



ALL CREDITS: SMIT & ZOON

Developments in fatliquoring

At February's IULTCS Congress in Chennai, Dirick von Behr, technical manager for leather at chemicals manufacturer Smit & Zoon, presented a paper entitled "Method for determining the optimised exhaustion of fatliquors to minimise the ETP-inflow". The paper referenced the upcoming changes in German regulations for the treatment of tannery wastewater. World Leather sat down with Mr von Behr to find out more.

In your paper, you mentioned the proposed amendment of regulations in Germany, which presumably relates to tanneries discharging to public treatment works. What will be the impact on tanneries running their own effluent treatment plants, or those in other parts of the world not subject to the German changes?

The revised German legislation will be in place by mid-2017. We know that new regulations in one European Union country very quickly spread across the others and that many interested parties push for similar legislation outside of the EU. The most significant change is from looking and testing what comes out at the end of the effluent treatment to looking at what goes into the effluent plant after processing.

In making the necessary changes in the fatliquor process to meet the new regulations, do you expect to sacrifice any of the properties of the finished leather?

We do not expect to sacrifice any leather properties. The legislation is handing responsibility over to the leather chemical suppliers to ensure a cleaner process without loss of performance. It is an indirect handing over; the responsibility, of course, remains with the tanner, but the chemical suppliers need to make the products available to do so.

Do these changes lead to an increase or decrease in the use of synthetic, as opposed to natural, fatliquors? Are there any other consequences of such a change?

The improvement in the discharge from the process comes from the selection of the right materials. We cannot say that this will lead to an increase in the use of more natural or synthetic fatliquors. We need to understand the performance of every individual product rather than looking at them by product group from their origin or composition.

You mention different approaches for chrome and non-chrome leathers; can you expand on this and tell us the potential differences in the effluent of the two types of leather?

I would like to answer this in three parts:

- It is already well known that product exhaustion is generally better on chrome leathers than non-chrome leathers.
- This does not mean, however, that every fatliquor will show this to the same extent; it means that selection of the right product for the type of tannage used is critical.
- The measurement of the exhaustion of the fat must include what comes out in the washing at the end of the process, not just what is left in the bath at the end of the fatliquoring process. We noted that if we see that 50-60% of the remaining product comes from the fatliquoring and 40-50% from the washing, this percentage will be the same for chrome and non-chrome leathers. Since with an anionic leather a relatively greater release would be expected by the pH increase that comes from washing, it is surprising to see that the ratio is the



same for chrome as for non-chrome leathers. This raises questions about the actual influence of charge as the main influence of binding.

What is the financial impact of the proposed changes to the fatliquoring process?

Generally, we can say that we do not expect to see a cost increase when changing products to meet the new effluent regulations. In time, we expect to see a cost saving as tanners should start to see significantly lower effluent treatment costs.

What percentage of the effluent load comes from the fatliquoring process for a plant processing from the wet blue stage onwards, and for one performing the complete tanning process from the raw hide?

We know that there is a higher effluent from the earlier processes, especially the beamhouse, but this should not be used as an excuse to do nothing in the retanning and fatliquoring area. We believe it is important to achieve the best results in all areas. Also, bear in mind the increase in the number of processors starting from wet blue or wet white, where the earlier processes have no impact on their effluent, as well as the fact that, whilst a tannery's beamhouse effluent is more or less the same every day due to lack of process variation, a retanning operation where many different types of leathers are being made will have much more variation in the effluent. This requires extra attention.



Dirick von Behr, technical manager for leather at chemicals manufacturer Smit & zoon.

When asked for any further comments on the development, Mr von Behr concluded: "The challenge is not to increase the percentage fixation or improve exhaustion; it is to make any fixation permanent and irreversible." 🌐

SENIOR LEVEL MANAGEMENT POSITION REPORTING DIRECTLY TO CEO

Wickett & Craig, located in Curwensville, PA, is a specialty tanner producing heavy vegetable side leather for use in the equestrian trade and high-end personal leather goods manufacturing.

We are currently searching for an executive to lead a management team in overseeing all aspects of business operations. The suitable individual will have the following qualifications:

- 10-15 years of experience in various facets of leather manufacturing, including operational, technical and sales functions
- A Bachelor degree in leather technology and/or Business Administration

We provide a competitive compensation and benefits package including relocation expenses.

Interested candidates should email their resumes to:
bbank@bankbros.com



Wickett & Craig

www.wickett-craig.com