CH402 CHEMICAL ENGINEERING PROCESS DESIGN

Lesson 8: Heat Exchanger Types and Costs

Read: Pages 669-694

Problems: 14-9 (Problem Set 4)

Objectives (Cadets will be able to):

1. Describe the physical layout and parts of the different types of heat exchangers.

2. Calculate overall the overall heat transfer coefficient from local heat transfer resistances (as in Lesson 7).

3. Implement the steps in the heat exchanger design procedure.

3. Determine costs of different types of heat exchangers.

Definitions:

Fixed tube, floating head, U-tube, one shell pass, split flow (shell-side), cross flow (shell-side), divided flow (shell-side), kettle-type reboiler, scraped surface heat exchanger, spiral heat exchanger, gasketed and welded head heat exchanger, compact heat exchanger, air-cooled heat exchanger, evaporator

Cadet Notes: