

BISKUPIEC MUNICIPAL WWTP

Poland

SIZE OF WWTP 1450 m³/d (383 050 GPD)

START OF OPERATION October, 2017

ISSUE

The client was operating the belt filter-press which was of poor dewatering efficiency (approx. 10 % cake DS content), insufficient capacity and had frequent maintenance issues.

SOLUTION

EKOTON company carried out preliminary laboratory tests to select the optimal chemical conditioning and performed on-site pilot tests with the smallest MDQ model. Based on the results, the most suitable sludge dewatering solution based on one unit of MDQ-353 C was developed and installed.

RESULTS

TYPE OF SLUDGE	Thickened waste activated sludge
UNIT SLUDGE SUPPLY	9 m ³ /h (40 GPM) 135 kg DS/h (300 lb DS/h)
FEED SLUDGE DS CONCENTRATION	1.4-1.6 %
CAKE DS CONCENTRATION	15-17 %
AVERAGE POLYMER DOSE	9.3 g/kg DS (18.6 lb/ton DS)
FILTRATE SS CONCENTRATION	60-260 mg/l (ppm)
SOLIDS CAPTURE	99.2-99.8 %



END USER'S COMMENT

Installation of a new sludge dewatering facility based on one multi-disc screw press dehydrator MDQ-353 C allowed an increase in sludge loading from 60 to 150 m³/d (15 850 to 39 625 GPD). Despite low feed DS content of only 1.5 %, the dewatering equipment provides transportable cake with high DS content of up to 17 % as well as clean filtrate with SS concentration of only 60-260 mg/l (ppm). Together with an automatic polymer solution preparation unit and screw conveyor, operation of the facility is fully automatic and reliable. Since the commissioning, it also led to a significant reduction of operating costs.

