



# Make the invisible visible

## QualiFlex QView

**A press sleeve is subject to extreme conditions in the nip. While web breaks, threading, paper jams and lack of lubrication are rare in papermaking, they are unfortunately real occurrences. Small invisible damage inside the press sleeve that is not visible from the outside can occur and lead to unscheduled paper machine downtimes. Our press sleeves withstand these conditions.**

QualiFlex QView is designed to make such problems visible. This special technology is unique and allows action to be taken before unplanned machine downtime occurs.

The special color of the QView press sleeve enables the inside of the press sleeve to be visible from the outside. A small amount of a special fluorescent dye is added to the lubrication

oil, which has no negative effect on the oil quality or viscosity. Irregularities of the oil film can reduce the running times of press sleeves. In case of even the smallest damage to the press sleeve, the oil enters the sleeve structures. The oil that has penetrated the press sleeve is made visible with UV light. During further operation, the damage/cracks in the polyurethane of the press sleeve become larger and larger due to the enormous stresses in the nip and more and more oil penetrates the sleeve structure.

The fluorescent oil makes the damage visible from the outside and can be checked or observed, so that a press sleeve change can be planned to avoid unplanned downtimes. The fluorescent dye makes even the smallest oil leaks visible.



## Benefits

- + Elimination of unplanned paper machine shutdowns
- + Inspection and real predictive maintenance opportunity
- + No paper contamination with oil due to early damage recognition (no leakage)
- + Perfect crack, hydrolysis and abrasion resistance
- + Excellent impact and chemical resistance

## Field of application

QView is the preventive maintenance solution for board, packaging and pulp paper machines. During a shutdown, the shoe press and QualiFlex QView can be inspected with a UV light. Any damage to the structure of the press sleeve becomes visible from the outside. Even the most minimal oil leaks appear. With QView, unplanned downtime can be avoided, resulting in a more efficient papermaking process.

## Successful results

QualiFlex QView is already used on some board and packaging paper machines worldwide. In the development of QualiFlex QView, press sleeves as well as the fluorescent dye were subjected to an intensive and extensive series of tests. On the NipcoFlex test rig, the fluorescent dye was added to the oil system. In one of the numerous tests, a hole was drilled on the inside of the press sleeve to simulate an oil leak. The effect of the dyed oil penetrating into the yarn reinforcement inside of the press sleeve is clearly visible.

## Mechanism of a typical oil leakage

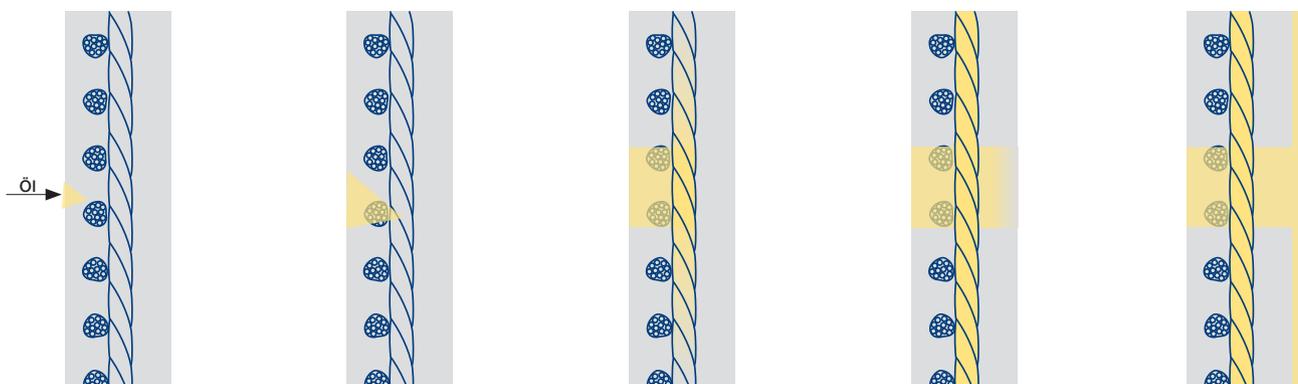
Step 1: A small damage occurs on the inside of the sleeve.

Step 2: The damage becomes bigger, oil can penetrate into the polyurethane and reach the yarn reinforcement.

Step 3: Even more oil is absorbed by the yarn reinforcement.

Step 4: The damage becomes even bigger.

Step 5: Now the oil has reached the outside of the sleeve.



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