

PRESS DE WATERING SYSTEM (PDS)



RAW MATERIAL PREPERATION

Raw material is broken in a fine **Breaker** to give a particle size of 20-25mm. The crushed material is conveyed to the **Precooker**.

PRECOOKING

The **Precooker** is a continuous indirect heat exchanger. It consists of an outer jacket and a heated central rotor. The heat transfer is by rotation of the rotor in the raw material. The raw material is fed continuously to the

Precooker where it is heated rapidly to 90 – 100oC to coagulate the proteins and break down the fat cells. The temperature is controlled by automatically regulating the steam supply pressure.

PRESSING

After precooking the raw material is continuously discharged from the **Precooker** and conveyed by the **Drainer Screw** to the **Double Screw Press**. In the **Drainer Screw** free liquids percolate out. In the **Press** most of the remaining fat and water is removed from the product leaving a cake with a moisture content of 45-55%.

The **Rendertech Press Dewatering System (PDS)** is a low temperature rendering process suitable for plant raw material capacities 5 t/hour and above. It produces good quality end products, has low energy consumption and is simple to operate. When fitted with a Rendertech **Waste Heat Evaporator** for stick water recovery, the process is virtually 'zero waste' resulting in high product yield and low wastewater loads.

The press and drainer liquid consisting of fat, water and a small percentage of the fine solids is pumped to the **Decanter Feed Tank** and the press cake is continuously conveyed to the **Drier**.

DRYING

The defatted solids from the press and decanter fines are dried in the Rendertech CD **Drier**. The meal leaving the drier is ready for milling and screening.

TALLOW REFINING

The Press liquid is reheated in the **Decanter Feed Tank** before being pumped to the **Decanter** for removal of the fine solids. The fines are discharged into the drier feed conveyor and the liquids flow to the **Separator Feed Tank**. Acid is added and the liquid reheated before final polishing in a disc **Separator**. The separator sludge is pumped to the **Precooker**. The polished tallow is pumped to storage.

