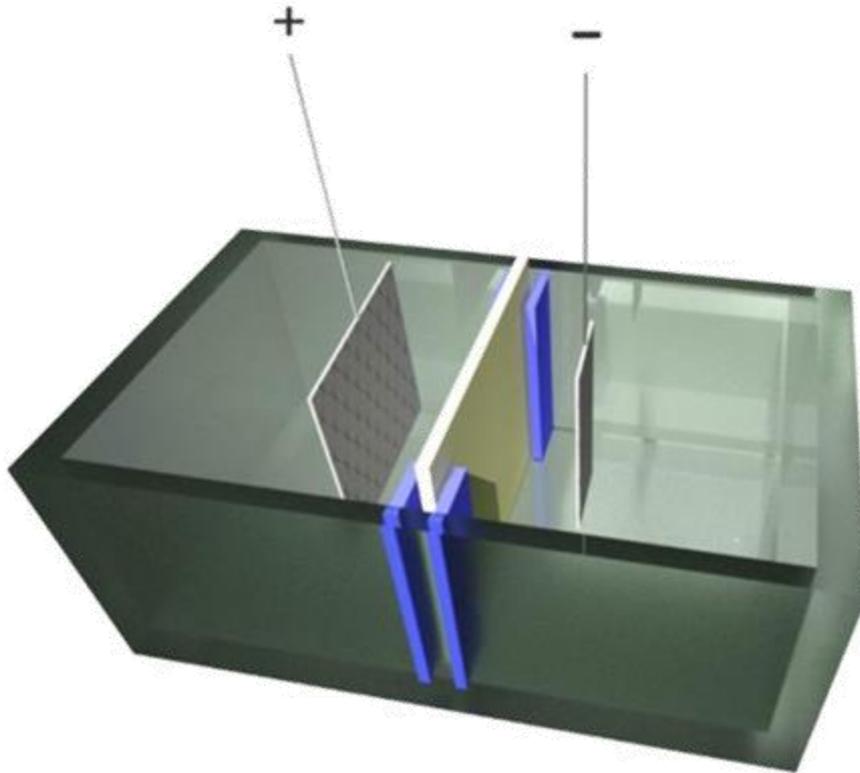


ENHANCED CHROME TANNING PROCESS



PRIORITY NUMBER:

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KEYWORDS:

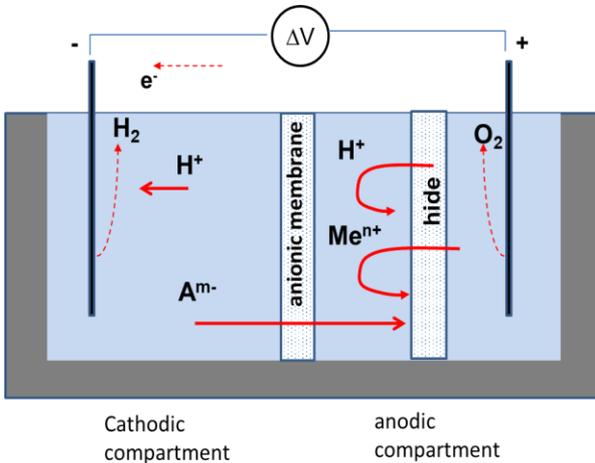
Leather tanning
Electrochemical
Chromium

The invention relates to an electrochemical process of leather tanning. Conventionally, process of leather tanning require hours of treatment to allow tanning agents to spontaneously diffuse through hide porosities. By the application of an electric field through the hide, required process time and exhaust bath volume are greatly reduced.



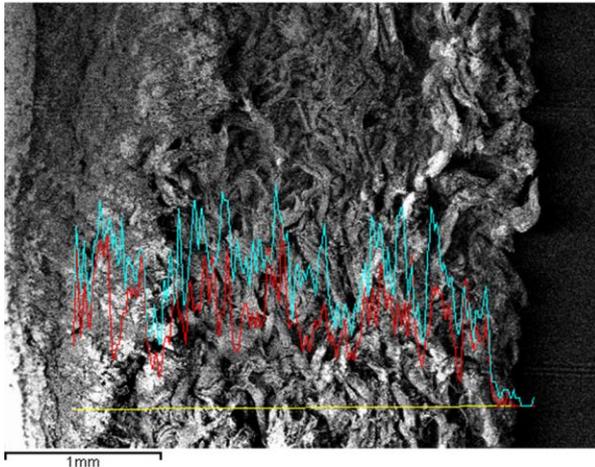
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ENHANCED CHROME TANNING PROCESS



DESCRIPTION:

The invention provides with the possibility to employ different tanning agents for hides, not limited to Chromium (III) and metal salts (e.g. Fe (III), Zr (IV), Ti (IV) etc.) but also to organic tannins. Time for the tanning process, conventionally divided into three steps (pickling, tanning and basification), can be considerably reduced by forcing the ionic migration through the hide when it is placed between two electrodes polarized with a potential difference. According to an embodiment of the invention, using a suitable separating membrane (anionic or cationic), the pH of the tanning bath can be tuned, avoiding the addition of other chemical agents in each of the process steps. Overall, besides the reduction of process time, the invention provides with a great reduction in the tanning bath volume required for the process.



ADVANTAGES:

- The electrochemical process significantly reduces the required time to obtain tanned leather;
- employment of a very small bath volume to hide area ratio;
- possibility to use different tanning agents other than chromium (III) salts.

APPLICATIONS:

- Leather tanning