MODERNIZATION OF THE SECONDARY CLARIFIER

Augustow, Poland

PROJECT	Modernization of the secondary clarifier
CUSTOMER	Wodociągi i Kanalizacje Miejskie Sp. z o. o. w Augustowie
OBJECT	Wastewater Treatment Plant in Augustów
COMMISSIONING	October, 2018

INTRODUCTION

Wastewater Treatment Plant is located in the South part of the Augustów city. It is a mechanical-biological type of plant adapted for deep removal of the biogenic compounds. Water needs to pass several steps and once purified, it is drained to the Netta river. The maximum capacity of the plant is 10 000 m^3/day. In June 2018 PRODEKO-EŁK Sp.zo.o. (EKO-TON Industrial Group) has been chosen as a main devices and technology supplier to accomplish the task of secondary clarifier modernization at the Wastewater Treatment Plant in Augustów.

MODERNIZATION PURPOSE

The main goal of the modernization was to:

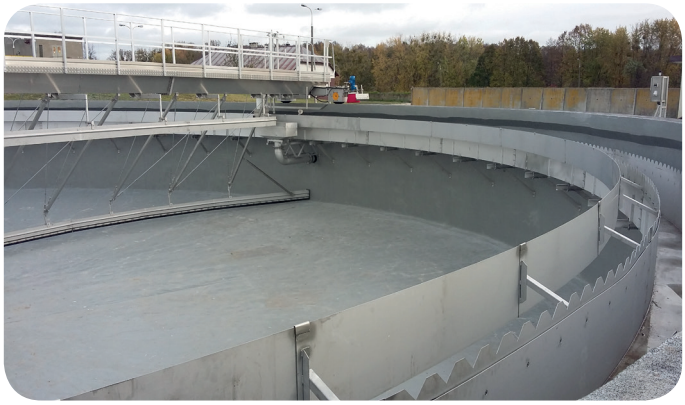
- ensure the stable work of the secondary clarifier
- increase the removal efficiency of the floating parts and the sludge
- decrease the operating costs

INITIAL STAGE

The upgraded secondary clarifier has been build at the stage of the Wastewater Treatment Plant build in 1984 and has been supplied with the radial sludge scraper made from black steel. Work performance degradation, extension of the service and repair times, all caused increase in the operation costs and its unstable work.

PROJECT IMPLEMENTATION

As part of the signed contract a radial sludge scraper ZGRwt-25 type and the penstock SGSM type have been supplied. The scope of work carried out included preparation of the documentation to fabricate the devices and necessary parts properly adapted to the dimensions of the clarifier and the sewage disposal channel, as well as assembly and technological commissioning of the supplied devices.



RESULTS AND CONCLUSIONS

The use of modern technological solutions in the design of devices ensures high work efficiency, energy efficiency and reliability. As a result of replacement of the existing sludge scraper at the Wastewater Treatment Plant in Augustów the following were achieved::

- **increase in the efficiency of floating parts and sludge removal** due to the special design of the scraper elements;
- **high level of energy efficiency** of the device due to the use of energy saving trolley drive with the gearbox embedded directly within the wheel;
- **lowered operating costs** of the device related to maintenance and repair.