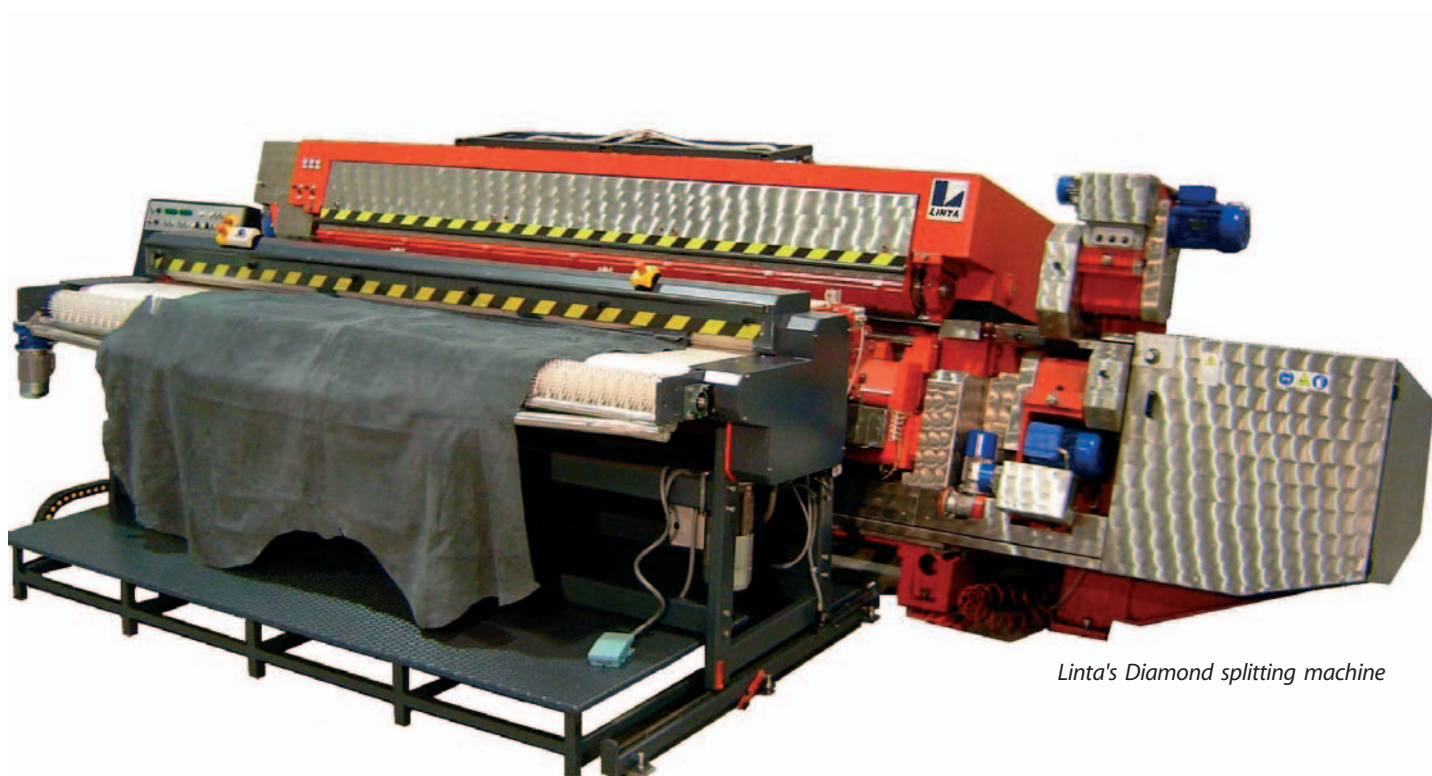




The Machine Minder



Linta's Diamond splitting machine

"Has anyone seen the splitting crew?"

As more and more leather manufacturing capacity moves to the world's cheap labour economies, tanners and machinery manufacturers in the developed countries have to explore every possibility to increase their productivity in order to stay ahead of the game. A promising possibility is being pioneered by Italian splitter manufacturers Linta, in feeding its 'Diamond' whole hide splitter directly from a through feed samm/setting machine without the requirement for any operators at the splitter infeed. It is, however, ironic that the first installed line of this type is in the Maydiang tannery in China, where general manager Dennis Thams is pioneering this concept. Western tanners should perhaps take this as a salutary warning—

if even innovation in de-manning is allowed to move eastward, what cards will they have left to play?

No boundary to adapting to change

The concept of feeding wet blue leather to a splitter, 'sandwiched' between two conveyor belts, was first introduced about three years ago. In a similar arrangement to that used for feeding soft leather into a reverse rollercoater, the hide is gripped, flat and crease-free, between upper and lower feed conveyors as it is introduced into the nip of the transport roller and ring roller of the splitter. The idea was to de-man and to de-skill the operation of the splitter—all that was required was someone to



Hides leave the Bauche throughfeed samm/setting flat and unpleated...



...and are delivered to the infeed conveyors of the Diamond splitter

“HAS ANYONE SEEN THE SPLITTING CREW?”



place hides flat on a conveyor. Linta has now carried this idea a stage further by linking the outfeed of a through feed samm/setter directly to the infeed of the splitter, using a simple flat band conveyor. While this would seem an obvious move, it requires great confidence in the ability of the splitting machine to operate consistently and reliably with no monitoring or input from an operator. Consistently flat, pleat-free leather from the samm/setter is also a pre-requisite for the linking of the machines, but this is now well within the capabilities of modern designs.

Working to a tight tolerance

The first line was installed and commissioned in Maydiang in April 2006, with the Linta Diamond splitter linked to a Bauche throughfeed wet blue samm/setter. It operates at 18 m/min, giving an output of 230-250 hides per hour; the splitting machine could run faster, but is limited by the speed of the samm/setter. The leather is cut into sides immediately after splitting, so no stacking machinery is installed in this case. However, there is no reason why measuring equipment and a multi-station selection stacker for grains and splits should not be added to extend the automated line in appropriate circumstances.

Linta claims that the ‘upside-down’ concept of the Diamond splitter, with gauge roller below and ring roller on top (see *World Leather* Vol.16 No.6), is particularly suited to such automated applications. The hide from the samm/setter already arrives grain surface down, and the Diamond allows splitting tolerance of less than one tenth of a millimetre. Tanners, particularly in the automotive sector, are seeking further productivity improvements through the reduction or even elimination of shaving to achieve level substance, by means of highly accurate splitting before retanning and dyeing, and Linta is endeavouring to meet this requirement. Trials have shown that the splitter retains its accuracy even with the variable thickness and density found in modern wet white tannages. Over twenty Diamond machines are now in service, and it is expected that more tanners will now consider linking them to modern through feed samm/setting machines.

Removing a hazard

The removal of operators from the infeed of the splitter has the additional advantage of obviating a particularly hazardous manual operation. Despite modern safety guarding, interlocking, and automatic opening with blade retraction, feeding a splitter is still not a job for the unwary, and chain mail gloves for operators are standard issue in many tanneries. The primary objective with a hazardous operation is always to remove the person from the hazard, and the automatically-fed splitter certainly succeeds in this respect.

Linta is exploring yet further possibilities for refining and perfecting such automated lines. In conjunction with measuring machinery experts GER Elettronica, it is testing the feasibility of automatically adjusting the head of the splitter using data from thickness measurements across the width of the hide, in order to keep split leather within pre-set parameters. Meanwhile, in the Maydiang tannery, the splitting crew has already hung up its chain mail gloves and moved on. Who knows—maybe, in years to come, the splitting crew will become as rare as the giant panda... 

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