

OPERATING PRINCIPLES – VERTICAL CENTRIFUGES

CENTRIFUGAL FILTRATION:

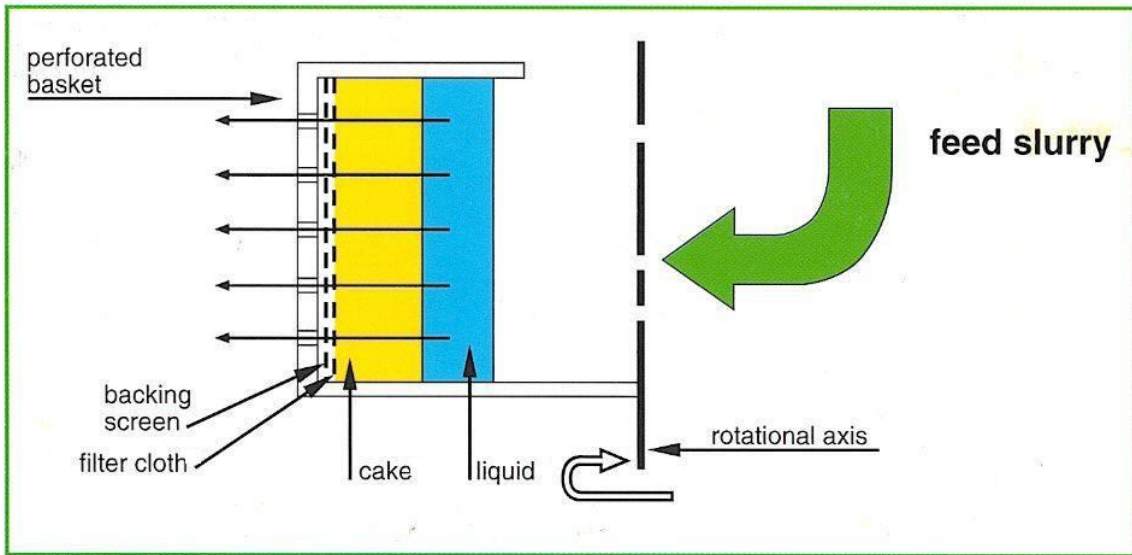


Figure 1: Centrifugal filtration with a perforated basket

Centrifugal force generates a pressure which forces the liquid through the caked solids, the filter cloth, the backing screen, and the basket perforations. The filter cloth retains the solid particles inside the rotating basket.

CENTRIFUGAL DECANTATION:

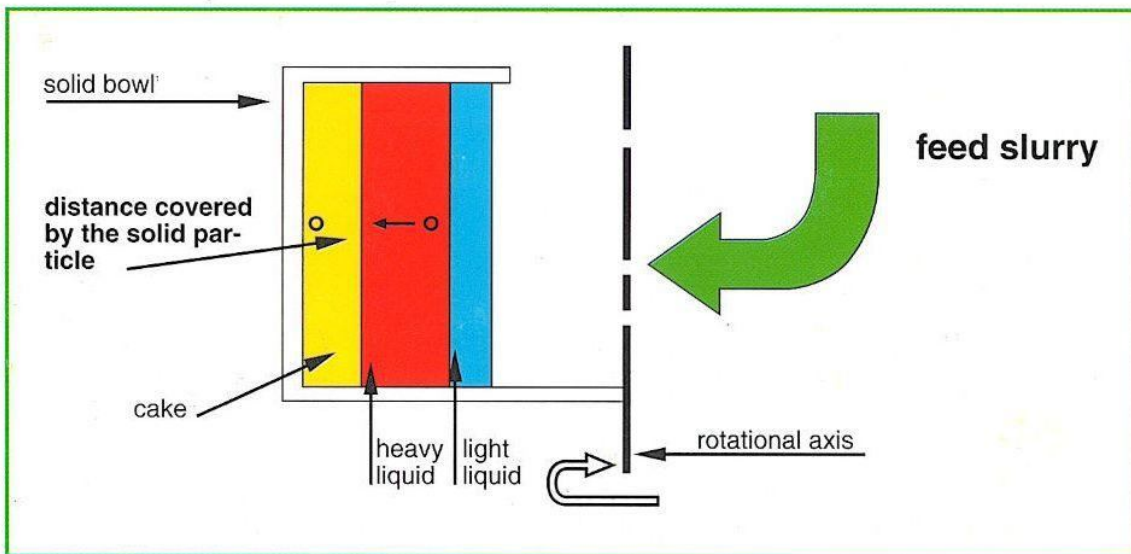


Figure 2: Centrifugal decantation with a solid [imperforate] bowl

Centrifugal force is used to accelerate gravity sedimentation in which a mixture of phases with different densities is allowed to settle. In a decanter centrifuge, the denser solids move radially through the liquid and accumulate on the walls of the rotating bowl. If two immiscible liquids are present, the lighter liquid migrates towards the