

Changsha Kaifu WWTP – Wastewater Treatment, China

Wastewater | Case Study

Hunan Xinyuan Water Co., Ltd

Xinyuan Water Co.,Ltd, Hunan – is a subsidiary of Xinyuan Group. The company is focused on investment and operation of the water services. As Municipal BOT project, Changsha Kaifu WWTP was invested and currently operated by Xinyuan Water company.



Key Figures

- Client :Hunan Xinyuan Water Co., Ltd.
- Contract date: 2016
- Year of delivery: 2017
- Capacity : 300,000 m³/d
- Selected process: Multiflo™, Biostyr® Actiflo® Turbo

The Client's Needs

Located at Jinxia Development Area in Kaifu District, Changsha city, Kaifu WWTP serves 620,000 citizen. In 2014, the client starts the plant upgrading project in order to meet the China National Sewage Discharge Standard Class IA.



The Solution

Veolia proposed Biostyr® PDN for secondary treatment and Actiflo® Turbo for tertiary treatment in the upgrading line with 200,000 m³/d.

For the new extension line with 100,000 m³/d, Veolia provided the combination of Multiflo™ for the primary treatment, Biostyr® Pre-DN and Biostyr® -N for the secondary treatment as well as Actiflo® Turbo for the tertiary treatment.

Conclusion

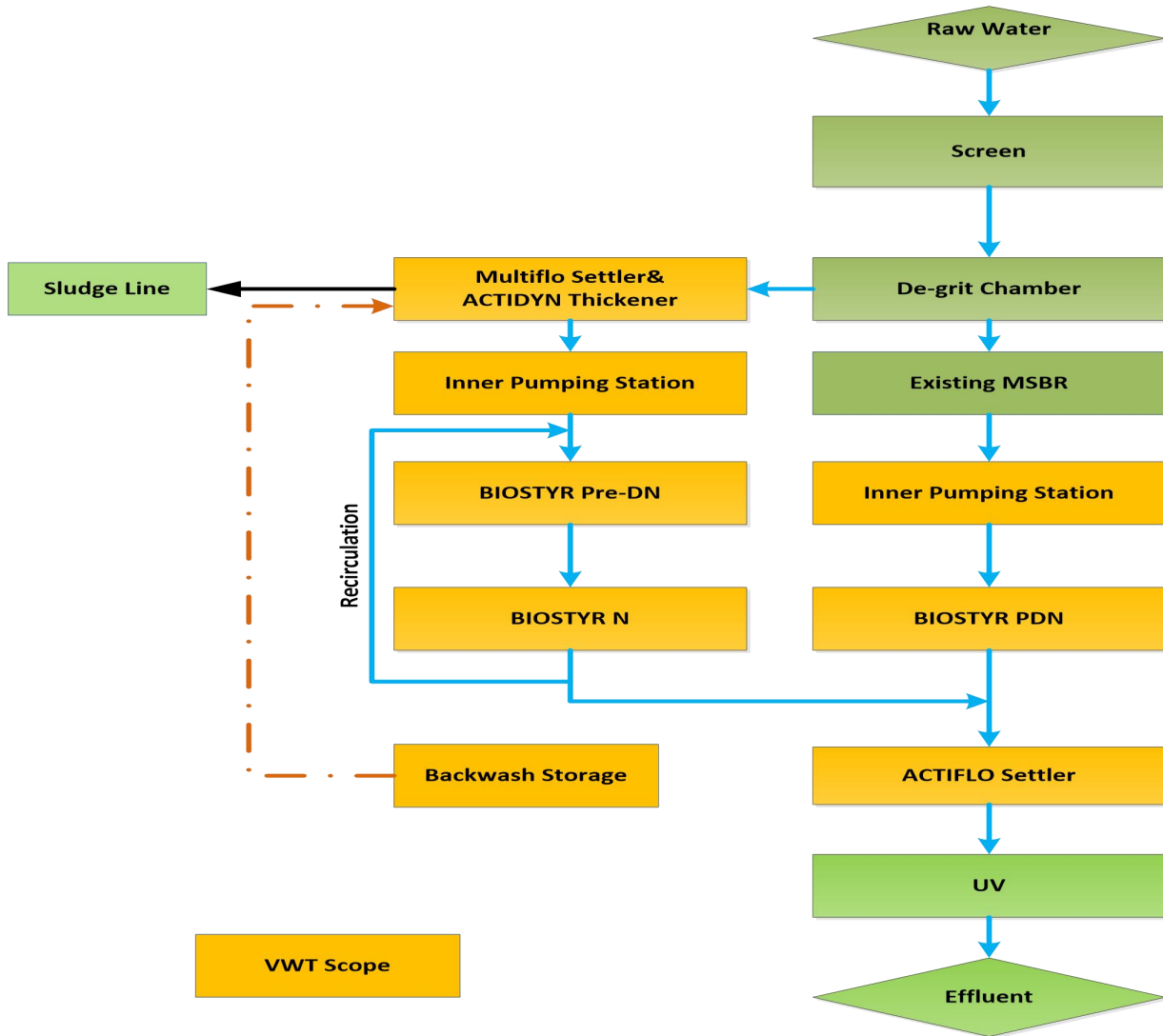
To minimize the OPEX of the plant, Biostyr® Pre-DN was applied so as to reduce the consumption of external carbon source.

Kaifu WWTP project is the first project to apply Biostyr® Pre-DN process in China and also advanced Multiflo™ design. The correct process selection and the excellent operation lead to the better-than-expected results.

Process Description

The process designed by Veolia for 2 treatment lines:

- Upgrading the existing line: Biostyr® PDN filter + Actiflo® settler
- New extension line: Primary Multiflo™ settler + Biostyr® Pre-DN + N+ Actiflo® Turbo settler



The design and operation effluent data

Parameters	COD	TSS	NH4-N	TN	TP
Required Effluent Standard 1A	<50 mg/l	<10 mg/l	<5 mg/l	<15 mg/l	<0.5 mg/l
Final Effluent Quality	<20 mg/l	<10 mg/l	<1.5 mg/l	<15 mg/l	<0.5 mg/l

Veolia Water Technologies

Room 708 • South Tower • China Overseas Plaza • No.8 Guanghuadongli •
 Chaoyang District • Beijing • China
 Tel. +(86) 010 5798 8000
 Email: china.municipal@veolia.com
 www.veoliawatertechnologies.com.cn



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