



Wet Staking Explained

As a result of ongoing development of the classic Cartigliano “just-in-time” processing line the “wet staking” concept has been researched and put into practice. This operation is carried out by means of a vibration staking machine employing specially designed pin and hole action, different from the more generally adopted pin to pin staking system. The benefit of this configuration however is fulfilled when feeding the staker with leather in a relatively wet state immediately following samm-setting when the leather would have a water content of the order of 50% or more.

Alternatively the desired moisture level may be determined by vacuum drying to the appropriate level.

In principle there are significant advantages in treating wet leather by this method, all based upon the fibre structure remaining lubricated and hence relaxed. As there is less stress and strain therefore strength characteristics along with softness and touch properties are protected and set only during final drying. Wet staking opens the leather homogeneously and progressively also promoting uniform substance. The leather is opened up equally from the

centre outwards. Shanks are equally opened and fat wrinkles are smoothed out. The leather is presented flat, the fibres are opened more for faster and uniform drying. An area increase of an average of 5% is expected to be the norm of the wet staking process.

For some leathers as for example automotive upholstery Cartigliano proposes a line containing conventional throughfeed samm-setting followed by conveyor wet stretching and immediate feeding to their low temperature vacuum dryer which produces flat, round and uniform leather and a lower shrinkage of



View of a classic Cartigliano just-in-time line with wet staking. On the left front of the photo the conveyor at the output end of the samm/setting machine is glimpsed leading to the first wet staker. From there the (green) conveyor feeds the leather to the vacuum dryer. The back of the image now shows the transfer from vacuum drying to the second wet staking station seen at the very back of the right hand side of the picture. The transfer to the entry side of the "TAIC" tunnel follows and the start of the tunnel can be seen.

4% or more compared with high temperature vacuum drying. After vacuum, wet stretching again before rigorous TAIC conditioning followed by a belly first 4HC 3400. All these machine elements are linked by conveyor-feeders.

The incorporation of the wet staking element into the classic Cartigliano just-in-time retanned/dyed leather processing line adds to its flexibility making it possible to achieve the ideal condition required for a variety of finished leather applications. Such a versatile and labour saving line can have a throughput capacity of 100 to 120 hides per hour. It would have a throughput

samm-setting machine removing around 50% of water followed by a transport conveyor/feeder immediately taking the hides to the wet stretching staker and then to a multi-table vacuum dryer. Depending upon the leather specification a further wet stretching may follow before entering the Cartigliano TAIC drying and conditioning tunnel. Already well proven the TAIC has 5 – 7 conveyor passages with up to 11 controlled air injection drying elements directed to both grain and flesh sides maintaining a leather temperature limit of 37°C. in a high RH environment At the same time, the high air pressure injected

against the flesh and grain sides ensure a perfect flatness of the dried leather or skin. Cartigliano advise that TAIC processing minimises leather shrinkage to about 4% compared with free hanging.

The principal advantages of the just-in-time development are highlighted as continuous interruption free production, precise control of all parameters with product consistency and reliably the maximum yield. Manpower requirements are reduced and there are no stocks of leather lying idle on the factory floor. ®

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