CHAPTER 2

EQUIPMENT DESCRIPTION

DESCRIPTION AND SPECIFICATIONS OF SYSTEM COMPONENTS

For purposes of discussion, the system is broken down into the following segments as shown on the color version of Piping and Instrumentation Diagram 627-D-9809.

A. Evaporator Equipment (not colored) - Evaporator Vessels, Pumps, Heat Exchangers and protective devices.

B. Feed - (Yellow) - From Terminal Point A through the Feed Heat Exchanger into the bottom of Effect #1.

C. Intermediate Concentration Liquor - (Yellow-Red) - All the liquor recirculating in Effects #1, #2, #3, #4 and #5 and the transfer lines from these five effects to the preceding effect.

D. Product - (Red) - All the liquor recirculating in Effect #5 and from the discharge of Effect 5 recirculation pump to the product flash tanks and through one of the product pumps to Terminal Point B1 or B2.

E. Steam - (Light Green) - From Terminal Point E into the steam chest of Effect #1.

F. Condensate - (Green) - The condensate (condensed steam) from Effect #1 is normally pumped from the condensate level tank to the condensate flash tank and is then pumped to Terminal Point D. A small portion of the condensate is recirculated through the desuperheater.

G. Vapor - (Light Blue) - Water vapor generated in each effect from the liquor flows through the vapor ducting into the steam chest of the subsequent effect, through the tubes. Vapor generated in Effect #5 flows to the Main Condenser. Vapor that hasn't condensed in the Main Condenser is vented to the Vent Condenser. Uncondensed vapors are vented to the vacuum pump or ejector system.

H. Acid Condensate - (Blue) - Acid Condensate (condensed vapor) is produced in the tubes of Effects #2, #3, #4, and #5 and in the Main Condenser. Acid Condensate produced in Effect #2 flows from the waterbox of Effect #2 to the Steam Chest of Effect #3. Acid Condensate from Effect #3 flows into the Steam Chest of Effect #4. Acid Condensate from Effect #4 flows into the Steam Chest of Effect #5. Acid Condensate from Effect #5 is flashed