DRINKING WATER

KATOSI (Kampala)

Drinking Water Treatment Plant

The Katosi plant secure access to drinking water in Ugandan capital

In Uganda, The National Water and Sewage Corporation (NWSC) has chosen SUEZ and Sogea Satom for the DB contract of the Katosi DW plant. The plant will provide safe drinking water for the people in Kampala and reduce the pollution of Lake Victoria.

Client objective

In 2018, the Ugandan public authority in charge of water and sanitation management (NWSC) awarded SUEZ and its partner, Sogea Satom, the contract for the design and construction of the Katosi drinking water production plant, with a capacity of **160,000 m³/day** with the aim of supplying more than 7.5 million people by 2040 in Kampala, Wakiso and Mukono.

This project is part of a program aimed at rehabilitating and extending the drinking water distribution network in Kampala, in response to significant population growth. The goal is also to support the Ggaba drinking water treatment plant, south of Kampala, the only one in the capital previously.

For this new plant, the NWSC wanted a treatment different from the conventional treatment implemented on the Ghaba plant, in order to deal with the problem of algae proliferation on Lake Victoria. The contract also includes the construction of a water intake in Lake Victoria, reservoirs and a sludge treatment unit, taking into account significant seismic constraints in the region

Our solutions

This plant includes:

- An offshore water intake located 500 meters inside Lake Victoria was designed to improve the quality of raw water.
- 4 **AquaDAF®**, a rapid dissolved air flotation process
- 12 **Aquazur® V** sand filters
- A final disinfection
- A sludge bed drying

The treated water is then sent nearly 10 km from the site to two 10,000 m³ reservoirs each.

In total, this project required the construction of 55 km of pipelines.

Benefits

The Katosi plant meets the crucial needs for drinking water supply in Kampala, while addressing the environmental and technical challenges of the region. Its commissioning makes a significant contribution to improving the quality of life of millions of Ugandans.

The 160,000 m³/day produced by the Katosi plant, will complement the 240,000 m³/day from the Ghaba plant to deliver a total of 400,000 m³ of drinking water to the inhabitants of the Ugandan capital.

The offshore water intake avoids problems of algae and bacteria proliferation along the shores of the lake at certain times of the year.

First and largest plant in East and Central Africa using AquaDAF® and Aquazur® V technologies

Differentiating factor

SUEZ has proven its commitment and ability to solve high-stakes situations, notably by conducting an audit on the difficulties encountered at the Ghaba plant (which was neither built nor operated by SUEZ) in order to dispel the concerns of the NWSC and its consulting engineer about the design of the new Katosi plant.

This approach has allowed us to gain the trust of the NWSC and to have our design choices approved to reduce the impact of the proliferation of algae in Lake Victoria, including operating costs, while securing the drinking water supply in Kampala.

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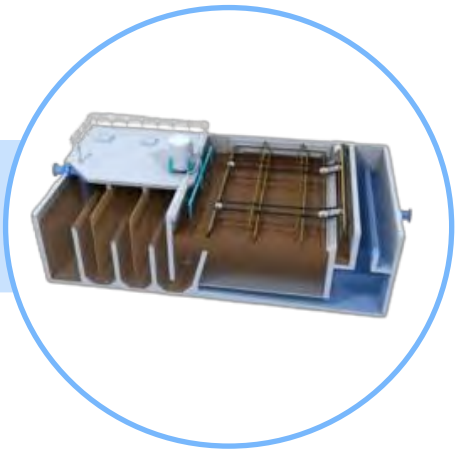
Reliable and proven technologies

AquaDAF®
Rapid Dissolved Air Flotation

AquaDAF® is a process adapted to the clarification of surface waters subject to algae blooms, and capable of dealing with turbidity peaks.



Flotation takes advantage of the natural ability of algae to float. Instead of trying to make them settle using large amounts of reagents, it is more efficient and gentler to make them float.

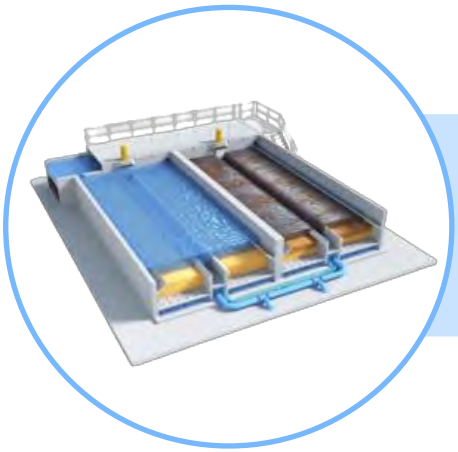
This method avoids agitation, pumping and recirculation that could damage the algae cells and thus contaminate the water with their toxins. Moreover, flotation allows the algae to be retained for a short period, the sludge layer being quickly and definitively evacuated

Avantages

- **Very low water loss**
- **Simplicity of operation**
- **Compactness and modularity**
- **Optimization of flocculation:** patented piston flow flocculator without energy consumption

Aquazur® V,
Descending current open filter

The Aquazur® V is designed to retain suspended solids (SS) present in the water to be treated thanks to a thick layer of sand. Positioned after flotation, it refines the water treatment before final disinfection.



Avantages

- **High speed filter**
- **Constant water level**
- **Quality and stability of filtered water**
- **Efficient washing system**
- **Easy maintenance**

TYPE OF CONTRACT	CONTRACT DURATION	CAPACITY OF THE PLANT	POPULATION SERVED
DB Design & Build	**2018-2021**	**160,000 m³/day**	**2 million PE** 7.5 million PE by 2040

SUEZ Engineering & Construction
www.suez.com