

PITA Training & Conferences

Paper
Industry
Technical
Association

Mark Smith presents. . . .

“PITA’s Introduction to Modern Wet End Chemistry”

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

11th & 12th November 2025 @ J36 M6 Meeting Rooms



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 & de-stabilised
Measurements of colloidal properties & other related chemical properties
Use of these measurements to improve paper machine operations

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—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 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 £795 (plus VAT) per person, including full course notes, refreshments & six months complimentary membership of PITA

For further details or to book your place on this course, contact Daven in the PITA Office



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