CH402 CHEMICAL ENGINEERING PROCESS DESIGN

Lesson 2: Piping, Part 2

Read: Pages 485-507

Problems: 12-1, 12-2 (Problem Set 1)

Objectives (Cadets will be able to):

1. Apply the mechanical energy balance to calculate the power needed to drive fluid flow in pipes.

2. Determine frictional losses in pipe flow.

3. Determine equivalent length from frictional losses for pipe fittings.

4. Determine cost of piping and associated equipment and materials from cost correlations.

Definitions:

Fanning friction factor, Reynolds number, cost correlations, optimum economic pipe diameter

Cadet Notes: