



How a new approach to the tannery drum developed



Jumbo polypropylene PPH drums, note absence of external construction elements.

General processing of skins and hides along with tanning and dyeing in drums goes back to the 18th century, originating in North America but soon spreading to most European countries. Mainly specialised carpenters everywhere quickly moved in to meet this demand for wooden vessels of this type, with a few of them developing ancillary devices and systems mostly in the period after the Second World War. Several of these drum builders are still around and also have developed new methods of construction.

Hüni, a Swiss tannery established in 1728, came along a different route into the drum business. Based upon their own background they realised that an important ingredient in drum processing is the right formulation and timing of chemical additions together with determined temperatures at which it works. As a result the Hüni company diversified into engineering, creating process control systems for the operation of tanning drums. Such systems based on punched card technology had been already introduced successfully by the textile industry. Hans Hüni started the development of drum process control by automating his tannery drums in 1960 by adopting the original punched card systems. He soon came to the conclusion that the complexity of leather manufacture required more flexibility and began to design computer and microprocessor technology as a more satisfactory way in dealing with a variety of programming and control functions, and subsequently introduced his technology in 1980 named Computan. Computan was operated

from a central control station. Later on when requirements for individual management at the front of a drum arose a unit known as Microtan was developed to meet this need.

General sophistication and developing extra capacities of computer technology has since never ceased and Hüni has not failed to incorporate them, further extending a range of available system functions. Some of the features a recent Hüni electronic



The old Hüni Tannery buildings.



"Long Shelf" fitted inside a large wooden drum.

management system branded M5 WinCC include:

- Manual interventions effected whilst a process is still active can be reported in history and protocol.
- Traceability is increased substantially.
- Additional response facilities to queries are available.
- More response facilities can be introduced.

To supply drum contents with water in accurate quantities and temperatures, as well as avoiding energy losses, had been a factor crying out for a proper solution and so a unit then known as Aquamix was brought to the market in 1970 and found immediate acceptance. Central Aquamix stations are designed to serve a complete drum shop. An Aquamix Satellite unit is also available to manage water at separate or distant drum locations.

Taking full advantage of the acquired knowledge of the drum processing market, Hüni took the step of moving into drum manufacture in 1988. Timber built drums were the universally used at that time so not surprisingly Hüni chose to develop its drum business using this medium. After research it was decided to standardise on an African timber known as Boldondo/tali offering a combination of factors such as ready availability, price, durability, hardness, stability and chemical resistance. The range of options available on drums, such as recirculation, lab tanks,



Polypropylene drums.

over axle loading, door controls and others, developed in recent years although redesigned by Hüni had been available. The drums were, and are still, made in a range of dimensions. Maximum sizes for soaking/liming and tanning drums are listed at 4.20m dia x 4.50m and for dye drums 3.60m dia x 3.60m.

The next step taken was thorough research into alternative drum construction materials which resulted in Polypropylene drums using PPH 7060, a high quality medium suitable for moulding and welding, with good chemical resistance. Hüni has now accumulated some 10 years of experience in the manufacture and the performance of drums of this type and are continuing further development. A newly introduced system is the PPH TT drum that eliminates the need to weld outside drum body joints. As a result circumferential hoops and metal frames have become superfluous, making a simpler and integral drum body construction. Amongst the features of the Jumbo liming, tanning, re-tanning and dyeing drums Hüni lists substantial savings against conventional drums in water, electrical and chemical consumption. There are also higher load capacities and there is better mixing action. The maximum size of such drums is 3.5m dia x 3.0m. Optional fittings and systems similar to those frequently used on wooden drums are also applicable. Jumbo drums are further suited to take "long shelves" which make it possible to process high skin or hide loads. ☺



The Master computer programming and controlling a large drum shop.



Prodromix mixing and dosing system with manifold scale tank and valve control housing.