



TANNING INDUSTRY - SULPHIDES RECOVERY PLANTS



TANNING INDUSTRY

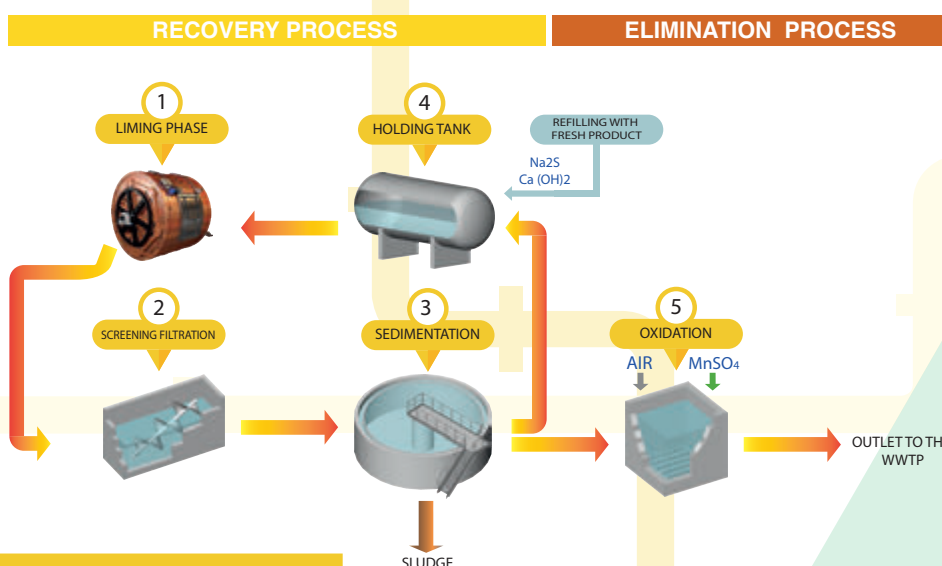
Sulphides Recovery Plants

In the field of the tannery process, the sulphides (in the form of sodium sulphide) are involved, together with lime, mainly in the liming phase for the hair elimination and derma opening and relaxing, to let it more reactive to the tanning fixation.

The liming baths at the end of the phase, and the subsequent washings, define the main part of the pollution generated from the tannery, giving to the effluent a sulphides content around 80-90% of the total.



SULPHIDES RECOVERY DIAGRAM: MAIN PHASES



The sulphides recovery system developed by Deltacque allows, through simple operations and low costs, the separation of sulphides and lime solutions from the liming baths, permitting its reuse in the process.

In detail, as shown in the figure below, the liming baths properly separated are firstly filtered (to eliminate the main part of the hair and solid parts) and then settled. At this point the clarified water is sent to a storage tank where, thanks to the addition of fresh reagents, the sulphides and lime solution are ready to be reused in the tanning process.

The exceeding part that cannot be reused in the tannery must be pretreated before the sending to the general plant, not only for the polluting charge reduction, but also to avoid the bad odours emission in atmosphere. For this reason, we foresee the sulphides oxidation through the atmospheric oxygen, in addition to specific catalysts.

The reintegration in the productive cycle of the liming baths allows as follows:

- **high economic return**, thanks to the saving of the fresh reagent and the **eventual fees for the discharge in public sewage**;
- **better control of the productive process**, due to the continuous monitoring of the discharge;
- **significant reduction of the environmental impact**.

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