

CASE STUDY

PROJECT	SLUDGE DEWATERING PILOT FOR PET FOOD FACTORY
PRODUCT	Dewatering Screw Press
INDUSTRY	Food and Beverage
LOCATION	New South Wales



BACKGROUND

A pet food processing plant in Western Sydney wanted to reduce the high disposal costs for its Dissolved Air Flotation (DAF) sludge. Following a technical review of different sludge dewatering processes, a Dewatering Screw Press (DSP) was identified as the best solution for this application.

MAK Water was selected to provide a pilot sludge dewatering plant to trial a dewatering screw press over a 2-week period as proof of concept.

SOLUTION

Dewatering Screw Press (DSP) with integrated flocculation tank and polymer dosing treating DAF sludge with an average concentration of 8% dry solids (DS) / 80,000 mg/L.

MAK WATER KEY SOLUTIONS

- Plug and play compact sludge dewatering equipment with small footprint
- Set-up and commissioning assistance provided to optimise plant settings and performance
- Optimised polymer selection and dosage rate for site specific sludge
- Quick delivery to enable immediate trialling

RESULTS AND BENEFITS

- **Pilot plant success.** Dewatered cake with up to 18.6% DS content achieved
- **Pressate with low solids content.** DSP pressate demonstrated solids recovery of >99%
- **Polymer optimisation.** Specialist polymer knowledge provided polymer optimisation for maximum DS cake with polymer consumption rate of 2-4 g/kg
- **Reduced operating cost.** Sludge disposal cost eliminated as cake is rendered down for product
- **CAPEX Approved.** Pilot demonstrated business case for approval of permanent full-scale dewatering screw press plant



Dewatering Screw Press Trial Plant



Produced Spadable Dewatered Cake