

HIDES PROCESS NOW ACCURATELY MIXED**BACKGROUND**

Accurate temperature in the processing of animal hides is crucial to ensure that a maximum yield and high quality of leather is produced.

Tanneries involved in this 'Wet-blue' stage of processing where the hide is converted from its raw state into a stable material which will not putrefy nor be attacked by bacteria, require a high volume of water at critical working temperatures. Many established plants have used Huni Aquamix™ systems to control the batching of the water into the drums as well as the temperature of the water.

The Aquamix system uses either Fisher YS valves, or more recent systems utilize dual controlled butterfly valves to achieve mixing of the tempered water.

PROBLEM

If the temperature of the water is not accurate, the hides do not clean up properly. If the temperature is too high, they may scald, they can shrink excessively and become unusable or if the temperature is too low they can fail to preserve.

The challenges faced by processors are many and varied:

Processors experience "mixing time". This is the time delay experienced from when an operator requests temperature for process to when the temperature is achieved at the mixing valve.

This delay creates unnecessary re-circulation time, water wastage and production delays.

Processors experience "call time". This is the time taken to fill the drum with the required in specification tempered water.

Excessive water-recirculation increases demand on hot-water supply and hot-water storage systems. This is the result of "warm" water returning to the hot-water boiler source.

Processors experience water temperature fluctuation as a result in unstable pressures. These fluctuations cause variation from process set-points and directly promote wastage in heating resources.



Traditional Huni Aquamix™ and Emech F8T

SOLUTION

The Emech™ 3" F4 and 4" F8 valve series offer a high-flow mixing valve solution (approx 3000 lpm / 780 gpm) and (approx 4700 lpm / 1700gpm) that has a fast-action response and 'swirl-mix' feature. This allows the required set-point or "mixing time" to be achieved very quickly and ensure a fast-fill to the drum.

The Emech™ system provides production and maintenance advantages over traditional technology:

- With a high flow volume Emech valve, "call-time" is reduced and production throughput can be increased
- Water-recirculation time and/or the dumping of excessive amounts out of specification water is reduced because of the patented Emech sense and mix system.
- Accuracy at the point of mix is achieved within 0.5°C (0.9°F) saving excessive heating costs.
- The shear-action of the valve and Emech™ closed loop temperature controller creates very little wear and has an extended maintenance free service life.
- It can operate as a stand alone batch temperature controller or the Emech™ system can be interfaced to work with various control technologies and architectures in the tanning market
- A typical 3 valve blending system is replaced with a one valve Emech™ system as it can accurately mix irrespective of pressure fluctuations, reducing capital costs, ongoing maintenance and spare part requirements.