b = dimension of the surface at right angles to w and Q, L (m)
w = perpendicular distance between surfaces, L (m)
v_θ = settling velocity, LT^{-1} (m/s)

A proprietary settler, the Lamella® Gravity Settler, manufactured by the Parkson Corporation, is based on countercurrent settling with modifications (see Fig. 5–27). The feed stream is introduced into the settler by means of a feed duct to the feed box, which is a bottomless channel between plate sections. The flow is directed downward toward individual side-entry plate slots. The feed is distributed across the width of the plates and flows upward under laminar flow conditions. The plates are inclined 55° from the horizontal. The solids settle on the plates and the clean supernatant exits the plates through orifice holes. The orifice holes are placed immediately above each plate and are sized to induce a calculated pressure drop to ensure the feed is hydraulically distributed

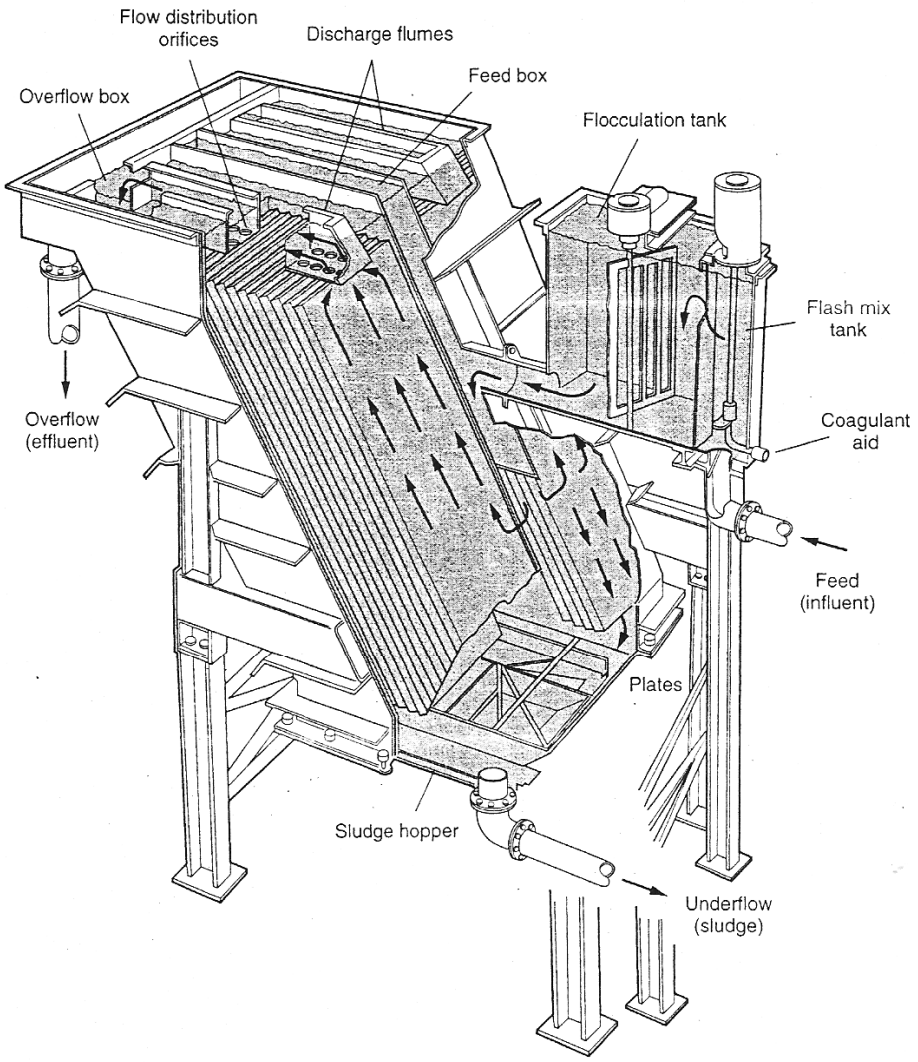

Figure 5–27
Example of a Lamella plate settler. *(Courtesy Parkson Corporation.)*