METHOD AND SYSTEM FOR THE SUSTAINABLE COOLING OF INDUSTRIAL PROCESSES

This application is being filed on 12 September 2011, as a PCT International Patent application in the name of Crystal Lagoons Corporation LLC, a U.S. national corporation, applicant for the designation of all countries except the US, and Fernando Fischmann T., a citizen of Chile, and claims priority to U.S. Provisional Serial No. 61/469,526, filed 30 March 2011, and U.S. Utility Serial No. 13/195,695, filed August 1, 2011, and which applications are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to a method and system for treating water, and using the treated water for the cooling of industrial processes. The water is treated and stored in a large container or artificial lagoon, has high clarity and high microbiological quality. The large container or artificial lagoon can act as a heat sink, absorbing waste heat from the industrial cooling process, thus creating thermal energy reservoirs in a sustainable manner, which can be later used for other purposes. The method and system can be used in any industrial cooling system with any type of water available, including fresh water, brackish water, and seawater.

BACKGROUND

Industries worldwide have increased significantly in number and have improved their processes over the years. Many of these industries require systems that provide cooling for at least some of their processes. Many of the cooling systems utilize water as a heat sink or heat transfer fluid. However, water is a limited resource. Exploitation and contamination of underground aquifers, oceans, and surface waters has occurred, leading to a decrease in the quantity of suitable water, as well as the quality of the naturally available water. Thus, new ways of using water in a sustainable and economical way need to be found in order to utilize this resource in an efficient manner and without damaging the environment.

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