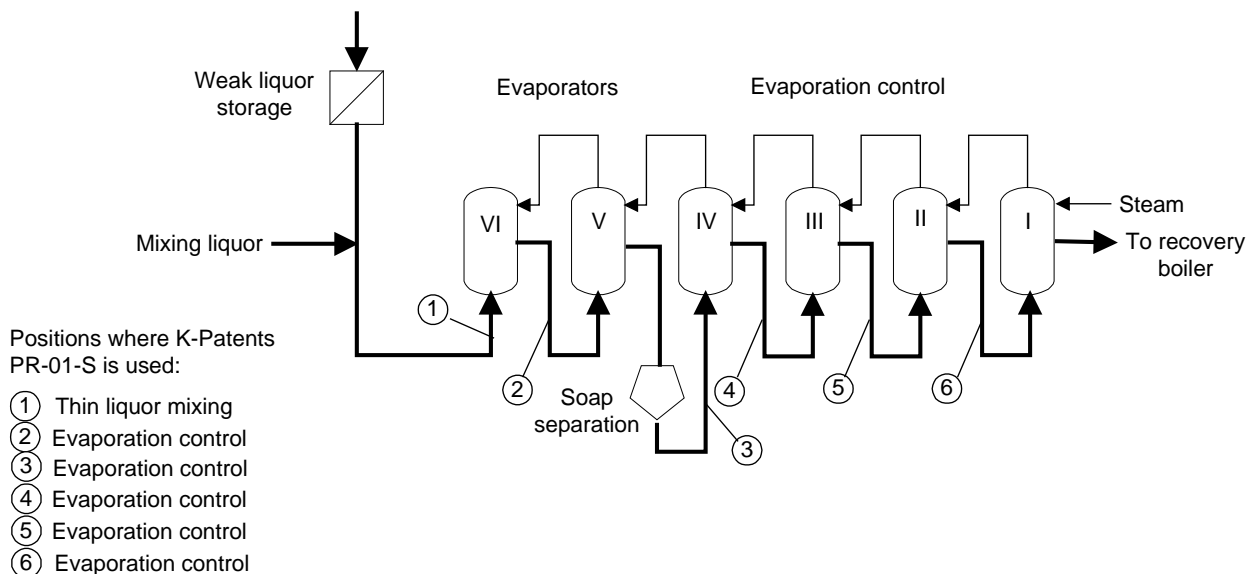
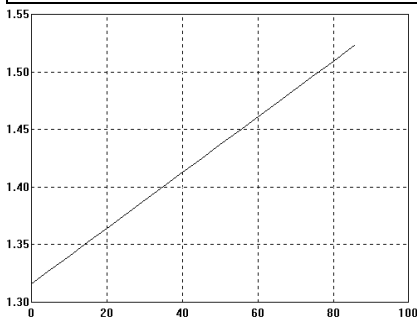


Sulphate Pulp: Evaporation



Black Liquor

Chemical curve: R.I. per Conc% b.w.



R.I. Ref. temp 95 °C

See also

Sulphate Pulp Process 3.01.00
 Sulphate Pulp: Washing Control 3.01.01
 Sulphate Pulp: Recovery Boiler 3.01.03
 Sulphate Pulp: Green Liquor 3.01.04

Introduction

In the evaporation plant the weak black liquor, which comes from the washing department, is concentrated to as high a concentration as possible depending on the design of the plant.

Application

To maximize the capacity and stabilize the output concentration feed to the evaporation should be as even as possible. The feed concentration is kept constant by controlling the mixing liquor by using K-Patents Process Refractometer, PR-01-S in concentration measurements.

The outgoing concentration is controlled by the steam flow through the evaporators. The control is based on the refractometer measurement. The concentration can also be measured after the concentrator. Typical temperature in this application is about 120-130°C (250-270°F).

If the steam cost is high in the mill then it is profitable to measure the liquor concentration in the intermedi-

ate stages to minimize the total steam consumption.

Installation

Typical concentration at the evaporation feed is 10-30% dry solids and after the concentrator phase 60-80% dry solids.

Automatic steam washing is recommended for evaporation installations.