

system. Vapor from the fifth effect goes through wire mesh pads to the main condenser. Any vapor that doesn't condense flows to the vent condenser and the remaining vapor and noncondensables go to the vacuum system.

H. ACID CONDENSATE - (Blue)

Acid condensate is produced in the tube bundle of effects 2, 3, 4 and 5 and in the condensers. The acid condensate produced in effect 2 is piped through a loop seal, which prevents vapor from flowing through the acid condensate pipe, into the steam chest of effect 3 where it flashes. This flash heat that is recovered improves the system economy. The combined acid condensate from effects 2 and 3 flashes in the steam chest of effect 4 and the combined acid condensate from effects 2, 3 and 4 flash in the steam chest of effect 5.

The combined acid condensate from effects 2, 3, 4 and 5 is flashed to the Main Condenser in the Acid Condensate Flash Tank. Level is controlled (Loop 10) to maintain sufficient NPSH for acid condensate pump as in Loop 9. Acid condensate also drains from the Main and Final Condensers into the tank.

Acid condensate flow is measured by a vortex meter FT-10 and is recorded on FR-10. Acid condensate is then utilized as washwater or is discharged from the system at Terminal Point C.

I. DEMISTER WASH LINES - (Dashed-Blue)

Acid condensate is used for cleaning the entrainment separator pads. It is pumped from acid condensate pump to each of the five effects and the product flash tanks. The pads are washed regularly according to a preset frequency by the DCS. Allowing the pads to become dirty and plugged results in higher vapor velocities through the remaining open areas leading to "blow-through" of liquor droplets during normal operation. Such blow-through will cause acid condensate contamination and must be avoided. To ensure adequate acid condensate flow occasionally make a visual check of the pad wash through the observation windows.

J. COOLING WATER LINES - (Not Colored)

Cooling water enters the system at Terminal Point G. The cooling water flow (normally about 3550 gpm) then splits into four streams. The majority of the flow (about 3200 gpm) goes to the Main Condenser where vapor from the last effect is condensed. Streams are also sent to the Seal Water Trim Cooler (about 150 gpm), the Vent Condenser (about 200 gpm), and the Ejector Condensers (about 300 gpm when operating). The streams