



Felt change in Docelles: the bottom felt is prepared for the installation in the press section.

Single NipcoFlex with PrintFlex SP3 Planar in use in Docelles

An unbeatable team

In the summer of 2006, the PM 1 of the Finnish paper maker UPM Kymmene was rebuilt by Voith Paper in the French mill at Docelles. Especially for UPM Kymmene Docelles, Voith Paper developed a felt, which guarantees high dryness with a consistently good machine run. In October of 2008, a speed record was achieved on the PM 1 with the Print-Flex SP3 Planar fabrics.

In October 2008, the PM 1 in Docelles operated at 1215 m/min during the production of the envelope paper “UPM Poste.” A few days earlier, felts of the PrintFlex SP3 Planar type were mounted at both press positions in the press section of the paper machine, combining the proven Planar concept with the Spectra elastomer technology. Planar technology is a unique modular non-woven concept. Individually twined threads are placed next to one another in a layer, without being connected by other threads.

Thanks to the lack of crossing points, they provide the greatest possible contact surface to the paper web and are thus clearly superior to woven structures. For example, a maximum production performance can be achieved thanks to fewer sheet marks, faster runs, and consistently high dewatering.

Spectra technology is a non-woven, non-textile elastomer, which can be highly compressed and provides a long-lasting reset force. The combination of Planar and Spectra operates optimally on sophisticated press positions where high dewatering performance and a compensation of the vibrations are required. Thanks to the Spectra elastomer, disturbances and irregularities in the press are compensated. Since February 2008, PrintFlex SP3 Planar has been used as top and bottom felt. PrintFlex SP3 Planar is a three-layered felt and consists of two Planar layers and one Spectra layer. It is the ideal fabric for the

Single NipcoFlex press from Voith installed in 2006.

Challenge: high dewatering right from the beginning

The installation of the Single NipcoFlex press in 2006 was part of a rebuilding phase in the mill in Docelles. UPM Kymmene had decided to further improve the paper quality of its copy and envelope paper, and to increase the production. In order to meet this challenge, Voith Paper recommended the Single NipcoFlex concept in Docelles. The press became the core of the rebuild. It is one of the most space-saving press sections and suitable for wood-free, uncoated grades. In addition to the new press, hot air dryers and products such as the Voith Drive and ProRelease+ stabilizers were installed.

Voith Paper Automation was involved with the installation of an OnQ EnviroScan and an OnV Felt-View in the rebuild project. Both products were implemented for the measurement of moisture during the paper production process. While the Felt View measures felt moisture, permeability, and felt temperature in the press, the EnviroScan determines the moisture and temperature of the web.

The PM 1 in Docelles was only able to set its speed record after the Single NipcoFlex press had been covered with the PrintFlex SP3 Planar on all positions. The felts used are the key element of the Single NipcoFlex press section. For the Voith Paper’s research team, it was a challenge to

develop a product, which ensured high dewatering from the beginning while at the same time guaranteeing consistent properties throughout the operating time. After numerous tests and test runs on the VPM 6 in the Voith Paper Technology Center in Heidenheim, Germany, the combination of Planar and Spectra technologies finally developed. The innovative PrintFlex SP3 Planar felts and the Single NipcoFlex press operate outstandingly in Docelles, which is also underscored by the speed record.

Infobox

Cooperation for over 30 years

The cooperation between Voith and the UPM Kymmene Docelles mill began in the 1970s. As part of major rebuilds at the time, Voith provided the press section, which was followed in the 1980s by the rebuild of the dryer section.

Shortly before the turn of the century, a DuoFormer D was installed to improve quality. In 2005, Voith Paper received the contract from UPM Kymmene for the rebuild of the PM 1 in Docelles.

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