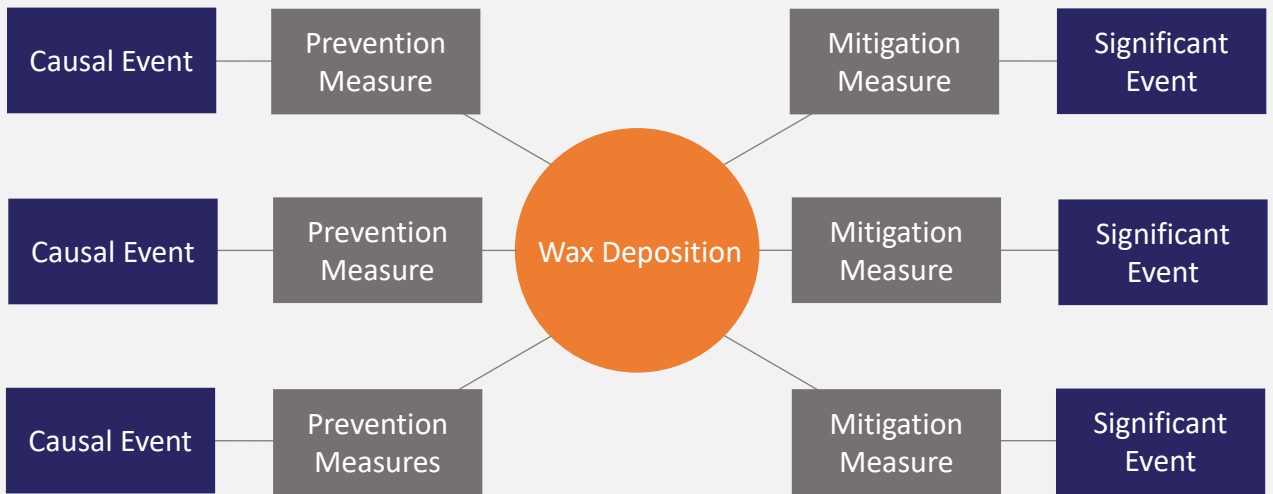


## WAX MANAGEMENT

## TRAINING COURSE

Learn from flow assurance experts and utilize the latest technology and methods to implement an effective and comprehensive Wax Management System



AIE's 2-day Wax Management training course can make a significant and lasting difference to your asset performance

- ANALYSE wax precipitation and temperature measurements
- REVIEW wax deposition modeling and hydrodynamic effects
- LEARN key issues associated with wax and how to identify and mitigate them
- IMPLEMENT optimized wax management control strategy
- UNDERSTAND methods for wax prevention and inhibition
- COMPLETE a series of wax-related case studies
- ENGAGE with various technologies
- NETWORK with a variety of influential personnel

## COURSE OVERVIEW

Our Wax Management Training Course is a comprehensive and practical program designed to equip attendees with essential knowledge of the entire toolbox to effectively manage wax-related challenges.

It covers the spectrum of the theory behind wax deposition through to the practicalities of developing an optimal control strategy based on prevention, inhibition and remediation, all underpinned by surveillance.

By course completion, attendees will be able to optimize their wax management strategy, engage more effectively with their chemical supplier, and minimize the risks and costs associated with wax deposition in their assets.

## WHO SHOULD ATTEND

This training course is designed for professionals working in the oil and gas industry who are involved in the exploration, production, transportation, and processing of hydrocarbons.

The program is ideal for engineers, technologists, field operators, production chemists, and managers responsible for maintaining the integrity and efficiency of wells, pipelines, equipment, and facilities in the presence of paraffin wax.

### DAILY PROGRAM SCHEDULE

- 09:00 - 10:30 Morning Session 1
- 10:30 - 11:00 Morning Break
- 11:00 - 12:30 Morning Session 2
- 12:30 - 13:30 Lunch Break
- 13:30 - 15:00 Afternoon Session 1
- 15:00 - 15:30 Course Roundup and Finalization

### COURSE FACILITATOR DARIO FRIGO

With over 30 years in the oil and gas industry, Dr. Dario Frigo excelled as a production chemist, technologist, and engineer. He achieved the role of Global Discipline Lead for Production Chemistry, overseeing training and mentoring.

His 87 publications and active engagement with SPE showcase his expertise in physical and biological sciences, including chairing symposia and reviewing papers for SPE journals.

### FLEXIBLE TO MEET YOUR REQUIREMENTS

AIE provides training courses tailored to our clients' unique operating environments. We also offer a comprehensive range of operational risk management services. Please contact us with your enquiry at: [training@aigroup.org](mailto:training@aigroup.org) or [info@aigroup.org](mailto:info@aigroup.org) To view our full range of services, visit us on: [www.assetintegrityengineering.com](http://www.assetintegrityengineering.com)

# TRAINING COURSE AGENDA

## DAY 01

### Module 1: Introduction to Wax Management

Overview of paraffin wax, the reasons for wax precipitation, temperature definitions, measurement techniques, pressure dependence, and common issues associated with wax in the oil and gas industry.

- Definition of paraffin wax
- Issues associated with wax
- Reasons for wax precipitation
- Key modelling parameters – the Wax Appearance Temperature (WAT), Wax Disappearance Temperature (WDT), etc.
- WAT determination - its limitations and pressure dependence

### Module 2: Wax Deposition Modelling

Sheds the light on wax precipitation and deposition modelling

- Precipitation modelling
- Deposition modelling
- Effect of water cut
- Hydrodynamics and multiphase-flow effects
- Surface properties and impact on deposition

### Module 3: Wax Management System Elements

Covers the essential elements of a comprehensive wax management control strategy and introduces the Bowtie Diagram as a practical that strikes the optimal balance between prevention & remediation.

- Elements of a control strategy
- The Bowtie Diagram and its application

## DAY 02

### Module 4: Wax Prevention and Inhibition

Explores various methods for preventing wax deposition

- Thermal management system for wax prevention
- Passive prevention methods
- Active prevention methods
- Chemical inhibition for wax control
- Wax-control chemicals and wax inhibitors
- Economics of chemical inhibition

### Module 5: Wax Remediation

Focuses on techniques used for wax removal and addresses wax build-up and blockages

- Wax removal methods
- Physical removal methods and pigging
- Thermal removal methods
- Chemical removal methods
- Thermochemical removal methods

### Module 6: Wax Surveillance

Describes the critical role of surveillance in managing wax-related issues and the three golden rules of production chemistry

- Role of surveillance in wax management
- Analysing production trends
- Production fluids analysis
- Deposit analysis and profiling
- Analysis from pigging operations
- Other (niche) wax control methods
- Three Golden Rules of Chemical Selection

# REGISTER NOW

Please complete the below form in full using **BLOCK CAPITALS**.

One completed form is required per delegate. Booking forms and any enquiries should be emailed to [training@aiegroup.org](mailto:training@aiegroup.org).

Delegates can also register direct via our website: <http://www.assetintegrityengineering.com/training/book-now/>

## DELEGATE DETAILS PLEASE USE BLOCK CAPITALS

TITLE (MR, MS, MRS, DR.)

FIRST NAME

LAST NAME

YOUR DESIGNATION

COMPANY NAME

DEPARTMENT

NAME OF DEPARTMENT HEAD

NAME OF TRAINING MANAGER

ADDRESS

COUNTRY

POSTAL CODE

EMAIL

TELEPHONE

FAX

SIGNATURE

I HEREBY AGREE TO  
AIE'S TERMS AND  
CONDITIONS FOR THIS  
TRAINING COURSE

DATE

## TRAINING PRICE

COURSE TITLE

Wax Management

EARLY BIRD PRICE

1650 USD\*

NORMAL PRICE

1950 USD

Prices quoted are per delegate attending. Team discounts are available on request.

Please note: accommodation and travel costs are not included in the course fees.

\*The Early Bird Price expiry date is as per the training schedule shown on our Online Training Courses webpage (<https://www.assetintegrityengineering.com/training/online-training-courses/>).

## TERMS & CONDITIONS

Payment must be made in full at time of registration. Registration will only be confirmed once payment is received in full and notification is received back from AIE. All bank charges to be borne by the payer. All early bird bookings must be paid in full before the offer date closes, otherwise course fees will be charged in full and discount will be lost. It is the responsibility of the attendee to ensure that they have an adequate internet connection as well as audio and microphone facilities.

### PAYMENT METHOD

Payment must be made by direct bank transfer. An invoice will be submitted within 5 days of making the booking which will include all bank account and transaction details.

### CANCELLATION & POSTPONEMENT POLICY

Payments are non-refundable in the event of cancellation. However, substitute delegates are permitted at any time by providing advance notice to AIE.

In the event that AIE postpones the course and the delegate is unable or unwilling to attend on the rescheduled date, a full refund of monies will be provided. This repayment is limited to the course fees only and does not cover travel and accommodation expenses.

AIE shall assume no liability in the event of this conference being cancelled due to any unforeseen or uncontrollable circumstances.