Leather Industry has been one of the traditional industries operating at present. The hides and skins of animals are the source of leather and preserving hides and tanning them into leather has become an important industry. Leather-making is now a scientifically based industry, but still retains some of the charm and mystery of the original craft. Animal skin that has been processed to retain its flexibility, toughness, and waterproof nature is known as leather. "Leather tanning" is a general term for the numerous processing steps involved in converting animal hides or skins into finished leather.

Tanning is the final process in turning hides and skins into leather. Tanning involves a complex combination of mechanical and chemical processes. The heart of the process is the tanning operation itself in which organic or inorganic materials become chemically bound to the protein structure of the hide and preserve it from deterioration. The main chemical processes carried out by the tanner are the unhairing, liming, tanning, neutralizing and dyeing.

This indispensable handbook provides a detailed insight into the leather industry, leather processing and tanning technology with manufacturing of different forms of leather products. The book contains the manufacturing process of different forms and type of leather products like box and willow sides, glazed kid, sole leather, lace leather, belting and bag leather, chamois leather, upholstery leather, antique leather, light and fancy leather, etc. to name a few. This book will be very helpful to its readers, upcoming entrepreneurs, scientists, existing industries, technical institutions, technocrats, etc.

Contents

1. FROM CRAFT TO INDUSTRY
2. WHAT LEATHER IS AND HOW IT IS MADE
   Early Methods of Preparing Leather
   The Sources of Hides and Skins
   The Nature of Hides and Skins
   Preparation for Tanning
   Tanning
   Dressing and Finishing
   Colouring
3. THE BOOMING LEATHER INDUSTRY
   Market
Leather Footwear Industry
4. LEATHER: PUTTING BEST FOOT FORWARD
Major Importing Countries of Indian Leather and
Leather Products
5. INDIAN LEATHER INDUSTRY SHINING BRIGHT
Tanning Industry
Leather Product Industries
Role of Training Institutions
6. CLARI PROCESSOR
Innovation through Engineering
Conventional Wooden Drum
Practical Wise Limitation
CLaRI Processor
7. HIDES AND SKINS
Kips
Slaughtered and Fallen (Dead) Hides
Flaying
8. CURING AND PRESERVATION OF HIDES AND SKINS
Wet Salting
Dry salting or Plaster Curing
Curing by Drying
Common Defects of Hides
Common Defects of Goat Skins
Defects of Sheep Skins
9. OPERATIONS PRELIMINARY TO TANNING
Soaking
Liming
Deliming
Pickling
Tanning
10. FINISHING OF LEATHER
Finishing of Vegetable tanned Leather
Finishing of Chrome Leather
11. MANUFACTURE OF BOX AND WILLOW SIDES BY THE SINGLE BATH PROCESS OF CHROME
TANNING
Raw Hides
Green Fleshing
Soaking
Liming
Bating
Pickling
Tanning
A Combined Double and Single Bath Tannage Using Farina Liquor
Shaving
Sorting for Dyeing
Neutralization
Dyeing
Method of Making Different Types of Fat liquor
Striking Out
Setting
Drying
Damping in Sawdust
Staking
Nailing on Board
Pigmenting, Seasoning and Glazing
Boarding or Graining
Manufacture of a Cheap Class of Box and Willow Sides Known as China Chrome in Calcutta
Manufacture of Embossed Chrome Leather for Ammunition Boot Uppers
Chrome Retanned Leather for Army Boots

12. MANUFACTURE OF GLAZED KID
Raw Material
Soaking
Pasting for Unhairing
Liming
Deliming
Puering or Bating
Scudding
Pickling
Tanning
Neutralizing
Dyeing and Fat liquorung
Setting and Drying
Damping for Staking
Staking
Nailing the Skins
Buffing
Restaking
Clearing
Seasoning
Glazing
Ironing
Measuring
Grading and Bundling

13. MANUFACTURE OF CHROME SOLE LEATHER
Raw Materials
Soaking
Unhairing and Liming
Deliming
Pickling
Tanning
Neutralizing
Fat liquorung or Oiling
Process of Making Chrome Sole White
Waxed or Stuffed Chrome Sole Leather

14. MANUFACTURE OF CHROME PICKING BAND AND LACE LEATHER
Raw Material
Soaking
Rounding
Unhairing and Liming
Deliming
Pickling
Tanning
Samming and Shaving
Neutralizing
Fat liquorung and Stuffing
Setting, Drying and Cutting into Straps
Colouring Picking Band
Hairy Bands
Further Processes for Picking Band Leather
Chrome Tanning of Lace Leather
Chrome Belting Leather

15. MANUFACTURE OF VEGETABLE TANNED SOLE LEATHER

Raw Material
Soaking
Liming
Rounding
Deliming
Tanning

Pit Tanning Process
Liquor Process of Pit Tannage
Leaching and Leach Pits
Carrying Out the Process of Liquor Tannage
Drum Tannage of Sole Leather
Finishing of the Usual Pit Tanned Sole Leather
Bag Tannage of Sole Leather
Deliming
Tanning

16. MANUFACTURE OF HARNESS, SADDLERY, BELTING AND BAG LEATHER

Raw Material
Soaking
Liming
Deliming
Tanning
Yield
Currying
Rolling
Glassing
Tallowing in
Finishing
Currying and Finishing of Strap Butts
Finishing Black Harness from Crust Condition

Belting Leather
Drum Stuffing Belting Butts
Leather for Bags, Trunks, Suit cases, etc
Tanning
Finishing

17. MANUFACTURE OF CHAMOIS LEATHER

Theories to Explain Chamoising
Tanning or Chamoising
Oiling and Stocking
Degreasing
Bleaching
Dyeing
Staining
Finishing

Water proofing
Combination Formaldehyde and Oil tannage of Chamois Leather

18. MANUFACTURE OF JAPANNED AND ENAMELLED LEATHER
Preparation of Leather for Japanning
Preparation of Japan
Villon's Formula of Japan
Davis Recipe
Use of Nitro cellulose in Patent Leather
Manufacture of Chrome Patent Leather
Rough Patent or Varnished Leather Manufactured in Calcutta
Manufacture of Chrome Patent Leather with Various Metallic Lustres
Abu Varnish
Alternative Methods
Abu Varnish (Alternative Method)
19. MANUFACTURE OF UPHOLSTERY LEATHER
Morocco Leather for Upholstery Work:
Manufacture of
Upholstery Hides
Upholstery Leather Prepared with Kepolac Coloured Lacquers
Leather for Furniture, Carriage and Automobile Upholstery
20. MANUFACTURE OF ANTIQUE LEATHER
Chrome Tanned Antique Leather
21. MANUFACTURE OF LIGHT AND FANCY LEATHERS
Leathers from Calf Skins
Velvet or Suede Calf
Leathers from Goat Skins
Leather from Sheep Skins
General Method of Treating Sheep Skins
Suede Leather from Chrome Tanned Sheep and
Goat Skins
22. MANUFACTURE OF HALF TANNED LEATHER FOR EXPORT
Different Barks Used in Tannage
Methods followed in Madras for the Manufacture of
Half tanned or Crust Leather for Export
23. TANNING OF REPTILE SKINS BY THE VEGETABLE PROCESS
Sizes of Lizard Skins
Dyeing and Finishing of Lizard Skins
Other Reptile Skins
Bleaching of Reptile Skins
A German Process of Vegetable Tanning Reptile Skins
24. ALUM TANNING
Typical Recipes
Tawing and Ageing
Calf Kid
Clove Kid
Dressing of Wool Rugs and Skins with Hair on
25. FORMALDEHYDE TANNING
26. WATER PIGMENT FINISHES FOR LEATHER
Materials in Composition of Pigment Finishes
A Few Recipes of Pigment Finishes
Black
Medium Brown
Ox Blood
White
Names of Some Pigment Finishes on Market
Application of Pigment Finishes
Directions for Using Eukesol Dyes
Carpenol Pigment Finishes
Finishing of Box and Willow Sides, i.e.,
Full Chrome Kip Sides
Finishing of Fully Chromed Coloured Calf Skins
Finishing of Fully Chromed Black Box Calf
Finishing Instructions for Hard Grain Goats
Finishing Instructions for Glazed Goat and Sheep
Finishing Instructions for Grain Bellies
Finishing Instructions for E. I. Tanned Kip
Application on Cheap Grade Leather
Recipe of Tung Oil Emulsion
Pigments Suitable for Leather
27. CELLULOSE LACQUERS FOR LEATHER
Manufacture of Cellulose Lacquers
Solvents
Direct Solvents
Cellulose Nitrate Non solvents
Thinners
Plasticisers
Gums and Resins
Dyes and Pigments
Grinding the Pigment
Final Mixing
Application of the Cellulose Finish
APPENDIX I
Principal Materials Required for Chrome Tanning
Principal Materials Required for Vegetable Tanning
Appendix II
Appendix III
Appendix IV
Appendix V
Appendix VI
Appendix VII
Measurement of the Thickness of Leather
Appendix VIII
Appendix IX
Appendix X
Solid chrome extract
Appendix XI
Appendix XII
Appendix XIII
Appendix XIV
GLOSSARY
ABC of Leather Industry

About NIIR

NIIR PROJECT CONSULTANCY SERVICES (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services.
NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.


NPCS also publishes varies process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.