

# Environmental and energy drying efficiencies from Cartigliano

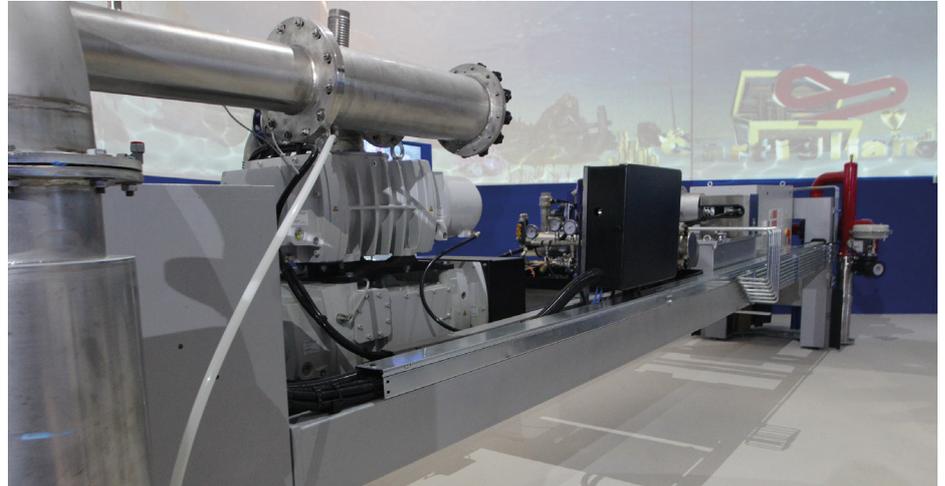
During the last edition of Simac Tanning Tech in Milan last February, leather drying, staking and conditioning experts Cartigliano highlighted several novel leather drying systems using innovative radio frequency drying for crust or finished leathers and the company's latest extruder, which is fitted on the AFT Drier for reducing the moisture content of tannery solid waste.

## Radio Frequency Dryer Finished leathers

Unlike traditional finished leather tunnel drying systems, which use high temperatures and thousands of cubic metres per hour of air, Cartigliano's innovative Radio Frequency Dryer (RFD) dries without excessive heating of the leather. Radio frequency is applied and only works in the dielectric part of the leather, which in this case equates to just a few grams of water contained in the finishing, resulting in leather that comes out of the drying conveyor cool and dry, maintaining its characteristics of area yield, softness, roundness and fullness. As the system does not require pre-heating, it means that production cycles are cut, with drastically reduced energy consumption as no ventilation is needed.

## Crust leathers

Radiofrequency drying can also be incorporated in the drying and conditioning of wet post tanned leathers to crust, lowering the residual moisture content by around 25% after sammy/setting out to a suitable level for staking. The leather is placed in an electromagnetic radiofrequency field and absorbs electrical energy through dielectric



dissipation in different quantities, according to the moisture content of each single part of the leather itself. This ensures homogenous conditioning, both on surface and throughout the whole interfibrillar structure. The heating coming from 'the inside' at a molecular level enables an easier exhaustion of interfibrillar moisture even at low temperatures, while the environmental temperature outside the leather remains absolutely cold to the touch.

## EFT Dryer with extruder

The latest generation of Cartigliano's EFT Dryer offers further efficiency gains for the drying of a diversity of materials, including industrial sludge, animal waste, biomass and humid residuals. It is able to dry incoming product and bringing it to a reduced humidity of 10 to 15%, resulting in significant

weight reduction of over 70% and a decrease in volume of 50 to 60%.

The EFT dryer's innovation lies in the fact that unlike other driers, the transmission of heat mainly occurs by convection and not by radiance, lowering the drying speed parameters compared with drying by air temperature. To increase the heat exchange area and to prevent the formation of dusts during drying, before entering the EFT, the material is extruded into pellets of variable diameter by means of an extruder and then spread over the entire working width of the machine with a transversing belt conveyor. Due to its low temperature and power consumption, the entire system therefore operates to the highest environmental standards. Cartigliano highlighted the latest extruder by showcasing a full sized version on its stand during the fair in Milan (pictured).

Italy based tannery equipment supplier Danese has launched its latest product innovation, the Ezipcut pneumatic cutter. The handheld device has been conceived to trim leather at any production stage. Light, precise, fast and easy to use and maintain, the application allows anybody to cut material precisely and in a time-saving process. The pneumatic blade trims very quickly, safely and any wastage is limited due to the high quality of its robust construction.

