

# Orbal® Biological Nutrient Removal System Kohafa, Egypt WWTP

## Biological Nutrient Removal Excellence

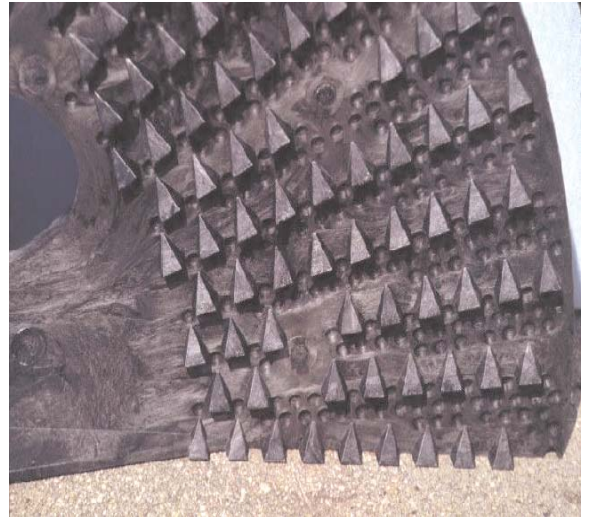
97% BOD removal  
95% TSS removal  
95% NH<sub>3</sub>-N removal

## Design Criteria

Average Daily Flow: 30,000 CMD  
BOD: 400 mg/l  
TSS: 450 mg/l  
NH<sub>3</sub>-N: 50 mg/l

The Orbal® process was selected to treat the municipal wastewater of the City of Kohafa, Egypt.

The Orbal® design for this project consists of three concentric channels, with wastewater passing through the channels in series. Dissolved Oxygen levels in each channel are controlled by varying aerator speed and/or disc immersion. The outer channel is maintained at low DO levels to provide simultaneous nitrification/denitrification conditions while the inner channel is maintained at aerobic conditions. Oxygen recovered by denitrification in the outer channel results in power savings.



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