REFERENCE CASE

NoWear™

– ceramic low friction coating from SKF

PULP & PAPER

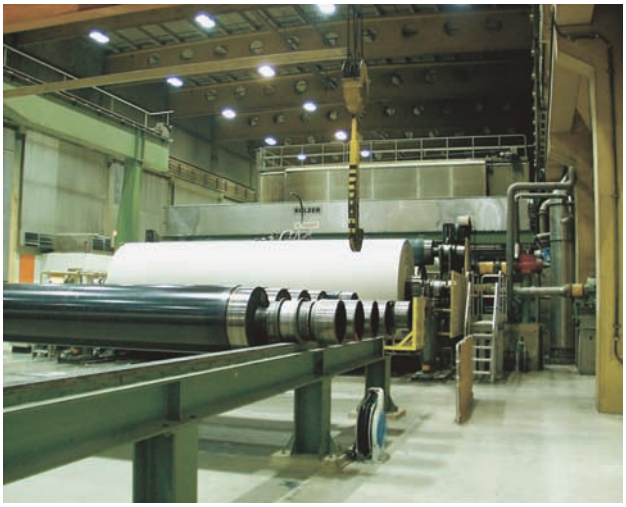
NoWear™ eliminates smearing in soft calender bearings

Stora Enso Magazine Paper, located near Karlsruhe in Germany was one of the early adopters of SKF's new surface technology NoWear™. In January 1997 these wear resistance bearings were implemented in the soft calender for PM7. This has enabled them to reduce not only scheduled stops, but also expensive breakdowns.

Paper mills often experience problems in the calender section where the paper is glazed between rolls. The bearings in these rolls need to operate in an environment of varying loads, ranging from virtually zero to full load. During loading rolling elements in the bearing are forced to accelerate quickly which can give rise to smearing problems. Smearing is a serious form of wear and will lead to failure. Consequently the bearings have to be replaced, which involves substantial costs not only for bearings but also for personnel.

At Stora Enso Magazine Paper the standard bearings used before had to be replaced about once a year. Using the NoWear™ bearing they have now been able to run the machine more then three years without any bearing problems. Since the calender rolls are taken out for regrinding every third year the bearings now outlive the rolls. One result of this is that scheduled stops can be cut in three. Another important aspect is that there have not been any unplanned stops since NoWear™ was implemented. There is a large potential for savings here, as the cost of lost production at a breakdown is approximately USD 10 000 per hour.

NoWear™ is a coating especially adapted to bearings and prevents failure where conventional bearings cannot e.g. in applications suffering from wear, poor lubrication or other difficult conditions. The coating can successfully be applied in wide range of bearing applications running in demanding environments.



PM7 at Stora Enso Magazine Paper

Operating conditions of PM7:

Design speed:	1 300 m/min
Paper grade:	Newsprint
Trim width:	7,2 m
NoWear™ position:	Soft calander rolls
Bearings:	232/530 CAK/C4W33L5DA
Lubrication:	Mobil SHC 630
Normal load stack 1:	100–120 kN/m, C/P≈30
Normal load stack 2:	30–40 kN/m, C/P≈100

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