pre-fitting Conveyor	4	For cutting operation. It's one way conveyor double sided.
Conveyor	Belt Drive Conveyor	6	For stitching operation. Its two way conveyor.it is also double sided.

CUTTING MACHINE :

It is manufactured by Bata India Limited on 1970 – 1971.

The machine may be supplied with cast steel or cast aluminum (alloyed) cutting arm. Aluminium cutting arm is recommended for cutting with cold bent steel units.

The press is used for cutting various types of material sole leather, card boards, folded textiles etc.

The machine is provided with electromagnetic tripping arrangement. The height of the cutting arm over the table is adjusted by means of a hand wheel with locking device which ensures such adjustment remains intact during working operation.

MACHINE SPECIFICATION :

- R.P.M of the Machine: 1430.
- Volt of the Machine: 400~440 V.
- Power: 1.5 H.P, 1.1 KW.
- Pressure: 8TN.

Corresponding author E-mail : moumita.bubu@gmail.com

- Height: 1640x1840x1850cm.
- Cutting table working surface: 30x60cm.
- Cutting arm working surface: 30x60cm.
- Poly propylene Board is used to cut the material.
- Cutting Bed is generally 18inch. But for cutting the piping it is thinner.
- Module knife is generally use for cutting purpose.
- Its operation should follow the specific rules to avoid the accident.

SAFETY :

- All belts and pulleys are covered with a wire mesh guard which should not be removed except when adjustments are required.
- There is no emergency switch for safety purpose.
- The machine should be operated according to the manual properly.
- Need to operate the cutting arm left and right very carefully according to the machine manual.
- Need to wear apron.

CUTTING KNIFE / MODULE KNIFE :

Three types of knife are available –

Sl No.	Types	Purpose	Made By	Capacity	Knife edge
1	19 mm	For uppers and Leathers lining.	Cold Steel	It can click one single piece.	Single Edge
2	32 mm	For foam, cloth etc	Cold Steel	According to thickness For 3mm tricot - 8 pcs / layer. For 6mm tricot - 4 pcs / layer. For 6mm cloth - 8 pcs / layer.	Single Edge
3	140 mm	For rubbers	Hard Steel	According to thickness. Maximum 24 pcs	Double Edge

MAKING PROCESS :

- ❖ Moulded steel knife.
- ❖ Casted steel knife.
- ❖ Casted steel knife has strength low so it is not using any more.

MECHANISM & SOME IMPORTANT PARTS OF THE MACHINE :

- Cutting Arm :
 - Ñ With aluminium plate - for leather upper.
 - Ñ 111 Without aluminium plate - for lining.
- Tripping Handle
- Push Switch
- Fly wheel
- Pressing
- Working table
- Side manipulation tables
- Hand Wheel

ADJUSTMENT OF THE CUTTING ARM

The position of the arm is adjusted according to the height of the cutting block and the cutting knife being used. Unlock and turn the hand wheel to raise or lower the cutting knife being used. Unlock and turn the hand wheel to raise or lower the arm too much as it will force the die through the material. Do not lower the arms too much as it will then cause the die to stick in the cutting block. Lock the hand wheel (you may have to reset the tripping arm in the tripping ring, loosen screw, adjust tripping lever so that the tripping handle can move freely; tighten screw, manual tripping only).

If the cutting die is exchanged with one of a different height or the cutting block is changed (when planed), adjust the arm to proper height as explained above.

TRIPPING THE CUTTING ARM

To trip the arm, simply press the button on top of the arm which actuates the solenoid.

PROCESS :

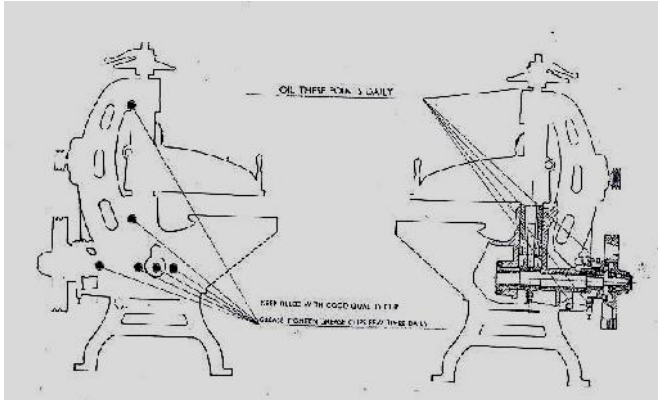
Pressing the arm or handle will connect /fixed the crank shaft then down the cutting arm will create the pressure and cut out the material.

Arm will generate a magnetic field which will help to attach the plunger will controller key lever clutch.
Key lock will initiate the function.

One pressure hand by which pressure is giving by hand is attached to aluminium plate the height between the cutting board and ram is adjusted by a key in the head of the machine.

There is a handle key to adjust the height of the handle.

The ram is movable left and right manner over the polypropylene board to cut and to release the material from cutting bed.



CAPACITY OF THE CUTTING MACHINES :

OXFORD SHOE :

Serial no (each content 1 min / 60sec)	No of Stroke (times)
1	6
2	8
3	5
4	6
5	4
6	9
7	6
8	7
9	6
10	5
TOTAL 10 Minute	62
In 1 Minute (Average)	62/10= 6.2 times
In 60Minute	6.2x60= 372 times
In 1 shift= 8 hour	372x8= 2976
1 person 8hour cutting capacity as per no of stroke	2976 times

According to the above calculation the capacity of a cutter will depend on the number of components per pair to be cut for a particular article.

For example: If number of components is 5. That is for an oxford shoe - Toe cap, Vamp, Tongue, Quarter, and counter.

For a pair number of component is $5 \times 2 = 10$.

As the number of stroke for 8 hr is 2976 times,
Then the capacity of the cutter for 8 hr in a day is $2976 / (5 \times 2)$
= 298 pair (round of).

So, the capacity per will depend upon on the number of components per pair need to be cut for a particular article.

The average total capacity of cutting per week is – 20000 pairs.

Total head count for cutting upper materials /lining materials/ skiving /perforation/ arranging - 75.

Checking / Inspection :

Each of cut pieces is then inspected thoroughly to ensure good quality upper materials. Followed by the inspection the cut pieces are bundled by mentioning pieces with white pencils.

Wastage Calculation:

The total sqft of the leather will transfer in to currency how much money one cutter is saving from their cutting will be calculated.

Reference

1.Comprehensive Footwear Technology by Somnath Ganguly ;

Disclaimer :-

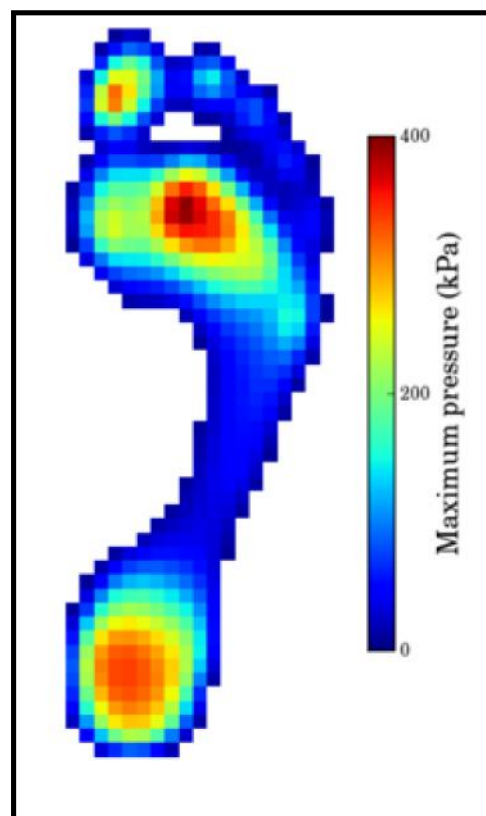
Opinion expressed in the article is absolutely that of the author.

BARE FOOT SHOE Part - 1

Mr. Shome Nath Ganguly
Former Principal, Karnataka Institute of Leather Technology



Runner without a Shoe



Example of Foot Pressure (kilopascal)

Barefoot running is also called “natural running”. This is the act of running without wearing a footwear. In India till date nearly 30% of our people walk bare foot. Mainly the farmer community of our country cannot afford to buy a pair of shoe, as such they work in their field bare footed. It is normal in India to walk naked foot in the rural sector. Even our football players till 1950-56 play without their football boot which affects their performances in the international arena.

But here we are discussing about runners who are participating in the various events with or without shoe. Development of

running shoe promises better feeling while participating with a “running shoe”. But we have found that it is not always corrects. To compete with traditional running shoe, a modern running shoe is developed with five individual fingers & with a very thin flat sole. This shoe is known as **5-Finger Shoe**.

Though it is a modern development of footwear but running with **5-Finger Shoe** has not yet get popularity in most parts of the world. It is still practiced in parts of Africa and Latin America. In some Western countries, barefoot running has grown in popularity due to perceived health benefits.



Scientific research & developments of running barefoot has not reached a clear consensus regarding its risks or its benefits. The traditional footwear is providing protection from cuts, bruises, impact and from weather. Developer argue that running barefoot reduces the risk of chronic injuries (notably repetitive stress injuries) caused by heel striking in padded running shoes. The barefoot movement has prompted some manufacturers to introduce thin-soled and flexible shoes such as traditional **Moccasins** and **Huaraches** for **minimalist running**.

I am mentioning some names below who were renowned runners perform without wearing a shoe (bare foot).

During 1944 **Dr. Charles Robbins** who won 11 U.S. National Championships & Yonkers Marathon. He finished the Boston Marathon 20 times, with a third place in 1944, and was an alternate to the marathon team at the 1948 London Olympics often ran races barefoot.

During Summer Olympic in 1960 at Rome **Mr. Abebe Bikila of Ethiopia** won the Olympic marathon in barefoot setting a new world record. He was in pain because he had received shoes that were too small so he decided to simply run barefoot. Bikila had trained running barefoot prior to the Olympics. He prepared himself to defend his Olympic title four years later in Tokyo with wearing shoes. He was very successful in setting a new world record wearing a shoe.

During 1960s **British runner Mr. Bruce Tulloh** competed in many races in barefoot and also won the Gold medal in the 1962 European Games in 5,000 metre race.

In the 1970s, Shri Shivnath Singh, one of India's greatest long distance runners, was known for always running barefoot. **Shivnath Singh** (July 11, 1946 – June 6, 2003) was one of the few great long-distance runners that India has produced. Singh represented India twice in the Asian games and twice at the Summer Olympics (1976 and 1980).

During the 1980s, a **South African runner, Zola Budd**, became known for her barefoot running style as well as training and racing barefoot. She won the 1985 and 1986 IAAF World Cross Country Championships and competed in the 1984 Olympic Games in Los Angeles.

Kenyan runner Tegla Loroupe began running barefoot 10 km (6.2 miles) to and from school every day at the age of seven. She was the first African woman to win the New York City Marathon in 1994. She contested bare foot as well as with shoe (shod) in several international marathons & half marathons. One barefoot runner **Mr. Rick Roeber**, has been running barefoot since 2003 and has run more than 50 marathons, 2 ultra-marathons of 40 miles, and over 17,000 miles (27,000 km) all barefoot.

HEALTH AND MEDICAL IMPLICATIONS.

Since the latter half of the 20th century, there has been scientific and medical interest in the benefits and harm involved in barefoot running. The 1970s, in particular, saw a resurgent interest in Jogging in western countries and modern running shoes were developed and marketed.

Since then, running shoes have been blamed for the increased incidence of running injuries and this has prompted some runners to go barefoot. However, the American Podiatric Medical Association has stated that there is not enough evidence to support such claims and has urged would-be barefoot runners to consult a podiatrist before doing so. The American Diabetes Association has urged diabetics and other people with reduced sensation in their feet not to run barefoot citing an increased likelihood of foot injury.

The structure of the human foot and lower leg is very efficient at absorbing the shock of landing and turning the energy of the fall into forward motion, through the springing action of the foot's natural arch. Scientists studying runners' foot motions have observed striking differences between habitually shod runners (wearing shoes) and barefoot runners. The foot of habitually runners who wears shoe typically lands with an initial heel strike, while the foot of a barefoot runner lands with a step on the middle, or on the ball girth of the foot. In addition, the strike is shorter in duration and the step rate is higher. When looking at the muscle activity (electromyography), studies have shown a higher pre-activation of the plantar flexor muscles when running barefoot. "By landing on the middle or front of the foot, barefoot runners have **almost no impact collision**, much less than most shod runners generate when they heel-strike."



ILTA
Since 1950

However, when comparing different populations of habitually barefoot runners, not all of them favor the forefoot strike. A 2012 study by Mr. Hatala focusing on 38 runners of the Daasanach tribe in Kenya found that a majority of runners favored a heel strike instead of a forefoot strike. Presently, Hatala and Lieberman are comparing their data, but Lieberman did note that his study, which focused on the Kalenjin people, also found some barefoot runners favoring a heel strike as well. He also said that the Daasanach people were primarily, “tall, lanky goat-herders who don’t run nearly as much as the Kalenjin, who own many of the world’s distance running records.”

Running in shoes also appears to increase the risk of ankle sprains, plantar fasciitis, as well as other chronic injuries of the lower limb. However, running shoes also provide several advantages, including protection of the runner from puncture wounds, bruising, thermal injuries from extreme weather conditions, and overuse injuries.

One 1991 study found that wearers of expensive running shoes that are promoted as having special features, such as added cushioning or pronation correction, were injured significantly more frequently than runners wearing inexpensive shoes.

One study suggests that there is no evidence that cushioning or pronation control in shoes reduces injury rates or reduces performance. It was also found that the belief that one’s shoes have increased cushioning had no effect on increasing or decreasing ground reaction forces during walking. Some study even suggests that running in high heels (not like ladies high heel) might be better than modern running shoes. Improperly fitting shoes may also result in injuries.

(Ref : [//en.wikipedia.org/bare foot running](http://en.wikipedia.org/bare foot running))

Read and Let Read :-

JILTA

We care for the environment

CLC TANNERS ASSOCIATION

Think Leather, Think Bengal

Asia's largest & most integrated leather complex with state of the art Common Effluent Treatment Plant (C.E.T.P.)

Over 400 Plus Tannery Units.

Manufacturers & Exporters of finished & leather articles.



www.calcuttaleathercomplex.in



ILTA
Since 1950



SPONSORED BY:



We care for the environment

CALCUTTA LEATHER COMPLEX TANNERS ASSOCIATION

AN ISO CERTIFIED COMPANY

Think Leather, Think Bengal

100 KANPUR UNITS TO JOIN LEATHER HUB

Kolkata : More than 100 leather units from Kanpur are waiting in the wings to come to Bengal, said state finance and industries minister Amit Mitra at an expo organized by leather industry. Thirty units from Kanpur have already shifted their base to the state in the last two years.

The minister also set a target of Rs 30,000 crores revenue at the leather complex in the next five years from the current level of 13,500 crores. Currently, in Bantala, there are 430 units taken together tanneries and footwear units. "Another 400 units will come," he added.

(Times of India – 28/09/2019)

LEATHER EXPORTS DIP 4.90% IN q1

Chennai : Exports of leather, leather products and footwear from India declined by 4.90% in the first quarter of the current fiscal to \$1.3 billion following recessionary trends and fierce price competition.

In rupee terms, the exports touched Rs 9,071 crores against Rs 9,159 crores for the corresponding period last year, according to the figures released by the Directorate General of Commercial Intelligence and Statistics.

Export of finished leather products dropped by 30% in dollar terms. "We have been facing challenges on the export front due to a combination of factors such as recessionary trends and fierce price competition.

Consequently, exports from the sector declined during the first quarter," said Panaruna Aqeel, Chairman, Council for Leather Exports.

"But this is only a temporary phenomenon and the sector has the potential to achieve double digit growth levels in the coming months," he added. Referring to the recent announcement of the Union Finance Minister about the new scheme of Remission of Duties or Taxes on Export Products (RODTEP), he said it would be introduced by January 2020.

Till then, MEIS (Merchandise Exports from India Scheme) would be in force. RODTEP would more than adequately incentivize exporters than the existing schemes put together. "This would help enhance our price competitiveness," he said.

(Hindu – 18/09/2019)

BATA TO ADD 500 MORE STORES IN NEXT FIVE YEARS

Footwear major Bata India on Thursday said it will strengthen its presence in the domestic market by adding 500 stores in next five years, focusing mainly on smaller markets. The company has identified tier II, III and IV cities where it has plans to broaden its sales network through the franchise model, Bata India said in a statement.

Bata has already identified 180 such markets in smaller cities pan-India, where the company is seeking franchise partners to expand its presence beyond metro cities. "The company is betting big on franchising and already has over 150 franchise stores across the country. Bata plans to open 500 stores in the next 5 years," the statement added.

According to the latest annual report, Bata India has pan-India retail presence with 1,415 stores across cities with 3.07 mn sq ft of retail space. Over the last two years, Bata has increased presence in smaller towns and reinvigorated its portfolio to offer more contemporary, fashion and casual styles for the younger generation.

"India is one of the most important market for Bata globally and we aim to make Bata accessible to the fashion forward customers in tier II-IV smaller cities via the franchise stores," said Bata India CEO Sandeep Kataria. He further said, "We have seen strong demand for the new products, which is driven by multiple campaigns featuring celebrities from Bollywood and cricket world."

Bata India had revenue of Rs 2,928.44 crores in FY 2018-19 and had recorded a net profit of Rs 329.66 crores in the said period. Established in 1931, Bata India is a part of the Bata Shoe Organization. It is the largest retailer and manufacturer of footwear in the country and has sold 47.25 million footwear pairs in the last fiscal.

LIVESTOCK COUNT TOUCHES 140M, 6% LOWER THAN LAST CENSUS

Cow population up 18 per cent in seven years but number of oxen plunges 30 per cent

The population of cows in the country has risen by 18 per cent in the last seven years, while that of oxen dipped by 30 per cent, according to the latest census of livestock. The total number for livestock was pegged at around 536 million.

The provisional data of the 20th Livestock Census released by the Department of Animal Husbandry and Dairying on Wednes-



ILTA
Since 1950

day showed that the livestock population increased by 4.6 per cent, from 512.06 million in 2012.

Besides, there was a spectacular 16.8 per cent increase in the poultry population in the country to 851.81 million, mainly on account of a 46 per cent rise in backyard poultry birds, whose numbers have gone up to 317 million.

The number of female cattle is 145.12 million, which is 18 per cent over the 122.98 million in 2012. The number of male cattle, on the other hand, dropped to 47.4 million as against 67.92 million in 2012. Significantly the male to female cattle ratio in the 2019 survey dropped to 1:3 from 1:1.8 in the 2012 livestock survey.

Interestingly, there is a 6 per cent decline in the total number of indigenous cattle over the previous census. On the contrary, the population of total exotic/crossbred cattle has increased by 26.9 per cent in 2019 as compared to previous census.

Among the States, Uttar Pradesh has the highest number of livestock of 67.8 million (68.7 million in 2012), followed by Rajasthan 56.8 million (57.7 million), Madhya Pradesh: 40.6 million (36.3 million) and West Bengal: 37.4 million (30.3 million). While cattle accounted for 35.94 per cent of total livestock in the country, goats accounted for 27.80 per cent, buffaloes: 20.45 per cent, sheep: 13.87 per cent and pigs: 1.69 per cent.

As compared to the previous census, the percentage of sheep and goats has increased whereas the percentage of cattle, buffaloes and pigs has marginally declined. The total number of milch animals (in-milk and dry) in cows and buffaloes is 125.34 million, an increase of 6 per cent over the previous census.

The country now has a total of 109.85 million buffaloes as compared to 108.70 million in the 2012 census. The goat population, on the other hand, went up to 148.88 million showing an increase of 10.1 per cent over the previous census. The total number of sheep in the country is 74.26 million in 2019, an increase of 14.1 per cent over the previous enumeration.

For the latest round of census, more than 80,000 personnel were in the field collecting data from more than 27 crores households and non-households using tablets. According to the official statement, this was a unique attempt to digitize household level data transmitted directed from the field.

RS 540 CRORES FOR BANTALA LEATHER HUB INFRA BOOST

State Commerce and Industry minister Amit Mitra said the state

government is spending Rs 540 crores for developing infrastructure at the leather hub at Bantala where around 100 tanneries from Kanpur will be shifting in the years to come.

“The present turnover of Calcutta Leather Complex (CLC) stands at Rs 13,500 crores. We are targeting to take it upto Rs 30,000 crores in the next five years,” Mitra said at the inauguration ceremony of two day India, Leather and Accessories Fair at ITC Royal Bengal hotel on Friday.

The fair is being organized by India Trade Promotion Organization (ITPO) with active support from CLC Tanneries Association, India Footwear and Components Manufacture Association, Central Leather Research Institute, India Leather Chemical Promotion Association and state Commerce and Industry department.

Thirty seven international buyers from countries such as USA, Korea, Italy, Spain, Portugal, Poland, Kenya, Sri Lanka, Germany to name a few are taking part in the two day fair. “The organizers had received order of Rs 2,000 crores last year. I would like to see orders worth Rs 3,000 crores from this exhibition this year,” Mitra said.

It was on July 18, when Chief Minister Mamata Banerjee inaugurated a slew of new projects and laid the foundation stone of many others at Asia's first “Integrated Leather Complex” at Bantala, the completion of which would generate 5 lakh employments in near future.

(Millenium Post – 28/09/2019)

INDIA INTERNATIONAL LEATHER FAIR – 2020

“International Fashion Accessories & Leather Industry Products” will be displayed in the forthcoming India International Leather Fair at Chennai Trade Center, Chennai from 1st to 3rd February’ 2020.

It will have on display the entire range of products relating to leather industry from raw material to finished products and auxiliary products such as finished leather, shoes, shoe components - uppers, soles, heels, counters, lasts, leather garments, fashion accessories, leather goods, machinery & equipment and chemicals. IILF has all along been a vivid presentation of the leather industry. Latest expressions of the trends, styles, designs, and colors in world fashion are shown in this mega event.

(Source - <https://10times.com/iilf>)

Solidaridad ASIA

Solidaridad Network is a global civil society organization providing efficient, scalable and economically effective and innovative sustainability solutions in various agricultural and industrial commodities such as:



Solidaridad Asia has more than 320 sustainability experts operating from 26 offices in 9 countries and has also pioneered development and implementation of national sustainability standards in the region.

Solidaridad initiated its efforts in the leather cluster in late 2017 with the Kanpur-Unnao leather cluster. Within 2 years of inception, we have started our efforts in Kolkata and Bangladesh Leather clusters. Through tailor-made programs, Solidaridad has tried to address the following components:

KEY COMPONENTS



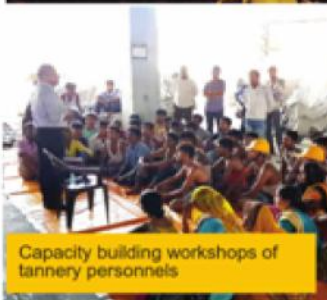
SUSTAINABLE WAY FORWARD IN THE LEATHER CLUSTERS ACROSS INDIA



Solidaridad ASIA



Solidaridad celebrating its 50th year anniversary in The Netherlands



Capacity building workshops of tannery personnels



Tannery workers using desalting machine to remove salt from hides



OHS workshop conducted by experts for awareness creation and risk mitigation of toxic H₂S gases



Ministry of The Netherlands acknowledged Solidaridad's contribution to leather sector in India at Indo-Dutch forum



Launch Meeting of Solidaridad's project for pollution prevention in tanneries in Kanpur

Tatheer Raza Zaidi, Senior Program Manager- Leather: tatheer.zaidi@solidaridadnetwork.org
Solidaridad Network Asia Limited
 A-5, 1st Floor, Shankar Garden, Main Najafgarh Road, Vikas Puri, New Delhi – 110018
 Contact: 011-45134500, +91-9818311450

NMCG PARTNERS WITH SOLIDARIDAD TO LAUNCH THE MULTI STAKEHOLDER PLATFORM FOR SUSTAINABLE GROWTH OF KANPUR-UNNAO LEATHER SECTOR

Solidaridad convened a Multi-Stakeholder Platform, a unique public-private partnership on 19 November 2019 in Lucknow, Uttar Pradesh. This was chaired by Shri D.P Mathuria, Executive Director, National Mission for Clean Ganga, Government of India and Mr Ashish Tiwari, Member Secretary- Uttar Pradesh Pollution Control Board, Government of Uttar Pradesh also gave the consent to be the co-chair of the platform.

Solidaridad, under its flagship programme of pollution prevention in the mid-Ganga landscape, has formulated the Platform to bring together a diverse group of representatives from policy institutions, technical agencies and experts, industry representatives and CSOs to collaboratively address the central theme of the platform: '***Sustainable Way Forward of Kanpur-Unnao Leather Cluster***'. The programme leverages its success factors from its Indo-Dutch expertise to conduct pilot demonstrations of proven eco-friendly and commercially viable technologies and introduce scalable technical interventions to address issues of effluent discharge, solid waste generation and promotes optimization of water usage in the industries. Solidaridad along with its technical partners viz. Central Leather Research Institute, Stahl has already established a number of pilot demonstrations to minimise total dissolved solids, total suspended solids, Chromium, water consumption and encourage measures for Occupational Health and Safety in the industries and utilization of solid wastes generated by tanneries into value added products (lime sludge into paver tiles, leather trimmings into belts, fleshings into tallow etc. The project is also working for the livelihood improvement of downstream farmers through improvement in the quality of waste water through bio remediation measures and capacity building of the farmers on Good Agricultural practices. This programme is currently working with around 100 tanneries in the Kanpur-Unnao Leather Cluster and will be soon expanding to the other important leather geography of India and adjoining countries. Though a great deal of attention is paid to finding the right technologies and practices to comply to the environmental norms, an often overlooked area in sustainability is the journey of ideating, scoping, evaluating and strategizing to invest in techno-commercial options which are feasible for the small and medium tanning industries too. Thus, having consensus building among all key players will enable in jointly working towards the common goal.

The Platform will meet on a quarterly basis to plan and design the roadmap for requisite initiatives in the leather cluster and monitor the status and discuss challenges at the ground level with the stakeholders. Pollution prevention is an area that can't be tackled with agencies working in silos but requires multiple stakeholders with complimentary areas of competence. Primarily, the platform will encourage and mobilize the key players in the sector to pool in their capacities, knowledge and resources, thus aligning their strategic interests.



The event witnessed a proactive discussion among representatives from National Mission for Clean Ganga, Uttar Pradesh Pollution Control Board, Department of MSME, Kanpur, Embassy of Kingdom of the Netherlands, CSIR-CLRI, Council for Leather Exports, and Industry Associations, etc. The stakeholders exchanged best practices regarding the techno-commercial viable solutions to minimize pollution at source, reduce overall water use and optimize the effluent water treatment. The Platform will complement the larger objectives of National Mission for Clean Ganga.



At the launch event, Shri Mathuria said “It is encouraging to see such a broad group of stakeholders coming together to jointly address the issue of pollution in the Ganga Basin. The exchange of information is a promising start and will hopefully reap us positive impact in the coming future”.

Mr Tatheer Zaidi, Program Head- Leather, Solidaridad Asia in his address apprised that Solidaridad has received encouraging support and responses from tannery stakeholders after demonstration of pilot units to address the key effluents viz. total dissolved solids, total suspended solids, Chromium etc. The multi stakeholder platform will be instrumental in upscaling the efforts which will enable the holistic growth of the cluster. He also thanked NMCG for chairing the platform and UPPCB for co-chairing the same.

Ms. Maya, Acharya, Senior Advisor from Embassy of the Netherlands mentioned “PPP model is a successful approach and has proven effective in other Dutch programmes. It was time that this model be used for resolving the issue of pollution in the river basin wherein multiple stakeholders are present”. Mr. Mukhtarul Amin, Former CLE Chairman representing the industry stated “We are thankful for the platform wherein our concerns can be voiced in front of the policy stakeholders and concrete solutions can be provided”

Mr. Prasanna Maduri from Stahl India presented flagship technological interventions under the ongoing project to

address TDS, BoD and CoD; water reduction etc in an effective manner. He also stated about the Centre of Excellence coming under the project which will ensure the long term sustainability of the initiative.

Dr SarvananPalanivel; Chief Scientist; CSIR-CLRI delivered a presentation on the techno- commercial viable interventions to address the effluent load significantly from the tanning processes through practices like Water Less Chrome Tanning; Low Sulphide Enzyme Assisted unhairing; Electro Oxidation etc.

Mr AnwarulHaq, President- UP Leather Industries Association delivered the welcome note and flagged the concerns Kanpur-Unnao Leather Cluster is facing to sustain in the global market. Mr S M Shahid highlighted important concerns of the Industry and opened the floor for the comments of the Industry stakeholders.

Mr D P Mathuria addressed the points flagged by Industry and assured the platform established today will be indeed instrumental to address such kind of issues and concluded that successful PPP model is likely to fulfil the vision of National Mission for Clean Ganga, Government of India and will serve as a blueprint for other industries along the Ganga Basin.

Lastly, Mr S M Shahid tanked Chair; Solidaridad and other consortium partners to launch this meaningful platform and assured all support on behalf of Industry.

Solidaridad





This Article was published in Vol.-26, No. - 04, April' 1978 of JILTA (Concliding part)

increase the oxygen demand of the effluent, they do become significant in such cases where effluents without dilution with household waste water have to be clarified, for instance, in a tannery's own clarification plant. The stronger aeration that will then become necessary may oxidize ammonium salts to form nitrites which impair the biology. This caused the recent demand for nitrogen-free deliming agents.

Pickling and Tannage

The pickling and tanning effluents are acid and contain little protein but larger amounts of neutral salts, acids and chromium salts. Particularly the chromium salts are a critical factor in the assessment of the effluents, because the strict requirement imposed on the chromium content of effluents necessitates revision of almost all processing methods.

Since various^{22, 23, 24} authors have proved that biological clarification plants with neutral mixed effluents can tolerate up to 100 mg Cr/l without harmful effects and that fertilizing experiments have shown that no excess chromium accumulation occurs in food circulation^{25, 26} it is positive today that the maximum allowable amounts of 4 mg Cr/l in effluents imposed in Europe and the USA are too strict. According to our knowledge, however, there are no indications that these limits will be changed, so that it will continue to be necessary for the leather factories to work towards obtaining residual liquors with as low a chromium content as possible. In Europe, there are tanneries whose existence depends on the almost complete elimination of chromium in their effluents.

In recent years, a series of processing methods have been suggested which can be roughly divided into the following groups: precipitation of the chrome tanning agent in the residual liquors as chromium hydroxide; direct re-use of residual liquors; improvement of exhaustion by optimizing processing and use of auxiliaries; partial replacement of the chrome tanning agent by other tanning material.

In the first two systems, the chrome-containing liquors have to be collected before they can be re-used. This means that their efficiency with regard to reduction of the chromium oxide content in effluents is dependent on the available facilities rather than on the chemical conditions on which the other two systems are based.

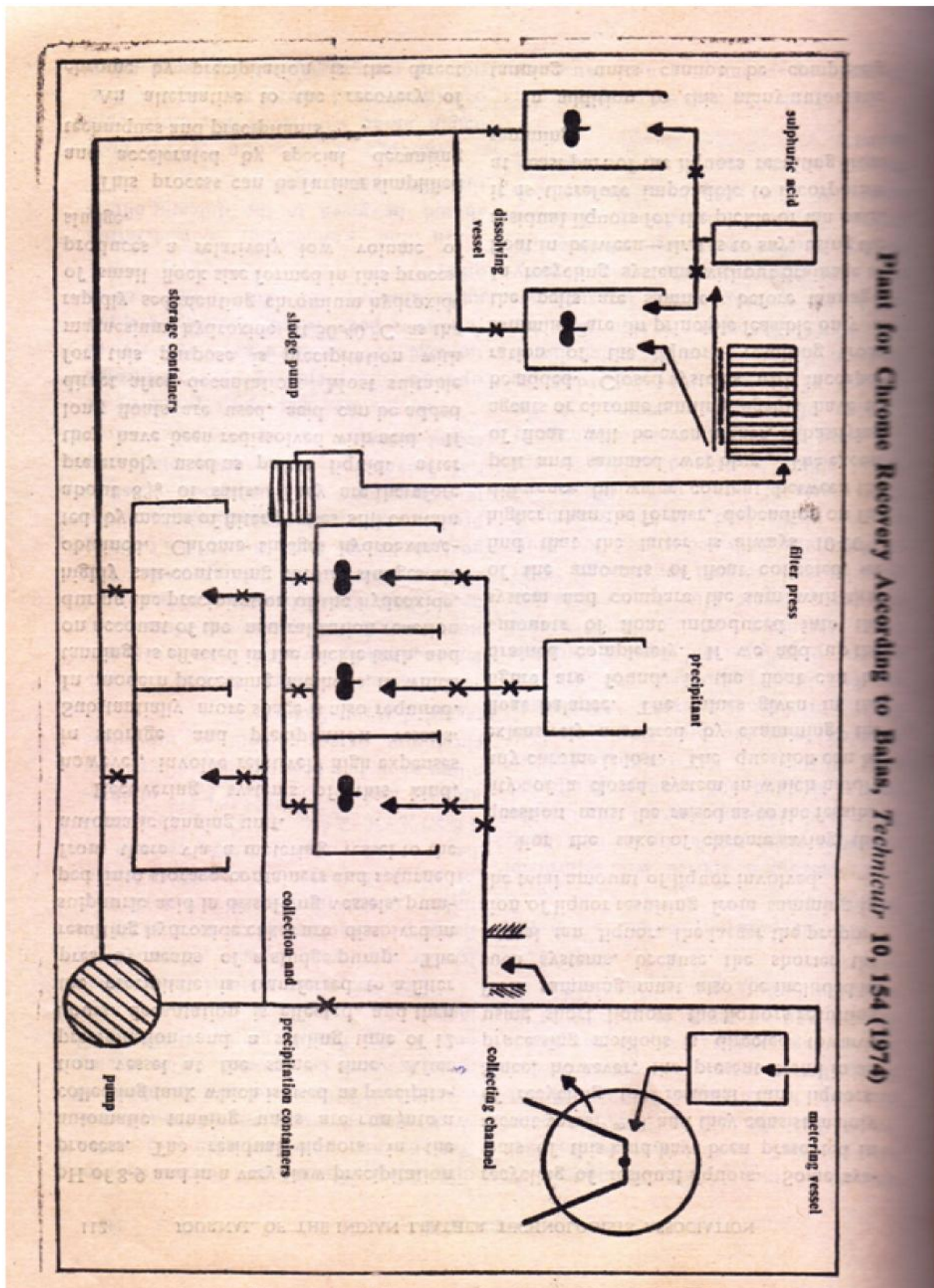
Precipitation of chromium compounds in the residual liquors is one of the most effective measures for eliminating the chrome problem. In order to be able to take advantage of all the possibilities offered by this measure, all chrome-containing residual liquors obtained have to be collected—that is to say, not only the residual liquors from the tanning process, but also the liquors resulting from the draining and samming of the leathers.

The diagram on the facing page shows the schematic representation of a chrome recovery unit²⁷.

Precipitation should preferably be effected with alkalis which form soluble sulphates, i.e., with soda, ammonia, caustic soda solution or magnesium oxide. It is important that a rapidly settling chromium hydroxide is obtained. This is generally accomplished only at a



ILTA
Since 1950



pH of 8-9 and in a very slow precipitation process. The residual liquors in the automatic tanning units are run into a collecting tank which is used as precipitation vessel at the same time. After precipitation and a settling time of 12 hours, decantation is effected, and then the precipitate is transferred to a filter press by means of a sludge pump. The resulting hydroxide cakes are dissolved in sulphuric acid in dissolving vessels, pumped into storage containers and returned from there via a metering vessel to the automatic tanning unit.

Recovering systems of this kind, however, involve relatively high expenses in storage and precipitation vessels. Substantially more space is also required. In modern processing methods, in which tanning is effected in the pickle bath, and on account of the neutralization reaction during the precipitation of the hydroxide, highly salt-containing chrome sludges are obtained. Chrome sludges hydroextracted by means of filter presses still contain about 8% of salts. They are therefore preferably used as pickle liquid, after they have been redissolved with acid. If long floats are used, acid can be added direct after decantation. Most suitable for this purpose is precipitation with magnesium hydroxide at 30.40 °C, as the rapidly sedimenting chromium hydroxide of small flock size formed in this process produces a relatively low volume of sludge.

This process can be further simplified and accelerated by special decanting techniques and precipitants^{28, 29}.

An alternative to the recovery of chrome by precipitation is the direct

recycling of residual liquors. Some systems of this kind have been presented in recent years^{30 to 37}, and they consist mainly of recycling the residual tan liquors. Since, however, the present trend in all processing methods is directed towards using short liquors, the liquors resulting from samming must also be included in such systems, because the shorter the actual tan liquor, the larger the proportion of liquor resulting from samming in the total amount of liquor involved.

For the sake of chrome saving, the question must be raised as to the feasibility of a closed system in which hardly any chrome is lost. The question can be extensively answered by examining the float balance. The values given in the figure are found, if the float can be drained completely. If we add up the amounts of float introduced into the system and compare the sum with that of the amounts of float collected, we find that the latter is always 10-20% higher than the former, depending on the difference in water content between the pelt and sammed wet blue. The excess of float will be even higher, if basifying agents or chrome tanning agents have to be added. Closed systems with incorporation of the liquors resulting from samming are in principle feasible only if the pelts are sammed before tannage. In recycling systems without drainage of float in between—that is to say, using the residual liquors for the pickle or tan bath, it is therefore impossible to incorporate at least part of the liquors resulting from samming.

In addition to this, many automatic tanning units cannot be completely



APRIL, 1978

113

drained so that 15-20% of liquor is lost after tannage. In such systems, it is then found that about 2 kg Cr_2O_3 per ton of raw hide is discharged into the effluent. Much better results are obtained when the tanning vessels can be completely drained and as much as possible of the summing liquors can be included in the process.

The diagram overleaf shows a system of this kind.

Processing is started with a formate/sulphuric acid pickle in a short float. After a drumming time of 2 hours, the float is drained and tannage is effected with 40-50% of the residual liquors resulting from the preceding cycle plus 1.8-2% of chromium oxide. After tannage has been completed, the residual liquors, drippings and liquors resulting from summing are collected passed through a coarse filter to separate skin particles and re-used for tannage. Part of the liquors collected is used for diluting the pickle acid. In this system, a slight excess of liquor up to 10% is obtained which is either discarded or used for other purposes, such as retannage or tannage of splits. Depending on the amount of excess liquor discarded, the load on the effluent in this system lies at 0.7-1.4 kg Cr_2O_3 per ton of skin. Suitable as chrome tanning agents for such systems are primarily 50% basic, slightly masked tanning agents with which basification becomes superfluous. Tanning agents of this kind have already been brought on the market by the auxiliary industry.

As regards the processing technique, the recycling systems no longer cause any

difficulties. The salt and chrome concentrations are constant after 2-3 cycles. With short floats, a rise of the salt concentrations with increasing numbers of cycles is not to be expected. This occurs only if the float length lies at 100% and more.

In all recycling systems the resulting leather quality is normal. Often a finer, flatter grain is obtained on account of the milder initial tannage in the pickle bath or the pretannage. The resulting leather has a chromium oxide content of 4.8-5.1% if 2.4% of Cr_2O_3 has been applied and of 3.9-4.2% if 1.5% of chromium oxide has been applied. The latter chromium oxide content is nowadays regarded as satisfactory.

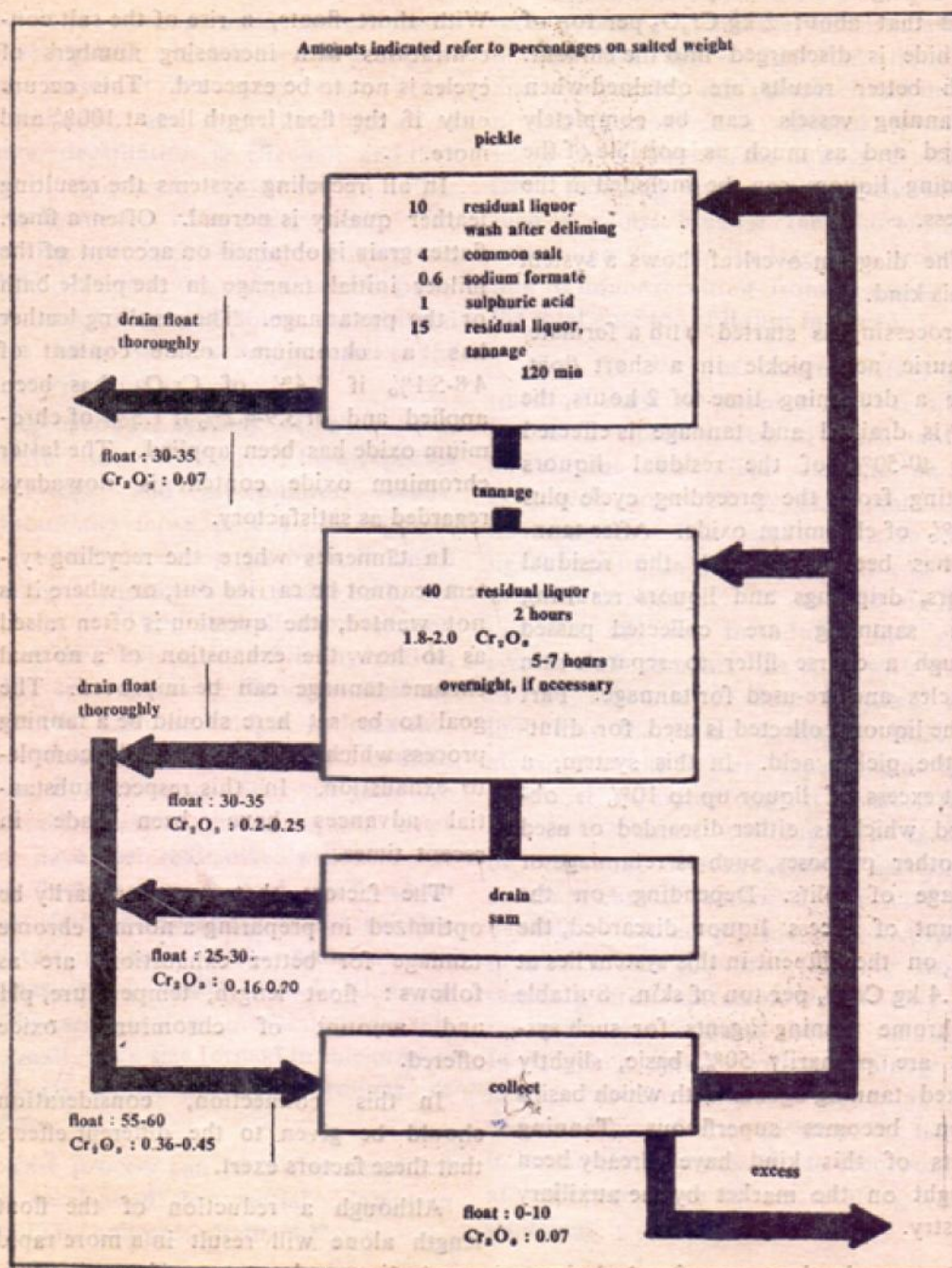
In tanneries where the recycling system cannot be carried out, or where it is not wanted, the question is often raised as to how the exhaustion of a normal chrome tannage can be improved. The goal to be set here should be a tanning process which enables practically complete exhaustion. In this respect, substantial advances have been made in recent times.

The factors that must primarily be optimized in preparing a normal chrome tannage for better exhaustion are as follows: float length, temperature, pH and amount of chromium oxide offered.

In this connection, consideration should be given to the different effects that these factors exert.

Although a reduction of the float length alone will result in a more rapid penetration and more uniform distribution of the chrome tanning agent taken

Recycling System Incorporating Samming Liquors





APRIL 1978

115

up, this measure is not effective enough for itself. Elevated temperatures, however, have a beneficial effect in any case. Both the degree of exhaustion and the proportion of firmly fixed chromium oxide can be increased by 10% when the temperature is raised from normal to 40°C.

The residual liquors will then contain only about half of the amount of chromium oxide found at normal temperature.

A beneficial effect regarding the residual liquors is also obtained by reducing the amount of chromium oxide applied, because the chromium oxide content of the leather and that of the residual liquors do not decrease proportionally with the amount of chromium oxide applied,

The control of the pH during tannage has a very great influence on both the leather quality and the chrome exhaustion. Although increasingly better up to complete chrome exhaustion can be obtained with rising end pH during tannage, the highly basic chrome tanning agents formed during the process do not penetrate deeply enough into the fibre and are unsatisfactorily fixed there.

A proved method of promoting the exhaustion of chrome tanning agents is to apply masking agents,^{38 to 40} which have a cross-linking effect on chrome tanning agents. The principle of their mode of action is shown in the diagram overleaf.

The figure shows the degrees of exhaustion in relation to the amount of chromium oxide and masking additives applied.

Curve 1 shows the conditions of a normal process in a formic acid/sulphuric acid pickle.

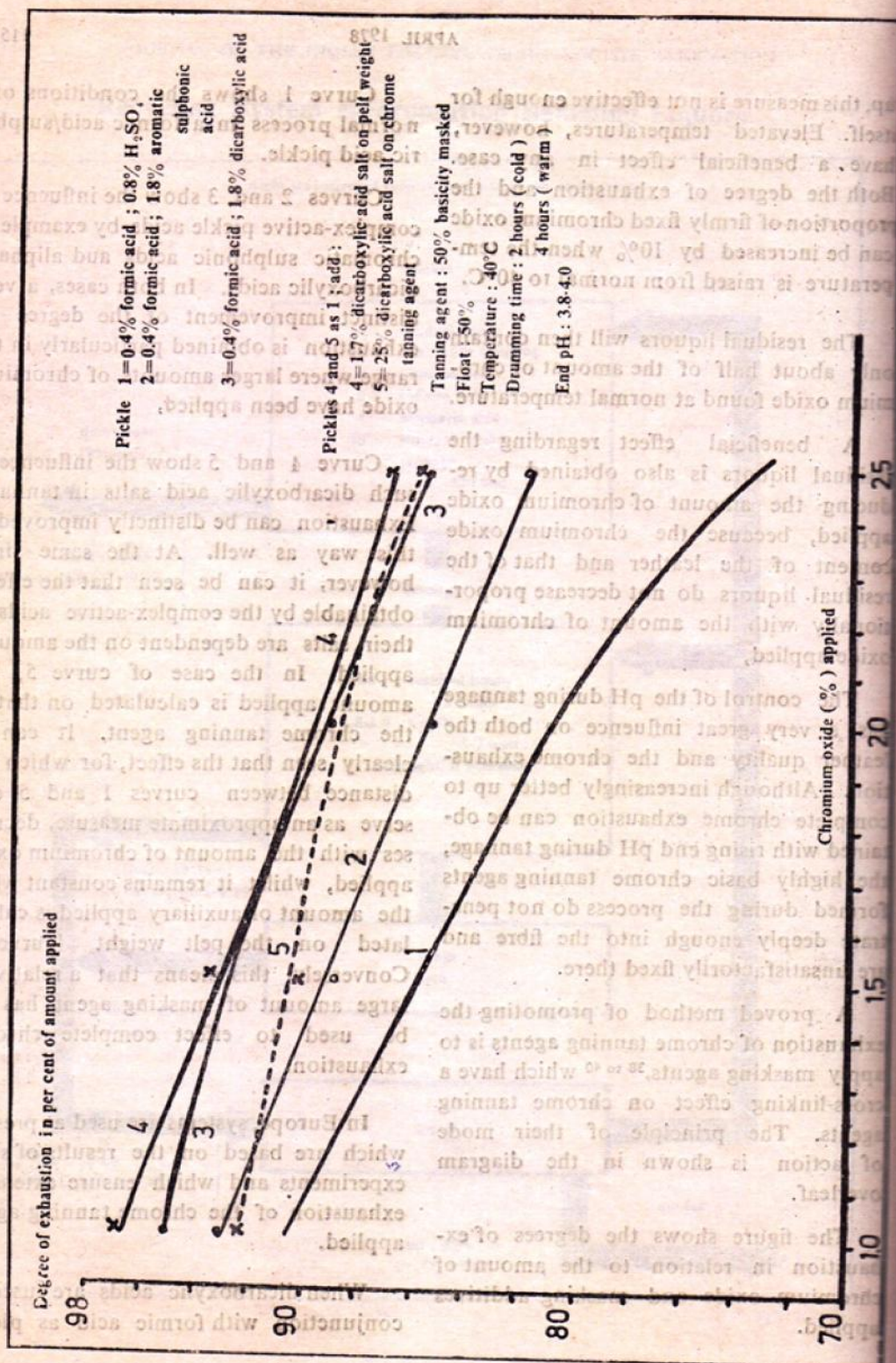
Curves 2 and 3 show the influence of complex-active pickle acids by example of chromatic sulphonic acids and aliphatic dicarboxylic acids. In both cases, a very distinct improvement of the degree of exhaustion is obtained particularly in the range where larger amounts of chromium oxide have been applied,

Curve 4 and 5 show the influence of such dicarboxylic acid salts in tannage. Exhaustion can be distinctly improved in this way as well. At the same time, however, it can be seen that the effects obtainable by the complex-active acids or their salts are dependent on the amounts applied. In the case of curve 5, the amount applied is calculated on that of the chrome tanning agent. It can be clearly seen that this effect, for which the distance between curves 1 and 5 can serve as an approximate measure, decreases with the amount of chromium oxide applied, whilst it remains constant when the amount of auxiliary applied is calculated on the pelt weight (curve 4). Conversely, this means that a relatively large amount of masking agent has to be used to effect complete chrome exhaustion.

In Europe, systems are used at present which are based on the results of such experiments and which ensure extensive exhaustion of the chrome tanning agent applied.

When dicarboxylic acids are used in conjunction with formic acid as pickle

Degrees of Exhaustion in Various Pickle Systems





APRIL 1978

117

acids in short floats or in floatless processes,⁴¹ about 85% of the chrome tanning agent applied is fixed to the leather in a form irremovable by washing. Still higher degrees of exhaustion and chromium compounds are obtained when dicarboxylic and polycarboxylic acids salts are used.

A chrome uptake of 98-99 per cent is achieved. The chrome tanning agent taken up is so firmly fixed that it is no longer extracted by synthetic tanning agents in the retannage.

As already mentioned, the processes described are based on the masking of the chrome tanning agents with auxiliaries that have a cross-linking effect. In these systems, it is therefore important that the enlargement of the tan molecules is brought about so slowly that their diffusion into the cross-section of the skin is not substantially obstructed. In processing unsplit hides, the masking agent is added in several portions and not until penetration of the whole cross-section is attained.

It may be regarded as a certain drawback, however, that these processing methods have to be suited to the different conditions in the individual tanneries and that the requirements with regard to amounts of chemicals applied, temperature and pH control have to be strictly adhered to, if leather of good quality and a very high degree of exhaustion are to be obtained.

In systems where replacement of part of the chrome tanning agent by other tanning materials is recommended, attempts are made to reduce the chromium oxide content of the residual

liquors not by optimizing the degree of exhaustion but by extensive reduction of the amount of chrome applied and by processing in the normal way. In these methods, only so much chrome is added as required to produce the necessary chrome leather character, whilst the filling effect is produced with other tanning materials. For this purpose, mainly glutaraldehyde has been used lately⁴². It has been found, however, that leathers containing little chrome and large amounts of glutaraldehyde are too spongy and that their cationic charge is too low. Retannage and fatliquoring have to be carried out accordingly to eliminate these deficiencies. Better results are obtained when small amounts of aluminium tanning agent are incorporated. The resulting leather has a largely chrome tanned character and can be aftertreated accordingly⁴³. Moreover, its pale colour allows production of leather with good dyeing properties and an almost white leather with good fastness to perspiration.

Effluent Clarification

When they are used in a suitable combination with one another, the liming and chrome tanning processes described may help to reduce the amount of effluents and that of the pollutants substantially. The question as to the specific processes to be applied, of course, depends on local conditions, the technical equipment of the leather factory concerned and the type of leather to be produced. By modifying the processes alone, it is not yet possible today to obtain effluents that can be discharged untreated directly into the drain. In

Chrome tannage incorporating dicarboxylic acid salts

Cattle pelts split to about 3 mm, thoroughly delimed.

Percentages on the pelt weight

Pickle :	40%	water
	5%	common salt
	0.6%	sulphuric acid, diluted 1 : 10
	0.4%	formic acid, diluted 1 : 5

Drum for 60-90 minutes,

pH bath : 3.4-3.6.

Tannage	+	6%	chrome tanning agent, 33% basicity (= 1.5% chromium oxide)
---------	---	----	---

Drum for 60-120 minutes,

bath pH 3-3.3,

penetrated throughout cross-section,

	+	0.5-0.8%	sodium bicarbonate
--	---	----------	--------------------

Drum for 30 minutes,

	+	1.5-2%	dicarboxylic acid salt
--	---	--------	------------------------

pH immediately after addition

max. 4.5 ; after 60 minutes pH 4.1-4.3.

Drum for 2-4 hours at 40°C,

end pH 4.1.

Chromium oxide content of residual liquor : 0.3-0.5 g/l

Chromium oxide content of leather : 3.5-3.8%

Main processing steps :

(1) Thorough deliming

(2) Cross-section must be uniformly penetrated by chrome and acid before addition of dicarboxylic acid salts

(3) Addition of dicarboxylic acid salts at temperatures below 30°C.

most cases, efforts should be made to connect the drain to a municipal clarification plant where somewhat higher concentrations of pollutants are permissible. If, for example, a sulphide-free liming system is used in combination with a chrome tanning process that gives a high degree of exhaustion, it is only necessary to mix the acid and alkaline

effluents and free them from coarse contaminations before they are run into a municipal clarification plant.

It is seldom found today that tanneries build their own clarification plant as an alternative solution, because this is worthwhile only to large tanneries and requires considerable space. Tannery effluents can be clarified chemically or



biologically according to the active sludge process. Compared to biological clarification, chemical clarification has the advantage that it requires less space and is more readily adaptable to load variations, but it involves higher costs on account of the use of flue gas, iron salts and aluminium salts as precipitants for lime, sulphides and proteins. Trials in practice have shown that biological clarification of tannery effluents is feasible, because the decomposing bacteria adapt themselves to the effluent medium, but compared to municipal clarification plants the dwell time is longer⁴⁴.

Before they are mixed together, the acid effluents from the chrome tannage and the alkaline lime and wash liquors have to be destroyed chemically by iron sulphide or by catalytical oxidation using manganese-II-salts as catalyst in an oxidation ditch^{45, 46}. The sludges resulting from the purification process contain only about 5% of solids and have to be hydroextracted by filter presses or centrifuged before they can be disposed of. Efforts are also often made to incinerate them to reduce the waste volume drastically. It is obvious that the disposal of these sludges involves considerable costs. For this reason future developments will include processes which allow direct recovery of proteins from residual lime liquors to reduce the amount of resulting clarification sludge substantially and the use of processed sludge as fertilizer, provided that its chrome content lies below the harmful limits. The chromium-III-content of sludges used as fertilizer is now regarded not as critical as it was some years ago, because in the meantime

fertilizer experiments have shown^{47, 48} that even acid soils will tolerate up to 50 mg Cr/kg soil without reduction of the crops. Nevertheless, the question of the general use of these products has not been clarified yet with the official authorities.

Solid Wastes

Similar disposal problems are caused by the solid tannery wastes, such as hide cuttings, glue stock, chrome shavings and buffing dust. Hide shavings and glue stock are processed into glues, and in contrast to splits and unlined hide wastes, however, glue stock has a low yield and the load on the effluent is relatively high. Disposal by dumping or incineration calls for hydroextraction beforehand and additional material. For the production of fertilizers, the solid wastes have to be degreased, in order to counteract greasiness of the soil. The most beneficial utilization method that offers itself today is to process the material by acid thermal hydrolysis without resulting waste water into meat flour, fat, gelatine and polypeptides⁴⁹. Chrome shavings can be used for the same purpose after they have been dechromed or they can be incorporated in the production of leather-fibre board.

The waste materials can also be utilized in the same way as the proteins recovered from the residual lime liquors, viz. as feed additives, fertilizers or after further processing as detergents or for cosmetic purposes.

It can be seen that the waste products of the leather industry can be utilized for a great variety of purposes, but that advantage is taken of the utilization to

only a limited extent. The leather industry itself is not in a position to push such utilization processes, as they require relatively high equipment costs and facilities that by far exceed the capacity of individual tanneries. These questions can, therefore, be solved only centrally.

Summarizing the facts, we can state that up to now it has been possible to reduce the effluent problems extensively without affecting the leather quality and rationalization measures or necessitating modification of proven technologies. With the aid of the various optimized processes, systems of recovery or recycling residual liquors and effluent clarification methods, it will be possible to find a solution suited to the local and technological conditions of the individual leather factories. This also means, however, that a generally valid solution of these problems does not exist. The change-over to processes that meet environmental protection requirements, therefore, involves time and considerable expenses for experiments. For this reason, it is necessary to start dealing with these problems as early as possible.

The final solution of the effluent problems by effluentless processes is not in sight yet, but various institutes are concerned with these questions. In principle, highly concentrated solutions are used in which each individual hide is thoroughly soaked. The appliances used are roller systems^{50,51} operating on the padder principle and special apparatuses specially developed for liming^{52,53}. The developments are still in the experimental stage and no practical assessment can be given yet. It is, however, a welcome attempt to look for and try out new technologies.

References

1. A. Zissel, *Leder-und Hautemarkt* 28, G+P, 102 (1975)
2. J. Bohm und P. Smykal, *Kozarstvi* 20, 295 (1970)
3. B. Vulliermet, *Technicuir* 6, 156 (1972)
4. J. B. Sladen, *J. Soc. Leather Techn. and Chem.* 61, 17 (1977)
5. M. A. Haffner, B. M. Haines *J. SLTC* 59, 114 (1975)
6. W. J. Hopkins, D. G. Bailey, *JALCA* 70, 248 (1975)
7. D. G. Bailey, W. J. Hopkins, H. H. Taylor, E. M. Filachione und R. G. Koeppen, *JALCA* 71, 400 (1976)
8. W. Fendrup, *JSLTC* 58, 9 (1974)
9. P. J. van Vlimmeren, R. C. Koopmann, H. H. A. Peickmans, *Das Leder* 25, 61 (1974)
10. R. Monsheimer, *Kongreßbericht JULTCS*, Wien 1973, S. 461
11. G. Mayer, *The Leather Manufacturer* 1975, 14
12. E. Pfeleiderer, *Leder-und Hautemarkt* 24, 275-278 (1977)
13. F. Knaflitz, *Das Leder* 23, 157 (1972)
14. C. A. Money and U. Adminis, *JSLTC* 58, 35 (1974)
15. A. Folachier, *Technicuir* 9, 66 (1975)
16. B. Schubert and W. Pauckner, *Leder-und Hautemarkt* 30, G+P 218 (1977)
17. A. Blazej, A. Galatik, L. Minarik, Vortrag 12. Kongreß IULTCS, Prag, 1971
18. J. E. Cooper, N. T. Happich, E. H. Bitcover, E. F. Mellan, F. M. Filachione, *JALCA* 70, 18 (1975)
19. G. Franke, *Leder-und Hautemarkt* 28, G+P 129 (1976)
20. A. Simonciri, L. Da Pezzo, G. de Simone, *Cuo Pelli Materio Concianti*, 311, (1971)
21. P. J. van Vlimmeren, *Leder-und Hautemarkt* G+P 26 (1976)
22. D. A. Bailey, J. J. Dassel, K. S. Robinson, *J. Soc. Leather Techn. Chem.* 54, 91 (1970)
23. G. Konigsfeld, *Das Leder* 24, 1 (1973)



ILTA
Since 1950

APRIL 1978		121
24. J. Gauglhofer, <i>Das Leder</i> 26 101 (1975)	40. B. Magerkurth, <i>Das Leder</i> 28, 155 (1977)	
25. E. W. Alther, <i>Das Leder</i> 26, 175 (1975)	41. A. Zissel, H. Lidle und S. Horig, <i>Das Leder</i> 23, 174 (1972)	
26. H. Herfeld, <i>Das Leder</i> 25, 134 (1974)	42. O. E. Gatewood, <i>Leather Manufacturer</i> 41 12 (1974)	
27. J. Balas, <i>Technicuir</i> 10 154 (1974)	43. A. Zissel, <i>Rev. Techn. Ind. Cuir</i> 67, 114 (1975)	
28. O. Harenberg, E. Heidemann, S. A. Allam, <i>Das Leder</i> 25, 219 (1974)	44. W. v. d. Emde und W. Stelzer, <i>Das Leder</i> 26, 169 (1976)	
29. J. W. Robinson, J. H. Heward, <i>The Leather Manufacturer</i> 1976, 12	45. P. J. van Vlimmeren, <i>Das Leder</i> 23, 201 (1972)	
30. M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 57, 33 (1973)	46. J. Gauglhofer, <i>Leder-und Hautemarkt</i> 24, 31 1G+P 84 (1977)	
31. M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 57, 173 (1973)	47. F. W. Alther, <i>Das Leder</i> 26, 175 (1975)	
32. J. E. Burns, D. E. Colquitt, M. H. Davis, J. G. Scroggie, <i>JSLTC</i> 60, 106 (1976)	48. Moulinier und Mazoyer, <i>Technicuir</i> 3. 75, (1969)	
33. J. R. Barlow, <i>JLSTC</i> 61, 29 (1977)	49. F. Naumann, <i>Leder und Hautemarkt</i> 29, G+P 114 (1977)	
34. H. G. France, <i>JALCA</i> 70, 206 (1975)	50. W. Kess'ler, <i>Das Leder</i> 25, 124 (1974)	
35. A. Folachier, U. S. Auroousseau, <i>Technicuir</i> 9, 76 (1975)	51. H. Herfeld und K. Schmidt, <i>Leder-und Hautemarkt</i> 26, 50, 326 (1974)	
36. R. Pierce, <i>JALCA</i> 71, 161 (1976)	52. E. Heidemann, O. Harenberg, J. Cosp, <i>JALCA</i> 68 520 (1973)	
37. B. Schubert und H. Herfeld, <i>Das Leder</i> 26, 21 (1975)	53. J. Sogala, R. Dorstewitz, E. Heidemann, <i>Das Leder</i> 28, 166 (1977)	
38. J. Gauglhofer, <i>Revue Technique des Industries du Cuir</i> 68, 412 (1976)		
39. K. Backer, H. Heinze, W. Luck und H. Spahrkas, <i>Das Leder</i> 28, 57 (1977)		

Read and Let Read :-

JILTA

INDIAN LEATHER PRODUCTS ASSOCIATION

The Indian Leather Products Association (ILPA), established in 1987, is a premiere representative body of manufacturer-exporters of superior quality leather and leather products with head office in Kolkata and a regional office in Chennai.

IMPORTANT ACTIVITIES OF ILPA :

- Brings together manufacturer & merchant exporters on a common platform.
- Stimulates growth & development of the industry as a whole.
- Promotes export of leather & leather products.
- Develops & maintains symbiotic liaison with international trade bodies & Chambers of Commerce.
- Organises trade delegations to international fairs & seminars.
- Organises various Seminars/workshops both the benefit of its members and industry.
- Promotes International Fairs and RBSMs like IILF Kolkata, ILPA Buyer Seller Summit.
- Organises the ILPA SHOW : Leather on the Ramp , one of the most prestigious and sought after Fashion event in Eastern India.
- Closely involved in setting up the Calcutta Leather Complex(CLC).
- Runs and manages the Freya Design Studio : a CLE award winning Design Studio both for leather goods and footwear.
- Runs and manages the ILPA INFRASTRUCTURE DEVELOPMENT FOUNDATION (IIDF) – a state of the art Common Facility Centre.
- Imparts Skill Development Training through ILPA Technical School.



Common Facility Center



Design Studio



CAD CAM Center



ILPA Technical School



Indian Leather Products Association
Plot no 1647, Zone 9, Calcutta Leather Complex,
Karaidanga, West Bengal, Pin Code: 743502
Mobile: +91 7605855567 / +91 9007881474
E-Mail : mail@ilpaindia.org
Web: www.ilpaindia.org





ILTA
Since 1950

**Come and visit
the world's best
leather goods
sourcing platform
in India**

**ILPA
BSS**
BUYER SELLER SUMMIT
KOLKATA

28th & 29th January 2020
in a centrally located
world class luxury hotel – ITC Sonar.

Reasons to visit:

- 42 major leather goods companies displaying their latest & best quality International collections under one roof!
- This part of India is the world's most competitively priced leather goods production hub!
- Golden chance to source premium best priced leather goods at one go!

Special Offers for Visitors:

- Facility to stay in the same hotel at discounted rate if confirmed before 30th September 2019
- Pick up & Drop facility from Airport
- Complimentary Language interpretation service
- Complimentary lunch & refreshments
- Option for factory visit of participant companies

Products on Display:

Ladies Hand Bags, & Purses, Men's Bag & Wallets, Belts, Hand Gloves (Fashion & Industrial), Garments, Luggage & Hold alls, Portfolio, laptop bags, iPod Covers, small leather goods & Accessories



BSS
**ILPA BUYER SELLER SUMMIT
KOLKATA**
28th & 29th January 2020



A highly focused B2B event
featuring leather goods
that brings together international
Buyers & Sellers.

Indian Leather Products Association
www.ilpaIndia.org

BSS **Indian Leather Products Association**
BUYER SELLER SUMMIT 2020, KOLKATA

GDP growth seen slipping under 5% in Sep quarter; may be in 4.2-4.7% range



A look at six indicators shows all of them have collapsed from positive growth in April to contraction in Sept

Finance minister Nirmala Sitharaman told the Rajya Sabha on Wednesday the country was not in recession yet, and won't ever be.

A set of data arriving in a day may qualify the statement to some extent. The Ministry of Statistics and Programme Implementation (MoSPI) will release the data on gross domestic product (GDP) for the July to September quarter of the fiscal year 2019-20 (Q2FY20) on Friday.

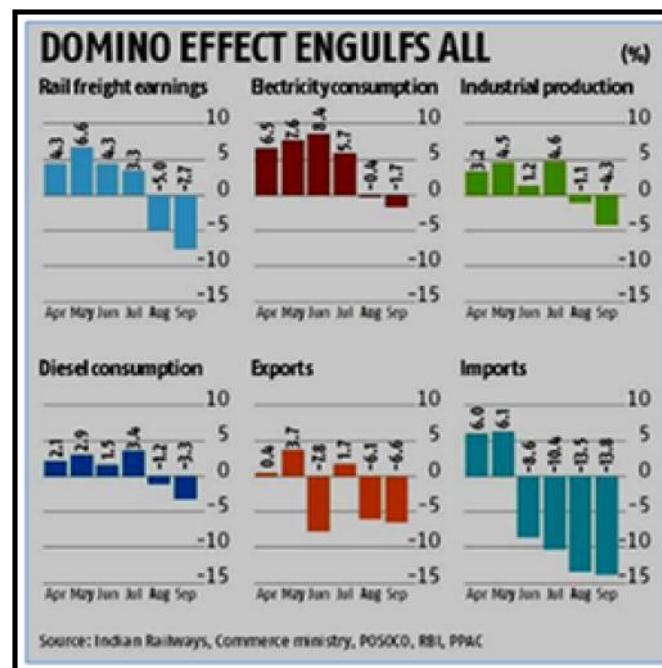
Raising slowdown concerns, economists whom Business Standard earlier spoke to have concurred on one thing: The growth in GDP in Q2 would be between 4.2 and 4.7 per cent, slower than the 5 per cent achieved in Q1.

The actual data could be more serious as the lowest-ever quarterly growth clocked since 2012-13 (when the new GDP series began) was 4.3 per cent, in the March quarter of FY13, when India was battling high inflation and political turmoil, in addition to pressures from the global economy.

Representative data for the July-September quarter proves their point to a great extent. A look at six indicators — imports, exports, rail freight earnings, electricity and diesel consumption, and overall industrial production — shows that all of them have collapsed from positive growth in April to contraction in September.

These indicators are a collage of manufacturing and services sector indicators in the country, encompassing a substantial part of the economy.

While the growth in Q1 was 5 per cent with positive leading indicators, Q2 has been characterized by all indicators in red. Port traffic too has stagnated, growing 0.4 per cent in the April–October period, entirely brought down by a severe contraction in coal imports.



Consumption of fast-moving consumer goods, such as shampoo sachets and coconut oil, has weakened to 2 per cent in Q2FY20, with the stress concentrated in north Indian states.

Shubhada Rao, chief economist at YES Bank, told Business Standard that except services propelled by the government's budgetary funding, all the sectors of the economy are a drag on growth in the September quarter.

But she also said that the Indian economy is going through a transition phase, and some near-term impact was expected.

Meanwhile, Sitharaman reiterated in the Rajya Sabha that the efforts to recapitalize public sector banks have paid off, and it is evident in the good liquidity available to finance needy micro, small and medium enterprises.

However, bank credit growth, which had reached 12.2 per cent at the end of FY19, has now fallen back to 8.2 per cent at the end of September.

The GDP growth numbers, due on Friday, would also show how investments in the economy have fared this quarter. Data

from the Centre for Monitoring Indian Economy has shown that India has seen new investments worth only Rs 1.2 trillion in April-September, lowest in absolute terms in the past seven years.

While observers maintain that the slowdown is mainly cyclical in nature, they admit that there are structural reasons too.

(Business Standard – 28/11/2019)

EXPORTS DIP NEARLY 7 PC IN SEPTEMBER



Merchandise exports from the country declined in September for the third time in the current financial year, while imports dropped for the fourth consecutive month.

Data released by the Commerce Ministry showed India's merchandise exports declined 6.57 per cent to \$26.03 billion

in September 2019 from \$27.87 billion in September 2018 while imports in the month dropped 13.85 per cent to \$36.89 billion from \$42.82 billion in September 2018.

The latest figures signal rising protectionism and continuing trade tensions between the US and China along with the spectre of a global slowdown are impacting India's trade prospects as well.

Despite the overall sluggish export performance, sectors such as electronic goods, spices, minerals and ores, ceramic products, drug and pharmaceuticals recorded positive growth in September.

Shipments of gems and jewellery, engineering goods, petroleum products, handloom and leather goods, cereals, meat and dairy products recorded negative growth, according to the data.

"Declining trend in exports does not augur well for the overall growth of the economy. Escalating trade tensions that have unsettled the slowing world economy have also led WTO to sharply cut their trade forecasts for both 2019 and 2020 to 1.2 and 2.7 respectively. The downside risks still remain high in the global economy and the projection for 2020 depends on a return to more normal trade relations," said FIEO President Sharad Kumar Saraf.

The problem for India's exports has assumed serious proportions as only eight out of 30 major product groups showed positive growth in September 2019. All major sectors including almost all labour-intensive sector of exports besides petroleum were in the negative, showing such a decelerating trend.

Read and Let Read :-

JILTA

-: JILTA :-

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