

Tanning Training and Service Centre

Dedicated to the Tanning Community

Government College of Engineering and Leather Technology





Brief Project Origin

It is an prestigious Indo-Italian Project launched at
the initiative of Hon'ble Chief Minister,
West Bengal, India

Objective of the project

- *“A Memorandum of Understanding (MoU) was signed on February 12, 2007 between Italian Trade Commission (ICE), National Association of Italian Manufacturers of Footwear, Leather Goods and Tanning Machinery (ASSOMAC), Council of Leather Exports (sponsored by the Ministry of Commerce & Industries, Govt. of India), Calcutta Leather Complex Tanners’ Association (CLCTA) and Government of West Bengal for setting up of Tanning Training and Service Centre (TTS&C) at Calcutta Leather Complex (CLC) in collaboration with and Technical Assistance of ICE & ASSOMAC.*

**Think
long-term**

What is Technology Foresight?

Act now

or miss the bus for ever

EXECUTION OF THE PROJECT

**Identification of
strategic areas
and emergent
technologies**

**Promote integration
of the Technology with
Innovation actors**

**Academic benefits and
industrial well-being**

- **Communication**
- **Concentration on the long term**
- **Coordination of R&D efforts**
- **Consensus**
- **Committment**



PHILOSOPHY OF COLLABORATION

- ✓ The future of the industry is constructed as a result of acting or not acting in the present
- ✓ From all of explored possibilities only one will occur
- ✓ We can not feel shy of adaptation.

**Joint Systematic efforts
to “outlook” the future
and develop a shared
vision of tomorrow’s
society needs**



***Be able to select a desirable
future and contribute to its
creation***

Realization of the Project

As a step towards realizing the MoU, the State Government has provided an area of 0.68 Acre of land at CLC and the entire cost of land has been borne by the State Government. At present the TTS&LC is run from the Government College of Engineering and Leather Technology, under the administrative control of the Higher Education Department of this Government. Arrangement will continue till the buildings and other Infrastructure comes up in the CLC

Modus Operandi

- *Vide addendum to the MoU, signed on 05.02.2009 Government College of Engineering and Leather Technology was chosen as an implementing agency in India and Politecnico Internazionale Per Lo Sviluppo Industriale Ed Economico, Italy (PISIE) as implementing agency of Italy.*
- *Altogether eight modular train-the-trainers courses have been held by the Italian experts both at the college and in Italy.*
- *Four faculty members and six Leather Technologists' sponsored by CLCTA has undergone training.*

Modus Operandi

- *Italian Trade Commission has provided fund for importing latest State-of-Art Testing equipments (both Physical & Chemical) of Leather Analyses.*
- *Two ultra modern laboratories have been set up.*
- *The Italian Trade Commission as per the terms of agreement has arranged fund for procurement of latest testing equipments and train the trainers, while the state Government will bear the cost of building and other Infrastructural development at CLC, Bantala where TIS&C will permanently be set up.*



Constructional Outline

- *Area of the land given: 0.68 Acre (approx 25,000 ft²).*
- *Building plan made by the Chief Government Architect, West Bengal comprises centre with plinth area 16,000 ft² per floor. Means 64,000 ft² main building plus other servicing areas covering the requirements as given under.*



Detailed Constructional Outline

Ground Floor:

- *Tannery of carpet area 14,500 ft² (approx.).*
- *Water reservoir,*
- *Pump House,*
- *Gas cylinder storage chamber.*
- *Drainage,*
- *Transformer room & Gen set,*
- *Gate rooms for watch men.*
- *Boundary wall of matching design.*
- *Wash rooms/Toilets*

Detailed Constructional Outline

First Floor:

- *Two Physical testing Labs (1P & 2P). Lay out given in Annex-II.*
- *Two Chemical testing labs (1C & 2C). Lay out given in Annex-III.*
- *One Environmental Engg Lab of carpet area 80 m².*
- *One (A/c) Conference Room*
- *Cafeteria.*
- *Small Library and reading room of 350 m².*
- *One Computer lab (A/c) capacity 40 computers along with a separate server room (A/c).*
- *Wash rooms/Toilets*



Detailed Constructional Outline

Second Floor:

- *Chamber of the administrator, antechamber, and small meeting room of 15 seats (A/c) with attached bath (preferably the chamber should clearly face the front gates with wide glass panels to make the Gates clearly visible).*
- *Waiting room for the visitors*
- *Office of the Unit*
- *Cash counter & embedded safety vault*
- *Three class rooms of capacity 40 each.*
- *One A/c executive class rooms for refreshers courses for Industrial managers/supervisors.*
- *One gallery to display leather/leather goods etc.*
- *Sign board at appropriate place*
- *Wash rooms/Toilets*

Detailed Constructional Outline

Third floor:

- *Auditorium cum multi-purpose room (gallery type).*

Other facilities:

- *Wash rooms/Toilets*
- *5. Lift well at a suitable position*
- *6. Fire hydrant.*
- *7. Fire extinguishers to combat diverse challenges like, Chemical fire, electrical fire, Cellulose fire etc.*
- *8. Complete sanitation-plumbing with auto janitors at each wash rooms/toilets.*
- *9. Roof treatments.*

A decorative graphic of a dark green leafy branch with several leaves, extending from the top left corner towards the center of the slide.

Project Deliverables

To the Learner Targets:

- *Improved learning of UG/PG/PhD students, research & consultancy using pilot tannery.*
- *Improved awareness & training on key environmental issues & eco-friendly leather processing.*
- *Improved learning of State-of-Art testing procedure (Physical, Chemical & Environmental) by the students/researchers.*

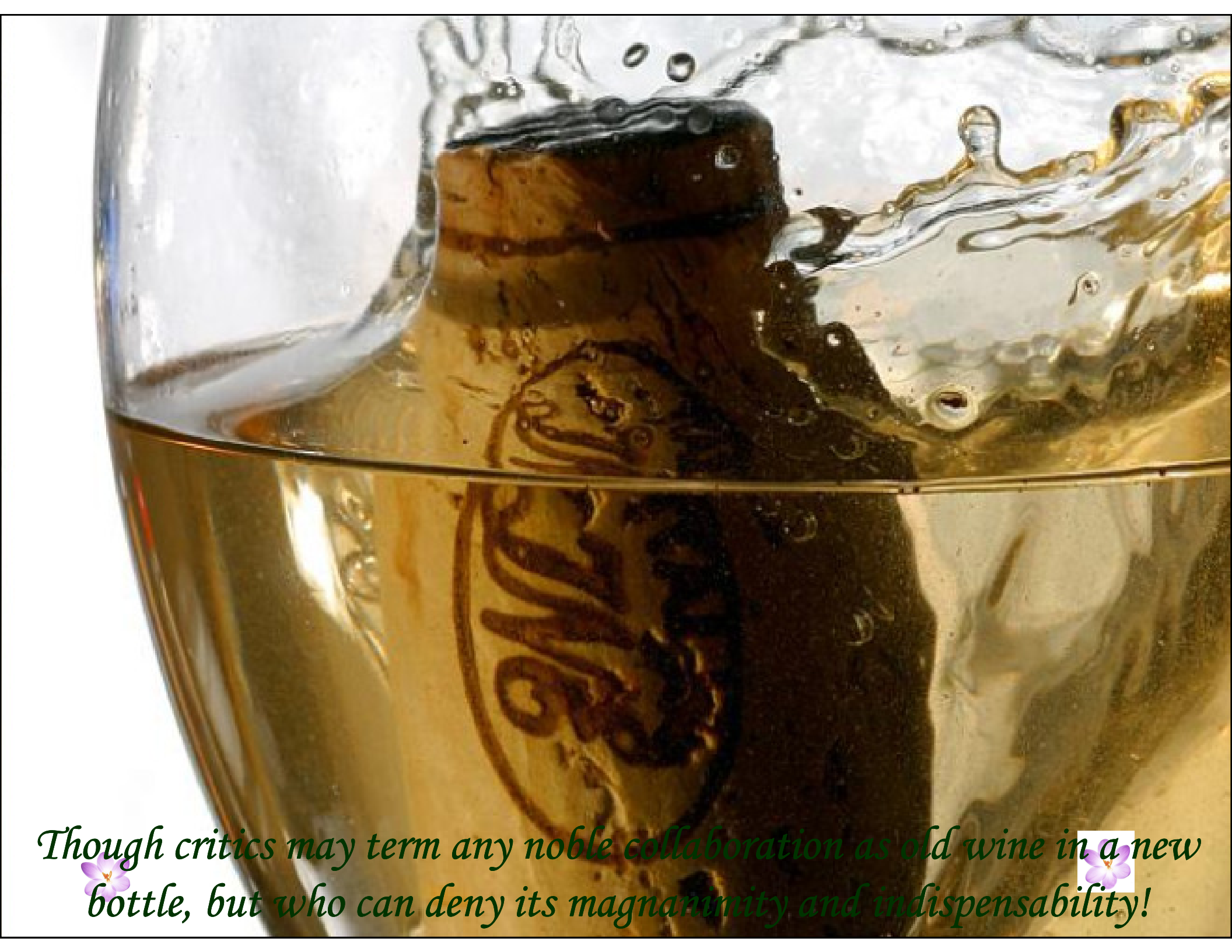
Project Deliverables

To the Leather Industries:

- *Replication of Seven modular courses to the practicing tanners employed at CLC.*
- *Testing & Consultancy services to earn Internal Revenue.*
- *Training Need Analysis to assess skill gap and plan its mitigation.*
- *Focused short term training courses to the Shop floor managers, supervisors & workers working at CLC.*
- *Industry sponsored project work.*
- *The similar objectives may be realized by the IT & Computer Science and Engineering departments of this college focusing at the IT-hub within CLC.*

Such International noble collaboration will unleash
a new horizon to our industry





Though critics may term any noble collaboration as old wine in a new bottle, but who can deny its magnanimity and indispensability!

Strategic Goals

**PROVIDE
INSTRUMENTS
FOR THE INDUSTRIAL
SUSTAINABLE
DEVELOPMENT**

- For the consultative benefits
- For the construction of the Laboratory for world class analysis in CLC

**MOTIVATE/ORGANIZE
THE PARTICIPATION OF
GOVERNMENT,
PRODUCTIVE SECTOR,
AND INSTITUTE**

- Increase in the coordination among the Industry and Institute
- More speed, responsiveness, and technological innovation rate in the industry

PHYSICAL TESTING LABORATORY

Facilities available:

1. Colourfastness Tester
2. Electronic Dynamometer
3. Fogging Tester
4. Bally Flexometer
5. Finish Rub Fastness Tester
6. Manual Shrinkage Tester
7. Steam Absorption Tester

PHYSICAL TESTING LABORATORY

Facilities available:

- 8. Abrasive Resistance for bottom Leather*
- 9. Digital Thickness Measuring Device*
- 10. Martindale Abraser*
- 11. Upper Leather Waterproofness Tester*
- 12. Ultra Low Temperature Refrigerator for checking Cold Crack Resistance*
- 13. Incubator for conditioning set up*



ANALYTICAL TESTING LABORATORY

Facilities available:

SOLVENT EXTRACTOR

This Instrument can be used for :

- i) extraction of oils from leather*
- ii) determination of total fat in meat , fish, cocoa, and derived products*
- iii) determination of total fat content in whole egg*
- iv) determination of total fat content in oily seeds and nut*
- v) extraction of oil and grease from wastewater*
- vi) extraction of oil and grease from sludge*
- vii) extraction of petroleum source in rocks*
- viii) extraction of plasticizer mixtures from vinyl chloride plastics*
- ix) extraction of rosin from paper and paperboard*

ANALYTICAL TESTING LABORATORY

Facilities available:

PORTABLE pH METER:-

This is a mobile pH meter. It may be used to check the pH of any liquid. Any decimal range of pH can be measured by this portable pH meter. We can check the pH of soak-liquor, lime liquor etc.

B.O.D-CLASSIC ANALYSERS 6 POSITION:-

In this system there are six glass bottle in which the sample is taken for BOD measurement. One bottle of them content distilled water for reference.

HEATING DRY BLOCK FOR C.O.D.MEASUREMENT:-

It is generally used to measure the C.O.D. content of a liquid sample.

ANALYTICAL TESTING LABORATORY

Facilities available:

CHEMICAL REACTOR:-

It may be used for any chemical reactions e.g. synthesis of fatliquor, liquid syntan, casein binder, wax etc

TURBIDIMETER-AL250T-IR:-

This instrument is used to measure the turbidity of fatliquor, liquid system and waste water also.

GC-MS.SYSTEM:-

It is a very important instrument for determination of organic and inorganic compounds present in the mixture ,like chrome III, chrome VI, preservative, azo-benzene content in leather and waste liquor.



An aerial photograph of a coastal landscape. In the foreground, a wide, white sand beach curves along the edge of a clear, turquoise sea. To the right, a river with a complex, braided channel system flows through a lush green valley. The background features rolling green hills and mountains under a clear blue sky.

INTRODUCTION OF VARIOUS COURSES

- *Introduction of Distant Education Courses for the supervisors after their working hours.*
- *Various professional courses on based on several modules can be introduced for the aspiring supervisors.*
- *Faculty exchange programme with Italy can be initiated to get in touch with the recent developments and make the industry aware of it.*

LONG TERM IMPACT OF THE PROJECT: 5Cs

- **COMMUNICATION OF KNOWLEDGE**
- **CONCENTRATION ON LONGER TERM**
- **CO-ORDINATION (ACADEMIA-INDUSTRY)**
- **CONSCIOUSNESS OF QUALITY**
- **COMMITMENT TOWARDS STATE**

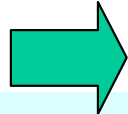
Sense of Participation: as every one is stakeholder of the project

Short Goal: Sense of commitment

Long Goal: Industry – Academia synergism

EXECUTION OF THE PROJECT

TRAINING OF TRAINERS

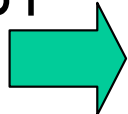


Step 1: Identification of Trainers from Institute and Industry

Step 2: Training of trainers for four modules by experts in India

Step 3: Training of trainers for four modules by experts in Italy

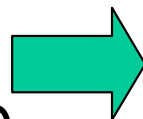
TRAINING BY TRAINERS



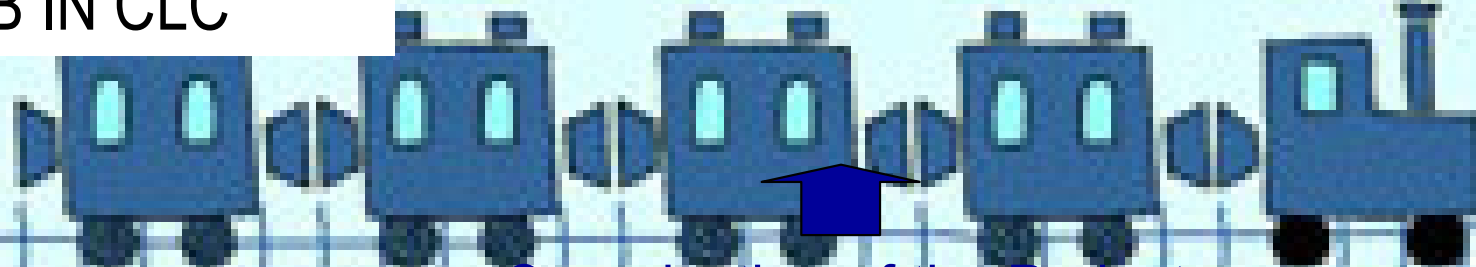
Step 1: Trainers will train the technocrats and supervisors from industry

Step 2: Trainers will facilitate analysis and solution of problems for CLC

SETTING UP OF LAB IN CLC



Setting up of a modern laboratory abiding E.U. norms in CLC to facilitate testing facilities



Organization of the Project

**We are highly thankful to Italian Trade Commission,
Assomac, Govt. of West Bengal and especially to Sri S.S.
Kumar for rendering our state and the institute such a
international magnanimous collaborative project**



GCELT thank every one
for sharing their sentiment for the cause of
the industry

