

PITA Training & Conferences

Mark Smith presents. . . .

"PITA's Introduction to Modern Wet End Chemistry"

Everything you need to know about Colloid Chemistry on a Paper Machine

10th & 11th November 2026 @ J36 M6 Meeting Rooms

Paper
Industry
Technical
Association



Mark gained a PhD in Colloid Science from the University of Bristol and then spent a few years in the oil industry before joining and working (for over 30 years) in Paper Industry. Having gained experience at McMillan Bloedel Research, Mead Central Research, UK Paper and Omya, he has been involved in problem-solving around Wet End Chemistry on Paper Machines around the world. By measuring colloidal properties and using these measurements, it is possible to solve a wide range of papermaking issues.

Course Objective:

Gain an understanding of how colloidal materials can be used and controlled to give you desired paper properties and improved paper machine efficiency.

Day 1—Morning:

Understanding & measuring colloidal properties

- *What are colloidal materials*
- *How colloidal systems are stabilised & destabilised*
- *Measurements of colloidal properties & other related chemical properties*
- *Use of these measurements to improve paper machine operations*

Day 2—Morning:

Use of colloidal material to give desired paper properties

- *Strength additives*
Nanocellulose, starch, wet strength & dry strength additives
- *Shade control, Dyes & DBAs*
- *Surface modifications additives*
Wet end size, size press & coatings

Day 1—Afternoon:

Use of inorganic colloidal solids - Fillers

- *Type of fillers used in paper making*
- *Effect of fillers on paper properties & paper making*
- *Recent developments to maximise filler use*

Day 2—Afternoon

Control of colloidal material to improve paper machine efficiency

- *Control of undesirable colloidal materials*
Pitch, scaling & anionic trash
- *Improve retention of desired colloidal material*
Retention & drainage aids
- *Control of microbiological contaminants*
- *Yankee dryer chemistry*

Only £817 (plus VAT) per person, including full course notes, refreshments & six months complimentary membership of PITA



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PITA Members may get £100 discount on this price—contact the office to confirm