Print Media Americas.
Quality Printing and the Chemistry Behind the Print.

Overview
Optimal inking and dampening settings are the prerequisites for excellent print quality. Operators will learn the chemistry behind the interaction of ink, water, rollers, plates and how to maintain this balance within narrow tolerance between production.

Introduction
The dampening unit's primary task is to apply a uniform, thin film of dampening solution to the image-free areas of the printing plate. When the plate is inked up, the inking rollers always take up some of the dampening solution — one part of this solution is deposited on the ink layer, while the other emulsifies with the ink.

Changing the dampening solution quantity in the inking unit (increasing or decreasing the amount of available solution) will change the rheological behavior of the ink, thereby affecting the inking process. The results are changes of ink and screen density in the printed image.

Topics
- Understanding and Solving Faults
  - Color fluctuations in the print that change the overall impression of the image (on parts of the sheet or the entire sheet)
  - Changes in color intensity
  - Tendency to scumming – the ink is over emulsified
  - Ink mist, ink splashes – incorrect ink adhesion
  - Ink acceptance and ink transfer problems
  - Coating buildup on the blanket
  - Registration problems due to paper distortion
  - Negative influence on ink drying



- Testing of:
  - Conductivity (µS)
  - RO water
  - pH
  - Calcium content
- Importance of Roller Conditioning
- How to Set Dampening Rollers
  - Checking the condition of metering roller
- Roller Check Assistant
  - How to set rollers without needing to remove them
- Dampening Test Form
  - Maximize skew settings and fine tune pan roller settings

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