CASE STUDY

PROJECT	SLUDGE DEWATERING TREATMENT FOR BREWERY
PRODUCT	Dewatering Screw Press
INDUSTRY	Food & Beverage
LOCATION	NSW

mak water
water | wastewater | sewage

BACKGROUND

As part of a major expansion of its operations, one of the largest independent craft brewers in Australia, established a new state-of-the-art craft brewery in 2019. The wastewater generated by the brewing process, had to be treated onsite prior to discharge to sewer, to meet the local council's stringent trade waste requirements.

To reduce disposal costs the site dewaters the liquid waste sludge emanating from the biological Wastewater Treatment Plant (WWTP) utilizing a Sludge Dewatering Press (DSP).

SOLUTION

MAK Water installed a Dewatering Screw Press (DSP) and continuous wave liquid polymer make-up & dosing system, to dewater the Waste Activated Sludge (WAS) from the Sequential Batch Reactor (SBR) biological process. WAS is discharged intermittently from the SBR process into a sludge storage tank. The Dewatering Screw Press is operated intermittently and receives feed sludge from the sludge storage tank as required to maintain tank capacity to manage the WAS volumes.
The dewatered cake is discharged into a skip for off-site disposal.

DESIGN FEATURES

- Single-step dewatering from as low as 0.2% dry solids concentration to 18% without need for pre-thickening
- Capable of treating up to 30 kg/h dry solids
- Fully automated operation, with touch-screen operator interface & control
- High degree of operational flexibility and turn-down with incorporated flow control, flocculation, thickening and washing system

Low noise and vibration levels

RESULTS AND BENEFITS

- **Performance**. Producing dewatered cake of 18-25% dry solids content with recovery rate of >95% at a polymer consumption rate of 10-15kg / ton solids processed
- **Reduced solids disposal cost**: Being able to dispose of spadable cake in lieu of liquid sludge, offers significant cost savings to the site
- **Technology benefits**:
  - Simple installation & operation
  - Low energy consumption
  - Low wash water consumption
  - Simple and low maintenance
  - Low noise and vibration levels

Low wash water consumption