TANNING PROCESS FOR OBTAINING LEATHER

The present invention is related to a process of tanning hides to obtain leather. More specifically, it refers to an improvement introduced in the conventional process of tanning hide with chrome to obtain better quality leather. The advantages of the present invention are obtained with smooth acidification with organic acid in the pickling step.

STATE OF THE ART

Hide tanning is a process in which the collagen protein present therein reacts with tanning agents, originating leather-the tanning process is therefore one of the essential steps in leather production process. It is a very old process, whose purpose is to avoid hide degradation and putrefaction, by means of a protein crosslinking phenomenon caused by the action of the employed tanning agent.

For chrome tanning producing "Wet Blue" (an intermediary stage prior to obtaining the final leather), traditionally used tanning agents are chrome III salts, such as chrome sulfate or basic chrome sulfate. Typically, leather has already been tanned when the hide incorporates about 3.5% by weight of chrome oxide, Cr_2O_3, dry basis, thus obtaining retraction test resistant leathers.

In the traditional processes of tanning hide, only 70% to 80% of chrome oxide available in the tanning bath is used. This means that the use of a large excess of salt is required, imposing additional costs to the process and generating an undesirable residue, potentially causing damaging impact to the environment and requiring storage and/or chemical treatment before disposal.

Despite the fact that chrome III compounds are not damaging to plants and animals, especially under neutral conditions, international rules impose low limits to the presence of chrome III and other heavy metals in water and air.

American patents US 4,715, 861 and US 4,978, 361 describe better hide absorption of chrome by hide by means of supplementary addition of chemical compounds. American patent US 4,042, 321 proposes recycling the tanning bath by a complex and costly process aiming the reduction of effluents treatment, being, however, complicated due to the accumulation of salts and fiber residues. European patents EP 822,263 and Brazilian patents BR 9603419-0 and BR

TANNING PROCESS FOR OBTAINING LEATHER WITH IMPROVED PHYSICAL-MECHANICAL PROPERTIES

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