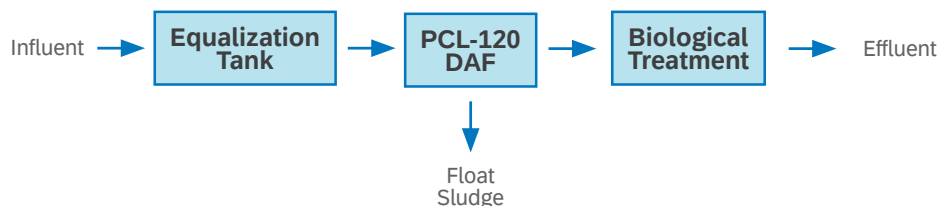


## WASTEWATER SOLUTION

## Beef Abattoir



A Sulzer Brand



The beef abattoir plant processes several thousand head of heavy cattle per day to produce meat products for export and domestic distribution.

The generated wastewater is laden with fatty, oily, and gritty materials that are washed down the drain during normal processing procedures and plant sanitation. A chemical-free DAF system was installed to process over 1300 gpm of wastewater for removal of TSS and FOG.

The nature of the solids in the wastewater grants separation without chemical addition. Combined with the high effluent temperature and density of the solids, the DAF unit operates at an extraordinarily high solids loading rate and achieves extremely high dry solids concentration thanks to the FRC DAF system's dewatering grid.

	Design Parameters	Discharge Requirements
Flow	1,870,000 GPD	
TSS	6000 mg/L	75% Reduction
FOG	6500 mg/L	85% Reduction
TEMP	140° F	

## Equipment Supplied

**PCL-120 DAF**  
**Odor Control DAF Cover**  
**U-Shaped Catwalk**

## DAF Sizing Calculations

## Hydraulic Surface Loading Rate

$$\begin{aligned}
 &= \frac{\text{Feed Flow} + \text{Recycle Flow in gpm}}{\text{Effective Surface Area in sqft}} \\
 &= \frac{1320 + 210 \text{ gpm}}{\text{x sqft}} = 1 \text{ gpm/sqft} \\
 &= 1530 \text{ sqft required}
 \end{aligned}$$

## Solids Loading Rate

$$\begin{aligned}
 &= \frac{\text{Weight of TSS in feed in lbs/hr}}{\text{Free Surface Area in sqft}} \\
 &= \frac{3900 \text{ lbs/hr}}{\text{x sqft}} = 35 \text{ lbs/sqft/hr} \\
 &= 111 \text{ sqft required}
 \end{aligned}$$

