Extending The Press Section Lifetime Through A Mini Shoe Press Rebuld

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ABSTRACT

There are several considerable benefits that support a press section rebuild by replacing a conventional roll press nip with a shoe press. A shoe press will increase dryness after the press section by several percentage units compared to a conventional roll press. The increased web dryness yields numerous significant benefits better runnability in the beginning of the dryer section, higher speed, energy savings and greater production on machines with limited drying capacity, increased web strength and improved moisture profile.

The press section rebuild scope greatly influences the investment cost. By minimizing the changes to the existing frame structure required to install a shoe press, there will be fewer costs related to machinery, civil work and crane capacity. Machine downtime will be shorter and the machine will go from paper to paper sooner. Investment payback time will also be shorter as line production will quickly surpass the pre-rebuild level.

A new mini shoe press rebuild has been introduced for small- and medium-sized paper and board making lines. This rebuild solution makes it possible to boost production with a press rebuild with minimal changes to the press section geometry. In a standard shoe press rebuild, the linear load varies between 600 and 1,000 kN/m, and the nip length between 180 and 290 mm. The mini shoe press rebuild applies a shoe roll with a nip length of only 90 to 120 mm and linear load of 250 to 400 kN/m.

Shoe press technology is a standard solution today, with hundreds of successful references worldwide. Its benefits are now within easy reach of a larger group of paper and board makers through the mini shoe press rebuild.

This paper will discuss the features of the mini shoe press rebuild, and hybrid shoe roll technology and its benefits.

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