

[Home](#) ■ [HUBER Report](#) ■ [Case History: Drinking Water Recovery Project Dongola City](#)

Case History: Drinking Water Recovery Project Dongola City



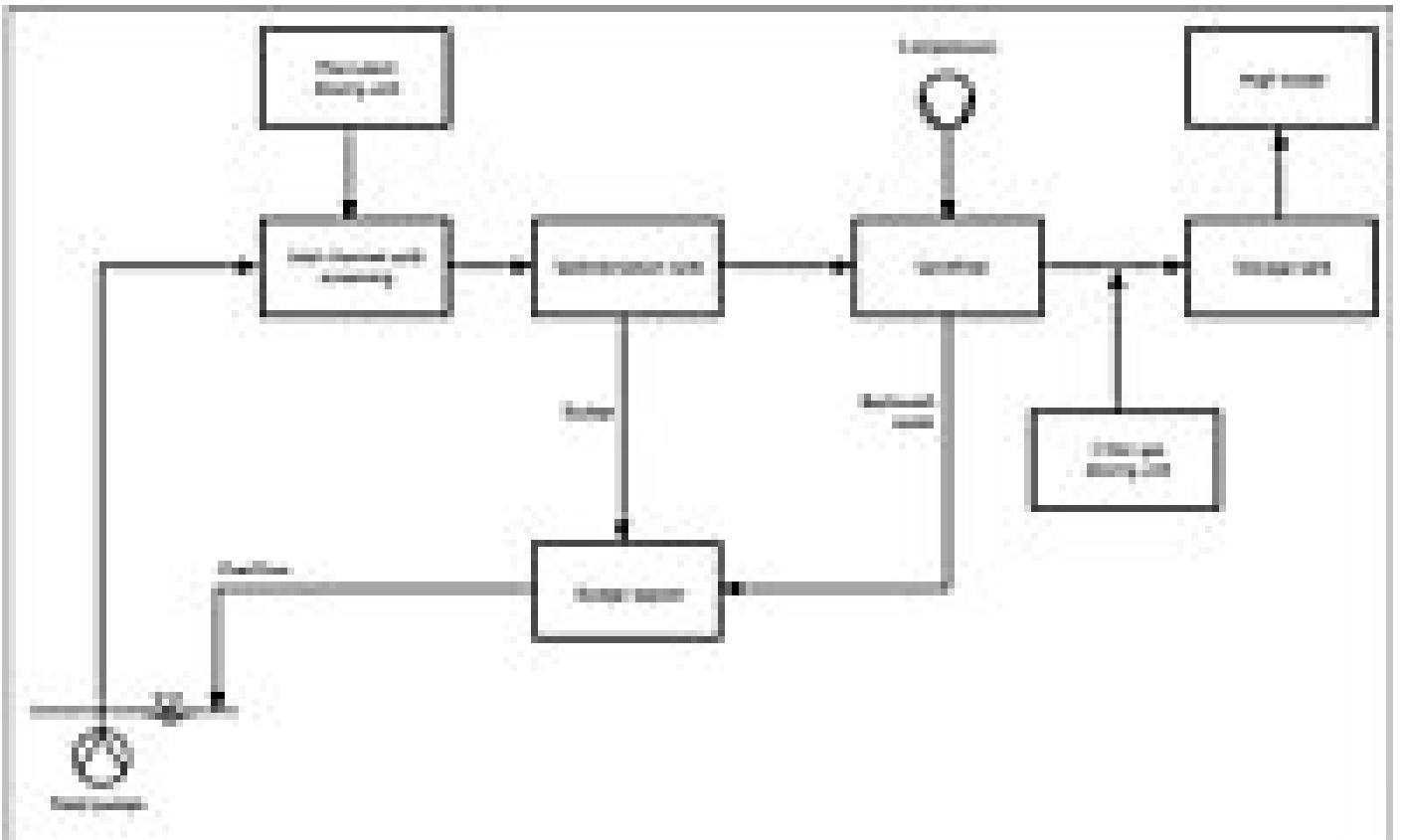
Interior of a Sandfilter



Filled sedimentation tank



Sedimentation tank before start-up



Process scheme

HUBER is a supplier of drinking water and wastewater treatment equipment worldwide, offering for the drinking water sector a wide

range of products, such as screens, sedimentation tank equipment, sand filtration, sludge treatment and stainless steel products. HUBER uses its long-term experience for recovery of drinking water from surface water in developing countries. The concept includes the complete mechanical equipment and engineering, both from one source.

Two identical drinking water recovery plants are installed in Dongola City and Eldebbba, Sudan for which the HUBER engineers had to consider specific local conditions which are reflected in the selected process technology.

The requirements:

The project demanded the recovery of drinking water from the river Nile for 70,000 people. The treated water had to meet the WHO standards. Furthermore, a simple and reliable technology was an absolute prerequisite for this project due to the absence of technicians on site.

The solution:

The plant designed for a nominal flow of 3500 m³/d consists of the following process steps:

1. Coarse preliminary treatment in the inlet channel; at the same time coagulant agents are added in order to allow colloids (such as humic or particulate material) to settle.
2. The settleable material (flocks and solids) settle in the sedimentation tank. The produced sludge is removed by a belt scraper and deposited in a sludge lagoon.
3. Solids that did not settle in the sedimentation tank are filtered in a continuous sandfilter. Owing to a fully automatic principle these fast filters can be operated with minimum maintenance. The wash water is returned into the sludge lagoon.
4. The filtrate passes a disinfection stage with chlorine gas where microorganisms and pathogenic germs are eliminated.
5. The treated water is stored in a storage tank.
6. Finally, the potable water is pumped into an elevated reservoir (high tower). The plant is additionally equipped with HUBER stainless steel products, such as manhole cover, pipelines, doors, railings.

Related Products:

- [HUBER Sandfilter CONTIFLOW®](#)

Related Solutions:

- [Water Conditioning: HUBER Solution for Potable Water Generation from Surface Water](#)

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