

Case Study

Special Hybrid Bearings



REVOLUTIONARY THINKING

INDUSTRY

Paper Mill

PROBLEM

A Paper Mill manufactures a variety of office and specialty paper grades. 'Calendering' polishes the finished paper sheet as it feeds off the paper machine – the calendering rolls are heated with hot oil and, to achieve this, rotary joints are fitted to the end of the rolls to seal the connection between the piping and the rotating roll. Each rotary joint has two ball bearings. Over time, in order to achieve the desired finish, operating temperatures have increased notably and this has resulted in premature bearing fatigue and failure. Operating life had reduced to between 1 week and 3 months.



APPLICATION

Calendering Process

SOLUTION

Working with on-site engineering, BSC & NSK Engineers established that the solution would be to specially manufacture a hybrid bearing using conventional bearing races and cages with ceramic rolling elements. NSK Japan were able to fit this special manufacture into their production schedule and within a few months the hybrids were up and running.

BENEFIT

Total Production Downtime Savings >\$250,000.00 PER ANNUM