PetroSkills

Fluid Flow

MODULE

About the Skill Module

This skill module discusses the flow of fluid through a pipe segment. Single phase and multiphase flow are explored. In addition, simple correlations are used to estimate important fluid flow parameters.

Target Audience

Production and processing personnel involved with natural gas and associated liquids, to acquaint or reacquaint themselves with gas conditioning and processing unit operations. This course is for facilities engineers, process engineers, senior operations personnel, field supervisors, and engineers who select, design, install, evaluate, or operate gas processing plants and related facilities. A broad approach is taken with the topics.

You Will Learn

Participants will learn how to:

- Explain Bernoulli's equation, including how to estimate and apply the friction factor
- Describe the difference between Newtonian and non-Newtonian fluids
- Explain economic pipe diameter and describe typical velocity and pressure drop guidelines for sizing piping systems
- Calculate fluid velocity and estimate the pressure drop in a plant piping system using simple correlations
- Describe common gas transmission pipeline flow correlations and their applications
- Describe the parameters that affect heat transfer for various piping systems
- Describe the most common flow regimes in multiphase flow systems
- Explain the difference between liquid hold-up and liquid volume fraction and list factors that affect their value
- Describe common slugging mechanisms and list methods to limit or reduce the impact of slugging events
- Describe erosional velocity and explain how it can be estimated for various systems

Product Details

Categories: Midstream

Disciplines: Gas Processing

Levels: Basic

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4 hours (approx.)

$395.00