

HERZLIYA MUNICIPAL WWTP

Israel

SIZE OF WWTP 22 000 m³/d (5 812 000 GPD)

START OF OPERATION November, 2013

ISSUE

Soon after the reconstruction of WWTP and launching a new biological reactor with EPDM membrane disc diffusers in 2009, the aeration system appeared to be highly uneconomical. In order to keep the constant dissolved oxygen DO concentration of 1.5-2.0 mg O₂/l in the reactor, three blowers with capacity of 4500 m³/h each had to work continuously almost all the time.

SOLUTION

Because of its low economic efficiency and tearing of some diffusers noticed at the beginning of 2013, it was decided to replace the existing aeration system. EKOTON company installed 600 m (1970 ft) of highly efficient PE tube air diffusers with high mechanical strength and longevity. Previously installed air diffusers were replaced gradually section by section.

RESULTS

BIOREACTOR SIZE	3 sections, 6000 m ³ (1,6 MG) each with an operating height approx. 6 m
TYPE OF BIOLOGICAL TREATMENT PROCESS	Aerobic suspended growth
DO CONCENTRATION	2.0 mg O ₂ /l
SUPPLY AIR FLOW RATE	4500-9000 m ³ /h (2650-5300 cfm)



END USER'S COMMENT

After we launched the first section of the reactor with EKOTON tube air diffusers, the quantity of consumed air as well as the energy was significantly reduced. Wastewater saturation with oxygen became more stable and uniform throughout the whole basin. After the old aeration system in all reactor sections was replaced with EKOTON air diffusers, the quantity of consumed air was reduced up to 3 times. From November 2013 so far there has been no diffuser breaking detected or any other problems occurred.