

TissueFlex – first application in America



*The author:
Ronaldo Parucker,
Voith S.A. São Paulo*

Late in January 2000, the first commercial application of the TissueFlex in the Americas and the second in the world started up successfully. The TissueFlex technology consists of a shoe press against the Yankee dryer surface.

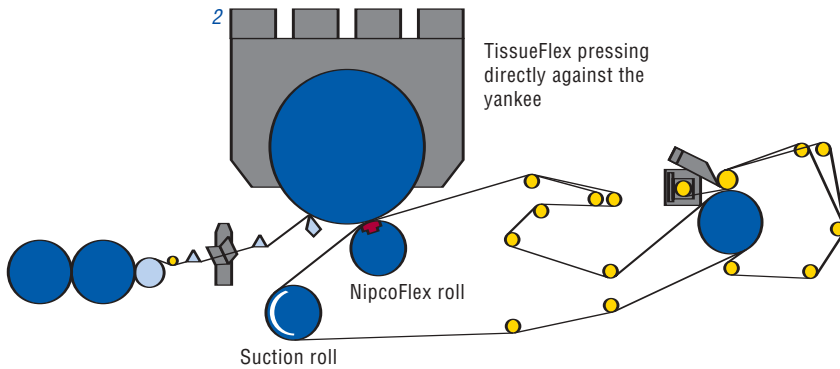
This equipment was installed in Mogi das Cruzes, São Paulo, Brazil, at Companhia Melhoramentos de São Paulo, a long-established Brazilian tissue manufacturer.

Prior to the installation, the machine operated with two presses against the Yankee, at speeds limited to approximately 1,600 m/min. With the application

of today's technology, the same speed can be achieved using only one shoe press against the Yankee.

The entire machine rebuild was completed over a 6 1/2 day shutdown period in which several other services were executed, including the Yankee dryer grinding. The installation of the TissueFlex™ itself took approximately four days.

The objectives of the rebuild, and the basis for return on investment were an operating cost reduction, saving 5% of fiber, and product quality improvement. Now, after a short period of approximately two months, this new technology has reached all the objectives that were set.



After the TissueFlex™ start-up, a bulk increase of approximately 20% was realized, and paper softness was greatly improved. After some analysis, it was also noted that fiber reduction would possibly be even greater than 5%. The conversion of toilet paper, now being manufactured with the new TissueFlex™ technology, presented no problems. The other main product of this tissue machine is napkin. The company now achieves the same package size with 50 units, compared to a package of 60 units before the rebuild.

Even with a basis toilet paper weight reduction of approximately 5%, the diameter of the converted paper roll increased approximately 2.5%.

As to production itself, Melhoramentos points out that after the felt compaction the machine already reaches the same production as before the rebuild. However, they feel that the next target will be to determine the best felt for this new technology, since the felt compaction time significantly increased.

There was a small increase in steam consumption with the production of papers with a higher basis weight. However, it is believed that this consumption will be significantly reduced through the use of the right felt. Consideration has to be given to the fact that the machine now operates with only one press, compared to the two presses against the Yankee be-

Fig. 1: General view of TissueFlex installation at Companhia Melhoramentos de São Paulo, Brazil.

Fig. 2: TissueFlex technology for tissue.

Fig. 3: Tissue machine Melhoramentos Papéis S.A.

Fig. 4: TissueFlex control panel.



fore the rebuild. The consumption of water, vacuum and fuel for the hood remained unchanged. Total drive power consumption remained the same, the suction roll and the Yankee consume more power, but, on the other hand, there is no longer any blind drilled press.

Another important issue at Melhoramentos is that some items requiring frequent maintenance were eliminated, such as the suction press and the rolls for the second press. Previously, the press rolls had to be exchanged or serviced every four months, due to problems with the rubber covers (plugged shell drillings, total cover loss etc.), causing long down time, which resulted in lost production. With the installation of the new TissueFlex™ technology, the mill feels that these problems have now been solved.

Even considering the relatively small amount of time that the mill has been using the new TissueFlex™ technology, Melhoramentos is pleased, since the transition phase, as well as the learning curve was very short and the objectives set for this rebuild were fully achieved.

