

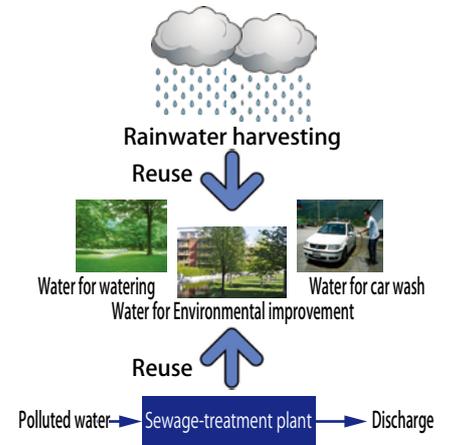
Water Environmental Load Reduction Plan

■Reuse of rainwater or processed sewage water

In urban areas, there are water resources such as rainwater or processed sewage water which can be reused. If they are processed properly according to the purpose of reuse, they can be used, for example, for sprinkling park trees, for water paths in parks, to replenish water in urban rivers, or for washing cars.

If rainwater or processed sewage water is reused instead of clean water for miscellaneous purposes, it leads to the reduction of environmental load.

In particular, in Asia, including China, there is a period when the amount of evapotranspiration becomes greater than the amount of rainwater. If processed sewage water is effectively used during such a period, it becomes an water source for environmental maintenance such as keeping urban landscape, or preventing a high salt concentration in river water. We draw up environmental load reduction plans by proposing reuse of rainwater or processed sewage water through the manipulation of natural conditions during the course of the entrusted work including city (regional) plans in Asia.

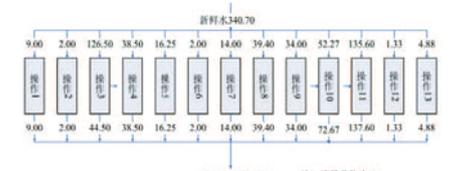


■Highly intense use of water for industrial complex in N city, China

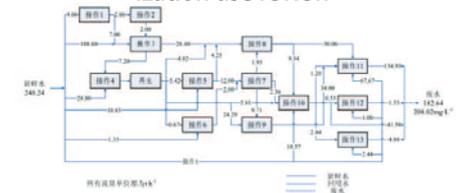
A study concerning highly intense use of water (water amount and reduction of discharge load) was conducted for the industrial complex centering on the heavy chemical industry in N city, China in collaboration with Tongji University's Environmental Science Department (Shanghai City).

As Chinese legal regulations controlling industrial water greatly differ from those of Japan, water used in A factory can be reused in B factory or C factory. Therefore, a study using a pinch technology for minimizing the total amount of water use and discharge load at the industrial complex, etc. was conducted.

However, it became clear that there were problems to be resolved for realizing highly intense use of water such as the time sequential change of necessary water amount and the distance between factories.



Used amount of water before rationalization use review



Water usage after rationalization review

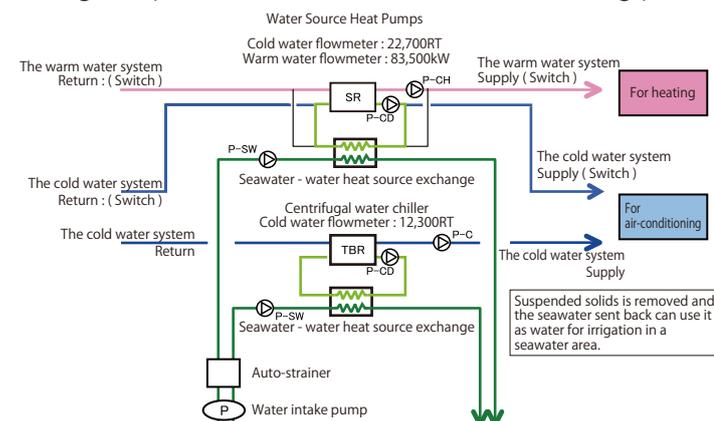
■Use consideration of the water heat energy which made a new development area in a Chinese N city S prefecture the subject

Introduction of the water heat energy which made a new urban development area at a Chinese N city S prefecture the subject is considered as a part of the low carbon urban development consideration which had reduction in energy amount of consumption and CO2 amount of emission for its object.

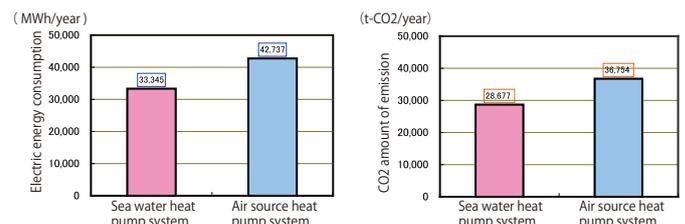
A source of heat made seawater in the area of sea spread in a development site front the subject. The power consumption and CO2 amount of emission could reduce about 22 % more than usual aerial heat source system as a result of the consideration.

A float is removed, so it's possible to use as making-up water to a water area within the development area region, and the seawater used as a source of heat will be, and also contributes to water environment protection in the district.

It's merged together in unutilized energy such as sunlight and the wind velocity this and the drafting which plans to affect the environmental load reduction which made the seawater and the water from river or the sewage disposal water a source of heat is being performed.



The system outline adopted in the new development area in N City



Comparison of the electric energy consumption of "Air source heat pump system", "Sea water heat pump system" and comparison of CO2 amount of emission