

CASE STUDY

An Affordable Wastewater Solution for Commercial Properties

ANTHOUSSA BEACH HOTEL, GREECE

Problem The Anthoussa Beach Hotel resort needed to replace an extended aeration package treatment plant until city sewers were extended to their property. The hotel's owners needed a solution that would provide excellent treatment without disturbing their guests.

Solution Dialynas S.A. designed and installed a wastewater system for the resort using a total of ten AdvanTex AX100 textile filter pods for secondary treatment. Treated, disinfected effluent was used for drip irrigation on the hotel property, and the nearly invisible AX100 system minimized both noise and odors.

A Quiet AdvanTex® System Goes Unnoticed at a Downtown Resort

Anthoussa Beach Hotel is a resort in Stalida, a seaside town near Heraklion on the island of Crete. With 660 beds, a pool, a private beach, restaurants, and bars, it's one of the best hotels in the area.

The hotel wasn't served by city sewers and, in 2005, its extended aeration package plant needed to be replaced. Dialynas S.A., a wastewater engineering firm, was chosen to design and install a new wastewater treatment system. The hotel's owners chose a design that included eight AdvanTex AX100 textile filter pods for secondary treatment.

In 2008, hotel owners installed two additional AX100 units to accommodate increased flows, bringing the total to 10 treatment units. "The most impressive part was the simplicity of upgrading the system to another



Anthoussa Beach Hotel, a resort on the island of Crete, used ten AdvanTex AX100 textile filter pods that were nearly invisible to the guests and minimized both noise and odors.

Photo courtesy of Anthoussa Hotels.

Commercial Market

Project Overview

STALIDA, CRETE, GREECE



Design Parameters

- 660-bed hotel
- 58,000 (220 m³/day) gpd peak flow
- Minimize inconvenience to hotel guests

Design Limits

- 30 mg/L BOD₅
- 25 mg/L TSS

Effluent Quality*

- BOD₅: <15 mg/L
- TSS: <10 mg/L

Start-up and Decommission Dates

- April 2006 (start-up)
- April 2012 (decommission)

Total Project Cost

- \$185,600 (€157,075)

Funding Source

- Private

Collection System

- Onsite septic and grease tanks

Primary Treatment

- 52,800 gal. (200 m³) of septic tankage

Secondary Treatment

- 31,700 gal. (120 m³) recirc/blend tank
- 10 AdvanTex AX100 treatment pods
- Submersible aerator in recirc tank

Dispersal

- One 7,900 gal. (30 m³) discharge tank
- Pumped to drip irrigation

Operation

- Operation/maintenance by Dialynas S. A.

* Source: Dialynas S.A.

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25% capacity and even moving the whole project to a more desirable location at a very reasonable cost,” said Thanos Papageorgiou, the hotel’s owner and general manager.

Wastewater from the rooms, restaurants, bars, and all public spaces was collected in a septic tank. From there, effluent was recirculated through the AdvanTex pods, then disinfected before dispersal by drip irrigation onto the hotel property.

The treatment system was located in front of the hotel, close to the street. Shops, restaurants, and cafes were within a few meters of the AX100 units. Yet because the AX100 system minimized both noise and odor, it was virtually unnoticeable.

Georgios Dialynas, the engineer who designed and oversaw the installation of the system, was initially concerned about the hotel owner’s requirements.

“At first, none of us thought that we could manage to make this project meet all the strict requirements set by the customer,” said Dialynas. “Now that the system is complete, however, there are no disturbances of any kind, even with the new installation located just over the parking area near the hotel entrance. Our engineering team is very proud of this accomplishment, and the hotel management has enjoyed a flawless system for five years now.”



After initial installation, the treatment system was relocated to an area next to the parking lot in order to accommodate hotel expansion.

In spring of 2012, sewers were extended to the property. Although the owners would have been happy to continue using the AdvanTex system, they were told that the sewer fees would need to be paid, regardless. Consequently, the system was decommissioned.

Commercial Market

The Anthoussa Beach Hotel’s AdvanTex Treatment System was located in front of the hotel, close to the street.



“The most impressive part was the simplicity of upgrading the system to another 25% capacity and even moving the whole project to a more desirable location at a very reasonable cost.”

– **Thanos Papageorgiou**
Anthoussa Beach Hotel
owner/general manager

For information about Prelos™ Sewer, AdvanTex® Wastewater Treatment, or Orenco Controls™, contact Orenco Systems®, Inc.



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Data used by Orenco to derive the representations and conclusions contained within this Case Study were current as of February 2013.