

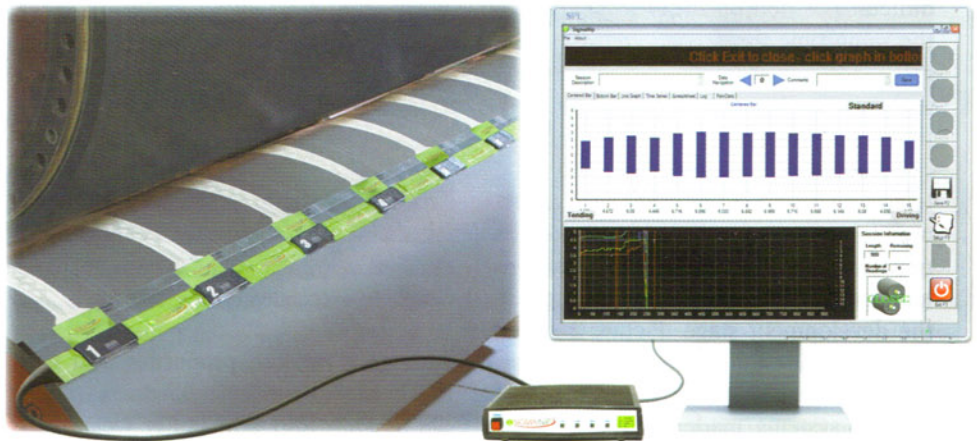
Sensor Products Inc.

## Introduction of Sigma-Nip – a new roll alignment diagnosis

Sensor Products Inc., a world leader in the manufacture and distribution of tactile pressure sensing solutions from New Jersey, USA, introduces the trademarked Sigma-Nip, a technologically advanced electronic nip analysis system which measures roller profiles and diagnoses roll alignment with unprecedented speed and cost-effectiveness. This sensor system, which records nip width, renders obsolete time-consuming and inexact tools such as carbon paper and embossed foils.

When Sigma-Nip is used, loading problems, skewing and crown deficiencies are quickly exposed. According to the supplier, it is more accurate, more durable, and has a more powerful software user interface than any of its predecessors. The system consists of a chain of sensor elements and Windows-based software. The new sensors have been improved to withstand repeated high pressures and temperatures as well as routine exposure to grease and solvents. When placed between two contacting rollers, the sensors capture data and ultimately record and assimilate nip width readings on a laptop while it is being viewed. Adjustments to rollers are made in real time while the sensors are in the closed, (non-rotating) nip. Easy-to-interpret statistical data and graphical displays, which are being transmitted wireless or through an USB port, update continuously as technicians perform their tests and adjustments.

Taking only minutes to deploy across the roller face by just one person, Sigma-Nip is useful for ongoing maintenance, as well as during equipment setups and



Detailed analysis of nip condition

shutdowns. As a quality control tool, it facilitates evenly loaded roller sets that are much less likely to cause web breaks and costly downtime. It improves web control and print quality by reducing uneven paper pulling, which can lead to sheet walking, wrinkles, jams and mis-registration. By virtue of routine tests, the system allows the user to greatly extend blanket life.

“Sigma-Nip has come a long way from concept to being a reliable, easy-to-use nip profile measuring tool,” according to Michael Stoltz, Senior product manager, Metso Paper USA. His company partner with Sensor Products to develop the system. “Being able to save and review the entire real-time data from nip closing to nip opening is extremely useful, however, the ability to correlate accurate nip width data to roll deflection is an exceptional benefit.”

Being designed for maximum versatility, the system is portable and comes with

its own carrying case. Depending on the number of sensors ordered, the same sensor chain can be used to measure different sized rolls. Nip widths from 0.38 to 22.9 cm can be measured, and pressures from 2.8 to 211 kg/cm<sup>2</sup> can be withstood, making Sigma-Nip potentially usable throughout the machine. Large pulp and paper rolls, small converting rolls as well as calendar stacks are all potentially measurable by Sigma Nip.

Minimal computer knowledge or training is needed since the system prompts users through the few steps needed for installation and set up. Software enhancements include a Comparison Mode, where up to three nip width readings can be viewed simultaneously, and an Alignment Tool, which instantly draws a line to indicate nip width variations.

Reaction to Sigma-Nip, which has been tested and installed in web-based environment around the world, has been very favourable. ■ )