

Presentation by **R&D Team**



# MASHAKPIPER LEATHERS

*Empowering Visionaries, Igniting Advancements*

WWW.MASHAKPIPER.COM

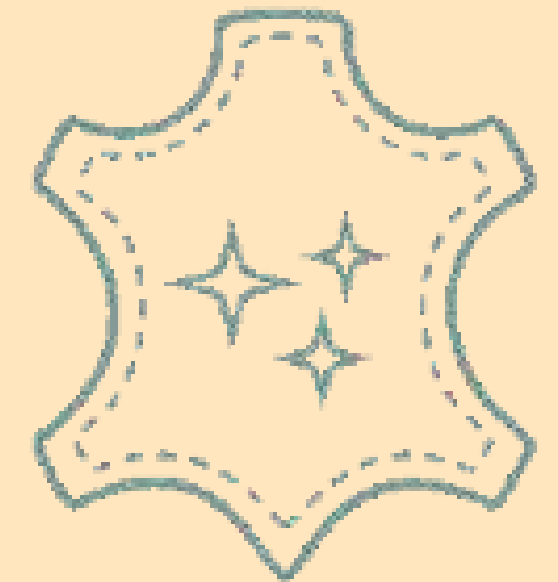
We Mashakpipers with past 12 years' experience in leather industry, are suppliers of export quality leather upholstery for recliners, sofa, automotive & projects, Individuals .i.e. We deals in wide range collection of finished water-buff leather hides with spectrum of colours, finishes & textures options available

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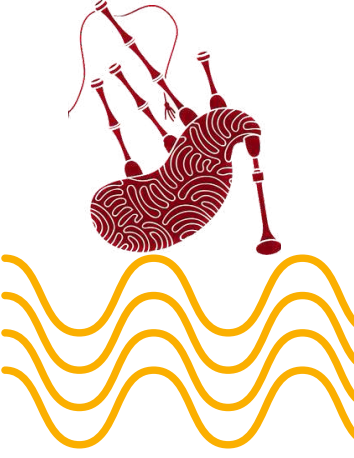
Mashakpiper Leathers Pvt. Ltd. | Version 2.1

# Abstract

Driving Manufacturing Excellence in Leather Tanneries:  
Enhancing Processes & New Product development recipes with R&D support for Manufacturing excellence, QAP for selection of Raw & finished hides , Quality Supervision, optimising efficiency, ensuring quality, and Maximising value in the leather manufacturing process with maintaining EHS aspects.

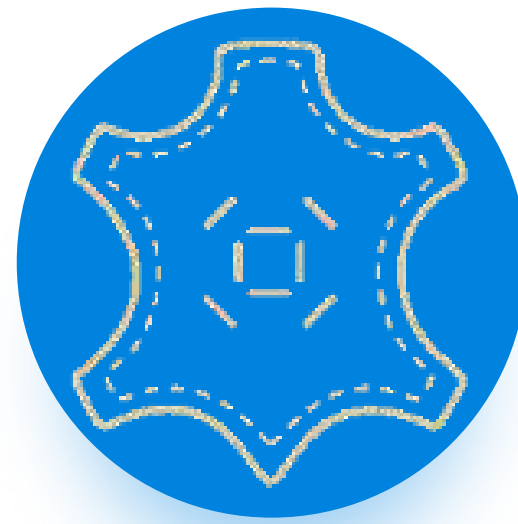


# KEY PROCESSES OF LEATHER-PROCESSING



## BEAMHOUSE / WETBLUE

To prepare the raw hides or skins for further processing by removing impurities, hair, and non-collagenous materials, and to create a suitable substrate for tanning.



## WET END / CRUST

Wet finishing lends more specific properties to leather (softness, basic colour, water repellence, etc.) important for its appearance and ultimate use.



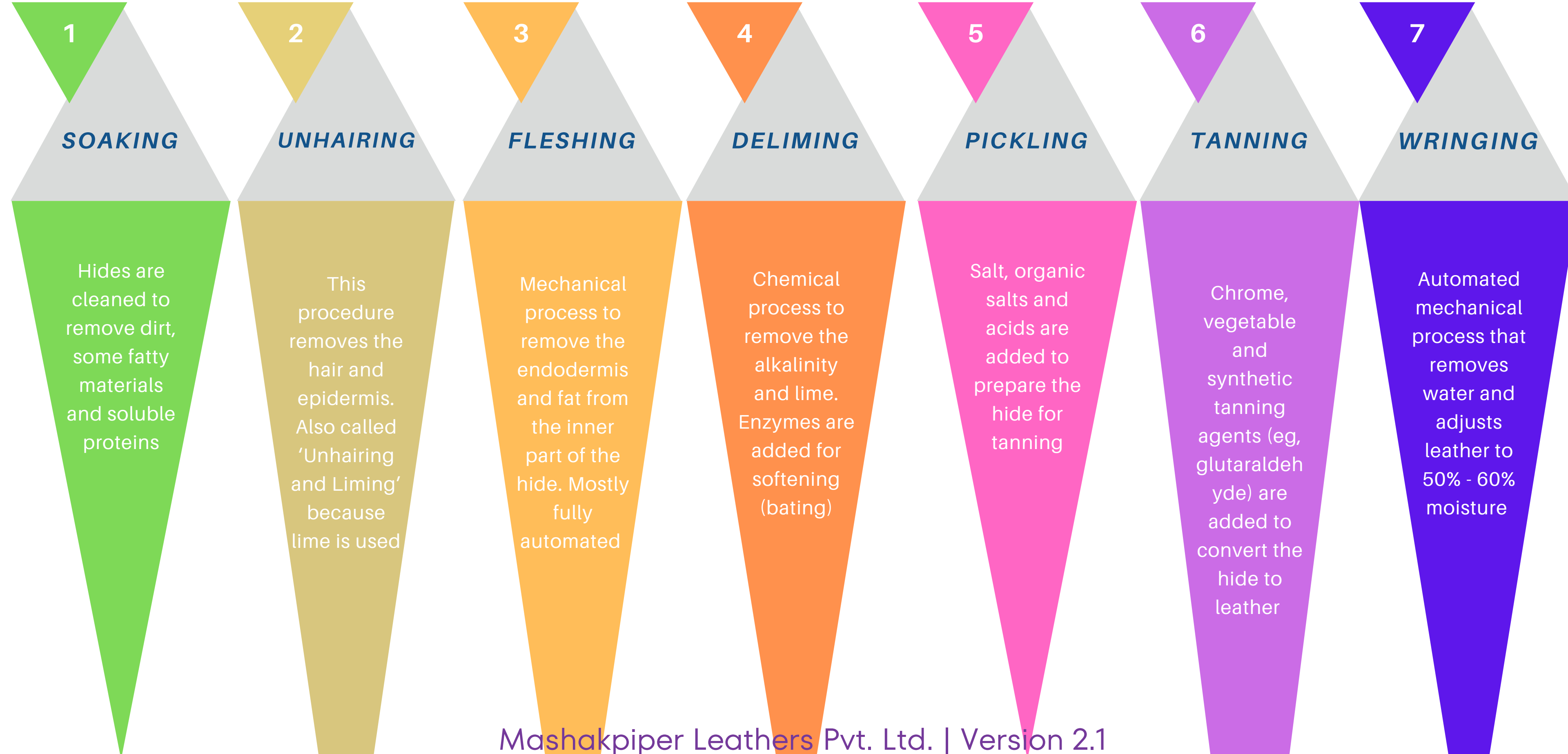
## FINISHING

The purpose of finishing is to lend to leather not only a kind of grain protection against soiling, staining and water penetration, but also the desired (uniform) appearance, flexibility, colour, gloss or dullness and handle.

# BEAMHOUSE(RAW TO TANNING)



## Wetblue Process



# Main Processing Equipment

## Drums

Wood and polypropylene drums offer the mechanical action needed for the chemicals to react with the hides or leathers.



## Mixer

Soaking and Liming processes of hides



# Beamhouse Machinery

## FLESHING MACHINE

This removes the endodermis and fatty material of the hide, preparing it for the next steps.



## SPLITTING MACHINE

Equipment used to split the hide into a top part (grain-side) and a bottom part (flesh split). This step is either carried out after fleshing (as in the photo), or after tanning.



# CHEMICALS USED IN THE BEAMHOUSE (RAW TO TANNING) PROCESS

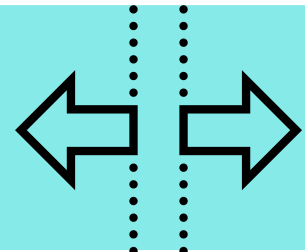


# WET END PROCESSES



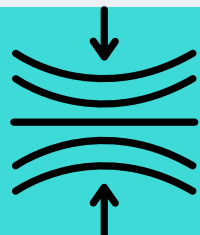
## SPLITTING

Mechanical operation to slice the leather into grain and split parts



## SHAVING

Mechanical operation to uniformize the thickness of the leather



## NEUTRALIZATION

Chemical step to reduce the leather acidity in preparation for retanning



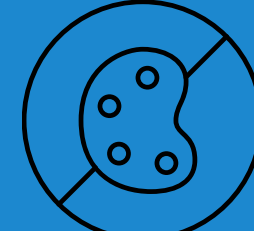
## RETANNING

Natural and synthetic chemicals are added to improve/add leather properties



## DYEING

Dyes are added to give color to the leather



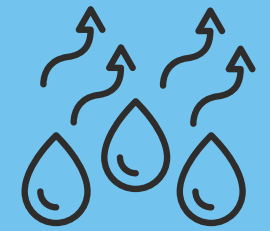
## FATLIQUORING

Oils and waxes are added for softening and lubrication

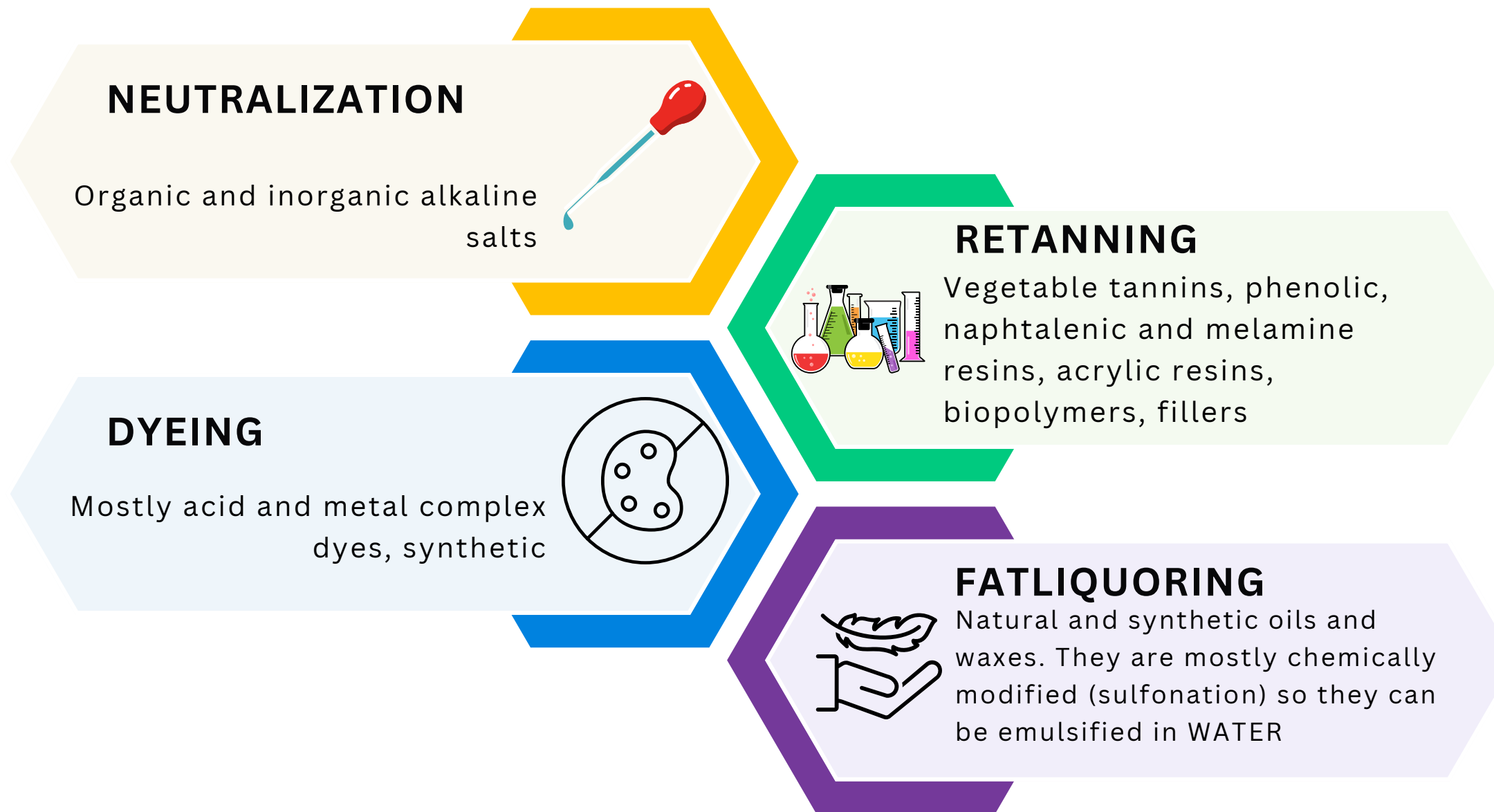


## DRYING

Natural or forced drying, these days using advanced machinery



# CHEMICALS COMMONLY USED IN THE WET END



# THE CHANGING APPEARANCE OF LEATHER as it goes through the wet end



## WASHING

Cleans the tanned leather intermediate (wet white, wet blue), uniformizes the moisture and pH, removes some natural fats and salts



## NEUTRALIZATION

Reduces the leather's acidity and prepares it for retanning: **1 to 3% of chemicals are added here.**

Percentages are based on the shaved weight of the leather



## RETANNING

**A combination of retanning chemicals is added to transform the leather's properties.** Typically, 10 to 30% chemicals are added at this stage



## COLORING

Dyes are used to **give color.** Usually a **mixture of dyes** is used to **give the color.** A typical amount is from 0.5 to 4%



## FATLIQUORING

Mixtures of **natural and/or synthetic oils and waxes** are added to **soften the leather.** Usually, the amount is between 6 and 20%

# WET END MACHINERY



## SET OUT

Wrings excess moisture from wet leather, reducing it to 50-60% and preparing the leather for splitting (Photo: vegetable leather).



## SPLITTING

This machine is used to divide the leather into two layers, to separate the grain from the split (not used if leather is lime split).



## SHAVING

This makes the leather thickness uniform by shaving any excess away on the flesh side.



## SAMMYING

The machine opens the leather after wet end processes and removes excess moisture, preparing it for the drying stages.

# FINISHING FLOW DIAGRAMS

## CORRECTED GRAIN FINISHED



## FULL GRAIN FINISHED



## FULL GRAIN SEMI-ANILINE FINISHED



# CHEMICALS USED IN FINISHING



## Auxiliaries

- Surfactants, oil and wax emulsions, solvents, silicones. In some leathers. Oils and waxes can be used alone, without binders

## Fillers

- Clays, silicas, organic polymer particles for filling or dulling

## Pigments

- Organic and inorganic pigment dispersions, finely ground

## Dyes

- Metal complex dye solutions

## Binders

- Acrylic and PU (polyurethane) emulsions producing soft to hard films, natural proteins (eg, casein) and modified natural cellulose

# FINISHING MACHINERY



## **STAKING** (*Molisa™*)

Softens the leather by moving the leather continuously through vibrating pins.



## **MILLING**

Is another way to soften the leather by tumbling it in dry drums. Water and chemicals can be added to produce further effects on the leather.



## **BUFFING**

Is the superficial sanding of the leather to uniformize the surface, reduce defects and create effects.



## **EMBOSSING OR PLATING**

Is used to smooth the leather, or create textures by embossing it. Deep embossing effects are possible with this machine.



## **ROLL PRESS**

Is a continuous machine that smooths the leather surface and can create light textures, gloss or embossing.



## **MEASURING MACHINE**

Is an electronic device that measures the area of each piece and stamps the measurement on the back of the leather.

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**THANK YOU**

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