

## “Securing a Production Process through Nip Measurements”

Un-parallel rollers/cylinders or incorrect absolute pressure can greatly influence process critical nips. Machine builders/ roller manufacturers and process/application owners are in different ways interested in the nip characteristics of process critical nips. Industrial roller nips can be divided into processing nips, where the intent is to permanently modify the web or a fluid in a targeted way, or transport nips where the intent is not to modify the properties of the web in a permanent way. The presentation will describe definitions like repeatability and accuracy as well as the basic physics of nips and how they change with hardening, softening, swelling or shrinking of the roller rubber. Also, a nip, how is it formed? Line force, total force and average nip pressure. Force and pressure. What are the mathematical calculations? Additionally calculated average nip pressure and measured peak pressure will be discussed and mathematical formulas and general guidelines will be presented along with measuring methods.