

The project of East Lake, Wuhan



~ 948 National Project of the Ministry of Water Resources ~

■ The details of the project

Wuhan University (WHU) was demonstration of cleaning water with carbon fiber as a national project at East Lake. The decision was made by WHU due to recommended by National Institute for Environmental Studies of Japan. WHU and SO-EN CO.,LTD were signed a technology agreement for providing cleaning water with carbon fiber technology. WHU was in charge of local operation, they decided the locations of experiment, after consultation with Ministry of Water Resources (MWR) in Wuhan. SO-EN CO.,LTD was in charge of technical guidance and we made a design of installation of water purification. MWR of the P. R. of China was granted for the project in June, 2011. In September, WHU installed by technical guidance of SO-EN CO., LTD. After installation, the observation regularly is continued by WHU and water quality measurement has been carried out by MWR.

■ What is 948 national project of

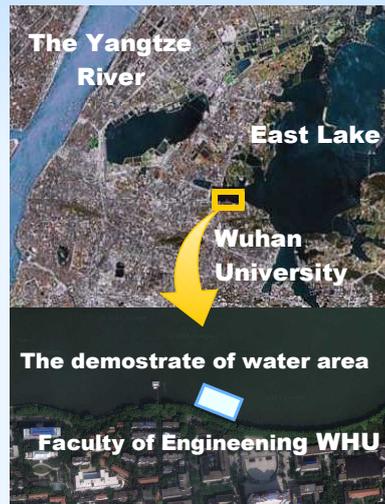
the Ministry of Water Resources?

948 national project, which stands for one of national project with promoting the Chinese government for advanced technological introduction. The project has two purpose. The first is that reduce the time one takes to research development, the second is self-manufacture as a world-class leading-edge technologies. The project has started since the 11th Five-Year Plan and continued the 12th Five-Year Plan. The ministry of agriculture and state forestry administration are also carrying out this project.



Faculty of Engineering WHU

The demonstrate of water area



The Yangtze River

East Lake

Wuhan University

The demonstrate of water area

Faculty of Engineering WHU

■ East Lake

East Lake(E Lake) consist of some lakes of drainage basin east along the Yangtze River and situated in the suburbia of east. E Lake is designated as landscape conserved area. It has an area of 73 sq.km and largest lake in a city. E Lake is the importance of water resources for surrounding area. However, in recent years, E Lake became closed water body because of rapid urbanization and water quality indicator became level IV. In fact, due to eutrophication, it has water contamination problem.

■ Purpose

In College of Water Resources and Hydroelectric Engineering of WHU, it demonstrate for water purification technology with carbon fiber. SO-EN CO., LTD achieve satisfactory results due to a better effect. And on the basis of these results, it expand use of carbon fiber for water quality purification in China.

■ Installation



■ Outline of demonstration

Location : East Lake (In front of main gate in WHU)
 Area : 1,800㎡ (30m×60m)
 Water depth : average of 2m
 Period : one year after installation
 Carbon fiber installation type : Hanging with rope and Flats, Flating with the steel-Frame in the water, etc.

■ 2 months after installation

2 months after installation, water purification was significantly better results. You can see through the bottom of 2m.



Purified water



Inside

Outside

Comparing inside and outside

Water quality change

Items	Before Grade	After Grade
T-N	- V	II
T-P	IV	III
COD	IV	I

※Grades for Environmental Quality Standards for Surface Water in CHINA

Grade Description
I : Mainly for headstream and the national nature preserves.
II : Mainly for drinking water resources in first-class protected areas, protected areas for precious fish, and spawning areas for fish and shrimp
III : Mainly for drinking water resources in second-class protected areas, protected areas for fish, and swimming areas
IV : Mainly for industrial water resources and recreational use in which people do not contact water
V : Mainly for agricultural water resources and water areas required for landscape
-V : The water which is available in no case