

4 Crust

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The dried leathers have a series of mechanical operations for softness and general presentation so that they can be sorted for final top finishing, or for export.

CONDITION

The object is to give the leather a moisture content of 18-22% to allow mechanical softening. The dried leathers have different levels of moisture from drying to 8-14% because there are different thicknesses and conditions. In practice, leathers are dried to the lowest level at the first drying, so that subsequent conditioning can produce a uniform moisture content and allow a uniform softening. Conditioning adds a controlled amount of water to the leather, usually on the flesh side. This is normally a simple spray application combined into a string conveyor, and a great improvement over the use of damp sawdust. The moistened leathers are piled flat and stand for 24 hours to allow the moisture to reach equilibrium. They should be covered with plastic sheets during this period.

STAKE

The object is to mechanically break the leather, separating the fibres, which have become attached to each other during drying. It is important that the moisture content is correct, in the 18-22% range. This is often recognised by touch and handle better than a moisture meter. If the leather has too much moisture, there is insufficient movement of the fibres and the resultant leather is not soft enough after drying out; if the leather is too dry, less than 18-22%, the fibres are damaged by the mechanical action. The actual extent of the fibres self-attachment varies with the wet processing, particularly fat-liquoring, and the drying conditions. The conveyor driven vibrating staking machine is excellent for most leathers, and causes less damage than earlier types. It also has an advantage that the operators need less training. The older jaw-type staking, Slocomb, machine is still suitable for special softness provided there are skilled operators.

OPTION TO DRY DRUM (MILL)

This option of a fast revolving (20 rpm) dry drum is increasingly used to produce very soft leather with a relaxed surface appearance. It could be for upholstery, garments, or casual shoes. There are degrees of development, with dust extraction needed to clean any fibres from the atmosphere. It can be done on crust leather without finish, split, suede or on finished leather, provided the finish film will withstand the mechanical action. Several hours running are

needed. The leather needs to have the toggling afterwards to restore the flat surface and the area.

DRY SECOND TIME

The object is to dry out flat the softened leather, from the conditioned levels of 18-22% to the normal dry leather, which contains 14%. This level of 14% is the norm for all natural fibres and the leather should not feel damp at all. It can be stored in this condition, which is not the case for the conditioned leathers, which become harder and can develop mould. Toggle, or vacuum, drying is used and the times are short for this mild drying. The temperature used can be critical to prevent area loss. Yield is always better at as low a temperature as possible, for example 18°C is better than 30°C and is feasible with a low amount of moisture to remove and reasonable air circulation.

TRIM - DRY TANNED WASTE

After the second drying, the leather will be flat but there may be folds, pleats or ragged edges in some areas, which either disfigure the appearance or will prevent further operations being done correctly. For example, the leather would not be able to pass between some revolving cylinders in an even manner. As always, it is important to control and supervise carefully trimming operations, because it is all too easy to trim away too much leather, lose the sales value for the piece and profit for the tannery.

CRUST SORT - OPTION TO EXPORT

This is the second quality control point, after the wet blue sorting control. It is an important stage and sorters need to have good experience and judgement, because so much of the grading is subjective. The surface is assessed for potential cutting area and the extent to which defects and damages reduce that area and quality value. The break of the leather is also checked together with the actual thickness (in tenths of millimetres) and how the leather feels on handling. There will often be different dyeings, which have to be checked for shade correctness in finishing.

A finishing load, or batch, starts here and is now going to be specifically for a certain type and colour of finished leather, and usually for a specific customer. The best qualities are for full grain and have different degrees of covering finish to improve their cutting value. The worst grades need to have a corrected finish, where the grain is removed by buffing.

The crust stock is an important logistic asset because it can be the means of making quick deliveries to customers, provided that there is the suitable crust leather available. This would mean the grades, thickness, base dye colour and character.

Finishing can be the means to adjust the surface appearance.