

**Training Title**

**FUNDAMENTALS OF PIPELINE DESIGN AND HYDRAULIC MODELING**

**Training Duration**

**5 days**

**Training Date**

REF ME056	Fundamentals of Pipeline Design and Hydraulic Modeling	5	14-18 July 2025	\$6,500	London, UK
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In any of the 4 or 5 star hotels. The exact venue will be informed once finalized.

**Training Fees**

- \$6,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

Language: English

**TRAINING DESCRIPTION**

This course provides an overview of a new pipeline hydraulics modeling capability that eliminates the need to employ separate third-party tools for pipeline hydraulics. There are many benefits to modeling the entire gathering and production system (be it offshore, onshore, topside, etc.) within one tool, including not only being able to optimize the design from a capital and energy perspective, but also ensure the overall safety of the system.

**OBJECTIVE**

- **Understanding Fluid Behavior:** Analyzing how fluids flow and react under various conditions.
- **Hydraulic Analysis:** Evaluating pipeline performance by calculating pressure drops, flow rates, and system efficiency.
- **Pipeline Design:** Choosing appropriate materials, diameters, and configurations for safe and durable systems.
- **Optimization:** Minimizing costs while maintaining performance and reliability.
- **Hydraulic Modeling:** Simulating system behavior under different conditions to predict performance.
- **Flow Assurance:** Preventing issues like blockages and ensuring continuous flow.

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- **Safety and Compliance:** Designing for safety, regulatory adherence, and environmental impact.
- **Maintenance and Monitoring:** Planning for ongoing system maintenance and condition monitoring.

### WHO SHOULD ATTEND?

Engineers new to the pipeline industry or those seeking practical knowledge. Also, for electrical and civil engineers working on pipelines. Participants must be able to perform engineering-level computations.

### TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivate everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on a daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

### COURSE CONTENTS

Need for Accurate Modeling of Hydraulics

Overview of Pipeline Modeling Solutions

The Basics of Flow Simulation

- Flow Correlations [www.definettraining.com](http://www.definettraining.com)
- Dynamic Modeling
- Flow Assurance

Aspen HYSYS V8 for Usability

Aspen Pipe Segment Model

Aspen HYSYS Hydraulics Sub flowsheet

Uses of Aspen HYSYS Hydraulics Sub flowsheet

The Bigger Picture

Conclusion

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**NOTE:**

**Pre & Post Tests will be conducted.**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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