

Record time for Seam Felt change Paper Pete does it

Dear papermakers,

When seam felts on shoe presses (SP) have to be changed the usual procedure is that the press is opened. This is not, however, always necessary! In today's example from best practice we show you how a felt can be successfully changed – even when the SP is closed. This means time and cost savings: a real benefit for papermakers. Today's case concerns our customer, Klingele, with whose support this article was written. This family business is one of Germany's five largest producers of corrugating base and packaging papers.



Our task was to **change the Connect felt on their PM2 as efficiently as possible.**

On this 510 cm wide machine Klingele produces Testliner and corrugated board at speeds up to 1,000 metres per minute.

Planning is everything

My colleague Josef Kosse rolled up our CAD machine drawing (fig. 1) and we drove to the customer. To begin with **all machine details were discussed on site by means of the drawing.** We started by carefully studying and examining the individual press components and their exact positions before developing the basic concept together with Klingele. Of course – and as always – we kept in mind the primary aim when changing clothing:

Keep shut times as short as possible!

And in order for this to work good planning and intensive preparation are half the battle.

Here's the key: **The SP should remain closed** in order to reduce the time for felt changes to a level that means real cash for Klingele.

It's all about the nip

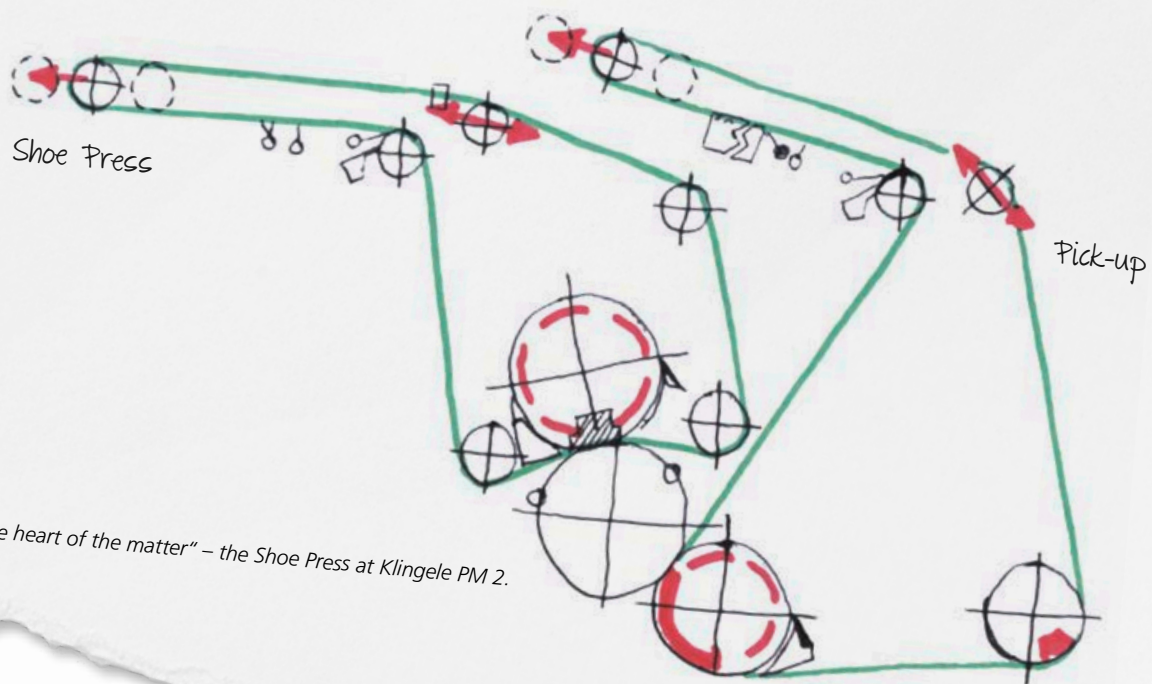
"You can combine the best seam felt with the most up-to-date technology, but this may still not work unless the craftsmanship is also there", Josef puts it succinctly. In order to perform precisely as it should the machine must be **taken apart in the head**, so to speak. And when dealing with applications in the press section it is often said: "The key tip is often in the nip!" Just like here, as we had to **analyse not only the entire press but all other details around it as well, in order to find out which nip configuration had been applied.** An essential job that requires a lot of experience and know-how.

Prepared to the last detail

In this case our analysis of the press design revealed quite clearly: **The SP does not need to be lifted**, in which case the points precisely before and after the nip are crucial. So much for the theory – but what does the practice say? After everything had been discussed we went to the shop floor to check the machine itself. We closely examined all elements of the SP and checked individual components. Our theory was confirmed: **The SP can remain closed!** So far, so good; the concept was agreed, its feasibility established. Back at Heimbach our Product Managers determined the correct seam felt design for the application.



Klingeke, PM 2, PP



„The heart of the matter“ – the Shoe Press at Klingele PM 2.

And now to the felt

When attending the installation, we first went through the individual steps of the procedure with our colleagues from Klingele before going promptly on to the installation itself: **The felt – an Atromaxx.Connect – had of course to be installed in the run direction** – that was clear. The internal air pressure pump was stopped; the press remained untouched, “bones” did not have to be disassembled. The seam felt lay in the unwinding device, ready for installation (photo 1) – of course **absolutely level as flatness is crucial both before entering as well as after the nip!** Especially in the nip outlet, where water deflector and saveall are located, both of which must not be damaged. Thanks to the special finishing of the felt collisions are impossible.



Photo 1: Atromaxx.Connect (still in its' protective wrapping) ready for installation.

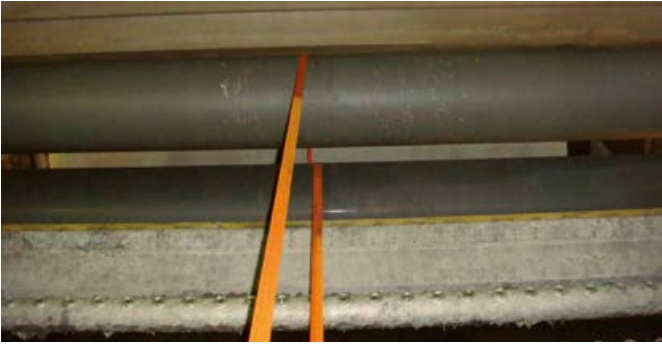


Photo 2: Important – the strap must not be twisted at any point!



Photo 3: Only one buckle in use (curving upwards).



Photo 4: Ready for pulling in.

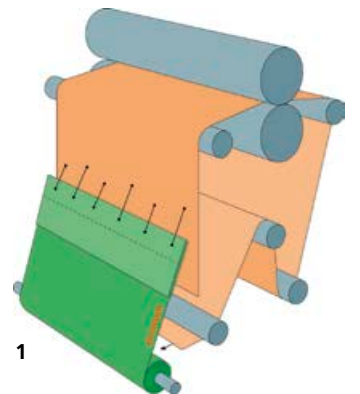


Photo 5: Exit from the Shoe Press – very flat and even.



You can rely on the kite

The adjustable strap lay evenly throughout the entire SP loop; it was not twisted at any point. Moreover, only one single buckle was used: **The felt ran neatly into the nip – and thanks to the installation aid it ran out evenly as well** (photos 2-5). Once we had arrived at the closing position the zipper, and so the seam, was closed and all aids were removed: A completely stress free operation – **in particular thanks to the “kite”, as we call it.** Perhaps loyal readers may remember: It was my very first project, which I was privileged to introduce in my column “Best practice from practical





Great teamwork: Only 50 minutes from preparation to start-up!

KLINGELE PAPIERWERKE

Klinge Paperwerke

Klinge was founded in 1920 and is among the five largest producers of corrugated base and packaging papers in Germany. Two paper mills, twelve corrugated board and eight converting plants in Europe, Africa and Central America form part of the corporate group. Dr Jan Klinge manages the **family business in its third generation**. Klinge is one of four "Blue Box Partners", a European business alliance that makes the following claims: "The optimal supply of corrugated board packaging to their customers. **Everywhere in Europe. From a single source. In any quantity. In all qualities. At any time.**" Approximately 2,400 employees work to this goal, generating total sales of around 620 Million Euros in 2016.

experience" (see edition 01/15, pages 12-14). In that article you were able to find out for the first time why the "kite" significantly simplifies every seam felt installation. It is constantly being developed and optimised, but the basic functionality has never changed.

Convincing result

To make sure everything works smoothly, please always remember: **Patience and attentiveness pay off!** For one thing the adjustable strap must never be twisted;

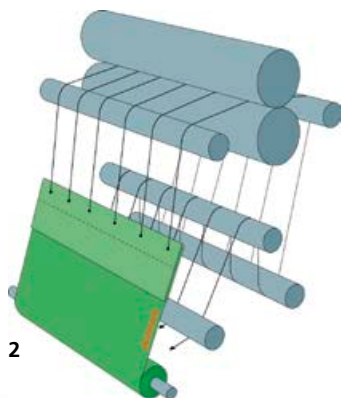
for another the most important parameter when passing through the nip is the distance between shoe and centre roll, a fact that must always be taken into account. The felt must be guided through the **SP with an absolutely consistent speed** in order to keep the tension as even as possible: Because tension variations are just as damaging as pulling too fast. So be sure to avoid a "stop-and-go" installation. Then everything works like a charm! Just as in the case of Klinge, **where the plan not to open the SP came to fruition!**

Happy customer

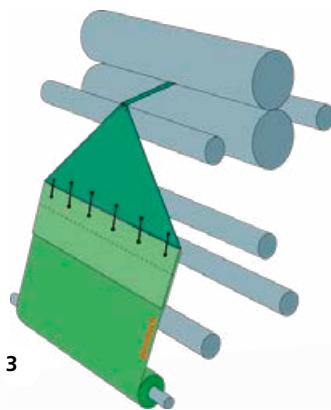
This will certainly not remain an individual case because even if this was a pioneering achievement **similar results are possible with similar configurations**. If the standard procedure takes approximately 2 ½ hours, we only spent 50 minutes at Klinge. Not a bad result for a single process change. A targeted and conscientious response to a customer request has, as usual, paid off. **We would be happy to discuss with you whether your next seam felt change would also be possible with the press remaining closed.** My next project of this kind is already in preparation.

Best wishes,

Your Paper Pete



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Dragon.