A large municipal wastewater treatment plant.....

enersave has the capabilities

Shidongkou Waste Water Treatment Plant at Su Zhou Creek Shanghai has a planned capacity of 800,000m³/day. Enersave undertook the first phase of capacity 400,000m³/day for this huge and important project

Introduction

Shanghai is a fast growing and modern metropolis with a population of 20 million. To ensure its long-term success and maintain its image, the government has identified the Su Zhou Creek Rehabilitation Project as a highly important project to be implemented under its ninth 5-year plan. Su Zhou Creek is one of the most important tributaries of the Huang Pu River in Shanghai and yet remains a huge *environmental* problem with very serious pollution. Both industrial and domestic wastewater discharge directly into this waterway and together with tidal influences, seasonal changes, sediment pollution and heavy water traffic, the Su Zhou Creek has become heavily polluted.

The government is committed to a long term rehabilitation plan to change this by year 2010. Amongst the ten-fold comprehensive measures identified as Phase 1 of this massive project, the Shidongkou Wastewater Treatment Plant of initial capacity 400,000m³/day has been built.

The need to provide ecologically sound solutions for various water applications was the motivation for the establishment of Enersave in 1982. Twenty years on, Enersave is proud to be involved with this important *environmental* project on target to be completed successfully in year 2002.

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Description of Shidongkou Wastewater Treatment Plant

The construction of the Shanghai Shidongkou Wastewater Treatment plant (WWTP) is one of the major components of the Shanghai Su Zhou Creek Rehabilitation Phase I Project. The WWTP is located on a 6 acres of land in the Shanghai Shidongkou District. Phase I of the WWTP is designed to serve an area of 150 km² with a population of 700,000. The current WWTP Phase I design capacity is 400,000 m³/day. The final design capacity of the WWTP at Phase II will be 800,000 m³/day.

The process design of the WWTP utilizes the single tank bio-treatment concept. This WWTP comprises a pumping station, coarse screen, fine screen and grit chamber before it is introduced to the biological treatment. It is then followed by post chlorination before discharge into the Yangtze River.

The WWTP effluent quality complies with the China National Class I discharge requirement prior to discharge into the Yangtze River. The sludge generated from the WWTP is disposed of via incineration after dewatering. The equipment and control system selected for installation in the WWTP utilise sophisticated SCADA and DCS, requiring minimal operators to operate it.

When completed and in full operation, the Shidongkou WWTP will be one of the most technologically advanced large scale WWTPs in the world.

The design criteria of the WWTP is as follow:

Influent:	COD	=	400 mg/L
	BOD ₅	=	200 mg/L
	SS	=	250 mg/L
	NH ₃ -N	=	30 mg/L
	PO ₄	=	4.5 mg/L as F
	PH	=	6-9
Effluent:	COD	≤	60 mg/L
	BOD ₅	≤	20 mg/L
	SS	≤	20 mg/L
	NH ₃ -N	≤	10 mg/L
	PO ₄	≤	1 mg/L as P

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