



Cangilones wooden drums for retanning and dyeing at Simona Tanning (China)

Spanish drum maker Olcina Group, the developer of the “Cangilones” drum system in the late nineties, has now created “Cangilones Next” technology, the most revolutionary breakthrough in wet end processing in recent times.

3 “Cangilon” is the Spanish word for a bucket or water wheel scoop, commonly employed in the Spanish Levante Region to rationalise use of scarce water resources. Applied to Cangilones drums such a system causes a stirring and movement waterfall effect with even float distribution and the required mechanical action inside a slowly revolving drum.

Most leather technicians recognised that the new machinery development significantly changed the processing of all types and skins. Initially Olcina met resistance as it was difficult to understand that the system could result in doubling drum capacity, requiring only less than half the water needed in a conventional drum and this without compromising quality. That a 4.2m diameter drum x 4.5m could be loaded with 20,000 kg wet salted hides for liming or up to 24,000 kg for the tanning process, seemed unbelievable.

Olcina however succeeded in introducing the system to receptive tannery managers who became aware that the important savings achieved produced very fast payback of investment. It was more difficult to convince leather technicians that high loads, short float and extremely low speed processing, just the opposite of what they were taught, could be feasible. Ultimately, thanks to the benefits, a significant number of leading companies switched to the Olcina Cangilones technology, now widely employed in soaking, liming and tanning as well as in retanning and dyeing. The overall impact of the new development has motivated many leading tanners of all sizes to adopt the technology. Olcina reports that a significant number of companies with Leather Working Group (LWG) as well as Gold and Silver awards as well as Tannery of the Year 2009 and 2010 finalists, are employing the Cangilones process.

Environmentally friendly is nowadays a priority and the Cangilones system is essential to respond to this, saving water and its subsequent treatment costs.

Olcina Cangilones is a patented technology with approved patents in the USA, UK, Brazil, Argentina, Italy, Turkey, Germany and France, amongst others.

Cangilones Next has been designed to be built also in stainless steel or polypropylene as well in the classic wood construction.



Fully automated Cangilones Next stainless steel drums at Colomer Moda (China).

Cangilones Drum working principles

A robust drum construction with initially using four off-centre deep shelves and in the new Cangilones Next generation only three such shelves and a special float distribution-optimising mechanical action at very low rotation speed. The hides are not stressed and the movement of the whole load is such so as to expose the surface of each hide to the action of concentrated chemicals. Scuffing is eliminated and the proper swelling is achieved through gravitational forces as opposed to centrifugal ones in conventional drums. Water and chemical distribution systems are specially developed together with recirculation offering the possibility of cooling or heating the float as desired, coping with the effects of extreme climates.

Amongst many advantages, quality improvement results in enhanced selection grading, fewer wrinkles, no rolling action, no tears and better chemical penetration. Process formulations with long or short floats and high or low floats can be achieved in Cangilones system drums.



Cangilone NEXT wooden drums at JBS (USA).

Summing up:

- Cangilones Next allows maximum loading capacity
- 50% saving in installation and automation costs
- 70% power saving
- 50% to 60% water saving
- important chemical savings (dependant on chemical)
- lower effluent costs
- 2% to 5% higher yield combined with appropriate finishing methods.

Olcina has compiled a time line of its research and innovation development activities:



Olcina Automation and Process Control System.

- 1977 Plastic pegs in place of wooden ones introduced as standard in Olcina drums.
- 1982 Airless seal on automatic doors – developed as its does not need permanent air supply to keep the door shut.
- 1985 New Degas valves avoiding use of bronze reducing maintenance costs
- 1995 Process monitoring and Control system developed in cooperation with BLC and other partners
- 1998 Development of “Cangilones” drum
- 2008 “Cangilones Next” developed – a 2nd drum generation with improved performance. ©



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