



# The Performance Pipe Engineering Manual

## First Edition

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# Preface

The Performance Pipe Engineering Manual consists of three books for clarity and ease of use. The set is intended to provide a fundamental view of polyethylene as an engineered piping material, general information about polyethylene piping as an engineered piping system, and general principals and guidelines for installing and operating polyethylene piping systems.

Each subsequent book relies on information from its predecessor. Readers, especially those who are not familiar with polyethylene piping, are urged to start at the beginning of the manual to first familiarize themselves with the unique properties of the polyethylene material. This helps avoid confusion with other piping materials that do not perform the same.

Successful piping system design, installation and operation begin with selecting the appropriate materials and piping products for the application. Like all piping materials, polyethylene piping will perform best when it is suitably applied, designed within its capabilities, properly installed and operated as designed.

## ***Book 1: Engineering Properties***

Book 1: Engineering Properties provides general descriptions of Performance Pipe polyethylene piping products and various applications, describes polyethylene material, its properties and material standards, and describes some environmental effects on polyethylene.

## ***Book 2: System Design***

Book 2: System Design discusses the design of polyethylene piping products, fluid flows in polyethylene piping, thermal effects, above grade supporting, buried pipe design, groundwater flotation effects, and water environment design considerations.

## ***Book 3: System Installation***

Book 3: System Installation examines issues related to handling and storage, joining and connections, installation below grade, on the surface, above grade, underwater, and floating, inspections and tests, and guidelines for pipeline operations.

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